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The Relationship of Training in Improving the Environment (Environment Centers at the University of Mosul as A Model)

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Abstract

The research aims to demonstrate the impact of training in improving the environment. The research sample was represented by trained persons in research and advisory centers, continuing education courses and training courses held annually by the University of Mosul, specifically the College of Engineering, for people affiliated with institutions, companies, offices and laboratories of the public and private sector in Mosul, and measuring the extent of their utilization. And its application in the labor market, and its repercussions on the environmental reality in the city. The researcher relied on the descriptive analytical method by relying on a questionnaire and analyzing it using the statistical analysis program (SPSS). The results showed that there is a positive and strong relationship between training programs and improving the environment, the more realistic the training programs meet the needs of the community, are clear and at the heart of the work and can be applied in practice, in addition to the maximum benefit from the programs as a result of the trainers' commitment to the curriculum and the time of the course, the more this contributes to improving the environment through investment. sound environment, developing environmental, economic and social awareness, as well as recognizing the role of institutions in achieving sustainable development, and vice versa. Study recommended Paying attention to training programs

because of their impact on society, as the study showed a strong relationship between training programs and improving the environment, in addition to holding on-site training courses in the dysfunctional state institutions and companies.

Keywords: training, environment, University of Mosul, model, environment centers

1. Introduction

Iraq is currently going through a severe economic crisis, and perhaps the most prominent solution to that crisis is to achieve economic growth by relying on the available natural and human resources. By working on developing and maximizing revenues, and providing an investment and economic environment for the public and private sectors in order to reach sustainable economic growth, and to achieve the optimal investment of human resources, they must be developed, educated and trained. Where training is one of the most important educational means for the development of human resources, which can be exploited and benefited by all institutions, companies and organizations to achieve the goals they aspire to. The relationship of training with environmental development is a close one, and it is one of the basic activities in human resource management, as many organizations spend huge amounts of money to train their employees.

It is mentioned (Masa'dah, 2008, p. 80) that training is one of the basic keys to developing the human element, developing its capabilities and skills, improving its performance and raising its production to the maximum possible level of quality and economy.

Study problem and questions

Through the work of a teaching researcher at the University of Mosul and direct access to the centers and advisory offices and mechanisms of cooperation at the University of Mosul, and after reviewing previous studies in this field, he noticed the existence of direct cooperation and contact between the government sector represented by the university and its training courses and the private sector represented by trainees. This petition, which is supposed to be reflected on the companies, offices, laboratories and factories that send their employees for training, in a way that achieves environmental development for those beneficiaries. Therefore, the main question of the research problem is: What is the impact of training in achieving environmental improvement?

Research aims

The research aims to identify the volume of training courses at the University of Mosul for the private sector. And to identify the extent of cooperation between the governmental and private sectors, and to identify the extent to which trainees at the University of Mosul benefit from training courses and their repercussions on the labor market.

Research importance

The importance of the research is in identifying the training factors, analyzing them and measuring their relationship to improving the environment. And provide appropriate solutions and recommendations for the optimal investment of human resources, through the centers of continuing education in universities and the courses held on them.

Fourth: The hypotheses of the study:

The research is based on a main hypothesis that there is a relationship between training and improving the environment, and a number of sub-hypotheses emerge from this hypothesis, as follows:

1- There is a statistically significant relationship between training programs and improving the environment.

2- There is a statistically significant relationship between training methods and improving the environment.

3- There is a statistically significant relationship between the implementation of training and the improvement of the environment.

4- There is a statistically significant relationship between training evaluation and environmental improvement.

Fifth: Limitations of Research:

The spatial research limits of the University of Mosul and the trainees in its research centers were represented in the temporal limits 2020-2021.

Sixth: Data collection methods:

The theoretical side: The research has been enriched in the theoretical side by the most important contributions of researchers and academic writers, which were collected through international foreign and Arab scientific journals through the latest sources of Arab and foreign books.

The practical side: the researcher relied on the design of the questionnaire form to cover the aspects addressed by the theoretical framework and research hypotheses.

