

# The Impact of Creativity and Innovation of Human Resources on the Quality of Service provided at the Middle Technical University

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## ABSTRACT

The study aimed to identify the impact of creativity and innovation of human resources on the quality of service provided through a sample of workers at the Central Technical University. For this purpose, the researcher used the questionnaire to collect data and information, and the researcher adopted a random sample of (372) individuals. The analytical descriptive approach was used, and the data were processed by the statistical software package for social sciences (SPSS). Using appropriate statistical methods such as the arithmetic mean, standard deviation, and Pearson's correlation to determine the relationship between the independent variables represented by creativity and innovation and the dependent variable represented by the quality of service provided by the Central Technical University, Cronbach's alpha coefficient was used for reliability. The study concluded that there is a statistically significant relationship between creativity, innovation and the quality of service provided at the Central Technical University. From this relationship, the study concluded that there is an impact of creativity and innovation on the quality of service provided at the university, and that (78.3%) of changes in the quality of service provided at the university are explained by creativity. And innovation, the study also found that the level of creativity and innovation in the university was low, and that the level of quality of service provided at the university was low too. This study also concluded with a set of recommendations, including; the objectives of the curricula must take into account the needs of students, the labor market, the knowledge society, and the nature of the era, as well as setting clear mechanisms that enable new students to see the nature and requirements of the programs they wish to join.

**Keywords:** Creativity, Innovation, Service Quality, Middle Technical University.

## 1. Introduction

Human resources have been the most important elements in organizations over the years and their basic pillar that no organization can move forward without relying on them. Therefore, these organizations have always sought with all their efforts to develop and grow their human resources because this development is the development of the organization as a whole. Organizations have realized that developing the human element will be reflected in the performance of the entire organization (AL Shukri, 2021). Based on this fact, human resource development was viewed as an important and influential variable in the organization's operations by building human cadres with great intellectual, mental and scientific capabilities and potential capable of creativity. Therefore, human resource development has become an important approach to developing administrative creativity among employees, which in turn is a variable with a positive impact on the performance of organizations when it is developed and improved (Al-Homsi, 2013). Creativity and innovation represent the most important basic requirements in public administration, as it operates in many cases of instability. It is no longer sufficient to use traditional methods in decision-making, but the ambition must go beyond that by constantly working to find new areas of work, diversity and excellence in providing services, and developing creative skills that aim to develop the capabilities of employees at various administrative levels, which requires moving towards creative processes in administrative decision-making (Al-Wakeel, 2016). Because of the important and vital role played by the university, the results of which are summarized in developing and advancing societies, and considering the university as the first organization entrusted with the task of generating, disseminating and exploiting knowledge. It was imperative for the university to value its human resources and raise their skills, efficiency and knowledge, by adopting and applying the idea of investing in their development in an effective investment that maximizes the benefit from them and considers them its real capital. Since excellence in performance and creativity is the guarantor of survival, excellence and advancement, the endeavor of every institution has become to obtain creative human resources with efficiency and capable of achieving its goals. In an equation between the university and other institutions, achieving this is dependent on what the university provides in terms of human competencies to the labor market, reflecting the level and efficiency of its qualified professors and even administrators and at the same time expressing excellence in university performance (Sabrina, 2016).

Based on the above, many researchers have presented studies that addressed the subject of the impact of creativity on the quality of services provided by the university. Indeed, for example, the study presented by the researchers (Zain Al-Din and Abu Amra, 2017). This study investigated the impact of applying the elements of administrative creativity on the quality of services at Palestine Technical College. The study identified the impact of applying the elements of administrative creativity (sensitivity to problems, fluency, flexibility, originality, complexity) on the quality of services such as (tangible material aspects, reliability, responsiveness, safety or

security, empathy). The study adopted the descriptive analytical approach for a random sample that included (110) academic and administrative workers in the college under study. The study reached several results; the most important one is the existence of a direct relationship between the total score of the creativity elements scale and the total score of the service quality scale and its dimensions, as well as the existence of a fundamental impact of both sensitivity to problems and originality at Palestine Technical College, Deir al-Balah on the quality of educational services. In addition, the researchers (Mahdi et al, 2021) introduced a study analyzed the Role of job satisfaction in developing administrative performance and creativity in Tikrit University at Iraq. The study relied on the descriptive analytical approach, and the most important results of the study reached the existence of a positive impact of job satisfaction on the development of creativity among workers, and the orientation of the respondents to accept the dimensions of administrative creativity such as problem solving, changeability, risk acceptance and encouraging creativity.

After reviewing a number of previous studies, the current study is achieved to be the first study that addresses the impact of creativity and innovation of human resources on the quality of service provided in its dimensions (responsiveness, reliability, assurance) at the Middle Technical University. Accordingly, the current research will focus on studying the role of creativity and innovation of human resources in the quality of service provided at the Middle Technical University.

