


The Effect of Technical and Vocational Training on Factory Performance: A Case Study of the Date Sector in Saudi Arabia

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Abstract

This research tackles with the impact of technical and professional training on the performance of factories- Dates factories in Al Ghat and Zelfi as a case study-Riyadh-Kingdom of Saudi Arabia from 2021 to 2024. The study included all the staff except workers and guards. Dates factories in these two towns have significant influence not only in the area, but also in the whole kingdom. The study covers six factories, and it tries to discover the impact of technical and professional training on the performance of these factories. The research defines the technical and professional training of human resources. It consists of an introduction, three topics and a conclusion. The first topic discusses the concept of training, its goals and importance. The second topic examines the performance and production of dates factories in Alghat and Zelfi. The third topic focuses on the field of study. The results show that there is a statistically significant correlation between the technical and professional training and the performance of factories at the level of significance with 88.7%. Recommendations assert the necessity of relating training to the practical side to achieve the final goals. The researcher used the descriptive analytical method to analyze the results, SPSS is used thoroughly in addition to descriptive statistical measures such as iterations and percentages to describe the characteristics of the research sample.

Keywords: Training, Productivity, Performance, Saudi Arabia.

Introduction:

The human being is considered as one of the most important and expensive resources in all organizations, especially factories, so those in charge of them must pay attention to this resource, which if it succeeds in qualifying and developing them, it will succeed in achieving its goals. The development and training of human resources is one of the most important incentives for them to carry out their duties as required, as the interest in developing them comes through the vital role they play in achieving the competitive capabilities of Dates factories in the governorates of Zulfi and Ghat. The idea of training crystallizes technical and professional factories in the transition from the traditional view that considers human cadres just an element of production that plays specific role and without any addition, to the advanced view that believes in the utmost importance of human cadres as being the beating heart and the main pillar of the progress of the industrial sector and its excellence in the production of the best products with international standards and specifications. Therefore, this research deals with the impact of technical and vocational training on the performance of factories - A case study of Dates factories in the governorates of Zulfi and Ghat - Riyadh - Kingdom of Saudi Arabia from 2021-2024 AD. For sure the employee who has received a large amount of training courses and that have already increased his skills and abilities can carry out his job duties to the fullest, which is first to take care of the customer and his interest to gain his satisfaction.

Research problem:

The research problem is to try to find out the impact of technical and vocational training on the performance of factories - A case study of Dates factories in the governorates of Zulfi and Ghat - Riyadh - Kingdom of Saudi Arabia from 2021-2024 AD, for the vital role they play, and based on the importance of developing this sector, especially in field of technical and vocational training for human resources, as the nature of their work requires to continuously develop and familiarize themselves with everything new in order to provide the best products for the community, so the research problem can be formulated in the following questions:

- ✓ Is there a correlation between TVT and factory performance?
- ✓ Is there an impact of personal and functional factors (age, marital status, educational qualification, years of experience, job degree) on technical and vocational training in Dates factories in Zulfi and Ghat governorates?
- ✓ Are those in charge of managing dates factories convinced of the importance of technical and vocational training?

Research Objectives:

This research aims to achieve several objectives, the most important of which are the following:

- ✓ Provide an appropriate theoretical framework that clarifies the concept of technical and vocational training.
- ✓ Shedding light on the Dates factories in the governorates of Zulfi and Ghat.
- ✓ Identify the impact of personal and functional factors (Age, marital status, educational qualification, years of experience, job degree) on technical and vocational training in Dates factories in Zulfi and Ghat governorates.
- ✓ Provide suggestions and recommendations for the factories sector in general and to dates factories in the governorates of Zulfi and Ghat considering the research results.

Research questions or hypotheses:

This research will test the following hypotheses:

- ✓ Is there a correlation between TVT and factory performance?
- ✓ Is there an impact of personal and functional factors (Age, marital status, educational qualification, years of experience, job degree) on technical and vocational training in Dates factories in Zulfi and Ghat governorates?
- ✓ Are those in charge of managing dates factories in the governorates of Ghat and Zulfi convinced of the importance of technical and vocational training?

Limitations of the study:

The limitations of the study are as follows:

Spatial boundaries: This research includes the impact of technical and vocational training on the performance of factories - A case study of Dates factories in Zulfi and Ghat governorates - Riyadh - Saudi Arabia.