Seventh: The search form:

Based on the research hypotheses, the research model can be expressed in the following illustrative scheme:

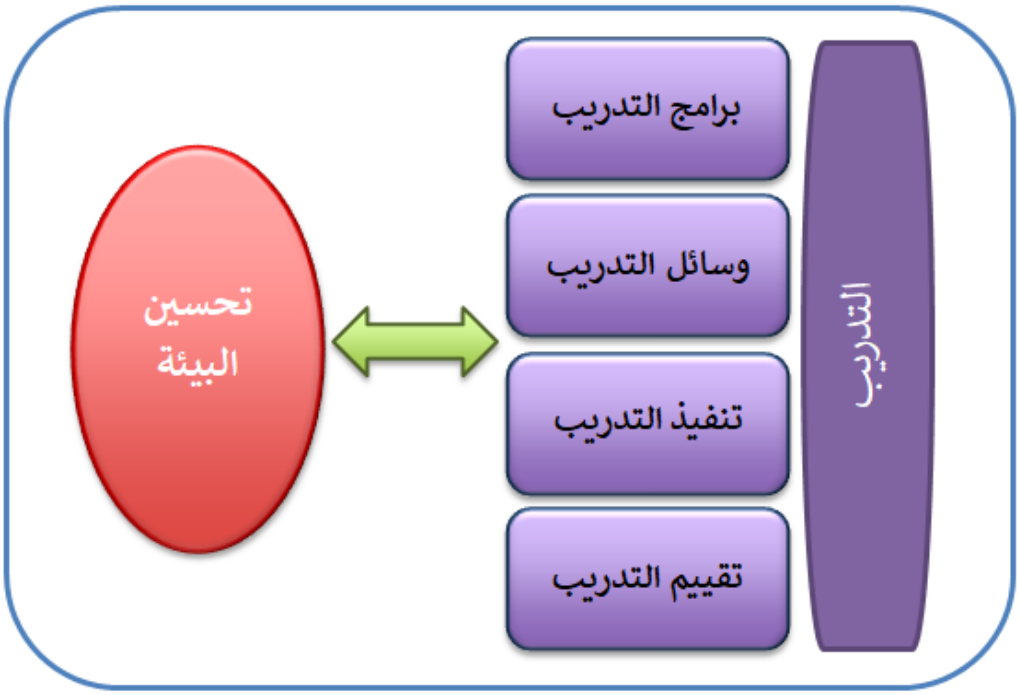

Figure 1. Explanation of the search model

Source: Prepared by the researcher based on the research hypotheses

The second topic: the practical aspect of research

First, the search tool

The research tool was the questionnaire that was developed by referring to the theoretical framework and previous studies related to the topic of the research. The questionnaire consists of two main parts:

The first part: included some personal information of the respondents, which included (educational qualification, age, and gender).

The second part: It included the fields of training and improving the environment. As for the field of training, it included four axes. The first is the programs axis and consists of (3) phrases, the second is the training means axis and consists of (4) phrases, the third is the implementation axis and consists of (3) phrases, and the fourth is the evaluation axis and consists of (3) phrases. The field of environmental improvement consists of (5) phrases. A five-way Likert scale (strongly agree, agree, neutral, disagree, strongly disagree) was used in designing the research questionnaire, and in line with the statistical analysis of the respondents' answers, the score (5) was given as a weight for each answer "strongly agree", and the score (4) as a weight for each 'agree' answer, a score of (3) for each 'neutral' answer,

a score of 2 as a weight for each 'disagree' answer, and a score of (1) for each 'strongly disagree' answer.