## 1.2. The questions of the study

There is an important relationship between creativity and innovation in the one hand, and the quality of services provided on the other hand. Also, the development in various sectors, especially universities are in dire need of permanent and continuous innovation and renewed creativity. Because of the importance of science and education in any country to keep pace with developments and innovate new updates at the local and global levels, the following questions will be answered by this study:

1. What is the impact of creativity and innovation of human resources on the quality of the service provided?
2. What is the impact of creativity of human resources in improving the quality of services provided?
3. What is the impact of innovation of human resources in improving the quality of services provided?

## 1.3 The aim and the objectives of the study

The aim of this research of is determining the impact of creativity and innovation of human resources in improving the quality of service provided at the Middle Technical University.

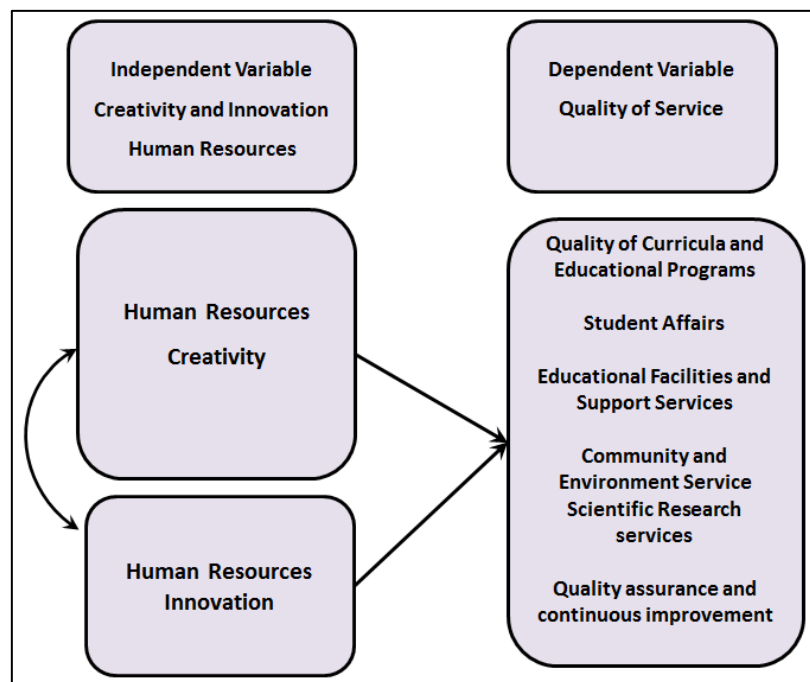
Based on research aim ,the following objectives branch out from it:

1. Determining the impact of creativity of human resources in improving the quality of service provided at the Middle Technical University.
2. Determining the impact of human resource innovation in improving the quality of service provided at the Middle Technical University

## 2. Study methodology

In order to conduct the study according to scientific foundations that would show the facts that explain the relationship between the study variables, the descriptive analytical approach was followed, by describing the phenomenon under study, which is creativity and innovation, to reach the quality of service provided at the university under study. The methodology of this study is shown in Fig 1.

As for the analytical aspect, it will be done by analyzing the relationship between the main study variables, i.e. the relationship between creativity and innovation and the quality of service provided. Where, the statistical analytical survey of the data, information, tables and numbers obtained from the field study will be conducted through the questionnaire. The questionnaire is considered the main tool for collecting information, and outputting it in the form of figures, tables and graphs to reach the most accurate results and recommendations that serve the study.



**Figure 1: The methodology of the study**

## 2.1 Study community and sample

- **Study community:** The current study community consists of employees at the Middle Technical University under study.

It is a governmental technical university established in the academic year 2014-2015. Its oldest institute is the Technical Medical Institute in Baghdad, established in 1966. The Technical Engineering College was established in 1993. It includes technical and applied colleges in Baghdad Governorate and institutes in Baghdad, Anbar, Wasit and Diyala Governorates.

- **Study sample:** A sample of employees from the three administrative levels of employees at the Middle Technical University under study. They will be selected using the simple random sample method according to the appropriate laws and statistical methods.

## 2.2 Procedures of the field study

The researcher used the questionnaire as a basic tool for collecting data in order to achieve the study objectives. The questionnaire form included personal data about the target groups, represented by gender, academic qualification, profession, experience, and number of training courses in the field of service quality.

The questionnaire also included two basic variables as follows: -

**A) The independent variable is creativity and innovation:** It consists of the following:

- The first part: creativity, it consists of (30) statements (phrases) at the questionnaire.
- The second part: innovation, it consists of (30) statements (phrases) at the questionnaire.

**B) The dependent variable: quality of the service provided;** It consists of the following

- The main part: quality of curricula and educational programs, it consists of (12) statements.

Note, the results of questionnaire based on the above variables are illustrated in results part (section 3.2) at the questionnaire.

In this study, the researchers used digital coding in coding the community members' for answers related to the three-point scale. Where (one degree ) was given to the answer (disagree), (two degrees) given to the answer (somewhat agree), and (three degrees) given to the answer (agree) as illustrated in Table 1.

