The Management of Information Systems and Its Impact on the Quality of Services
(From the Perspective of Students: A Case Study)

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---Abstract--
This study aimed to identify the impact of management information systems (MIS) techniques on the quality of services provided at the University of Tabuk from the perspective of students. To achieve the goals of the study, one question were developed and distributed on a random sample of 244 students at the University of Tabuk in the Kingdom of Saudi Arabia. The Statistical Package of Social Sciences (SPSS, V.16) was used to analyze the data of the question.

Keywords – information technology, management, MIS, services, quality

I. INTRODUCTION

The topic of IT techniques is one of the core issues that the researchers sought to highlight and study various aspects thereof, in order to enrich the subject and take advantage of the results of studies and research that is being reached in the development of applications in various business organizations.

The utilization of IT among administrative organizations requires the making of radical changes across administrative systems that impact human resources in terms of technical skills, know-how, organization policies, and the leaders' behavior which plays a major role in success regardless of any difficulties faced by the staff. In order for organizations to advance into the future, they must adopt the technology utilization approach, which is a mandatory requirement for such organizations which seek excellence in performance.

Hence, this study seeks to measure the impact of the use of management information systems technology and the quality of services provided by the University of Tabuk in the Kingdom of Saudi Arabia, due to the importance of technology in providing effective services.

1.2 Study Problem

The problem of the study lies in the fact that the University of Tabuk has not accommodated the change towards the use of technology in performing its functions and operations; it rather remained in the same position away from progress and excellence, due to the intensification of competition between private and public organizations as a result of the multiplicity and diversity of services and organizations that provide such services on one hand, and the high level of their needs and expectations and desires, and different standards of judgment of the quality of services that they consume the other hand. The use of technology has many positive and effective advantages that are reflected on the organization itself such as technological development, competition, the desire to improve work and others, which leaves various outcomes and results on the organization, both at the level of work and the services provided. So the problem of the study is illustrated by the lack of awareness and knowledge of the impact of using of management information systems technology and quality on the services provided by the University of Tabuk in the Kingdom of Saudi Arabia.

1.3 Study Questions

The study seeks to answer the following questions:
Question One: What are the perceptions of staff at the University of Tabuk in the Kingdom of Saudi Arabia about the use of management information systems technology?
Question Two: What is the level of quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia from the perspective of its staff?

1.4 Importance of the Study

The importance of this study stems from the interest in users, although attention is often focused on information

technology and its material components. Since this study addresses the use of management information systems technology, it acquires a new dimension in studying ways to develop information systems in the organization. Also, this study is important because it considers the use of management information system technology and its impact on the quality of services provided by the University of Tabuk in the Kingdom of Saudi Arabia. Further, this study gains its important from the following factors:

1. It addresses the organizational concept of using Management Information Systems (MIS) technology, which is one of the important topics in the modern management doctrine, being an important source for the survival and durability of the organization, especially in organizations that seek to adopt a strategy of modern management that allows the involvement of workers in making decisions, exploiting opportunities, and increasing their competitiveness and creativity.

2. Since this concept (perceived management information systems technology) is relatively new in this environment, subjecting this concept to an applied study gives the study a clear importance within the academic framework for advanced management methods in the acquisition of knowledge and skills which can be used to improve performance and increase productivity.

3. The importance of this study also stems from the importance of adopting the use of management information systems technology at the University of Tabuk in the Kingdom of Saudi Arabia; the use of which helps in the adoption of new operation methods that differ from the typical traditional work, and therefore helps the university to solve its problems and embrace change as a methodology.

4. Also, this study can guide the attention of managers and decision-makers at the University of Tabuk to the importance of adopting the use of the management information systems technology with a view to being promoted to help improve the quality of services.

5. This study contributes to enriching the Arabic literature with a new topic of interest to researchers and practitioners, and is the starting point for further studies.

5.1 Objectives of the Study
This study aims mainly to analyze and measure the impact of the use of management information systems technology and quality of services provided by the University of Tabuk in the Kingdom of Saudi Arabia, and this can be achieved through the following targets:

- Identifying the extent of the use of information technology at the University of Tabuk in the Kingdom of Saudi Arabia.
- Identifying the level of quality of services at the University of Tabuk in the Kingdom of Saudi Arabia.
- Measuring the impact of the use of information technology (hardware, software, security, and usability) on the level of quality of services provided across different

dimensions (tangible physical evidence, reliability, response strength, safety and confidence, and empathy.
- Presenting a conceptual framework on the topic of using information technology and the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia.
- Making recommendations based on the results of the study that help decision makers to adopt the use of information technology as an approach that contributes to the success of organizations to improve the quality of their services.

1.6 Study Hypotheses
This study is based upon the following hypotheses:

Sub-hypothesis 1: There is no statistically significant effect at the level of confidence ($0.05 \leq \alpha$) for the use of information technology dimensions (hardware, software, security, and usability) on safety and confidence as a dimension of the quality of services provided.

Sub-hypothesis 2: There is no statistically significant effect at the level of significance ($0.05 \leq \alpha$) for the use of information technology dimensions (hardware, software, security, and usability) on empathy as a dimension of the quality of services provided.