To measure the relationship of training with improving the environment according to the respondents' opinions, the answers were classified according to the arithmetic average into five levels, where the categories corresponding to these levels were found as follows:

Range = Maximum answer value – Minimum answer value = 5 – 1 = 4

Class length = range / number of classes = 4 / 5 = 0.8

In light of this, the general trend of the respondents' answers will be explained according to the table below:

Table 1. The general trend levels of the respondents' answers

general direction	the level	average
Strongly Disagree	very low	1.8 - 1.0
disagree	low	2.6 – 1.8
neutral	Moderate	3.4 – 2.6
I agree	high	4.2 – 3.4
I totally agree	very high	5.0 – 4.2

Source: Researcher Preparation

Second: the community and the research sample

The research community consists of the trainees in the training courses of the College of Engineering, and the research sample was randomly selected, where the questionnaire was distributed to (50) members of the target study community, and (30) individuals responded, and it was found that there are (26) questionnaires. Valid for analysis at a rate of (87%) of the total distributed questionnaires, while there are (4) questionnaires that contain incomplete answers, so they were excluded from the sample, and thus the final research sample became composed of (26) individuals.

2. The Theoretical Framework

Training

Researchers differ in the concept of training, some see it as education, and some see it as training. (Hassouna, 2010) defined training as a set of actions that allow trainees to be in a

state of readiness and readiness on a permanent and advanced basis for their current and future jobs within the framework of their institutions and their environment.

Whereas (Mousa 2015) believes that training is the systematic development of knowledge, skills, ideas and attitudes necessary for workers to perform their work tasks in the required manner.

Types of Training by Job (Maher, 2012)

1- Technical and Vocational Training This type is concerned with manual and mechanical skills in technical and vocational works.

2- Professional Training This training includes knowledge and skills on jobs higher than technical and professional jobs.

3- Managerial Training This training includes the administrative and supervisory knowledge and skills necessary to assume administrative, middle or senior positions, which are knowledge that includes administrative processes such as planning, organizing, controlling, decision-making, directing, leading, motivating, managing work groups, coordination and communication.

The importance of training

Training is of paramount importance to organizations, especially in developed countries, in terms of allocating huge amounts of money to train their employees to acquire skills and knowledge and raise their competencies. (Al-Khatib, 2006, p. 303) believes that the advantages of training are:

1- Developing the efficiency and expertise of employees and increasing their skills.

2- Preparing individuals to fill administrative positions.

3- The ability to face the changes that occur in economic systems and to face development.

While (Abdul Bari, 2008, p. 235) mentions that the importance of training for workers is:

1- Improving people's decisions and solving their problems at work.

2- Helps individuals develop communication skills.

3- Helps individuals improve their understanding of the organization and their role in it.

4- Reducing the number of work accidents.

5- It provides the individual with opportunities to excel at work and develops the driving factors for performance.

Dimensions of Training

The dimensions of training can be divided into several stages: (Hala Moussa, 2015)

1- Training design stage: It is the stage of developing the appropriate curriculum by defining the objectives of the training course, taking into account the available training methods

2- Training implementation phase: It is the phase of starting the training process and applying the curriculum to achieve the objectives of the training course

3- Training evaluation stage: It is the follow-up and review process for the training course and the trainees to measure the extent of benefit and achieve the objectives of the training course for which it is established.

The environment

An increasing number of national governments are striving to achieve environmental sustainability, with green economy and green growth initiatives, and with increasing support from employers' organizations and trade unions. Many countries have taken initiatives at all levels of development around the world. Many of these are recent initiatives, including a large number that explicitly consider green jobs policies or explicitly address issues of jobs, skills, enterprise development, social protection, social inclusion, and fair transitions.

Natural Resources

A recent study by the McKinsey Global Institute showed that resource-intensive use is driving up energy and commodity prices, and believes that resource management will have to be completely rethought, along with sharp increases in efficiency in the use of energy and materials to reconcile limited resources with the increasing demand for them. Increases in demand of 30-80 percent across all major resources will coincide with increasing difficulties and costs in accessing and extracting them. The study indicates that the sharp increase in commodity prices since 2000 and which continued to 2011 eliminated the declines in prices that had prevailed over the past 100 years. Moreover, the study hints at the possibility that the global economy will witness higher and more volatile resource prices over several decades, which could have serious consequences for production. (R.Dobbs, 2011)