The average measurement (2.34) was used as a comparison point to determine the degree of agreement with each statement (phrase) and each part of the study.

**Table (1) Coding of answer alternatives**

Answer	Not Agree	Somewhat Agree	Agree
Coding	1	2	3
Class Length	1- 1.66	1.67 – 2.33	2.34 – 3

### 3. Results and Analysis

#### 3.1 Personal characteristics and traits of participants

The questionnaire was targeted sample of ( 372) employees from the three administrative levels of employees at the Middle Technical University. Statistical description of the study community according to personal characteristics and traits is shown in Table 2.

**Table (2) Distribution of target groups according to personal data**

Gender		Male		Female		Total
	No.	158		214		372
	%	42.5		57.5		100%
Academic qualification		Bachelor's	Master		Ph.D	Total
	No.	56	205		111	372
	%	15.1	55.1		29.8	100%
Profession		Head of Department	Faculty Member	Administrative Staff Other	Other	Total
	No.	30	229	87	26	372
	%	8.1	61.6	23.4	7	100
Experience		Less than 5 years	5 to Less than 10 years	10 to less than 15	15 years and over	Total
	No.	55	84	37	196	372
	%	14.8	22.6	9.9	52.7	100
Training courses		None	One	Two	Three or More	Total
	No.	115	101	84	72	372
	%	30.9	27.2	22.6	19.4	100

The results in Table 2 showed that (158) targets, representing (42.5%) of males, and (214) targets, representing (57.5%) of females. As for the academic qualification, it was found that (15.1%) of the targets hold university qualifications, (55.1%) of the targets hold master's degrees, and (29.8%) of the targets hold accurate bachelor's degrees (PhD). As for the profession, it was found that (30) targets, representing (8.1%) of the targets, were department heads, (229) targets, representing (61.6%) of the faculty members, (87) targets, representing (23.4%) of the administrative staff, and (26) targets, representing (7%) of the targets, had other professions than those mentioned. As for the years of experience; It was found that (55) targets, representing (14.8%), had less than 5 years of experience; (84) targets, representing (22.6%), had

experience ranging from 5 to less than 10 years; (103) targets, representing (27.7%), had experience ranging from 10 to less than 15 years, and (130) targets, representing (34.9%), had experience of 15 years or more.

As for training courses in the field of services, it was found that a large number of employees at the Central University, representing (30.9%), did not receive training courses in the field of services, (101), representing (27.2%), received one training course, (84) targets, representing (22.6%), received two training courses, and (72), representing (19.4%), received three training courses. Therefore, it is necessary to intensify the various training courses, especially in the field of service quality.

### 3.2 Data analysis according to sample members' answers

To determine the degree of agreement on each questionnaire statement and on the total of each questionnaire axis, the (One Sample T-Test) test was used. The variable is available (the sample members agree on the content of the statement) if the mean value is greater than the measurement mean value (2.34) and the statistical significance value is less than (0.05) (Abdel-Azim, 2008). Also, the variable is unavailable (the sample members do not agree on the content of the statement) if the mean value is less than the measurement mean value (2.34) and the statistical significance value is less than (0.05), and the availability is insufficient if the statistical significance value is greater than 0.05 regardless of the response average value

#### 3.2.1 The independent variable (creativity and innovation)

##### A. Creativity

It is independent variable and it consists of (30) statements (phrases) as illustrated in Table 3 .

**Table (3) Frequency distributions, descriptive analysis results, and One Sample T-Test results for the creativity part**

No	Statement	Frequency & Percentage	Disagree	Agree to somewhat	Agree	Weighted Mean	Standard Deviation	T-Test	Availability Degree
1	University staff are interested in research and are distinguished by their clarity of vision and ability to understand problems.	No.	39	125	208	2.45	0.67	0.001	Available
		%	10.5	33.6	55.9				
2	University staff are characterized by independence, honesty and the search for truth.	No.	27	181	164	2.37	0.617	0.376	Somewhat available
		%	7.3	48.7	44.1				
3	The university administration is keen to launch the spirit of thinking and welcome the ideas presented by university employees.	No	54	160	158	2.28	0.702	0.068	Not available
		%	14.5	43	42.5				
4	The university administration is keen	No.	64	197	111				



