

Research Article

Statistical Evaluation for Communication Management in Iraqi Consultant Bureaus

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Abstract: The purpose of this study is assess the reality of the communications management in Iraqi consultant bureaus, data collection completed by personal interview and questionnaires, then analysis questionnaire by using the Statistic Packages for Social Science, the results have shown in third section that is a lack of knowledge about the efficiency of the communication system in the consultant bureau , Finally, four section include communication barriers and individual in to three axis (technical communication barriers, financial communication barriers and communication barriers on worker performance) in consultant bureaus, the results of study sample agreed on the existence of communication barriers.

Keywords: Arithmetic mean, consultant bureaus, communications management, evaluation, personal Interview, questionnaires

INTRODUCTION

Measuring project performance is an important part of project and program management. Measuring project performance provides the organization with a clear picture of the health of its projects and can instill confidence in the project teams. Additionally, these performance measures can help the PMO establish continuous improvement initiatives in areas where projects commonly perform at lower levels. The usefulness of measuring project performance is evident and as long as organizations do not become overwhelmed with them, these measures will remain important contributors to organizational success (Al-Zwainy *et al.*, 2015a).

Considered consultant bureaus of leading organizations in Iraq's construction sector. Communications management plays a pivotal role in the success or failure of performance of these bureaus and therefore, the process of evaluation of communications management in these consultant bureaus are index and scale, which is based upon the evaluation.

This study dealt with the field study to assess the reality of the communications management in Iraqi consultant bureaus , data collection completed by personal interview and questionnaires, then analysis questionnaire by using the Statistic Packages for Social Science (SPSS version 20) and (Microsoft Excel 2010), depending on many statistical tools.

SPSS is one among the analytics software's are estimate with confidently what will happen next and will be create smarter choices, improve outcomes and solve complex problems. (Al-Zwainy and Hadhal, 2016)

There are different techniques currently used for measuring the performance of projects, all address performance in three key areas: scope, schedule and budget. Some of these methods suffer the major disadvantages of lack of precision, aged, slow and uncertainty. Construction sector needing for modern efficient techniques to measuring and predicting the performance of projects that have more advantages such as, being modern, fast, accurate, flexible and easy to use (Mohammed *et al.*, 2014).

Therefore this study adopted the questionnaire to evaluation of consultant bureaus.

Questionnaire is one of the means of communication with experts and skilled specialists and engineers; to take advantage of their information available and relied upon in making the right decisions and accurate (Al-Zwainy and Jaber, 2014; Al-Zwainy *et al.*, 2013).

Descriptive approach was used in this study, because it helps to assessing communication management at consultant bureaus, describing and the extent of its impact on decision-making, performance and availability of information, which helps to understand the barriers of communication management and assists in reaching the conclusion and recommendation to develop proposals that will help to

reduce the obstacles in the engineering consultant bureaus.

It includes research population in this study the engineering consultant bureaus in the engineering colleges of Iraqi universities as follows: Eng. Consultant bureau-Baghdad University, Eng. Consultant bureau-Al-Nahrain University, Eng. Consultant bureau-Al-mostansria University, Eng. Consultant bureau-Technology University, Eng. Consultant bureau -Dealla University, Eng. Consultant bureau -Kirkuk University, Eng. Consultant bureau – Babylon University, Eng. Consultant bureau -Karbala University, Eng. Consultant bureau-kufa University, Eng. Consultant bureau-Waist University, Eng. Consultant bureau -Basra University, Eng. Consultant bureau–Al-Kadisia University, Eng. Consultant bureau -Thi-Qar University, Eng. Consultant bureau–Mesan University and Technical Education Institute.

The researcher distributed questionnaires of ten forms for each consultant bureau, researcher depends on the stratified sample style to choice study sample, represented an engineers and consultants were they working in these bureaus.

Aims and objectives: The objective of this research is to demonstrate that questionnaire is an effective management technique that integrates technical performance requirements with resource planning. And the main aim of this study is to investigation and assessment the current status of the consultant bureaus in Iraq's construction sector.

METHODOLOGY OF FIELD STUDY

Methodology of field study consist of many stages to reach the impact of communications management in consultant bureaus on the performance, decision-making, cost and time then determine the barriers on communications processes in consultant bureaus, Fig. 1 shown the methodology of field study.

Literature review of field study: The resources of dada collected in this study are as follows, references and previous scientific research and (World Wide Web), as well as periodicals that pertain the subject of study in order to evaluate and improve the management of communication in the engineering consultant bureaus.

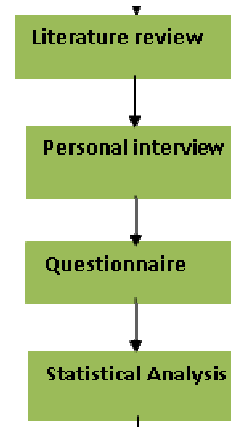


Fig. 1: Methodology of field study

Personal interview: The researcher has making a number of interviews with engineers and consultants that working in the Iraqi consultant bureaus (population of study) in order to benefit from their expertise and scientific potential in the forming of questionnaire questions.

Design of questionnaire: The processing of design the questionnaire it consists of two stages:

Primary stage: The questionnaire has been presented in primary stage to many of experienced arbitrators which have more than fifteen years of experience in college engineers, in order to correction and redesign the questionnaire to reaching the final form of questionnaire. Table 1 show names and scientific specialization of arbitrators.