Pollution

In the absence of increased efficiency and waste reuse and recycling, global waste volumes will continue to rise rapidly, as will soil, water and air pollution. By 2025, the World Bank estimates that the world will produce 2.2 billion tons of waste, double its current volume of

1.3 billion tons. (2012, World Bank)

Water scarcity

Fresh water is already scarce in many parts of the world. Water stress is expected to increase, with water supplies expected to meet only 60 percent of global needs within a 20-year period. In its Environmental Outlook to 2050, the Organization for Economic Co-operation and Development projects that the number of people living in areas of acute water stress will increase by 2.3 billion, to a total of more than 40 percent of the world's population in 2050. The existing shortage of water hinders the growth of many economic activities. Industry, power generation, human consumption and agriculture will increasingly compete with each other for water, which will have serious repercussions on food security. . (McKinsey, 2009)

Climate change

One of the most serious global threats, and one that exacerbates other environmental concerns such as water scarcity and biodiversity loss, is climate change. Climate change, in the medium and long term, leads to an increase in average global temperatures, changes in precipitation regimes and an increase in sea levels. The effects of climate change, in the short term, are due to fluctuating weather patterns and more severe weather events. Climate change is primarily due to the increase in the concentrations of greenhouse gases in the atmosphere mainly caused by burning fossil fuels and biomass, raising livestock, irrigating rice fields and using nitrogen fertilizers. These greenhouse gases trap more of the energy the Earth receives from the sun, giving an effect similar to that of the greenhouse. (International Labor Conference, 2013)

Sustainable development

The International Union for Conservation of Nature in 1980 defined sustainable development as development that takes into account the environment, society and the economy (Corinne Gendron. Le developpement durable compromise. Quebec. 2005. p. 166).

The United Nations Conference on Environment and Development in 1992 defined that sustainable development is the necessity of realizing the right to development where the developmental and environmental needs of present and future generations are equally fulfilled. Development. (Douglas Moses, 2000)

This does not mean that sustainable development is easy and easily accessible, but it is necessary to strive to achieve the desired goals and objectives of the sustainable development model, which is a complex and multi-dimensional process that combines equity and efficiency between generations in terms of economic, social and environmental aspects.

The relationship of training to development

(Ismail, 2015) believes that the human element is the main controller of the other production

elements represented in the organization and the material element to achieve the goals with the highest possible productivity. The higher the efficiency of the human element through education, training and knowledge, the more efficient the use of resources, even if they are scarce. And developing countries reflect the image of the decline in the efficiency of the human element, in addition to the low level of technology used in production, which makes it more difficult to reach high productive efficiency. Therefore, the human element is one of the most important elements of production, and therefore it must be given the greatest attention in order to reach economic development Continuously growing in a way that maintains the natural capacity of the same development resources over time.

Training centers at the University of Mosul / College of Engineering

Training centers and continuing education courses at the College of Engineering, University of Mosul, hold various training and educational courses for all disciplines annually, as the College of Engineering consists of 8 scientific departments (Architectural Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, Water Resources Engineering, Environmental Engineering, Engineering Computers, Mechatronics Engineering) to which a large group of qualified professors and teachers are affiliated with the highest degrees in their scientific disciplines.

So that the professors set the course title and curriculum based on the latest scientific curricula, then it is presented to the Scientific Committee and then the College Council to be approved and announced to those who wish to participate and benefit from it.

Below is Table No. (2), which represents the number of courses held in the year 2021 at the College of Engineering, University of Mosul

number of courses	Section	T
7	electrical engineering	1
5	Mechanical engineering	2
5	Environmental Engineering	3
4	Water Resources Engineering	4
4	civil engineering	5
3	Computer engineering	6
2	architecture	7
2	Mechatronics Engineering	8
32	**the total**	

It is noted from the table that the total of courses is 32 courses in one year, i.e., an average of

one course per month, noting that the year 2021 was affected by the Corona pandemic. Which reduced the number of annual courses.

More than 500 participants participated in these courses. 100 of them were selected and a questionnaire was distributed to them.