	to separate between deriving ideas and evaluating them.	%	17.2	53	29.8	2.13	0.675	0.000	Not available
5	There is respect, encouragement and development of individuals by giving them opportunities to participate in decision-making, which ensures the success of the university.	No.	65	173	134	2.16	0.708	0.000	Not available
		%	17.5	46.5	36				
6	The management is keen to abandon routine and decentralization in dealing, which develops creative ability.	No	88	186	98	2.03	0.708	0.000	Not available
		%	23.7	50	26.3				
7	Management always seeks to look up, to motivate individuals to work and do more to achieve long-term goals continuously.	No.	54	179	139	2.23	0.684	0.002	Not available
		%	14.5	48.1	37.4				
8	The management seeks to follow up on the experiences of others, evaluate them, take the good, leave the bad, and make the necessary adjustments for the better.	No.	51	167	154	2.28	0.69	0.078	Somewhat available
		%	13.7	44.9	41.4				
9	The management is keen not to leave good ideas that lack implementation mechanisms and expose them to discussion.	No	50	167	154	2.31	0.695	0.393	Somewhat available
		%	13.4	42.2	44.4				
10	The management is keen to give great importance to learning through work as it is the best way to develop competencies and expand activities.	No.	26	182	164	2.37	0.612	0.329	Somewhat available
		%	7	48.9	44.1				
11	You feel the desire and pride in doing the work with determination.	No.	38	99	235	2.53	0.674	0.000	Available
		%	10.2	26.6	63.2				
12	You have the ability	No	31	80	261				Somewhat



	to deal with change individuals and creative workers in the organization.	%	8.3	21.5	70.2	2.62	0.69	0.000	available
13	The university administration considers the human element as the most important resource available to it.	No.	51	167	154	2.28	0.69	0.078	Somewhat available
		%	13.7	44.9	41.4				
14	Your colleagues appreciate the work you do.	No.	44	156	172	2.34	0.681	0.908	Somewhat available
		%	11.8	41.9	46.2				
15	Training courses are held on an ongoing basis in order to develop the performance of employees in anticipation of changes that may occur in the work environment.	No	25	159	188	2.44	0.618	0.002	Available
		%	6.7	42.7	50.5				
16	The university administration seeks to break the boring routine in performing tasks in order to achieve distinguished performance for university employees.	No.	70	197	105	2.09	0.68	0.000	Not Available
		%	18.8	53	28.2				
17	The university administration seeks to diagnose and correct the obstacles that prevent the implementation of the required tasks with ease and simplicity.	No.	57	181	134	2.21	0.687	0.000	Not Available
		%	15.3	48.7	36				
18	The university staff are characterized by a sense of humor and fun.	No	33	206	133	2.27	0.612	0.026	Not Available
		%	8.9	55.4	35.8				
19	The required work is completed at the university in record time and without delay.	No.	46	198	128	2.22	0.648	0.000	Not Available
		%	12.4	53.2	34.4				
20	The university administration seeks to provide financial incentives to those with new ideas.	No.	89	141	142	2.14	0.776	0.000	Not Available
		%	23.9	37.9	38.2				
21	The university administration is keen	No.	82	162	128				Not Available

	to provide moral incentives to employees committed to work.	%	22	43.5	34.3	2.12	0.742	0.000	
22	The university administration specializes in programs and applications to develop the spirit of creativity among university employees.	No	45	198	129	2.23	0.646	0.001	Not Available
		%	12.1	53.2	34.7				
23	The creativity of the university staff is greatly welcomed by the university administration.	No.	51	186	135	2.23	0.671	0.001	Not Available
		%	13.7	50	36.3				
24	The university administration is keen to maintain creative individuals with great experience.	No.	63	180	129	2.18	0.697	0.000	Not Available
		%	16.9	48.4	34.7				
25	The university administration seeks to overcome the obstacles that hinder the work of creative people at the university.	No	51	173	148	2.26	0.684	0.026	Not Available
		%	13.7	46.5	39.8				
26	The university administration is interested in creative culture as a means of achieving outstanding performance.	No.	38	187	147	2.29	0.642	0.159	Not Available
		%	10.2	50.3	39.5				
27	University staff are open to everything new and interact with it.	No.	32	207	133	2.27	0.609	0.031	Not Available
		%	8.6	55.6	35.8				
28	Workers are characterized by a love of experimentation and a desire to carry out difficult tasks.	No	20	218	133	2.31	0.567	0.254	Not Available
		%	5.4	58.6	36				
29	University staff are highly capable of bearing responsibility.	No.	39	205	128	2.23	0.627	0.002	Not Available
		%	10.5	55.1	34.4				
30	The administration is keen to allow any idea to be born and grow as long as it is in the right direction and in the service of the public interest.	No.	26	213	133	2.29	0.588	0.087	Not Available
		%	7	57.3	35.8				
Total						2.27	0.445	0.004	Not

				Available
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From Table (3) it is clear that the average values of the statements of the creativity part ranged between (2.03) and (2.62). it is clear that (4) statements (phrases) of this part had average values greater than (2.34) and that the statistical significance values of these phrases were less than 0.05, which indicates the availability of the four phrases in the field of creativity. They are arranged in descending order as follows:

- 1) You have the ability to deal with individuals of change and creative workers in the institution.
- 2) You feel the desire and pride in performing the work with determination.
- 3) University employees are interested in research and are distinguished by their clear vision and ability to understand problems.
- 4) Training courses are held continuously in order to develop the performance of employees in anticipation of changes that may occur in the work environment.