Detail stage: One hundred fifty (150) questionnaires form were distributed to consultant bureaus which could be found in Table 2 and each questionnaire consists of four main sections which are:

- **First section:** (Personal Information), this section description the age, scientific degree, scientific specialization and functional position.
- **Second section:** (Reality of the Communication Management in Consultant Bureaus), this section include the study of reality of the communication in consultant bureaus and content of questions.
- **Third section:** (Efficiency of the Communication System in The Consultant Bureaus),this section includes four axes that impact the efficiency of the communication system in the consultant bureaus on (performance, make decisions, provide

Table 1: Arbitrators

Name	Experiences	Engineering specialization	Academic position
Dr. Bain M. jabar	20	Communication	Al-Nahrain University
Dr. Majedsalal	18	Communication	Collage of Dijla
Dr. Faiq M. Sarhan	16	Civil.	Al-Nahrain University
Dr. WadahAmer	15	Civil.	Technology institute of Duala
Dr. HatemKalefa	20	Civil Eng.	Baghdad University

Table 2: Distributed and received the questionnaire forms

Consultant bureau	Distributed forms	Received forms
Consultant bureau-Wasit University	10	5
Consultant bureau- Mara University	10	4
Consultant bureau- Basra University	10	5
Consultant bureau- Baghdad University	10	5
Consultant bureau- AL-Nahran University)	10	1
Consultant bureau- Technology University	10	9
Consultant bureau- Babylon University	10	8
Consultant bureau-Kufa University	10	6
Consultant bureau- Dyala University	10	7
Consultant bureau- Karbala University	10	7
Consultant bureau- Technology Education	10	7
Consultant bureau-Kirkuk University	10	4
Consultant bureau Al- mstansrea university	10	0
Consultant bureau Al Kadsia University	10	0
Consultant bureau -ThiKar University	10	0
Total	150	68

information and achieve the aims of the consultant bureaus).

- **Fourth section:** (Communications Barriers In Consultant Bureaus), this section includes three axis (technical communication barriers, financial communication barriers and communication barriers on the performance of employees).

Questionnaire was according to prepared (LikertScale) and was similar to (Merna and Al-Thani, 2005; Mousa, 2005; Al-Zwainy, 2009; Al-Zwainy and Hadhal, 2015, 2016; Al-Zwainy *et al.*, 2015b) scale.

The option titles in the likert scale are different according to the purpose of the measurement. In trend studies that have been built and proposed by Likert originally used (very agree, agree, neutral, disagree and is very disagree) (Al-Sumadia, 2013).

The study adopted a subject of neutrality in the distribution of questionnaires, a non-interference in the answers to the sample in order to achieve neutrality and given a chance to express their true opinion, so give each person sufficient period to the questionnaire where it was followed for a long time extended from 2/jun. / 2016 up to 1/march/2016, So as to get the largest number of questionnaires.

The study was keen in the drafting of the questionnaire phrases on simplicity and ease as much as possible so that they are understandable to the public that was covered by the questionnaire. Sixty-eight 68 questionnaires were collected out of one hundred fifty (150) forms and 68 forms were analyzed and thus the response ratio was (45%). The researcher classified data that were taken from the questionnaire and analyzed them using Statistical Package for Social Sciences (SPSS version20) (Table 2).

Statistical analysis was performed for the answers to the sample by using the following statistical methods) (Alfara, 2009):

- Test validity and reliability of the questions in the questionnaire used for data collection using the coefficient (Cronbach's Alpha) by the Eq. (1):

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum s_i^2}{s_T^2}\right) \tag{1}$$

where,

K : The number of items the group (the number of paragraphs within the same axis).

Si : Element variation

ST : Contrast the total score of the elements.

- Percentages to describe the members of the study and determine the percentages of their answers on a questionnaire phrases according to Eq. (2):

$$\%p = \frac{X_i}{\sum X_i} \tag{2}$$

%p: The percentage of classes where the answers reflect the proportions of each effect in accordance with the measure of the Lekert for the level of significance.

Xi: Variable Value; i: No. value of the variable.

- Mean to arrange the answers to study individual's phrases resolution by the degree of influence According to the Eq. (3):

$$X^- = \frac{\sum_{i=1}^k X_i f_i}{\sum f_i} \tag{3}$$

where,

X⁻: The mean of the distribution of data ranked repetitive

Xi : Grading range's average of item (i)

k : Number of items

i : The total number of data readings

f_i : Frequency

- Standard Deviation to measure the homogeneity of the study on the responses of individuals to influence the averages using the Eq. (4):

$$S.D = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}} \tag{4}$$

Table 3: Reliability coefficient

Section	No. of equation	Chronbach Alpha
Third section	42	0.944
Fourth section	19	0.926
Total	61	0.947

Table 4: Ages of the study sample

Item	N	Min.	Max.	Mean	S.D
Age	68	24	60	42	6.949

Table 5: No. of experience year in consultant bureau

Item	N	Min	Max	Mean	S.D
No. of experience year	68	1	30	15.27	6.017

where,

S.D: Stander Division

Validity many definitions, including the questionnaire to measure the status of the measure, including the fact that the survey reflects the content to be measured according to the relative weights to ascertain the sincerity the tool (Fatma and Marfit, 2002; Al-Jarjawi, 2010). Mathematically equal to the square root of the coefficient of stability (Alfara, 2009), Achieving validity is more important than the achievement of stability, because it has been characterized by stability testing, but it is validity (Fatma and Marfit, 2002). Validity is important method to employed collection of new data to check the model and its predictive ability (Rasool and Al-Zwainy, 2016).

There are several types such as a virtual sincerity is also known as truthfully arbitrators, as is the rule on the measuring instrument by its appearance, address and examine the consistency of her words with the title. So showing questionnaire on the number of arbitrators with experience and competence, on the grounds that the arbitrator someone who specializes in this area and it can be judged whether the questions set out in the questionnaire actually measure what they developed to measure (Al-Zwainy *et al.*, 2016).