The third topic is statistical analysis

Third: the statistical methods used in the research

The following statistical methods were used:

1- Cronbach's stability coefficient - alpha (α-Cronbach)

2- weighted arithmetic means Weighted Mean

3- standard deviation Standard Deviation

4- Spearman's rank correlation coefficient Spearman Rank Correlation Coefficient

In order to obtain as accurate results as possible, the SPSS statistical program was used in its version 26.

Fourth: The stability and validity of the research tool

Tool stability

The stability of the tool is defined as the degree of agreement in the respondents' answers when the test is repeated, or its equivalent on the same group. The stability coefficient takes a value between (0) And the (1If the value of the reliability coefficient is high, then this is a good indicator of the questionnaire's stability, and therefore the validity and suitability of the questionnaire for research purposes. As is known in the field of humanities and social sciences, the reliability coefficient is acceptable starting from0.60). To check the stability of the search tool, the alpha Cronbach stability coefficient (α-) will be calculated Cronbach).

Statistical honesty

The validity coefficient is an indicator of internal consistency (consistency) for the questionnaire statements, statistically, it represents the square root of the reliability coefficient. The following table shows the reliability and validity coefficients for each of the questionnaire axes and for the questionnaire axes combined. Where it is noted from the table (2) that the stability coefficients exceeded (0.70), and the validity coefficients exceeded (0.80) and depending on the scale mentioned by each of the George and the Mallery. It can be said that the research tool has a high level of reliability and validity, which makes the respondents' answers to the questionnaire be credible and therefore the results that the

research will reach can be relied upon (George & Mallery, 2003: 121).

Table 2. The reliability and validity of the research tool

honesty coefficient	stability coefficient	number of phrases	axles
0.92	0.84	3	methodology
0.91	0.83	4	Training methods
0.89	0.79	3	Execution
0.94	0.89	3	Evaluation
0.95	0.90	5	environmental improvement
0.98	0.96	18	Total

Source: Program resultsSPSS-26

Fifth: Results and discussion

1. Description of the characteristics of the respondents:

The table shows (3) and shape (2Numbers and percentages of respondents in the research sample according to academic qualification. Where it is clear that the majority of the respondents have a “bachelor’s” academic qualification, as their number is (14(individual and percentage)54%) of the total respondents in the research sample. The research sample included (5(Individuals with “Masters” academic qualifications, with a percentage of)19%). The research sample also included (6(Individuals who have “preparatory” educational qualifications, with a percentage of)23%), in addition to the presence of one individual with a "diploma" qualification, with a percentage of (4%). In general, it can be said that the majority of the respondents in the research sample have university and higher qualifications, which means that the opinions and perceptions that will be presented regarding the relationship of training with improving the environment You will have a kind of credibility, and this will positively affect the search results.

Table 3. Distribution of respondents in the research sample according to academic qualifications

%	the number	Educational Qualification
-	-	PhD
19	5	Master's
54	14	BA
4	1	diploma
23	6	prep
100	26	Total

Source: program resultsSPSS-26

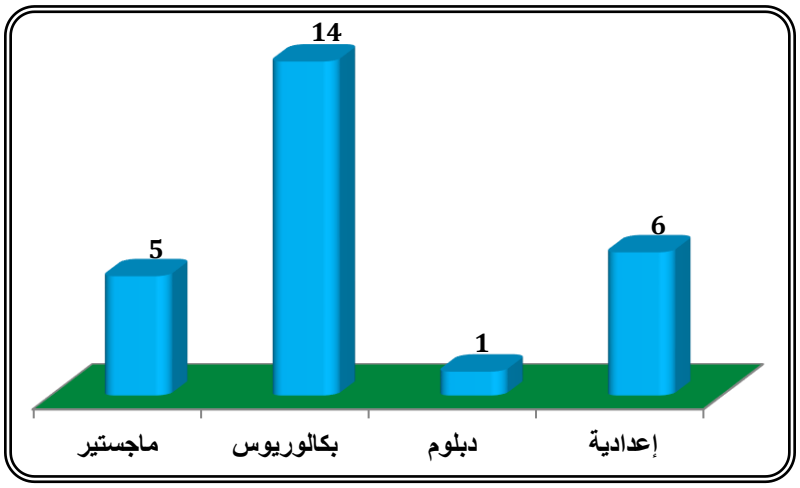

Figure 2. Distribution of respondents in the research sample according to academic qualifications