Time limits: This research involves the impact of technical and vocational training on the performance of factories - A case study of Dates factories in the governorates of Zulfi and Ghat - Riyadh - Kingdom of Saudi Arabia for the period from 2021-2024.

Human Limits: This research covers the impact of technical and vocational training on the performance of factories - A case study of Dates factories in Zulfi and Ghat governorates and includes all employees except workers and guards.

Objective limits: The impact of technical and vocational training on the performance of factories - A case study of Dates factories in Zulfi and Ghat governorates.

Sources of information collection:

The researchers will rely on the following means of data collection:

- * Primary sources include data derived from the research tool (questionnaire).
- * Secondary sources include books, periodicals and journals, theses, published reports, information available via the World Wide Web (Internet).

Data Analysis:

For data analysis, the research will depend on the package of statistical programs for the social sciences SPSS, including descriptive statistical measures such as frequencies and percentages to describe the characteristics of the research sample.

Research Structure:

The structure of the research consists of an introduction, three sections and a conclusion, the first section deals with the concept of technical and vocational training, the second section talks about Dates factories in the governorates of Zulfi and Ghat, while the third section discusses the field study.

The First Section: The concept of technical and vocational training

Training concept:

(Moussa, 2019) believes that training is a change in the psycho-mental attitudes of the individual towards his work in preparation for providing knowledge and raising the individual's skills in performing work.

As noted by (Allaqi, 2020). They are planned programs that are directed to employees in the organization intending to provide them with certain information, skills, and behaviors.

Technical and vocational training concept:

(Mohammadi, 20119) believes that training is a set of activities and programs aimed at changing the behavior, knowledge and skills of workers and concentrates at developing their capabilities and raising their current efficiency and future effectiveness to create a state of balance between the capabilities and characteristics of the individual worker and the requirements of the job he occupies. The vocational training has great importance in running the wheel of national production, increasing national income, and reducing unemployment among young males and females who were not lucky to complete their studies for any reason, or did not find job opportunities available in their field of study, so these professions and crafts were the closest field to them, in meeting their needs, and opening future prospects for them in various aspects of life. Vocational training institutions and centers provide applied vocational education for both males and females who have completed the basic stage of education, through applied training programs of more than two hundred and fifty vocational and applied specializations that enables the student to join the labor market immediately after the completion of the training period scheduled for them.

(Moussa, 2019) says that the term vocational training is meant as the type of education that focuses on learning crafts, manual or applied professions, which form a parallel line with the academic disciplines that provide services to society and thus are the second face of the national economic tributary. Vocational training focuses on a youth group that has tendencies towards vocational and craft education more than academic education, so it seeks to attract these groups, and enroll them in dedicated vocational training centers, equipped

with all the equipment and technologies necessary to train any profession or craft that supplements the labor market, improves national income in general, and reduces unemployment among young people. Craft or applied professions mean that, they need physical and kinetic performance in their implementation, so that the student or trainee can learn a craft, such as the manufacture of gold jewelry, for example, vehicle repair, repair of electrical appliances, or establish his own project, through which he can meet his personal needs and increase his income.

The importance of Technical and Vocational training:

(Ayasrah, 2017) believes that technical and vocational training plays an important and pivotal role in steering the wheel of economic and social life, being one of the main tributaries in preparing national property, combating unemployment, and raising the standard of living. The technical and vocational training and education represents a key tributary in the efforts of countries to increase development rates, reduce the level of unemployment and provide a decent life for their people. There is a direct reciprocal relationship between economic growth rates as well as a direct correlation between the allocation of GDP to education and the growth rate of GDP, because of its multiplier effect on increasing income, absorbing the workforce, and decreasing unemployment rates.

The Second Section: Date Factories in the governorates of Zulfi and Ghat

The governorates of Ghat and Zulfi are agricultural areas in Riyadh region and have a large number of palm plantations that are characterized by high quality. These factories produce dates that meet the necessary specifications needed by local and international markets and to reach this goal, they follow an integrated method based on the development of quality controls at all stages of production and processing of dates, where the application of modern technology in irrigation, fertilization, pollination, cannula covering, thinning, picking and then transporting dates to the factory is one of the most important reasons for the high quality for the production. Also, it is one of the first date factories to obtain the quality mark from the Saudi Arabian Standards and Metrology Organization. It is worth mentioning that most of these factories follow an integrated program that includes quality control in the farm and factory to obtain the best quality of dates produced by the factory, and the date factories in the governorates of Ghat and Zulfi are considered pioneers of the dates industry in the region in general due to their importance in advancing the economy in the country and their contribution to the development of the dates industry. In the governorates of Ghat and Zulfi there are six factories:

A- Ghat Governorate Factories:

- 1- Al-Fakhira Dates Company Factory
- 2- Hamada Dates Factory
- 3- Al-ard Altaybah Dates Factory

B- Zulfi Governorate Factories:

- 1- Al-Aaliyat Dates Factory
- 2- Riyadh Dates Factory
- 3- Al-Diwan Dates Factory Company Ltd.