Meaning (Reliability) to give the same results if the questionnaire was re-applied several times in a row on the same sample (Al-Jarjawi, 2010). Which gives this questionnaire the same result if the redistribution of the survey more than once under the same circumstances and conditions, or in other words that the questionnaire firming means stability in its results and not to be changed dramatically if were re-distributed to several times the sample during certain periods of time (Fatma and Marfit, 2002)?

Been confirmed reliability of study tool which gauges (liker scale) quintet using the Statistical Package for the Social Sciences program (SPSS version 20) through its reliability rate calculation. Where frequently used Cornbrach's alpha coefficient to measure the stability of scales that measure trends as a measure of Likert scale, Alfa scale gives the minimum value of the estimated coefficient of consistency, it If the alpha value is near than (1) This indicates already on the

stability of the questionnaire and therefore will be the Chronbrach Alpha coefficient values are calculated to measure the stability of the axes of the various study tool and the tool as a whole by the stability coefficient (Chronbach's Alpha), where alpha coefficient expresses the degree of internal consistency of the scale, Note that the reliability coefficient takes values ranging between(1-0) (Alfara, 2009). Table 3 show reliability coefficient of the tool:

Table 3 it is clear that reliability coefficient for section three and section four and a questionnaire were generally greater than (0.7). In some references must be at least 0.75 (Al-Baldawe, 2007). A firming acceptable coefficient and can therefore rely on the survey results, which it is abstracted.

RESULTS AND DISCUSSION

The questionnaire was divided into four main sections as previously stated:

First Section (Personal Information):

Age: Table 4 shows the age of the study sample ranging between (24-60) years and the average age of the sample 42 years. This shows that members of the study sample are not newly recruited and have the experience and knowledge necessary to manage affairs of the consultant bureau.

Year of experience: Table 5 shows the minimum number of years of experience in the study sample was one year and the most the number of experience years is 30 years and the average years of experience 15 years.

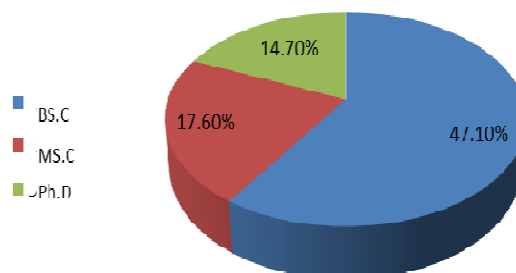


Fig. 2: Scientific degree

This indicates that members of the sample are not newly recruited and have experienced and skilled enough to manage their business.

Scientific degree: Figure 2 Shows scientific degrees of the respondents, where result show that (19.1%) of them hold a (B.Sc.) degree and (13.2%) hold an (M.Sc.) degree and (67.6%) hold a (Ph.D.) degree. This shows that the vast majority of the members of the sample were the hold a (Ph.D.) degree, which gives strength and accuracy in answering, the largest proportion of doctoral degree, because the work in the consultant bureau requires people have experience and decision-makers and providing consultancy.

Scientific specialization: Figure 3 Show communication Eng. by (1.5%) and computer Eng. By (4.4%) and architecture Eng. by (6%) and electrical Eng. by (8.8%) and chemical Eng. by (14.7%) and Mechanical Eng. By (17.6%), finally civil Eng. by (47.1%). This indicates that a diversity of engineering specialties in the study sample, which makes the answer

to the questionnaire more comprehensive and unlimited and that most of the study sample was specialization Civil Engineering, while specialization Communications Engineering is least; In addition, the study sample included many engineering specializations.

Functional position: Figure 4 shows Chairman of the Board of Directors by (1.5%) and Member of the Board of Directors by (7.4%) and Office Manager by (11.8%) and engineers by (26.4%), finally consultant by (52.9%). Notes from the percentages that consultants are the largest proportion in the study sample by 57%, who have work experience and decision-making for much of the consultant bureau.

Second section: (Reality of the Communication Process in Consultant Bureaus); Include the reality of the communication process in consultant bureau:

Q1: What are the most widely used communication techniques in the consultant bureaus?