It is also clear that (10) phrases had average values close to the value of the measurement average (2.34), and that the statistical significance values were greater than 0.05, so these phrases were somewhat available. The are arranged in descending order as follows:

- 1) The administration is keen to give learning through work great importance as it is the best way to develop competencies and expand activities
- 2) The university employees are characterized by independence, honesty and the search for truth
- 3) Your colleagues appreciate the work you do
- 4) The administration is keen not to leave good ideas that lack implementation mechanisms and expose them to discussion
- 5) The employees are characterized by a love of experimentation and a desire to implement difficult tasks
- 6) The university administration is interested in creative culture as a means of achieving distinguished performance
- 7) The administration is keen to make room for any idea to be born and grow as long as it is in the right direction and in the service of the public interest
- 8) The university administration is keen to unleash the spirit of thinking and welcome the ideas presented by university employees
- 9) The administration seeks to follow up on the experiences of others and evaluate them, taking the good and leaving the bad and making the necessary adjustments for the better
- 10) The university administration views the human element as the most important resource available to it

It was found that (16) expressions of creativity had average values less than the average value of the measurement (2.34) and that the statistical significance values were less than 0.05. Therefore, the degree of availability of these expressions was low. They are arranged in descending order as follows:-

- 1) University employees are open to everything new and interact with it

- 2) University employees are characterized by a sense of humor and fun
- 3) The university administration seeks to overcome obstacles that hinder the work of creative people at the university
- 4) University employees are characterized by a high ability to bear responsibility
- 5) The administration seeks to always look up, to motivate individuals to work and do more to achieve long-term goals continuously
- 6) The university administration specializes in programs and applications to develop the spirit of creativity among university employees
- 7) The innovations carried out by university employees are greatly welcomed by the university administration
- 8) The required work is completed at the university in record time and without delay
- 9) The university administration seeks to diagnose and fix the obstacles that prevent the implementation of the required tasks with ease and simplicity
- 10) There is respect, encouragement and development of individuals by providing them with opportunities to participate in the decision, which ensures the achievement of successes for the university
- 11) The university administration is keen to maintain creative individuals with great experience
- 12) The university administration seeks to provide material incentives for those with new ideas
- 13) The university administration is keen to separate the derivation of ideas
- 14) The university administration is keen to provide moral incentives to employees committed to work
- 15) The university administration seeks to break the boring routine in performing tasks in order to achieve distinguished performance for university employees
- 16) The administration is keen to abandon routine and decentralization in dealing with what develops creative ability

To determine the level of creativity among employees at the Middle Technical University, the data in Table (3) showed that the average response to the total axis (2.27), which is less than the value of the average measurement (2.34). Also, to determine the significance of the differences between the two values, the value of the statistical significance of the test is equal to (0.004), which is less than 0.05 and indicates the significance of the differences between the two values. This indicates that the level of creativity among employees at the university under study was low.

## B. Innovation

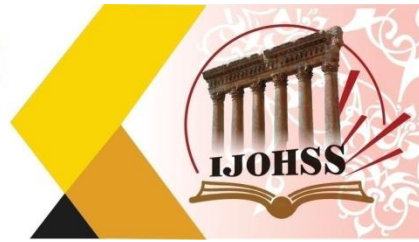
It is independent variable and it consists of (30) statements as illustrated in Table 4. From Table 4, it is clear that the average values of the innovation axis paragraphs ranged between (2.11) and (2.4). It is also clear that (5) phrases of this part had average values close to the measurement average value (2.34) and that the statistical significance values of these phrases were greater than 0.05, which indicates a limited availability of these phrases in the field of innovation. They are arranged in descending order as follows:

- 1) The university obtained patents that increased its innovations
- 2) The university cares about students' complaints and opinions as a hall on which it relies in developing its services
- 3) The administration seeks to excel and take a leadership position in the services market, which is considered an aspect of innovation
- 4) University employees seek to apply new innovative methods to confront the problems that hinder the implementation of the required work
- 5) New work technologies have been introduced to ensure raising the level of its services compared to competitors

**Table (4) Frequency distributions, descriptive analysis results, and One Sample T-Test results for the innovation axis**

No	Item	Frequency & Percentage	Disagree	Agree to somewhat	Agree	Weighted Mean	Standard Deviation	T-Test	Availability Degree
1	University staff seek to apply new and innovative methods to address the problems that hinder the implementation of the required work.	No	26	212	134	2.29	0.589	0.105	Somewhat available
		%	7.0	57.0	36.0				
2	It gives university staff the authority to solve immediate problems related to service delivery.	No.	46	229	97	2.14	0.605	0.000	Not available
		%	12.4	61.6	26.1				
3	The management is always seeking to make radical changes in its organizational structure.	No.	62	183	127	2.17	0.692	0.000	Not available
		%	16.7	49.2	34.1				
4	The university takes measures to activate communication and knowledge exchange among employees.	No	45	211	116	2.19	0.63	0.000	Not available
		%	12.1	56.7	31.2				
5	The university has obtained patents that have increased its innovations.	No.	25	175	172	2.4	0.612	0.083	Somewhat available
		%	6.7	47.0	46.2				
6	New technologies have been introduced to the business, ensuring that its services are raised compared to competitors.	No.	44	180	148	2.28	0.663	0.079	Somewhat available
		%	11.8	48.4	39.8				