Previous studies:

Referring to the previous studies related to the subject of the study, it becomes clear to the researchers the scarcity of the studies related directly to the subject of the current research, and that Arab and local field studies that dealt with the subject of the impact of technical and vocational training on the performance of factories - A case study of date factories are relatively few. The researchers will review two previous studies of Arab and local studies, in this regard from scientific theses, as follows:

(1) The study of (Farha, 2015) that intended to know the role of vocational training in achieving the objectives of human resources management, a field study at the Hadnaa Mills Corporation - Al-Salamiyah, and to find out whether vocational training has a role in achieving the objectives of human resources management and revealing the differences between individuals in their opinions on the extent to which vocational training contributes to achieving the objectives of human resources management due to the variable of professional experience. Among the most important recommendations reached by the study is the allocation of sufficient financial shares to establish training programs of importance in the institution under study, in addition to evaluating the extent to which the training objectives have been achieved.

Al-Shari Badr study, (2021) An analytical study of the role of technical and vocational training to achieve sustainable development considering the Kingdom's Vision 2030 "The Role of Technical and Vocational Training in Achieving Sustainable Development" The study aimed to address technical and vocational training in the Kingdom of Saudi Arabia, and the impact of education, technical and vocational training. In addition to the importance of achieving sustainable development, the return from technical and vocational training, and the role of the private sector in the labor market, the reality of technical and vocational training in the Kingdom of Saudi Arabia and the impact of education on it.

One of the most important recommendations of the study is the preparation of a technical and vocational education and training policy document, with the aim of guiding the process of reforming the TVET sector and unifying the sector considering the requirements of the labor market. Paying attention to pre-planning and forecasting the conditions and needs of the labor market and building models to predict labor market conditions.

Comment on previous studies:

It is clear through a review of the previous studies the variation of their topics and objectives, and it was concluded that all researchers were interested in the subject of

vocational and technical training, and the researchers benefited from previous studies in several aspects, the most important of which is the methodology used to know the impact of technical and vocational training on the performance of factories. The distinction of this study arises from focusing on the impact of technical and vocational training on the performance of factories, and it also touched on the concept of training in general and vocational and technical training in particular, as well as that it shed light on the date factories in the governorates of Zulfi and Ghat, and this has not been done in any previous study, which makes this study a real addition to the libraries of graduate studies in universities in the Kingdom of Saudi Arabia and the Arab world in general, which is considered a complementary study to the studies that preceded it and not a repetition.

The Third Section: Field Study Procedures

Research Methodology:

Since this research aims at the impact of technical and vocational training on the performance of factories - A case study of date factories in the governorates of Zulfi and Ghat - Riyadh - Kingdom of Saudi Arabia for the period from 2021-2024, the descriptive analytical approach in addition to the historical approach and the social survey method are the appropriate approaches for this study. **Population of the study:**

The population of the study means the total set of elements that the researchers seek to generalize on the results related to the problem studied. The population of the study includes a randomly tested sample of the employees of the date factories in the governorates of Zulfi and Ghat, except for the category of workers and guards.

Study sample:

The researchers adopted a sample from the population of the study in order to obtain the required data for the purpose of the study and it was tested by the research community described in the previous paragraph, where the researchers distributed (100) forms to the targeted persons, and (97) forms were received by (97%) where they returned the forms after filling them with all the required information in the questionnaire axes.

Study Tool:

In order to obtain information and preliminary data for this study, the questionnaire was designed, which reflects the impact of technical and vocational training on the performance of factories - A case study of date factories in the governorates of Zulfi and Ghat, and the questionnaire is one of the well-known means of collecting field information and is characterized by the possibility of collecting information from multiple phrases from the study sample and is analyzed to reach the specified results, and the researchers have followed during the process of conducting the study tool the following steps:

- ❖ Refer to previous literature related to the subject of the study and realize what has been written about technical and vocational training on factory performance.
- ❖ The researchers presented the study tool to several university professors, and get benefited from the experiences of some expertise and professional arbitrators, where they were asked to express their opinions and issue their judgments on the performance in terms of the consistency of the paragraphs with the research hypotheses and considering their observations the following was performed:
 - ✓ Deletion of unnecessary paragraphs.
 - ✓ Amending and rephrasing some paragraphs to give them the intended meaning.