The first major hypothesis: There are no statistically significant differences at the level of confidence ($0.05 \leq \alpha$) for the perceptions of staff at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of the use of information technology that are attributable to personal and functional factors (educational qualification, age, years of experience, and job title).

The second major hypothesis: There are no statistically significant differences at the level of significance ($0.05 \leq \alpha$) for the perceptions of staff at the University of Tabuk in the Kingdom of Saudi Arabia about the quality of services provided that are attributable to personal and functional factors (educational qualification, age, years of experience, and job title).

1.7 Procedural Definitions:
a .Independent variable:
Use of information technology (hard and soft components of computers, i.e. hardware and software together), which refers in the broad sense to all information systems in the organization. It consists of the following dimensions: devices, software, security and usability.

b .Dependent variable :
Quality of services provided: The product characterized by non-tangibility and correlation (inseparability of the service and the provider), the inability to store, contrast (plurality and difference), the dependence on the degree of the provider's skill and the place of provision, integration with tangible products when presented, and the inability to develop defined and specific standards to measure the degree of quality as well as the need for a beneficiary when produced or co-produced. It consists of the following dimensions: physical and tangible evidence, reliability, responsiveness, security and confidence, and empathy.

II.   DETAILS

The implications of utilizing computerized management information systems

There is a wide range of effects for the enforcement and utilization of computerized management information systems, of which the most important are as follows (Al-Khatib and Zighan, 2009):

1.   Increasing productivity
2.   Improving the quality of administrative processes.

Service concept

Organizations provide services to the community or to organizations with or without a certain price, according to the nature of the service provided, and also according to the nature of the provider organization.

The service is mainly provided in order to satisfy the wishes and requirements of customers; it thus forms strong relationships between customers and organizations providing service. The concept of service is not limited to the performance of an activity; it should rather fit and match the preferences of customers benefiting from the service (Santos, 2003).

The 'quality of service' concept

Organizations provide services to the community or to organizations with or without a certain price, according to the nature of the service provided, and also according to the nature of the provider organization. The service is mainly provided in order to satisfy the wishes and requirements of customers; it thus forms strong relationships between customers and organizations providing service. The concept of service is not limited to the performance of an activity; it should rather fit and match the preferences of customers benefiting from the service

Steps to attain quality in customer services:

There are many common steps that achieve appropriate and adequate customer service, attain their targeted satisfaction towards the organization and the marketing services that should be provided to them in this area, such as: attracting attention, generating interest in customers, creating a desire among customers, identify their needs, persuading the customers and addressing their objections promptly (Al-Khatib, Fahd, and Gharaibeh, 1998; Abu Musa, 2000)

Ensuring that customers continue to deal with the organization; this comes through a variety of sales and marketing services that form the basis for ensuring loyalty between the organization and its customers (Sumaidaie and Allaq, 2002; Taamna, and Harahshah, 1995); paying attentions to customers' complaints and feedback and addressing situations through:

Apologizing to customers and making them feel the importance of the complaint filed by them, compensating them for the loss resulting from it, replacing defective parts or those unfit for the use of the commodity, replacing the entire commodity with another or an alternative item with showing gratitude to them in order to maximize their role in supporting the organization, and providing services after the completion of the sale and contracting process.

Reasons for measuring the level of quality and customer satisfaction:

Identifying the causes of the measurement and evaluation process leads to significant progress in the results achieved as follows (Mualla & al-Tai, 2002; Allaq, 2001): identifying the impressions and opinions of the customers, identifying the requirements and expectations of the customer, filling and bridging gaps, setting goals, advanced performance leads to increase profit, assessing the current level of the organization and determining its future plans, the ability to continue the process of development.

Service quality standards:

Service quality standards have been proposed in pursuit of improving the level of services provided to consumers, including public services, and such standards rely primarily on surveys of consumer satisfaction, linking consumers' perceptions about receiving the service and the predicted service quality perceived. The significance of these surveys is that they serve as feedback from consumers and are very useful in determining whether the service image needs to be improved (Enezi, 2007).

Latifa (2002) pointed out that there are five key determinants of quality arranged according to their importance as follows: confidence or reliability, tangible aspects, responsiveness, assurance, and empathy and compassion.

III.   METHODOLOGY AND DESIGN

3.1 Methodology

The study adopted the descriptive, field and analytic research methodology. As per the descriptive research, desk research was conducted and field and theoretical studies were reviewed in order to develop the principles and foundations underlying the theoretical framework, in addition to reviewing a number of notable previous studies, which are a vital source for the study in their areas of knowledge.

As for the analytic field research, a comprehensive exploratory survey was conducted, and all the data collected through questionnaires were analyzed using appropriate statistical methods, and the study relied on the developed questionnaire .

3.2 Study population

The study population consisted of students at the University of Tabuk in the Kingdom of Saudi Arabia's. As per the study's student population, it consisted of all regular students at the University of Tabuk and those enrolled to study the optional requirements of the university during the

second semester of the academic year 2010/2011 totaling 10580 students (Admission and Registration Unit, University of Tabuk, 2011).