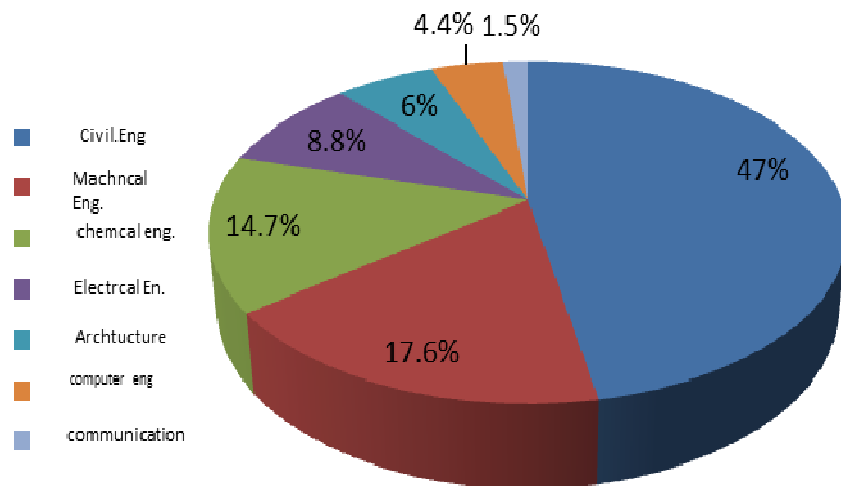


Fig. 3: Scientific specialization

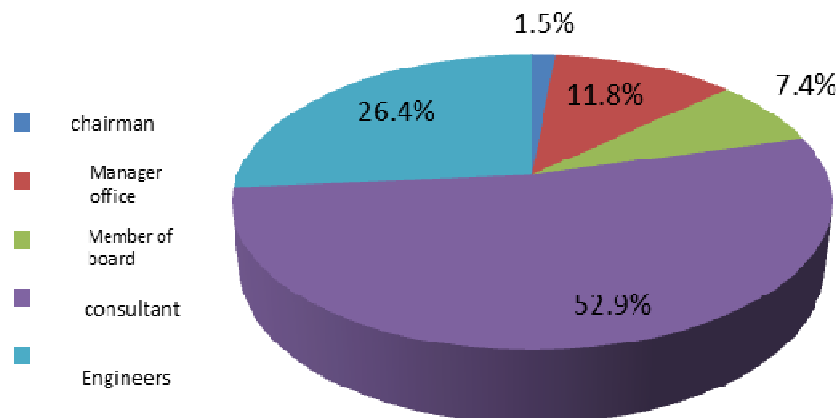


Fig. 4: Function position

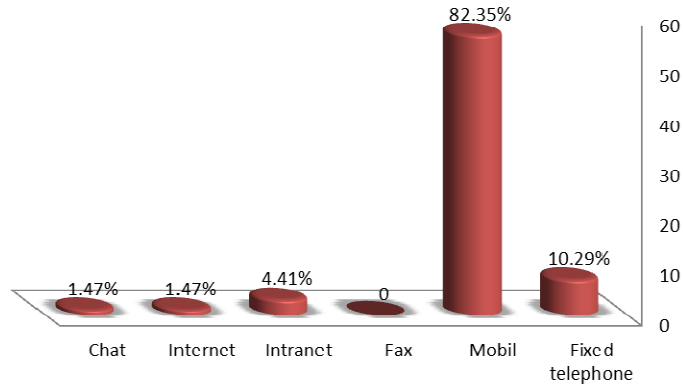


Fig. 5: Communication techniques used in consultant bureaus

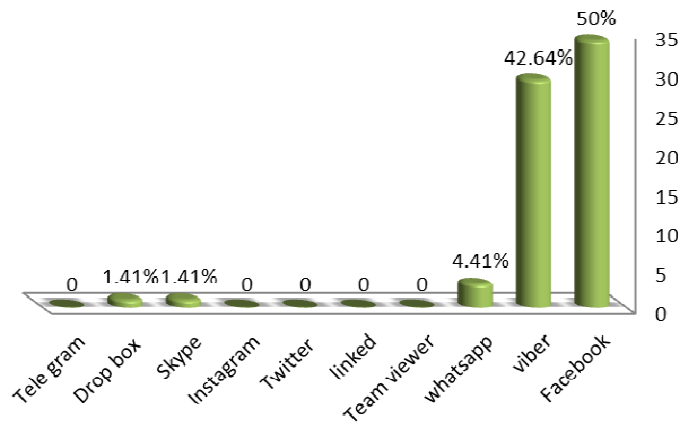


Fig. 6: Social communication programs in consultant bureaus

The most commonly used techniques in the consultant bureaus from the standpoint of the study sample is the mobile phone by (82.35%), Because of easy using and providing the information, especially in emergency situations, fixed telephone taken (10.29%), then intranet by (4.41%) ,finally internet and chat by (1.47%) (Fig. 5). Notice that the internet less frequently used Knowing that Internet technology is the most a development in field of communications.

Q2: What are the most used of social communication programs in the consultant bureaus?

Figure 6 shown the more social communication programs using in the consultant bureaus where the Facebook by (50%), viber by (42.64%), then Whatapp by (4.41%), finally skype and drop box by (1.47%). It is clear from the percentages that Facebook and fiber taken the largest proportion among the other social communication programs, while instagram, twitter, linked, team viewer, taken 0% that indicated the consultant bureaus Do not use most of the social networking programs.

Q3: Is there a communication management department at the consultant bureau?

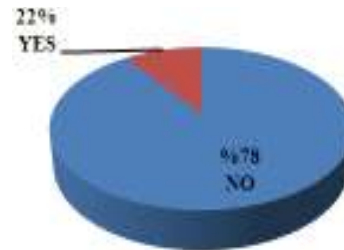


Fig. 7: Department of communications management

Sample of the study show that the percentage of (78%) confirms not existence the Department of Communication in consultant bureau and (22%) confirm its existence (Fig. 7):

Q4: Is there training programs of employees in the communication management system?

Figure 8 Shown that the (97%) of study sample confirms the absence of training programs for employees in the consultant bureaus on the communication management System, but (3%) confirm its existence.

Q5: Is there a programmed communications network between the sections consultant bureau?

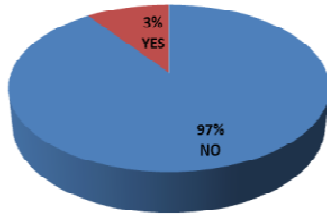


Fig. 8: Training programs for employees in the consultant bureau

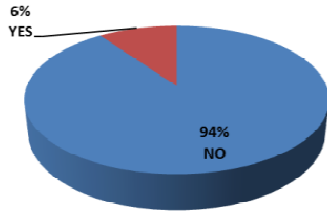


Fig. 9: Programmed networks between sections of consultant bureau

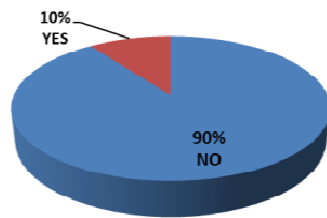


Fig. 10: Modern communications programs that work on smart phones

Sample of the study show that the percentage of (94%) confirms Absence of are programmed communication network between sections consultant bureau but (6%) confirm its existence (Fig. 9).