The researchers tried to formulate the questionnaire questions and consider the possible neutrality by avoiding the meanings that are difficult to understand or ambiguous. Accordingly, the survey form was designed to meet the purpose required for population of the study and the selected sample, and then the questionnaire was prepared in its final form and included two sections:

The first section: includes the primary data of the sample members, which are age, academic qualification, job degree, marital status, years of experience.

Second section: Contains (9) phrases addressed to the members of the study sample to determine their answers about what each phrase describes according to the Likert five-tiered scale, which consists of five levels (Strongly agree, agree, neutral, do not agree, strongly disagree) and these phrases have been distributed to the hypotheses of the study, and the answers of the respondents have been coded so that it is easy to enter them into the computer for statistical analysis as follows: Number (1) refers to the phrase strongly agree and number (2) refers to the statement I agree, as number (3) indicates neutral, number (4) indicates I do not agree, and number (5) refers to the statement strongly disagree.

Hypothetical mean = Sum of weights / number (= $5 + 4 + 3 + 2 + 1 / 5 = 3$)

The aim of the hypothetical mean is to compare it with the actual arithmetic mean of the phrase, where if the actual mean exceeds the hypothetical mean, this indicates that the respondents do not agree with the phrase, but if it is less than the hypothetical mean, this indicates the consent of the respondents to the phrase.

Validity and Reliability:

To ensure the reliability of the questionnaire and the validity of its questions in terms of wording and clarity, the researchers presented the questionnaire to three academic arbitrators and specialists in field of the study, and from various functional positions and scientific disciplines. Then, after retrieving the questionnaire from the arbitrators, amendments were made, while the other number of arbitrators indicated that the questionnaire in its current form meets the conditions of the study.

Stability of the study instrument:

The stability of the test means that the scale gives the same results if used more than once under similar conditions. Stability is also defined as the extent of accuracy and consistency in the measurements obtained from what the test measures, and to test the availability of stability and internal consistency between the answers to the questions, the credibility coefficient was calculated Cronbach's-alpha, statistically acceptable value of the Cronbach's-alpha coefficient is 60%. A credibility test was conducted on the respondents' answers to the questionnaire, where the value of the Cronbach's- alpha coefficient was estimated (0.87) this value means the availability of a very high degree of internal stability in the answers, which enables us to rely on these answers to achieve the objectives of the study and analyze its results.

Statistical processing methods:

To analyze the data of the questionnaire, the researchers used the SPSS program, which is one of the most powerful programs used in statistical analysis processes, and the word SPSS is an abbreviation for Statistical package for social science. (Abdel Fattah, 2017) believes that it means the statistical package for the social sciences, and this program is specialized in data analysis, whether it is descriptive analysis, deductive analysis, or what is known as hypothesis tests.

The fourth section: Presentation and discussion of the results of the study:

Field study data analysis:

First: Analysis of Personal Data:

To come up with objective results, the researchers were keen that the sample should be representative of the study population in terms of the following characteristics (age, marital status, academic qualification, years of experience, job degree), and the following is the frequency distribution of the answers of the units studied, which reflects the initial characteristics of the study sample:

1. Age: The respondents were asked about the age and Table (1) shows the answers:

Table (1): Frequency Distribution of Sample Members by Age Variable

Age	Number	Rate %
20 and less than 30	10	10,3
30 and less than 40	57	58.8
40 and less than 50	26	26,8
More than 50	4	4.1
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (1) that most of the respondents are between 30-40 years, reaching 58.8%, while the percentage of those between 40-50 years reached 26.8%. As for the sample members and those over the age of 50 years, they accounted for 4.1% of the total sample.

2. Marital status: The respondents were asked about the marital status and Table (2) shows the answers:

Table (2): Frequency Distribution of Study Sample Members According to Social Status Variable

Marital status	Number	Rate %
Married	84	86.6
Single	13	13,4
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (2) that most of the sample members are married, where they reached 86.6% of the respondents, while the percentage of unmarried was 13.4%, and this percentage indicates the stability of the study sample members, which is reflected in their performance.