7	The university allocates programs to improve and develop its services to increase students' loyalty to the university.	No	39	193	140	2.27	0.639	0.039	Not available
		%	10.5	51.9	37.6				
8	The university resorts to external bodies such as research and consulting centers to determine the future directions of students.	No.	64	179	129	2.17	0.7	0.000	Not available
		%	17.2	48.1	34.7				
9	The university cares about students' complaints and opinions as a basis for developing its services.	No.	31	163	178	2.4	0.638	0.096	Somewhat available
		%	8.3	43.8	47.8				
10	The university is interested in developing highly efficient programs that enable employees to understand the mechanisms of administrative work.	No	50	181	141	2.24	0.674	0.007	Not available
		%	13.4	48.7	37.9				
11	The university adopts new policies in the field of appointment, rewards and incentives.	No.	63	163	146	2.22	0.717	0.002	Not available
		%	16.9	43.8	39.2				
12	The management is interested in improving and strengthening competitive opportunities.	No.	51	187	134	2.22	0.67	0.001	Not available
		%	13.7	50.3	36.0				
13	Management takes care to allocate the necessary time to meet with employees and discuss their new ideas collectively.	No	64	174	134	2.19	0.706	0.000	Not available
		%	17.2	46.8	36.0				
14	University employees are interested in defining their goals and perceptions of work to develop their innovative capabilities.	No.	44	205	123	2.21	0.636	0.000	Not available
		%	11.8	55.1	33.1				
15	Management seeks to create opportunities for innovation by	No.	56	193	123				Not



	comparing the current reality with what should be.	%	15.1	51.9	33.1	2.18	0.671	0.000	available
16	The management is keen to keep pace with modern development and growth.	No	44	211	117	2.2	0.629	0.000	Not Available
		%	11.8	56.7	31.5				
17	The management seeks to innovate new services by making fundamental changes in innovative behavior.	No.	37	219	116	2.21	0.606	0.000	Not Available
		%	9.9	58.9	31.2				
18	University staff tend to be flexible and look for new ideas.	No.	56	182	134	2.21	0.684	0.000	Not Available
		%	15.1	48.9	36.0				
19	The university administration is keen to care for and nurture talents.	No	43	189	140	2.26	0.652	0.02	Not Available
		%	11.6	50.8	37.6				
20	The administration cares about developing and caring for individuals because they are a source of human economic power for the development and progress of the university, making it the largest, best and most innovative.	No.	44	207	121	2.21	0.634	0.000	Not Available
		%	11.8	55.6	32.5				
21	The university administration is keen to maintain innovative and talented individuals.	No	43	237	92	2.13	0.589	0.000	Not Available
		%	11.6	63.7	24.7				
22	The university administration is keen to remove the obstacles that hinder the work of innovative employees at the university.	No.	50	199	123	2.2	0.654	0.000	Not Available
		%	13.4	53.5	33.1				
23	University staff are characterized by rapid generation of ideas and fluent expression of them.	No.	56	193	123	2.18	0.671	0.000	Not Available
		%	15.1	51.9	33.1				
24	Management seeks to innovate services when the labor market produces outputs that make	No	57	198	117	2.16	0.666	0.000	Not Available
		%	15.3	53.2	31.5				

	innovation opportunities available.\								
25	The university administration is keen to motivate employees towards innovation.	No.	69	175	128	2.16	0.711	0.000	Not Available
		%	18.5	47.0	34.4				
26	There is an effort to exploit the blending of different fields to innovate new services and products.	No.	49	176	147	2.26	0.677	0030	Not Available
		%	13.2	47.3	39.5				
27	The management seeks to excel and take a leadership position in the services market, which is a manifestation of innovation.	No	49	164	159	2.3	0.688	0.215	Somewhat available
		%	13.2	44.1	42.7				
28	There is an effort to enhance the diversity of services and improve them continuously, which enhances innovative behavior.	No.	50	201	121	2.19	0.651	0.000	Not Available
		%	13.4	54.0	32.5				
29	The management seeks to attract individuals with innovation skills.	No.	69	194	109	2.11	0.684	0.000	Not Available
		%	18.5	52.2	29.3				
30	Innovations made by university staff are greatly welcomed by the university administration.	No	56	207	109	2.14	0.651	0.000	Not Available
		%	15.1	55.6	29.3				
Total						2.21	0.445	0.000	Not Available

It is also clear that (25) phrases had average values less than the measurement average value (2.34) and that the statistical significance values are less than 0.05. Therefore, the degree of availability for these phrases was low. They are arrange in descending order as follows:

- 1) The university allocates programs to improve and develop its services to increase students' loyalty to the university
- 2) There is an effort to exploit the integration between different fields to innovate new services and products
- 3) The university administration is keen to care for and nurture talents
- 4) The university is interested in developing highly efficient programs that enable employees to understand the mechanisms of administrative work

- 5) The university adopts new policies in the field of appointment, rewards and incentives
- 6) The administration is interested in improving and strengthening competitive opportunities
- 7) University employees are interested in defining their goals and perceptions of work to develop their innovative capabilities
- 8) The administration seeks to innovate new services by making fundamental changes in innovative behavior
- 9) University employees tend to be flexible and search for new ideas
- 10) The administration cares about developing and nurturing individuals because they are a source of human economic strength for the development and advancement of the university's path, making it the largest, best and most innovative
- 11) The administration is keen to keep pace with modern development and growth
- 12) The university administration is keen to remove obstacles that hinder the work of innovative employees at the university
- 13) The university takes measures that will activate Communication and knowledge exchange among employees
- 14) There is an effort to enhance the diversity of services and improve them continuously, which enhances innovative behavior
- 15) The administration is keen to allocate the necessary time to meet with employees and discuss their new ideas collectively
- 16) The administration seeks to create opportunities for innovation by comparing the current reality with what should be
- 17) The university employees are characterized by the rapid generation of ideas and expressing them fluently
- 18) The administration always seeks to make radical changes in its organizational structure
- 19) The university resorts to external parties such as research and consulting centers to determine the future directions of students
- 20) The administration seeks to innovate services when the labor market produces outputs that make innovation opportunities available
- 21) The university administration is keen to motivate employees towards innovation
- 22) The innovations carried out by university employees are greatly welcomed by the university administration
- 23) The university employees are granted the authority to solve immediate problems related to providing services
- 24) The university administration is keen to maintain innovative individuals with talents
- 25) The administration seeks to attract individuals with innovation skills

To determine the level of innovation among employees at the Middle Technical University, it has the data in Table 4 showed that the average response to the total axis was (2.21), which is less than the average measurement value (2.34). To determine the significance of the differences between the two values, the statistical

significance value for the test is equal to (0.000), which is less than 0.05 and indicates the significance of the differences between the two values. This indicates that the level of innovation among the employees of the university under study was low.

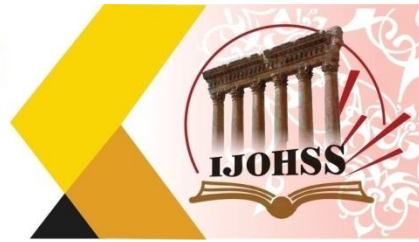
### 3.2.2 Second: Dependent variable (quality of service provided)

#### 3.2.2.1 Quality of curricula and educational programs

This study included a main hypothesis to determine the impact of creativity and innovation of human resources as an independent variable on the quality of educational curricula and programs as a dependent variable. The Table 5 reveals the relationship the impact of creativity on the quality of curricula and educational programs at the Middle Technical University.

**Table (5) Frequency distributions, descriptive analysis results, and One Sample T-Test results for the quality of curricula and educational programs part**

No	Item	Frequency & Percentage	Disagree	Agree to somewhat	Agree	Weighted Mean	Standard Deviation	T-Test	Availability Degree
1	The university's educational programs meet the needs of society and the labor market.	No	50	200	122	2.19	0.653	0.000	Not available
		%	13.4	53.8	32.8				
2	There are clear mechanisms that enable new students to learn about the nature and requirements of the programs they wish to join and provide academic guidance in this regard.	No.	37	220	115	2.21	0.605	0.000	Not available
		%	9.9	59.1	30.9				
3	The objectives of the curricula take into account the educational philosophy of the state, the needs of students, the labor market, the knowledge society, and the nature of the era.	No.	38	207	127	2.24	0.622	0.002	Not available
		%	10.2	55.6	34.1				
4	The content of the courses in the academic program helps students acquire the basic concepts in the field of specialization.	No	39	213	120	2.22	0.617	0.000	Not available
		%	10.5	57.3	32.3				
5	The content of the academic programme courses takes into	No.	44	182	146				Somewhat available



	account the balance between the needs of the individual and society.	%	11.8	48.9	39.2	2.27	0.661	0.056	
6	The educational institution works to provide the necessary requirements for learning for students with special educational needs in terms of technical methods and means.	No.	44	170	158	2.31	0.671	0.336	Somewhat available
		%	11.8	45.7	42.5				
7	There are multiple teaching and learning strategies that encourage students to think critically, solve problems, and develop their performance skills.	No	44	187	141	2.26	0.656	0.000	Not available
		%	11.8	50.3	37.9				
8	Academic standards or benchmarking are used to describe and describe its educational programmes and curricula.	No.	63	180	129	2.18	0.697	0.000	Not available
		%	16.9	48.4	34.7				
9	There are clear mechanisms for dealing with struggling and high-achieving students in educational programs.	No.	49	152	171	2.33	0.697	0.739	Somewhat available
		%	13.2	40.9	46.0				
10	The university is keen to use modern electronic and interactive learning methods.	No	55	159	158	2.28	0.705	0.085	Somewhat available
		%	14.8	42.7	42.5				
11	Program administrations are required to survey students' opinions on the quality of the educational process and use the results for improvement and development.	No.	36	147	189	2.41	0.661	0.038	available
		%	9.7	39.5	50.8				
12	Educational programs are evaluated periodically.	No.	44	156	172	2.34	0.681	0.908	Somewhat available
		%	11.8	41.9	46.2				
Total						2.27	0.494	0.007	Not Available