Q6: Are having the staffs of consultant bureau modern communication programs working on smart phones?

(90%) of the study sample they confirms Unavailability of modern communications programs for employees in consulting bureau working on smart phones, While the proportion of (10%) confirm its existence (Fig. 10):

Q7: Communication media of most used in consultant bureaus

In this equation include three sub questions as shown in the tab

Study sample indicated that the E-Paper is most used of communication medias between the consultant bureau and senior management and also between consultant bureau and customer by (64.7%) and (50%) Respectively, while mobile phone taken the grate percent (54.4%) between consultant bureau and staff (Table 6). This shows the consultant bureau depending on routine in communications, which takes time in the performance and decision-making.

In order to study the impacts of communication and communication barriers, a list of each was presented to the respondents to evaluate each item in a five grades system, which were already weighed in a scale of zero to one hundred (Table 7), then the relative impacts of each item was calculated using the equation (2):

Third section: (Efficiency of the Communication System in the Consultant Bureaus)

The third section included four main axes the impact of the efficiency of communication systems in the consulting offices on performance, decision-making and the provision of information processing and achieving the objectives of the consultancy offices. It found the percentages and standard deviation of the data from the Form-derived questionnaire by Eq. (2), (3) and (4) using a program-(SPSS version 20), the results were (Table 8):

Table 6: Communication media of most used

Items		E-Paper	E-mail	Fixed phone	Mobile	Meeting
What are most used of communication medias between consultant bureau and Higher Management?	Freq	44	8	0	13	3
	Per.%	64.7	11.8	0	19.1	4.4
What are most used of communication medias between consultant bureau and costumer?	Freq	34	5	1	26	2
	Per.%	50	7.4	1.5	38.2	2.9
What are most used of communication medias between staff of consultant bureau?	Freq	21	1	3	37	6
	Per.%	30.9	1.5	4.4	54.4	8.8

Table 7: The relative impact of communication

Grad Relative Impact (R.I)	Range		Xi
	Lower limit	Upper limit	
In effective	0	20	10
Little effect	20	40	30
Medium Effect	40	60	50
Effect	60	80	70
Very effect	80	100	90

Table 8: Effect the efficiency of the communication system in the consultant bureau on performance

Items	Statistical	Very effect	Effective	Medium effect	Little effect	Ineffective	Mean (X ⁻)	SD	(RI)
Access instructions and decisions through the channels of communication between the president and subordinates in a timely manner	Freq.	6	34	5	0	1	75.88	0.734	Effective
	Per.(%)	41.2%	50%	7.4%	0%	1.5%			
Accomplish the tasks assigned to employees in the consulting office without delay, thanks to the use of modern communications media	Freq.	19	39	7	1	2	71.17	0.844	Effective
	Per.(%)	27.9%	57.4%	10.3%	1.5%	2.9%			
Access generalizations to employees in consultant bureau quickly leads to increased acceleration performance	Freq.	28	32	6	1	1	75	0.799	Effective
	Per.(%)	41.2%	47.1%	8.8%	1.5%	1.5%			
Raising the efficiency of performance in the consultant bureau due to the clarity of communication among themselves	Freq.	17	41	10	0	0	72.05	0.791	Effective
	Per.	25%	60.3%	14.7%	0%	0%			
Communication means fast high-capacity between management and workers increase their interaction with each other.	Freq.	16	41	8	3	0	70.58	0.871	Effective
	Per.(%)	23.6%	60.3%	11.8%	4.4%	0%			

Effective = 72.94
SD: Stranded Deviation

First axis: Impact of the Efficiency of Communication System in the Consultant Bureaus on Performance.

These axis content 5 equations (Table 8), to obtain the arithmetic mean (x⁻) for equation one as follows:

$$X^- = \frac{28 * 90 + 34 * 70 + 5 * 50 + 0 * 30 + 1 * 10}{68} = 75.88$$

Table 8 shows that the Arithmetic mean of axle was (72.94), which indicates that the efficiency of the communication system in the consultant bureaus is (effective) on the performance and the standard deviation is (0.501), it indicated the homogeneity of the sample answers about this axis.

Second axis: Impact of the efficiency of Communication System in the Consultant Bureaus on Diction Making.

This axis content fourteen (14) equations (Table 9), to obtain the arithmetic mean (x⁻) for equation one as follows:

$$X^- = \frac{19 * 90 + 37 * 70 + 9 * 50 + 3 * 30 + 0 * 10}{68} = 71.17$$

Table 5 to 9 shows that the Arithmetic mean of axle was (69.31), which indicates that the efficiency of the communication system in the consultant bureaus is (effective) on the decision-making and indicates the standard deviation is (0.536) to the homogeneity of the sample answers about this axis.

Third axes: Impact of the Efficiency and Systems of Communication Techniques in Providing Information.

These axis content 12 equations (Table 10), to obtain the arithmetic mean (x⁻) for equation one as follows:

$$X^- = \frac{34 * 90 + 30 * 70 + 2 * 50 + 2 * 30 + 0 * 10}{68} = 78.24$$

Table 10 shown that the Arithmetic mean of axle was (75.65), which indicates that the efficiency of the communication system in the consultant bureaus is (effective) on the providing information and indicates the standard deviation of (0.522) to the homogeneity of the sample answers individuals about this axis.

Fourth axis: Impact of the Efficiency of Communication Systems in Achieve the Objects of the Consultant Bureaus.