3. Academic Qualification: The respondents were asked about the academic qualification Table (3) shows the answers:

Table (3): Shows the frequency distribution of the study sample according to the variable of academic qualification

Qualification	Number	Rate %
Secondary	46	47,4
Academic	43	44,3
Postgraduate	8	8.3
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (3) that most of the sample members are holders of a secondary certificate, where they reached 47.4% of the sample members, and therefore we can say that the study sample is one of the scientifically qualified samples and thus leads to obtaining objective opinions about research.

4. Years of experience: The respondents were asked about the years of experience Table (4) shows the answers:

Table (4): Frequency Distribution of Sample Members by Years of Experience

Years of Experience	Number	Rate %
Less than 5	7	7.2
5 and less than 10 years	35	36.1

old		
10 and under 15 years	30	30,9
15 and less than 20	21	21.6
20 years and above	4	4.1
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (4) that the majority of respondents have years of experience ranging between 5-10 years, reaching 36.1%, while the percentage of those with experience between 10-15 years reached 30.9%, while the respondents with less than 5 years of experience reached 7.2%.

5. Job grade: The respondents were asked about the job grade Table (5) shows the answers:

Table (5): Frequency Distribution of Sample Members by Job Grade

Job Grade	Number	Rate %
12 to 10	12	12,4
From 9 to 5	49	50.5
From 4 to 1	36	37.1
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (5) that most of the sample members whose job grade ranges between 9-5 years, where their percentage reached 50.5%, while the percentage of those whose job grade ranges from (12-10) reached 12.4 %, while the respondents whose degree ranges between (4-1) 37.1%.

Second: Basic Data Analysis:

The researchers aim to analyze the basic data to be able to know the extent of their representation of the study population and then provide a descriptive statistic of the basic data of the members of the study sample. The researchers summarized the data in tables that show the values of each variable to clarify the most important basic features of the sample and has used the frequency distribution to clarify the number of viewers of one value within the variable in the form of numbers and percentages. The following is the frequency distribution of the answers of the units surveyed for all axes of the questionnaire:

Table 6: Frequency distribution of the phrase (TVT topics are related to the nature of the work I do in my job)

Answer	Number	Rate %
I strongly agree	28	28.9
I agree	58	59.8
Neutral	7	7.2
Disagree.	3	3.1

Strongly disagree	1	1
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (6) the high frequency of answers in the category of I agree and strongly agree, and this indicates that most of the sample members agree that the topics of technical and vocational training are related to the nature of the work I do in my job, as their percentage reached 88.7%, while the percentage of those who did not agree with this reached 4.1%, while the sample members who did not give specific answers reached 7.2%.

Table 7: Frequency distribution of phrase (Technical and vocational training has added something new to me of practical knowledge and behavioral skills)

Answer	Number	Rate %
I strongly agree	19	19,6
I agree	46	47,4
Neutral	9	9,3
Disagree.	16	16,5
Strongly disagree	7	7.2
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table (7) shows a high frequency of answers in the I strongly agree and agree category, and this indicates that most of the sample members agree that technical and vocational training has added something new to me of practical knowledge and behavioral skills, reaching 67% while the percentage of disagree reached 23.7%. Those who did not give specific answers were 9.3%.

Table (8): Frequency distribution of the phrase (Technical and vocational training has affected the performance of factories)

Answer	Number	Rate %
I strongly agree	47	48,5
I agree	15	15,5
Neutral	10	10,2
Disagree.	18	18.6
Strongly disagree	7	7.2
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (8) that the frequency of answers in the category of I agree and strongly agree, and this indicates that most of the sample members agree that technical and vocational training has affected the performance of factories, reaching 64%, while the

percentage of those who do not agree with this reached 25.8%, while those who did not give specific answers reached 10.2%.

Table (9): Frequency Distribution of the Statement (Personal and functional factors (age, marital status, educational qualification, years of experience, job degree) affect technical and vocational training in date factories in Zulfi and Ghat governorates)

Answer	Number	Rate %
I strongly agree	28	28.9
I agree	25	25.7
No opinion	15	15.5
Disagree.	22	22.7
Strongly disagree	7	7.2
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (9) that the frequency of answers in the category of I strongly agree and agree, and this indicates that personal and functional factors (age, marital status, academic qualification, years of experience, job grade) affect technical and vocational training in date factories in the governorates of Zulfi and Ghat, where their percentage reached 54.6%, while the percentage of disagree reached 29.9%, while those who did not give specific answers amounted to 15.5%.