IV.   STUDY SAMPLE

Distributed to members of the study sample, 439 questionnaire were retrieved, which accounted for

As for the sample of students, 21 divisions were chosen randomly from among compulsory and optional university requirements totaling 86 divisions, which usually comprise students from different school years and faculties. Data were collected from students between lectures. And due to the possibility of the involvement of the student himself in other cultural material in the same class, data were only collected once from the same student, and he was excluded With respect to the university degree variable, Table (1) shows that the highest percentage was for undergraduate students (69.79%), while graduate students accounted for 30.21% of the total.

As per the school year variable, second year students accounted for 33.19% of the total, followed by first-year students which accounted for 26.38%, followed by third-year students with 25.11%, and finally came fourth year students with 15.32%.

As for the GPA variable, students with a "good" GPA accounted for 48.94% of the total, followed by students with "very good" GPA who accounted for 34.47% of the total, followed by students with an "excellent" GPA who accounted for 12.77% of the total, and finally came the students with an "acceptable" GPA who accounted for 3.83% of the total.

With regard to monthly income variable, students with a monthly income of (SR15,001-20,000) accounted for 46.43% of the total, followed by students with a monthly income of (over SR21,000) who accounted for 17.02% of the total, followed by students with a monthly income of (SR10,001-15,000) who accounted for 15.32% of the total, and finally came students with a monthly income of (less than SR10,000) who accounted for 7.23% of the total.

V.   STUDY TOOLS

The following two tools were used in this study :
One: Information technology study tool
By reviewing literature on information technology, in line with the objectives of this study and in order to gather information and test the hypotheses of the study, a questionnaire has been developed which comprises two parts:

Part I: devoted to the collection of personal and job data about staff, and includes (age, job title, job experience, educational qualification(

Part II: consists of 20 paragraphs that measure the study's independent variable of information technology, as well as the development of this part based on the

from other classes where he is enrolled. Consequently, the sample size was 350 students.244 questionnaires were retrieved at a rate of 90%. Nine questionnaires were excluded for lack of suitability for analysis, and thus 235 questionnaires were analyzed comprising 96.3% of retrieved questionnaires and 67.1% of the study sample, which is acceptable for the purposes of scientific research.

Description of the characteristics of the students sample at the University of Tabuk:
Table (1) Distribution of the study sample by variables (university degree, academic year, grade point average (GPA), and monthly income)

studies of (Yousuf, 2010; Aisan, Ani, 2008; Al-Jadiyah, 2008; Kasasbeh, 2007; Al-Bahisi, 2006; Hawamdeh, 2002). It was modified to suit the nature and functions of staff in the study population, and includes four sub-dimensions for measuring information technology, namely: (hardware, software, security, and usability).

VI.   STATISTICAL TREATMENTS

After the data has been entered using the Statistical Package for Social Sciences software (SPSS.16.1), the following statistical treatments were used:
- Descriptive Statistic Measures: used to describe the characteristics of the study sample in figures, percentages, mathematical averages and standard deviation.
- Multiple Regression Analysis: used to test the validity of the study model and the impact of the independent variable on the dependent variable.
- One Way ANOVA: used to to test for differences in demographic variables of the respondents' perceptions about the dependent variables.
- Stepwise Multiple Regression Analysis: used to test the entry of independent variables in the equation to predict the dependent variable.
- Variance Inflation Factor (VIF) and Tolerance to make sure that there is no high correlation (Multicollinearity) between the independent variables.
- Skewness coefficient test: used to make sure that the data follow a normal distribution.
- Cronbach's Alpha equation of internal consistency: used to verify the reliability of study tool.
Sub-hypothesis 4: There is no statistically significant effect at the level of confidence (0.05≤α) for the information technology dimensions (hardware, software, security, and usability) on security and confidence as a dimension of the quality of services provided.
Table (2) Results of multiple regression analysis to test the impact of information technology on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia.
    *Statistically significant at the level ($0.05 \geq \alpha$)

Information technology dimensions	B	Standard error	Beta	Calculated t value	Level of significance (t)
Hardware	0.270	0.054	0.286	* 4.980	0.000
Software	0.232	0.062	0.188	* 3.769	0.000
Security	0.128	0.056	0.127	* 2.267	0.024
Usability	0.316	0.053	0.298	*5.945	0.000

Evidenced by the statistical results appearing in Table (2), along with the t-test values, the following sub-variables (hardware, software, security, and usability) have an impact on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia, whereby the values of calculated t amounted to 4.980, 3.769, 2.267 and 5.945, respectively, which are significant values at the level of significance $(0.05 \geq \alpha)$. The above requires the following: reject of the null hypothesis, which states that: There is no statistically significant effect at the level of significance $(0.05 \geq \alpha)$ for the information technology dimensions (hardware, software, security, and usability) on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the

Kingdom of Saudi Arabia and accept the alternative hypothesis which states that: There is a statistically significant effect on the level of significance $(0.05 \geq \alpha)$ for the information technology dimensions (hardware, software, security, and usability) on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia.