These axis content 10 equations (Table 11), to obtain the arithmetic mean (x⁻) for equation one as follows:

$$X^- = \frac{22 * 90 + 32 * 70 + 9 * 50 + 4 * 30 + 1 * 10}{68} = 70.58$$

Table 11 shown that the Arithmetic mean of axle was (72.22), which indicates that the efficiency of the communication system in the consulting offices is (Effective) in Achieve the Objects of the Advisory

Table 9: Effect of the efficiency of communication system in the consultant bureaus on decisions makin

Items	Statistical	Very effect	Effective	Medium effect	Little effect	Ineffective	Mean (X ⁻)	SD	(RI)
Make decisions in a timely manner due to the effectiveness communication channels	Freq. Per.(%)	19 27.9%	37 54.4%	9 13.2%	3 4.4%	0 0%	71.17	0.77	Effective
Take appropriate decisions because of the clarity of the information in the communication channels used in the consulting offices	Freq. Per.(%)	11 16.2%	40 58.8%	16 23.5%	1 1.5%	0 0%	67.94	0.672	Effective
Ease of communication between workers in the consultant bureau lead to take the appropriate decision	Freq. Per.(%)	13 19.1%	43 63.2%	10 14.7%	2 2.9%	0 0%	69.70	0.680	Effective
The effectiveness of decision-Systems is working to improve the implementation of decisions	Freq. Per.(%)	19 28%	38 55.9%	10 14.7%	1 1.5%	0 0%	72.05	1.162	Effective
Contact is part of the administrative operations of the consultant bureau and a means effective in to take appropriate decisions.	Freq Per.(%)	11 16.2%	45 66.2%	10 14.7%	2 2.9%	0 0%	69.12	0.801	Effective
Obstruct the decision-making process because of the communication systems in the consulting offices	Freq Per.(%)	10 14.7%	33 48.5%	14 20.6%	10 14.7%	1 1.5%	62.05	0.964	Effective
Conducting personal interviews between the head bureau and its members to solve problems and things are related to business	Freq. Per.(%)	36 52.9%	21 30.9%	8 11.8%	3 4.4%	0 0%	76.47	0.854	Effective
Contributes to the recruitment and use of existing communications technology is currently Consultant bureau to improve the decision-making level	Freq Per.(%)	23 33.8%	33 48.5%	9 13.2%	3 4.4%	0 0%	72.35	0.801	Effective
Contributes to the recruitment and use of existing communications technology is currently the consultant bureau at the speed of decision-making	Freq Per.(%)	18 26.5%	31 45.6%	17 25%	2 2.9%	0 0%	69.11	0.799	Effective
Contributes to the recruitment and use of existing communications technology currently consultant bureau in reducing the time and effort necessary to make decisions	Freq Per.(%)	15 15	37 37	13 13	3 3	0 0	68.82	0.896	Effective
It contributes to the recruitment and use of communications currently in consultant bureau to reduce the cost of save the information technology for decision makers	Freq Per.(%)	22 32%	34 50%	10 14.7%	2 2.9%	0 0%	72.35	0.763	
Few currently on the consultant bureau and communication technologies are not available in full to reduce the efficiency of the service contribute to decision-making		14 20.6%	29 42.6%	27.9%	7.4%	1.5%	64.71	0.924	Effective
It contributes to reduced personnel training on communication currently in consultancy office to reduce the efficiency of the decision-making techniques level	Freq Per.(%)	14 20.6%	30 44.1%	16 23.5%	7 10.3%	1 1.5%	64.41	0.959	Effective
Not wanting to communication among managers contribute to the reduction of the efficiency of the decision-making	Freq Per.(%)	20 29.4%	2 7.1%	8 11.8%	7 10.3%	1 1.5%	68.53	0.982	Effective
Contributes to deficiencies in communication skills of managers to reduce the efficiency of the decision-making	Freq Per.(%)	28 41.7%	23 33.8%	10 14.7%	6 8.8%	1 1.5%	70.88	1.132	Effective

Effective = 69.31

SD: Stranded Deviation

Table 10: Impact of the efficiency and systems of communication techniques in providing information

Items	Statistical	Very effect	Effective	Medium effect	Little effect	Ineffective	Mean(\bar{X})	SD	(RI)
Effective information system (accuracy, timing, format) increases the understanding of the message	Freq	34	30	2	2	0	78.24	0.696	Effective
	Per.(%)	50%	44.1%	2.9%	2.9%	0%			
Ease of transmission and processing of information indicates the presence of an effective communication channels	Freq	28	31	7	2	0	75	0.760	Effective
	Per.(%)	41.2%	45.6%	10.3%	2.9%	0%			
Communications consultant bureau provide information about problems and ways to solve them	Freq.	30	33	4	1	0	77.05	0.663	Effective
	Per.(%)	44.1%	48.5%	5.9%	1.5%	0%			
Protect information and prevent distortion reflects the existence of efficient means of communication	Freq.	25	32	6	5	0	72.64	0.862	V.Effective
	Per.(%)	36.8%	47.1%	8.8%	7.4%	0%			
Communication between offices and advisory institutions, government departments requires oral communication	Freq.	25	29	10	4	0	72.06	0.992	V.Effective
	Per.(%)	36.8%	42.6%	14.7%	5.9%	0%			
Communication between offices and consultant bureau, government departments requires personal interview	Freq.	29	24	13	2	0	73.53	0.845	V.Effective
	Per.(%)	42.6%	35.3%	19.1%	2.9%	0%			
The use of e-paper between offices and institutions of government departments and the private sector	Freq.	27	26	12	3	0	72.64	0.991	V.Effective
	Per.(%)	39.7%	38.2%	17.6%	4.4%	0%			
The use of e-mail between offices and institutions of government departments and the private sector	Freq.	33	26	7	2	0	76.47	0.781	Effective
	Per.(%)	48.5%	38.2%	10.3%	2.9%	0%			
When there are acts do not bear the delay between relevant parties and the Advisory Office is used for communication by mobile personal	Freq.	35	23	9	1	0	77.05	0.768	Effective
	Per.(%)	51.5%	33.8%	13.2%	1.5%	0%			
Completion of the internal network (Intranet) within the Office helps speed the exchange of information and increase mutual cooperation	Freq.	41	20	4	3	0	79.11	0.799	Effective
	Per.(%)	0.3%	29.4%	5.9%	4.4%	0%			
The need to integrate parts of the external hard Printers and Scanners units linked to computer networks within Consultant Bureau	Freq.	31	29	7	1	0	76.47	0.722	Effective
	Per.(%)	45.6%	42.6%	10.3%	1.5%	0%			
The need to have all the consultant bureau a website an e-mail special on its website because of its great benefits	Freq.	38	19	10	1	0	77.65	0.792	Effective
	Per.(%)	55.9%	27.9%	14.7%	1.5%	0%			