Table (10): Frequency distribution of the phrase (there is conviction among those in charge of managing date factories of the importance of technical and vocational training)

Answer	Number	Rate %
I strongly agree	43	44.3
I agree	37	38.1
Neutral	10	10.3
Disagree.	5	5.2
Strongly disagree	2	2.1
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (10) that the frequency of answers in the category of I agree and strongly agree, and this indicates that most of the sample members agree that there is a conviction among those in charge of managing date factories of the importance of technical and vocational training, as they reached 82.4%. While the percentage of those who disagree with this reached 7.3% and those who did not give specific answers reached 10.3%.

Table (11): Frequency distribution of the phrase (I find encouragement from my immediate supervisor to participate in the training courses)

Answer	Number	Rate %
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I strongly agree	42	43.3
I agree	28	28.9
Neutral	16	16,5
Disagree.	2	2.1
Strongly disagree	8	9,3
Total	97	100

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (11) the high frequency of answers in the category of I agree and strongly agree, and this indicates that most of the sample members agree that there is encouragement from my direct boss to participate in the training courses, where their percentage reached 72.2%, while the percentage of those who did not agree with that reached 11.4%. Those who did not give specific answers were 16. 5%.

Hypothesis testing:

We will discuss the hypotheses of the study using statistical methods and to test the hypotheses of the study, the researchers identified the statements associated with the hypotheses and then tested them using:

(1) **Median:** where the median is used for each statement of the questionnaire where a score (1) is given for a strongly agree answer, a score (2) for an answer that agrees, a score (3) for an answer that does not agree, a score (4) as a weight for the answer does not agree, and a score (5) for the answer strongly disagree.

(2) **Standard deviation:** to measure the homogeneity of the answers of the units surveyed on the hypothesis statements.

(3) **The use of Chi- Square:** to find out the significance of the differences in the answers of the study sample members on the statements of each hypothesis.

The following is a discussion and testing of research hypotheses:

(1) First hypothesis:

There is a statistically significant correlation at the level of significance between technical and vocational training and factory performance:

This hypothesis was measured in the following terms:

Technical and vocational training (independent variable) represented by the phrase: the higher the technical and vocational training, the higher the performance of factories.

Factory performance (dependent variable) represented by the phrase: I got skills and information from the training courses that helped me increase work performance.

To prove this hypothesis, the median and the standard deviation of the hypothesis statements will first be estimated to know the direction of the study sample and Table (12),

which shows the estimation of the median values and the standard deviation of the statements of the first hypothesis:

Table (12): Median and standard deviation of the responses of the study sample members to the statements of the first hypothesis

Hypothesis phrases	Median	Interpretation	Standard deviation
The more technical and vocational training, the higher the performance of factories	2	medium	0,59
I got skills and information from the training courses that helped me increase work performance	1	High	0,63

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table 12 shows the following:

1. The median value of the responses of the study sample on the first statement (2) with a standard deviation (0.59) and this value means that most of the sample members agree that the greater the development and training of human resources, the greater the performance of work.
2. The median value of the responses of the study sample members on the second statement (1) with a standard deviation (0.63) and this value means that the majority of the sample members agree that I have obtained from the training courses skills and information that helped me in performing the work.

Second, the use of the test Chi- Square:

To test the existence of statistically significant differences between the numbers of agree, neutral and disagree with the above results, a square test was used to indicate the differences between the answers to all the statements of the first hypothesis, and the following table (13) summarizes the results of the tests for these statements:

Table (13): Results of the Chi-Square Test for the Significance of the Differences for the Answers of the First Hypothesis

Phrases	The value of Chi- Square	Morale level
There is a statistically significant correlation at the level of significance between technical and vocational training and factory performance	17,93	0,001

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table 13 shows the following:

The value of Kia-square for the significance of the differences between the members of the study sample for the hypothesis statement (17.93) with a significant level (0.001) and this value is less than the value of the level of significance of the moral level (5%) and therefore this indicates that there are statistically significant differences between the answers of the sample members and in favor of those who agree that there is a statistically significant correlation at the level of significance between technical and vocational training and the performance of factories.

From the above, we conclude that the hypothesis of the first study, which stated that there is a statistically significant correlation at the level of significance between technical and vocational training and the performance of factories, has been validated. Therefore, we can say that technical and vocational training affects the performance of factories.