Table (18) Results of Stepwise Multiple Regression analysis to predict security and confidence through the dimensions of information technology as independent variables

*Statistically significant at the level $(0.05 \geq \alpha)$

Order of entry of independent elements in prediction equation	R2 Determination coefficient	Calculated t value	Level of significance (t)
Usability	0.348	7.260*	0.000
Hardware	0.457	6.991*	0.000
Software	0.486	4,228*	0.000
Security	0.495	2,746*	0.009

When the Stepwise Multiple Regression analysis was conducted to determine the importance of each independent variable in contributing to the mathematical model, which represents the impact of the information technology dimensions (hardware, software, security, and usability) on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia, as evidenced by Table (18), which shows the order of entry of the independent variables in the regression equation, the usability dimension ranked first, interpreting 34.8% of variance in the dependent variable, followed by hardware which interpreted with usability 45.7% of variance in the dependent variable, followed by software which interpreted with two prior variables 48.6% of variance in the dependent variable, and finally came in security which interpreted with all the previous variants 49.5% of variance in security and confidence as a dimension of the

quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable.

Sub-hypothesis 5: There is no statistically significant effect at the level of confidence $(0.05 \leq \alpha)$ for the information technology dimensions (hardware, software, security, and usability) on empathy as a dimension of the quality of services provided.

Table (3) Results of multiple regression analysis to test the impact of information technology on empathy as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia.

*Statistically significant at the level $(0.05 \geq \alpha)$

Information technology dimensions	B	Standard error	Beta	Calculated t value	Level of significance (t)
Hardware	0.299	0.077	0.241	* 3.901	0.000
Software	0.229	0.084	0.151	* 2.741	0.0 07
Security	0.184	0.074	0.158	* 2.493	0.0 013
Usability	.0321	0.072	0.243	*4,396	0.000

above

Evidenced by the statistical results appearing in Table (3), along with the t-test values, the following sub-variables (hardware, software, security, and usability) have an impact on empathy as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia, whereby the values of calculated t amounted to 3.901, 2.741, 2.493 and 4.396, respectively, which are significant values at the level of significance $(0.05 \geq \alpha)$.The

requires the following: reject of the null hypothesis, which states that: There is no statistically significant effect at the level of significance $(0.05 \geq \alpha)$ for the information technology dimensions (hardware, software, security, and usability) on empathy as a dimension of the quality of services provided, and accept the alternative hypothesis.

Table (4) Results of Stepwise Multiple Regression analysis to predict empathy through the dimensions of information technology as independent variables

*Statistically significant at the level $(0.05 \geq \alpha)$

Order of entry of independent elements in prediction equation	R2 Determination coefficient	Calculated t value	Level of significance (t)
Usability	0.266	6.671*	0.000
Hardware	0.341	5.703*	0.000
Software	0.371	4.793*	0.000
Security	0.384	2.891*	0.009

When the Stepwise Multiple Regression analysis was conducted to determine the importance of each independent variable in contributing to the mathematical model, which represents the impact of the information technology dimensions (hardware, software, security, and usability) on empathy as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia, as evidenced by Table (4), which shows the order of entry of the independent variables in the regression equation, the usability dimension ranked first, interpreting 26.6% of variance in the dependent variable, followed by hardware which interpreted with usability 34.1% of variance in the dependent variable, followed by software which interpreted with two prior variables 37.1% of variance in the dependent variable, and finally came in security which interpreted with all the previous variants 38.4% of variance in empathy as a dimension of the quality of services provided as a dependent variable.

Second major hypothesis: There are no statistically significant differences at the level of confidence $(0.05 \leq \alpha)$ for the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of the service quality that are attributable to

personal and functional factors (university degree, academic year, GPA, and monthly income).

a .The perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia for the service quality dimensions depending on the university degree variable

Table (5) t-test results for the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about service quality dimensions depending on the university degree variable.
 * Not statistically significant at the level of $(0.05 \leq \alpha)$

Variable	Variable categories	Number	Mean	Standard deviation	t value	Level of significance
Tangible physical evidence dimension	Bachelor's Graduate	169 66	4.13 3.98	0.42 0.43	1.596 *	0.057
Reliability dimension	Bachelor's Graduate	169 66	3.92 3.70	0.65 0.69	1.78 *	0.077
Security dimension	Bachelor's Graduate	169 66	3.97 3.90	0.62 0.63	0.544 *	0.587
Empathy dimension	Bachelor's Graduate	169 66	4.07 3.95	0.64 0.59	0.952 *	0.34
Responsiveness dimension	Bachelor's Graduate	169 66	3.78 3.78	0.65 0.64	0.005 *	0.996
Service quality	Bachelor's Graduate	169 66	3.92 3.84	0.51 0.48	0.837 *	0.404

Table (5) shows the t-test results which demonstrate that there are no statistically significant differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the service quality dimensions based on the university degree variable. The value of t was 0.837 at the level of significance ($\alpha = 0.404$) which is not significant at the level ($0.05 \leq \alpha$) and this shows that there are no statistically significant differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about service quality dimensions depending on the university degree variable, which requires accepting the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in tangible physical aspects as a dimension of service quality based on the university degree variable. The value of t was 1.596 at the level of significance ($\alpha = 0.057$) which is not significant at the level ($0.05 \leq \alpha$) and this requires accepting the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in reliability as a dimension of service quality based on the university degree variable. The value of t was 1.78 at the level of significance ($\alpha = 0.077$) which is not significant at the level ($0.05 \leq \alpha$) and this requires accepting the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in security as a dimension of service quality based on the university degree variable.