Effective=75.65

SD: Stranded Deviation

Table 11: The impact of the efficiency of communication systems in achieve the objects of the consultant bureaus

Item	Statistical Process	Very effect	Effective	Medium effect	Little effect	Ineffective	Mean(\bar{X})	S.D	Relative impact
Priorities are identified, targets to be achieved by the consulting firm through a communication system.	Freq.	22	32	9	4	1	70.58	0.914	Effective
	Per.(%)	32.4%	47.1%	13.2%	5.9%	1.5%			
Contact between construction consultant bureau and their environment leads to the development of interaction between them	Freq.	28	29	8	2	1	73.97	0.868	Effective
	Per.(%)	41.2%	42.6%	11.8%	2.9%	1.5%			
Successful contact reconcile the objectives of the consultant bureau and staff	Freq.	26	35	4	1	2	74.11	0.991	Effective
	Per.(%)	38.3%	51.5%	5.9%	1.5%	2.9%			
Effective communication can generate ideas that will help to achieve the objectives of the consultant bureau.	Freq.	24	37	4	2	1	73.82	0.796	Effective
	Per.(%)	35.3%	54.4%	5.9%	2.9%	1.5%			
Ascribes to failure to achieve consultant bureau for some of its goals to malpractice communication between management and employees	Freq.	18	30	17	2	1	68.23	0.876	Effective
	Per.(%)	26.5%	44.1%	25%	2.9%	1.5%			

Table 11: Continue

The organizational structure the consulting firm obviously facilitates contact to every employee his duty.	Freq.	27	30	10	1	0	74.41	0.750	Effective
	Per.(%)	39.7%	44.1%	14.7%	1.5%	0%			
Contact skill consulting firm reduces mistakes	Freq.	22	34	11	1	0	72.64	0.731	Effective
	Per.(%)	32.4%	50%	16.2%	1.5%	0%			
Communications' role in the evaluation of performance and work productivity	Freq.	19	32	14	3	0	69.71	0.819	Effective
	Per.(%)	27.9%	47.1%	20.6%	4.4%	0%			
Communications is working to tighten censorship thus correcting deviations	Freq.	20	36	9	2	1	71.17	0.826	Effective
	Per.(%)	29.4%	52.9%	13.2%	2.9%	1.5%			
Treatment the delay due to rotten in consultant Buru performance by communication media	Freq.	25	34	6	2	1	73.52	0.828	Effective
	Per.(%)	36.8%	50%	8.8%	2.9%	1.5%			

Effective =72.22
SD: Stranded Deviation

Table 12: Technical communication barriers

Articles	Statistical	Very agree	Agree	Neutral	Dis agree	Very disagree	Mean	SD	Relative Agree(R.A)
Lack of technical potential of required to use communication techniques in the consultant bureau	Freq.	23	32	11	2	0	72.35	0.782	Agree
	Per.(%)	33.8%	47.1%	16.2%	2.9%	0%			
Absence training program that required to development of skill of worker in the use of communication technology	Freq.	28	27	9	4	0	73.23	0.874	Agree
	Per.(%)	41.2%	39.7%	13.2%	5.9%	0%			
Weakness perform maintenance operations of the means of communication available	Freq.	25	33	5	5	0	72.94	0.851	Agree
	Per.(%)	36.8%	48.5%	7.4%	7.4%	0%			
Frequent breakdowns and the available means of communication	Freq.	22	26	16	4	0	69.41	1.01	Agree
	Per.(%)	32.4%	38.2%	23.5%	5.9%	0%			
The weakness of some of the workers the ability of consultant bureau to keep pace with technological developments in the means of communication	Freq.	26	22	16	4	0	70.58	0.929	Agree
	Per.(%)	38.2%	32.4%	23.5%	5.9%	0%			
Lack of technical support Communications in the departments and sections of the consultant bureau	Freq.	36	19	8	5	0	75.29	0.94	Agree
	Per.(%)	52.9%	27.9%	11.8%	7.4%	0%			
Technical problems which occur during the use of the means of communication in the work of the consultant bureau.	Freq.	30	24	13	1	0	74.41	0.807	Agree
	Per.(%)	44.1 %	35.3%	19.1%	1.5%	0%			

Average = 72.60
SD: Stranded Deviation

Office and indicates the standard deviation of (0.611) to the homogeneity of the sample answers about this axis.