(2) Second hypothesis:

Personal and functional factors (Age, marital status, educational qualification, years of experience, job grade) affect technical and vocational training in date factories in Zulfi and Ghat governorates:

This hypothesis was measured in the following terms:

Personal and functional factors (Independent variable)

Development and training of human resources as a tool to increase productivity (dependent variable) represented by the phrase: personal and functional factors (Age, marital status, educational qualification, years of experience, job degree) affect technical and vocational training in Date factories in Zulfi and Ghat governorates.

To prove this hypothesis, the median and the standard deviation of the hypothesis statements will first be estimated to know the direction of the study sample, and the following table shows the estimation of the median values and the standard deviation of the second hypothesis statements:

Table (14): Median and standard deviation of the responses of the study sample members to the statements of the second hypothesis

Hypothesis phrases	Median	Interpretation	Standard deviation
Personal and functional factors (Age, marital status, educational qualification, years of experience, job degree) affect technical and vocational training in date factories in Zulfi and Ghat governorates.	2	I agree	0,753

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table (14) shows the following: The median value of the responses of the study sample members to the first statement (2) with a standard deviation (0.753) and this value means

that the majority of the sample members agree that personal and functional factors (age, marital status, educational qualification, years of experience, job degree) affect technical and vocational training in Date factories in the governorates of Zulfi and Ghat.

Second: The use of Chi- Square:

To test the existence of statistically significant differences between the numbers of agree, neutral and disagree with the above results, kia- square test was used to indicate the differences between the answers to all the statements of the second hypothesis, and the following table (15) summarizes the results of the test for these statements:

Table (15): Results of the Chi-square test for the significance of the differences for the answers to the second hypothesis

Phrases	The value of Chi-Square	Morale level
Personal and functional factors (age, marital status, educational qualification, years of experience, job degree) affect technical and vocational training in date factories in Zulfi and Ghat governorates.	50,7	0,000

Source: Prepared by the researchers from the results of the questionnaire, 2022.

It is clear from Table (15) the following: The value of the Chi -Square indicates the differences between the members of the study sample for the hypothesis statement (50.7) with a significant level (0.000) and this value is less than the value of the level of moral significance (5%) Therefore, this indicates that there are statistically significant differences between the answers of the sample members and in favor of those who agree that personal and functional factors (age, marital status, academic qualification, years of experience, job degree) affect training Technical and vocational in Date factories in the governorates of Zulfi and Ghat. The value of Chi-Square to indicate the differences for the second phrase (52.8) with a significant level (0.000) and this value is less than the value of the level of significance of moral (5%) and therefore this indicates that there are statistically significant differences between the answers of the sample members and in favor of those who agree that it affects personal and functional factors (age, marital status, educational qualification, Years of Experience, Grade) On technical and vocational training in Date factories in Zulfi and Ghat governorates.

Due to what has been mentioned before , we conclude that the hypothesis of the second study, which stated that personal and functional factors (age, marital status, academic qualification, years of experience, job degree) affect technical and vocational training in Date factories in the governorates of Zulfi and Ghat, has been validated, and therefore we can say that personal and functional factors (age, marital status, educational qualification, years of

experience, job degree) affect technical and vocational training in Date factories in the governorates of Zulfi and Ghat.

(3) Third hypothesis:

Those in charge of managing Date factories in the governorates of Ghat and Zulfi are convinced of the importance of technical and vocational training:

This hypothesis was measured in the following terms: The importance of technical and vocational training (independent variable) represented by the statements: Those in charge of managing Date factories in the governorates of Ghat and Zulfi are convinced of the importance of technical and vocational training.

Training (dependent variable) represented by the phrase: It can be said that I find encouragement from my immediate boss to participate in training courses.

To prove this hypothesis, the median and the standard deviation of the hypothesis statements will first be estimated to know the direction of the study sample, and the following table shows the estimation of the median values and the standard deviation of the third hypothesis statements:

Table (16): Median and standard deviation of the responses of the study sample members to the statements of the third hypothesis

Hypothesis phrases	Median	Interpretation	Standard deviation
Those in charge of managing Date factories in the governorates of Ghat and Zulfi are convinced of the importance of technical and vocational training	2	I agree	1.3
It can be said that I find encouragement from my immediate supervisor to participate in the training courses.	1	I strongly agree	0,56

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table 16 shows the following:

1. The median value of the answers of the study sample on the first statement (2) with a standard deviation (1.3) and these values mean that the majority of the sample members agree that there is conviction among those in charge of managing date factories in the governorates of Ghat and Zulfi of the importance of technical and vocational training.
2. The median value of the responses of the study sample members to the second statement (1) with a standard deviation was (0.56) and these values mean that most of the respondents strongly agree that it can be said that I find encouragement from my direct boss to participate in the training courses.