The value of t was 0.544 at the level of significance ($\alpha = 0.587$) which is not significant at the level ($0.05 \leq \alpha$) and this requires accepting the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in empathy as a dimension of service quality based on the university degree variable. The value of t was 0.952 at the level of significance ($\alpha = 0.34$) which is not significant at the level ($0.05 \leq \alpha$) and this requires accepting the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in responsiveness as a dimension of service quality based on the university degree variable. The value of t was 0.005 at the level of significance ($\alpha = 0.996$) which is not significant at the level ($0.05 \leq \alpha$) and this requires accepting the null hypothesis with respect to this variable.

b .Perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about service quality dimensions depending on academic year variable
Table (6) One Way Anova analysis of the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the service quality dimensions depending on the academic year variable
*Statistically significant at the level ($\alpha \leq 0.05$)

**Not statistically significant at the level of ($0.05 \leq \alpha$)

Dependent variable	Source of variation	Degrees of freedom	Sum of squares	Average squares	F value	Level of significance
Tangible physical evidence dimension	Between groups Within groups	(3, 231)	3.657 113.727	1.219 0.492	2.476**	0.062
Reliability dimension	Between groups Within groups	(3, 231)	5.659 212.574	1,886 0.920	2.050**	0.108

Security dimension	Between groups Within groups	(3, 231)	3.468 116.271	1.156 0.503	2.297**	0.078
Empathy dimension	Between groups Within groups	(3, 231)	12.596 127.923	4.199 0.554	7.582*	0.000
Responsiveness dimension	Between groups Within groups	(3, 231)	12.084 147.727	4.028 0.640	6.289*	0.000
Quality of Service	Between groups Within groups	(3, 231)	5.308 103.263	1.769 0.447	3,958*	0.001

Results in Table (6) show that there are statistically significant differences in the quality of service depending on the school year variable, whereby F= 3.958 and the level of significance (α = 0.001) and this result is significant at a level of significance (α ≤ 0.05), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (7) shows that there are sources of differences between the mean answers of respondents in the first year level and the mean of the fourth year level, where the mean for the first category (first year) was (3.72), whereas the mean of the fourth category (fourth year) amounted to (3.95) and in favor of the respondents in the fourth year level.

Table (7) Results of Scheffe test for comparisons between means of service quality depending on the school year variable
*Statistically significant at the level (α ≤ 0.05)

Academic year categories	Mean	First Year	Second Year	Third Year	Fourth Year
First Year	3.72	-	-	-	0.23*
Second Year	3.81	-	-	-	-
Third Year	3.86	-	-	-	-
Fourth Year	3.95	-	-	-	-

The results presented in Table (7) show that there are no statistically significant differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of the quality of service depending on the academic year variable, where F = 2.476 and the level of significance (α = 0.062). This result is not significant at the level of significance (α ≤ 0.05), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in reliability as a service quality dimension depending on the academic year variable, where F = 2.050 and the level of significance (α = 0.108). This result is not significant at the level of significance (α ≤ 0.05), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in security as a service quality dimension depending on the academic year variable, where F = 2.297 and the level of significance (α = 0.078).

This result is not significant at the level of significance (α ≤ 0.05), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in empathy as a service quality dimension depending on the academic year variable, where F = 7.582 and the level of significance (α = 0.000). This result is significant at the level of significance (α ≤ 0.05), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (8) shows that there are sources of differences between the mean answers of respondents in the first year level and the mean of the fourth year level, where the mean for the first category (first year) was (3.58), whereas the mean of the fourth category (fourth year) amounted to (3.79) and in favor of the respondents in the fourth year level.

Table (8) Results of Scheffe test for comparisons between means of empathy as a service quality dimension depending on the academic year variable

*Statistically significant at the level ($\alpha \leq 0.05$)

Academic year categories	Mean	First Year	Second Year	Third Year	Fourth Year
First Year	3.58	-	-	-	0.21*
Second Year	3.65	-	-	-	-
Third Year	3.72	-	-	-	-
Fourth Year	3.79	-	-	-	-

Table (8) results show that there are statistically significant differences in responsiveness as a service quality dimension depending on the academic year variable, where F = 6.289 and the level of significance (α = 0.000). This result is significant at the level of significance ($\alpha \leq 0.05$), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (9) shows that there are sources of differences between the mean answers of respondents in the first year level and the mean of the fourth year level, where the mean for the first category (first year) was (4.01), whereas the mean of the fourth category (fourth year) amounted to (4.19) and in favor of the respondents in the fourth year level.