Section four: (communication barriers): Included barriers communications in consultant bureaus and is divided into three major barriers to a financial and technical barriers and barriers communications on the performance of employees in consultant bureaus. We found the percentages and standard deviation of the data from the Form-derived questionnaire by equations (2) and (4) and using a program -(SPSS version 20), the results were as shown in the Table 12, This section includes three main axes:

First Axle: Technical communications barriers: This axis content 7 equations as shown in the Table 12, to obtain the arithmetic mean (\bar{x}) for equation one as follows:

$$\bar{x} = \frac{23 * 90 + 32 * 70 + 11 * 50 + 2 * 30 + 0 * 10}{68} = 72.35$$

Table 12 show the Arithmetic mean of the axis was (72.6), refers to a study sample agreement about Technical Communications barrier in consultant bureaus and indicates the standard deviation of (0.706) to the homogeneity of the study sample answers.

Table 13: Financial communications barrier

Items	Statistical	Very agree	Agree	Neutral	Dis agree	Very disagree	Mean	SD	R.A
The lack of the necessary financial resources for the establishment of a sophisticated communication systems	Freq.	28	30	8	2	0	74.71	0.775	Agree
	Per.(%)	41.2%	44.1%	11.8%	2.9%	0%			
The high cost of maintenance of modern communication techniques	Freq.	1	31	10	5	1	69.41	0.999	Agree
	Per.(%)	30.9%	45.6%	14.7%	7.4%	1.5%			
The high cost of the necessary training programs for the rehabilitation of workers in the consultant bureau	Freq.	24	30	10	4	0	71.76	0.859	Agree
	Per.%	35.3%	44.1%	14.7%	5.9%	0%			
Rising prices communication technologies (hardware)	Freq.	27	25	14	2	0	72.64	0.844	Agree
	Per.%	39.7%	36.8%	20.6%	2.9%	0%			
The speed of modern communication techniques damage when misuse	Freq.	18	33	14	3	0	69.41	0.809	Agree
	Per.%	26.5%	48.5%	20.6%	4.4%	0%			
The lack of the necessary financial allocations for planning the use of communication technologies in business consultant bureau	Freq.	30	25	11	2	0	74.41	0.825	Agree
	Per.(%)	44.1%	36.8%	16.2%	2.9%	0%			
Use personal phone to connect and network due to additional cost	Freq.	34	25	7	2	0	76.76	0.784	Agree
	Per.%	50%	36.8%	10.3%	2.9%	0%			

Average = 72.72
SD: Stranded Deviation

Table 14: Communication barrier on employs performance in consulting bureau

Items	Statistical	Very agree	Agree	Neutral	Dis agree	Very disagree	Mean	SD	R.A
Consultant bureau need sophisticated communication system serves all employees	Freq.	40	20	7	1	0	80	0.914	Vary agree
	Per.(%)	58.9%	29.4%	10.3%	1.5%	1.5%			
Palaces administration policy towards modernizing communication systems	Freq.	29	25	12	2	0	73.82	0.970	Agree
	Per.(%)	42.7%	36.8%	17.6%	2.9%	1.5%			
The absence of strategic planning required for the development of communication systems	Freq.	27	32	7	2	0	74.71	0.907	Agree
	Per.(%)	39.7%	47.1%	10.3%	2.9%	0%			
Compliance with regulations and instructions routine at work	Freq.	34	27	5	2	0	77.94	0.905	Agree
	Per.(%)	51.5%	39.7%	5.9%	2.9%	0%			
Slow application stages of electronic management in the work and tasks of consultant bureau.	Freq.	33	31	2	2	0	77.94	1.013	Agree
	Per.(%)	48.5%	45.6%	2.9%	2.9%	0%			

Average= 76.88
SD: Stranded Deviation

Second axes: Financial communications barrier:
This axis content seven (7) equations (Table 13), to obtain the arithmetic mean (\bar{x}) for equation one as follows:

$$\bar{X} = \frac{28 * 90 + 30 * 70 + 8 * 50 + 2 * 30 + 0 * 10}{68} = 74.71$$

Table 13 shown the Arithmetic mean of the axis is (72.72), refers to a study sample (agreement) about Presence Financial Communications barrier in consultant bureaus and indicates the standard deviation of (0.652) to the homogeneity of the study sample answers about this axis.

Third axis: Communications barriers on employ performance in consultant bureaus: This axis content 7 equations (Table 14), to obtain the arithmetic mean (\bar{x}) for equation one as follows:

$$\bar{X} = \frac{40 * 90 + 20 * 70 + 7 * 50 + 1 * 30 + 0 * 10}{68} = 80$$

Table 14 shows the Arithmetic mean is (76.88), This indicates the study sample they agreed of presence communication barrier on employs performance in consultant bureaus and indicates the standard deviation of (0.784) to the homogeneity of the sample answers about this axis.

CONCLUSION

From the previous analysis and the result that were collected by the close questionnaire, it can be said that the information of axis one has proved that the questionnaire sample are well-experienced in diversity engineering fields of construction works. In second section, study of the reality of the communications management in consultant bureaus, Through this section has been identified as the most communication media using between senior management and Management Bureau, between consultant bureau and customer and between the staff of the consultant bureau, as well as the most using of social networking programs. On the other hand, the results have shown in third section that is a lack of knowledge about the efficiency of the communication system in the consultant bureau and using statistical tools to analysis the results of study sample was effective (impacts of communication systems on performance, decision-making and information's distributed) in consultant bureaus. Finally, four section include communication barriers and individual in to three axis (technical communication barriers, financial communication barriers and communication barriers on worker performance) in consultant bureaus, the results of study sample agreed on the existence of communication barriers. So the researcher is recommended to improve the communications management in the consultant bureaus. Latterly, this study is the first studies in the field of evaluating the performance of consulting firms and therefore are considered guide for researchers in the future and they can compare their results with this study and indicate the strengths and weaknesses.

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