From Table 5, it is clear that the average values of the statements (phrases) of the part of the quality of curricula and educational programs ranged between (2.18) and (2.41). It is also clear that one of the phrases of this part, which is (program administrations are obligated to survey students' opinions on the quality of the educational process and employ its results in improvement and development), had an average value of (2.41). This value is greater than the value of the measurement average (2.34). Furthermore, the value of statistical significance is less than 0.05, so this phrase is available. It was also shown that (4) of phrases had mean values close to the measurement mean value (2.34). Also, the statistical significance values were all greater than 0.05. So that, these phrases were arranged in descending order as follows:

- 1) There are clear mechanisms for dealing with struggling and outstanding students in educational programs
- 2) The educational institution works to provide the necessary requirements for students with special educational needs to learn from technical methods and means
- 3) The university is keen to use modern electronic and interactive learning methods
- 4) The content of the academic program courses takes into account the balance between the needs of the individual and society

It was also shown that (6) phrases had mean values less than the measurement mean value (2.34) and that the statistical significance values were less than 0.05. Therefore, the degree of availability of these phrases was low. These phrases were arranged in descending order as follows:

- 1) There are multiple strategies for teaching and learning that encourage students to think critically, solve problems, and develop their performance skills
- 2) The objectives of the curricula take into account the educational philosophy of the state, the needs of students, the labor market, the knowledge society, and the nature of the era
- 3) The content of the academic program courses help students acquire basic concepts in the field of specialization
- 4) There are clear mechanisms that enable new students to learn about the nature and requirements of the programs they wish to join and provide academic guidance in this regard
- 5) The university's educational programs meet the needs of society and the labor market

6) Academic standards or benchmarking are used to describe and describe its educational programs and courses

To determine the level of quality of curricula and educational programs among employees at the Middle Technical University, the data in Table 5 showed that the average response to the total part was (2.21); this value is less than the value of the average measurement (2.34). To determine the significance of the differences between the two values, the value of the statistical significance of the test is equal to (0.000), which is less than 0.05. This indicates the significance of the differences between the two values, which indicates that the level of quality of curricula and educational programs was low.

#### 4. Conclusions

After analyzing the collected data, the study reached to the following conclusions:

1. The study showed the existence of a statistically significant moral relationship between creativity and the quality of service provided at the Middle Technical University. This relationship resulted in an impact of creativity on the quality of service provided at the university under study. It was found that (62.2%) of the changes in the quality of service provided at the university are explained by creativity. The researchers believe that this is due to the lack of many elements of creativity at the university, such as the lack of sufficient care to abandon routine and decentralization, and the insufficient efforts of the university administration to motivate individuals working at the university, as well as the failure to diagnose and fix the obstacles that prevent the completion of the required tasks, which had a significant impact on the quality of service provided at the university.

2. The study showed the existence of a statistically significant moral relationship between innovation and the quality of service provided at the Middle Technical University. This relationship resulted in an impact of innovation on the quality of service provided at the university under study. It was found that (76.8%) of the changes in the quality of service provided at the university are explained by innovation. This is attributed to the lack of many indicators of innovation at the university, such as the lack of interest in creating innovation opportunities by comparing the current reality with what it should be and the lack of sufficient care to keep pace with modern development and growth, as well as the lack of leniency in striving to innovate new services that contribute to bringing about fundamental changes in innovative behavior, which led to the quality of service provided not reaching the required level.

3. The study showed that there is a statistically significant relationship between creativity and innovation and the quality of service provided at the Middle Technical University. This relationship resulted in an impact of creativity and innovation on the

quality of service provided at the university under study. It was found that (78.3%) of the changes in the quality of service provided at the university are explained by creativity and innovation. The researchers believe that this is due to the level of creativity and innovation not reaching the required level, which had a clear impact on the quality of service provided not reaching the required level.

4. The study revealed that the level of quality of curricula and educational programs at the university was low, as it was found that the average response value for the total level of quality of curricula and educational programs at the university was (2.21) according to the three-tier scale. This is attributed to the fact that the university's educational programs do not adequately meet the needs of society and the labor market. Also, the lack of clear mechanisms that enable new students to learn about the nature and requirements of the programs. They wish to join, in addition to the fact that the content of the academic courses in the academic program does not help students acquire basic concepts in their areas of specialization.

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