Table (9) Results of Scheffe test for comparisons between means
of responsiveness as a service quality dimension depending on the academic year variable
* Statistically significant at the level of ($\alpha \leq 0.05$)

Academic year categories	Mean	First Year	Second Year	Third Year	Fourth Year
First Year	4.01	-	-	-	0.18*
Second Year	4.09	-	-	-	-
Third Year	4.13	-	-	-	-
Fourth Year	4.19	-	-	-	-

C. Perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of quality of service depending on the GPA variable:

Table (10) One Way Anova analysis of the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the service quality dimensions depending on the GPA variable
*Statistically significant at the level ($\alpha \leq 0.05$)
**Not statistically significant at the level ($0.05 \leq \alpha$)

Dependent variable	Source of variation	Degree of freedom	Sum of squares	Average squares	F value	Level of significance
Tangible physical evidence dimension	Between groups Within groups	(3, 231)	2.871 114.513	0.957 0.496	1.931**	0.125
Reliability dimension	Between groups Within groups	(3, 231)	2.597 215.636	0.866 0.933	0.928**	0.428
Security dimension	Between groups Within groups	(3, 231)	4.693 115.046	1.564 0 0.498	3.140*	0.013
Empathy dimension	Between groups Within groups	(3, 231)	15.020 125.498	5.007 0.543	9.216*	0.000

Responsiveness dimension	Between groups Within groups	(3, 231)	8.755 151.056	2.918 0.654	4.463*	0.005
Quality of Service	Between groups Within groups	(3, 231)	4.830 103.741	1.610 0.449	3,585*	0.015

Results in Table (10) show that there are statistically significant differences in the quality of service depending on the GPA variable, whereby F= 3.585 and the level of significance ($\alpha = 0.015$) and this result is significant at a level of significance ($\alpha \leq 0.05$), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table

(11) shows that there are sources of differences between the mean answers of respondents with "acceptable" GPA and the mean of the fourth category (excellent), where the mean for the first category (acceptable) was (3.70), whereas the mean of the fourth category (excellent) amounted to (3.96) and in favor of the respondents with "excellent" GPA.

Table (11) Results of Scheffe test for comparisons between means for the Quality of service depending on the GPA variable

GPA categories	Mean	Acceptable	Good	Very good	Excellent
Acceptable	3.70	-	-	-	0.26*
Good	3.84	-	-	-	-
Very good	3.88	-	-	-	-
Excellent	3.96	-	-	-	-

*Statistically significant at the level of ($\alpha \leq 0.05$)

Results in Table (12) show that there are no statistically significant differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about tangible physical aspects as a quality of service dimension depending on the GPA variable, whereby F= 1.931 and the level of significance ($\alpha = 0.0125$) and this result is not significant at a level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in reliability as a service quality dimension depending on the GPA variable, where F = 0.928 and the level of significance ($\alpha = 0.428$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

Table (12) shows that there are statistically significant differences in security as a service quality

dimension depending on the GPA variable, where F = 3.14 and the level of significance ($\alpha = 0.013$). This result is significant at the level of significance ($\alpha \leq 0.05$), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (13) shows that there are sources of differences between the mean answers of respondents with "acceptable" GPA and the mean of the fourth category (excellent), where the mean for the first category (acceptable) was (3.60), whereas the mean of the fourth category (excellent) amounted to (3.81) and in favor of the respondents with "excellent" GPA.

Table (13) Results of Scheffe test for comparisons between means for security   as   a
quality of service dimension depending on the GPA variable
    *Statistically significant at the level ($\alpha \leq 0.05$)

GPA categories	Mean	Acceptable	Good	Very good	Excellent
Acceptable	3.60	-	-	-	0.21*
Good	3.67	-	-	-	-
Very good	3.74	-	-	-	-
Excellent	3.81	-	-	-	-

Results in Table (13) show that there are statistically significant differences in empathy as a quality of service dimension depending on the GPA variable, whereby F= 7.582 and the level of significance (α = 0.000) and this result is significant at a level of significance (α ≤ 0.05), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (14) shows that there are sources of differences between the mean answers of respondents with "acceptable" GPA and the mean of the fourth category (excellent), where the mean for the first category (acceptable) was (3.53), whereas the mean of the fourth category (excellent) amounted to (3.80) and in favor of the respondents with "excellent" GPA.

Table (14) Results of Scheffe test for comparisons between means for empathy   as   a
quality of service dimension depending on the GPA variable

*Statistically significant at the level (α ≤ 0.05)

GPA categories	Mean	Acceptable	Good	Very good	Excellent
Acceptable	3.53	-	-	-	0.27*
Good	3.67	-	-	-	-
Very good	3.74	-	-	-	-
Excellent	3.80	-	-	-	-

Results in Table (14) show that there are statistically significant differences in responsiveness as a quality of service dimension depending on the GPA variable, whereby F= 4.463 and the level of significance (α = 0.005) and this result is significant at a level of significance (α ≤ 0.05), which requires the rejection of the null hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (15) shows that there are sources of differences between the mean answers of respondents with "acceptable" GPA and the mean of the fourth category (excellent), where the mean for the first category (acceptable) was (3.98), whereas the mean of the fourth category (excellent) amounted to (4.22) and in favor of the respondents with "excellent" GPA.