Second: Use of Chi - Square Test:

To test the existence of statistically significant differences between the numbers of agree, neutral and disagree members with the above results, a square test was used to indicate the differences between the answers to all the statements of the third hypothesis, and the following table (17) summarizes the results of the test for these statements:

Table (17): Results of the Chi-Square test for the significance of the differences for the answers to the third hypothesis.

Phrases	The value of Chi-Square	Morale level
Those in charge of managing Date factories in the governorates of Ghat and Zulfi are convinced of the importance of technical and vocational training	43.7	0,000
It can be said that I find encouragement from my immediate supervisor to participate in the training courses.	90,6	0,000

Source: Prepared by the researchers from the results of the questionnaire, 2022.

Table (17) shows the following:

1. The value of the Chi- Square indicates the differences between the members of the study sample for the phrase of the first hypothesis (43.7) with a significant level (0.000) and this value is less than the value of the level of significance of the moral level (5%) and therefore this indicates that there are statistically significant differences between the answers of the sample members and in favor of those who agree that there is conviction among those in charge of managing Date factories in the governorates of Ghat and Zulfi of the importance of technical and vocational training.

2. The value of Chi-Square indicates the differences between the members of the study sample for the hypothesis phrase (90.6) with a significant level (0.000) and this value is less than the value of the level of significance of the moral (5%) and therefore this indicates that there are statistically significant differences between the answers of the sample members and in favor of those who strongly agree that there is encouragement from my direct boss to participate in training courses. According to the previous information, we conclude that the hypothesis of the third study, which stipulated that there is conviction among those in charge of managing Date factories in the governorates of Ghat and Zulfi of the importance of technical and vocational training have been validated, and therefore we can say that there is conviction among those in charge of managing Date factories in the governorates of Ghat and Zulfi of the importance of technical and vocational training.

The fifth section: Conclusions and recommendations:

Research Findings:

The researchers took the Date factories in the governorates of Ghat and Zulfi as an example to find out the impact of technical and vocational training on their performance, and the study concluded with the results and recommendations. The results of the study indicated the acceptance of the research hypotheses, as well as the researchers reached a number of results, the most important of which can be discussed as follows:

1- A large percentage of the sample members are young, where their age ranges between 30-40 years, reaching 58.8%, and this indicates the promising future of Date factories in the governorates of Ghat and Zulfi.

2- The results of the field study also proved that 86.6% of the respondents are married, which indicates the psychological and job stability of the workers.

3- The field study proved that most of the sample members agree that the topics of the training courses are related to the nature of the work I do in my job, as their percentage reached 88.7%, while the percentage of those who did not agree with this reached 4.1%, while the respondents who did not give specific answers reached 7.2%. From the previous analysis, we conclude that the hypothesis of the first study, which stated that there is a statistically significant correlation at the level of significance between Technical and vocational training and factory performance have been validated and therefore we can say that technical and vocational training affects the performance of factories

4- The results of the field study indicated that most of the sample members agree that those in charge of managing Date factories in the governorates of Ghat and Zulfi are convinced of the importance of training and its role in performance, as their percentage reached 82.4%. While the percentage of those who disagree with this was 7.3% and those who did not give specific answers reached 10.3 %. Therefore, we conclude that the hypothesis of the third study, which stated that there is conviction among those in charge of managing Date factories in the governorates of Ghat and Zulfi of the importance of training and its role in performance.

Research recommendations:

Based on the discussion of the previous findings, the researchers recommend the following:

1- The need to pay attention to the training department and work to prepare all the requirements to ensure a successful and distinguished performance of its mission of identifying training needs, designing, implementing, following up and evaluating training programs in factories and outside them.

2- Focus on qualitative and specialized training courses in building distinguished human cadres.

3- Keeping pace with modern technical training methods to enable workers to perform their work efficiently and effectively.

4- The necessity to link training courses with the practical side of work to achieve the objectives of the factory.

5- Conducting internal workshops for factories to keep pace with building human capital.

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