Table (15) Results of Scheffe test for comparisons between means for responsiveness   as   a
quality of service dimension depending on the GPA variable

*Statistically significant at the level (α ≤ 0.05)

GPA categories	Mean	Acceptable	Good	Very good	Excellent
Acceptable	3.98	-	-	-	0.24*
Good	4.10	-	-	-	-
Very good	4.15	-	-	-	-
Excellent	4.22	-	-	-	-

d. Perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about service quality dimensions depending on the monthly income variable:

Table (16) One Way Anova analysis of the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the service quality dimensions depending on the monthly income variable

Independent variable	Source of variation	Degrees of freedom	Sum of squares	Average squares	F value	Level of significance
Tangible physical evidence dimension	Between groups Within groups	(2, 232)	0.272 9.194	0.136 0.040	1.182**	0.283
Reliability dimension	Between groups Within groups	(2, 232)	1.144 8.322	0.572 0.038	1.74**	0.175
Security dimension	Between groups Within groups	(2, 232)	0.079 9.387	0.039 0.040	0.165**	0.849
Empathy dimension	Between groups Within groups	(2, 232)	.0.263 9.294	0132 0.040	0.577**	0.566
Responsiveness dimension	Between groups Within groups	(2, 232)	0.414 0 9.052	0.207 0 0.039	0.891**	0.418
Quality of Service	Between groups Within groups	(2, 232)	0.058 47.77	0.029 0.206	0.166**	0.684

*Not statistically significant at the level ($\alpha \leq 0.05$)

Results in Table (16) show that there are no statistically significant differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about service quality dimensions depending on the GPA variable, whereby F= 0.166 and the level of significance ($\alpha = 0.684$) and this result is not significant at a level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in tangible physical aspects as a service quality dimension depending on the GPA variable, where F = 1.182 and the level of significance ($\alpha = 0.283$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in reliability as a service quality dimension depending on the GPA variable, where F = 1.74 and the level of significance ($\alpha = 0.175$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in security as a service quality dimension depending on the GPA variable, where F = 0.165 and the level of significance ($\alpha = 0.849$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in empathy as a service quality dimension depending on the GPA variable, where F = 0.577 and the level of significance ($\alpha = 0.566$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

The table shows that there are no statistically significant differences in responsiveness as a service quality dimension depending on the GPA variable, where F = 0.891 and the level of significance ($\alpha = 0.418$). This result is not significant at the level of significance ($\alpha \leq 0.05$), which requires the acceptance of the null hypothesis with respect to this variable.

*Statistically significant at the level ($0.05 \leq \alpha$)

Third Major Hypothesis: There are no statistically significant differences at the level of significance ($0.05 \leq \alpha$) for the perceptions of staff at the University of Tabuk in the Kingdom of Saudi Arabia about the quality of services provided that are attributable to personal and functional factors (educational qualification, age, years of experience, and job title).

Table (17) One Way ANOVA analysis of the respondents' perceptions of IT techniques depending on personal and functional variables (educational qualification, age, experience, and job title)

Personal variable	Source of variation	Degrees of freedom	Sum of squares	Average squares	F value	Level of significance
Age	Between groups Within groups	(3, 422)	5.57 77.44	1.86 0.184	25.67*	0.000
Experience	Between groups Within groups	(3, 422)	2.73 80.29	0.91 0.190	12.11*	0.000
Educational qualification	Between groups Within groups	(3, 422)	3.02 79.99	1.00 0.190	13.46*	0.000
Job title	Between groups Within groups	(3, 422)	0.984 82.03	0.328 0.194	0.596*	0.453

One: Differences in the perceptions of respondents about IT techniques depending on the educational qualification variable

Results presented in Table (17) show the differences in IT techniques depending on educational qualification variable show that there are statistically significant differences for the educational qualification variable in IT techniques, where F= 13.46 and the level of significance (α= 0.000). This result is significant at the level of significance ($0.05 \geq \alpha$), which requires the rejection of the hypothesis with respect to this variable.

This is further demonstrated by the results of the Scheffe test of multiple comparisons; as Table (18) shows that there are sources of differences between the mean answers of respondents with "graduate" qualifications and the mean of the first category (general secondary and below), where the mean for the fourth category (graduate studies) was (3.82), whereas the mean of the first category (general secondary and below) amounted to (3.51) and in favor of the respondents with "graduate studies" qualification .Also, there are sources of differences between the mean answers of respondents with "general secondary and below" qualifications and the mean of the second category (intermediate diploma), where the mean for the first category (general secondary and below) was (3.51), whereas the mean of the second category (intermediate diploma) amounted to (3.69) and in favor of the

Respondents with "intermediate diploma" qualification. Further, there are sources of differences between the mean answers of respondents with "general secondary and below" qualifications and the mean of the third category (bachelor's), where the mean for the first category (general secondary and below) was (3.51), whereas the mean of the third category (bachelor's) amounted to (3.72) and in favor of the respondents with "bachelor's" qualification .What explains these results is that the higher academic qualifications grant the individual higher ability to assess positive elements at work, advance in his career, and have a high degree of responsibility, loyalty and good workflow. In addition, personnel with high educational qualifications are usually able to choose the organization which is believed to meet the desires and aspirations, and this enhances the level of technology utilization.

Four: Differences in the perceptions of respondents about IT techniques depending on the job title variable:
Results presented in Table (18) on the differences in IT techniques show that there are no statistically significant differences for the job title variable in IT techniques, where F= 0.596 and the level of significance (α= 0.453). This result is not significant at the level of significance ($0.05 \geq \alpha$), which requires the acceptance of the hypothesis with respect to this variable.

Experience categories	Mean	5 years or less	6-10 years	11-15 years	+ 16 years
5years or less	3.58	-	-	-	0.21 *
6-10 years	3.68	-	-	-	-
11-15 years	3.70	-	-	-	-
+ 16years	3.79	-	-	-	-

1. DISCUSSION OF RESULT

I. The results showed that the following sub-variables (hardware, software, security, and usability) have an impact on tangible physical evidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia. Usability was ranked first and interpreted 32.1% of variance in the dependent variable, followed by hardware which interpreted with usability 40.2% of variance in the dependent variable, followed by software which interpreted with the two prior dimensions 45.4% of variance in the dependent variable, and finally came in security which interpreted with all the previous variables 46.6%

of variance in the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable.

II. The results showed that the following sub-variables (hardware, software, security, and usability) have an impact on reliability as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia. Usability was ranked first and interpreted 27.4% of variance in the dependent variable, followed by hardware which interpreted with usability 34.2% of variance in the dependent variable, followed by software which interpreted with the two prior dimensions 37.4% of variance in the dependent variable, and finally came in security which interpreted with all the previous variables 38.8% of variance in the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable.

III. The results showed that the following sub-variables (hardware, software, security, and usability) have an impact on responsiveness as a

dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia. Usability was ranked first and interpreted 27.7% of variance in the dependent variable, followed by hardware which interpreted with usability 35.0% of variance in the dependent variable, followed by software which interpreted with the two prior dimensions 38.2% of variance in the dependent variable, and finally came in security which interpreted with all the previous variables 39.7% of variance in the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable.

IV. The results showed that the following sub-variables (hardware, software, security, and usability) have an impact on security and confidence as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia. Usability was ranked first and interpreted 34.8% of variance in the dependent variable, followed by hardware which interpreted with usability 45.7% of variance in the dependent variable, followed by software which interpreted with the two prior dimensions 48.6% of variance in the dependent variable, and finally came in security which interpreted with all the previous variables 49.5% of variance in the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable.

V. The results showed that the following sub-variables (hardware, software, security, and usability) have an impact on empathy as a dimension of the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia. Usability was ranked first and interpreted 26.6% of variance in the dependent variable, followed by hardware which interpreted with usability 34.1% of variance in the dependent variable, followed by software which interpreted with the two prior dimensions 37.1% of variance in the dependent variable, and finally came in security which interpreted with all the previous variables 38.4% of variance in the quality of services provided at the University of Tabuk in the Kingdom of Saudi Arabia as a dependent variable .

VI. The results showed that there are no differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of quality of service depending on the variables of university degree and monthly income .The results indicated that there are differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi

Arabia about the dimensions of quality of service (empathy, responsiveness, and quality of service) depending on the academic year variable and in favor of the fourth year students .The results showed that there are differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of quality of service (empathy, responsiveness, and quality of service) depending on the GPA variable and in favor of students with excellent GPA.

VII.   RECOMENDATIONS

In light of the findings that have been reached, the study recommends the following:

1. To study The need to link the aim of increasing productivity and improving quality with improving the conditions of workers and increasing their skills within an integrated strategy for the management of human resources. In this regard, we propose that the university adopts HR policies or revise existing policies in order to :
1. Set up a system of rewards that clears the way for the adoption of a culture of participation in various activities and in particular, training programs on the quality of service .
2. Give individuals sufficient opportunities to utilize their skills, and provide them with the necessary capacities to analyze and solve problems, and make suggestions .
3. Expand the use of work teams, and the enhancement of team spirit.

4. The provision of security and safety systems at work.
- The need for the university management to have a level of senior management commitment that is embodied in the promotion of a culture of quality among workers, improving their skills and providing strategic vision and well-defined objectives and the organization .
- The study recommends the need for coordination between Saudi universities (and all organizations using service quality systems) in order to :

   1. Exchange of expertise in various issues of service quality .
   2. Take advantage of the training programs that are carried out by some of these organizations .
   3. Evaluate and compare the results achieved and draw appropriate indicators to judge how much of the objectives of the quality of service systems, both at the technical, human or organizational levels have been achieved.

VIII.   RESULT

1. The perceptions of students at the University of Tabuk about the service quality dimensions are at a high level.

2. There are differences in the perceptions of students at the University of Tabuk in the Kingdom of Saudi Arabia about the dimensions of service quality depending on the academic year and the GPA .There are statistically significant differences at the level of significance ($\alpha \leq 0.05$) in the respondents' perceptions of IT techniques that are attributed to (age, academic qualification, experience) variables .

The study recommends the University of Tabuk to pay attention to the importance of its students, as it is important for the university to realize that the student is the one who determines and defines quality and therefore it is imperative that services are provided in accordance with the demands and needs of students.The must be treated with respect and have their needs and expectations satisfied.

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