Source: the program Excel

With regard to the ages of the respondents in the research sample, the table (4) and shape (3) They show the numbers and percentages of the respondents in the research sample according to age. As it becomes clear that there is a close distribution of the respondents according to the age groups, (10(Researched and with a percentage)38%) aged between (20-30) year, (8(Researched and with a percentage)31%) aged between (30-40(year, plus)8(Researched and with a percentage)31% (their age)40) a year or more.

Table 4. Distribution of the respondents in the research sample according to age

%	the number	Age group
38	10	20-30year
31	8	30-40year
31	8	40year and over
100	26	Total

Source: program resultsSPSS-26

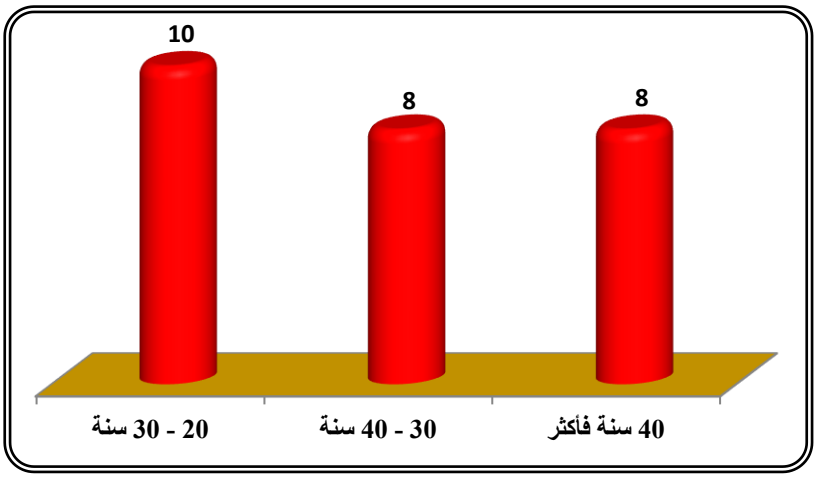

Figure 3. Distribution of the respondents in the research sample according to age

Source: the program Excel

With regard to gender, there was a close representation of both sexes in the research sample, as the sample included (14(of male individuals and by (54%) And the (12(of females and by (46%), as shown in the table (5) and shape (4).

Table 5. Distribution of the respondents in the research sample according to gender

%	the number	sex
54	14	Mention
46	12	feminine
100	26	Total

Source: program resultsSPSS-26

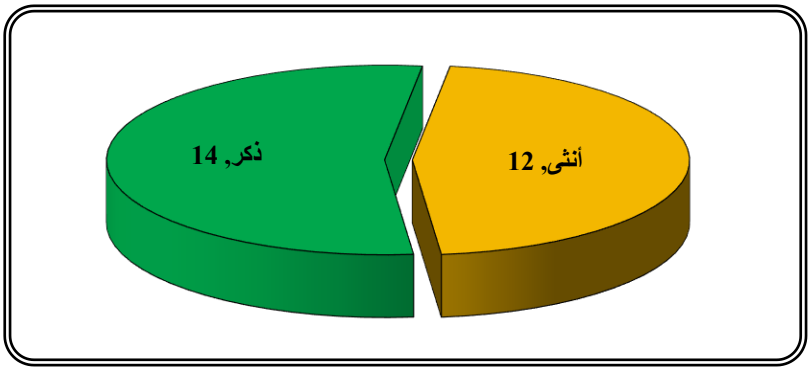

Figure 4. Distribution of the respondents in the research sample according to gender

Source: the program Excel

2. Perceptions of the respondents about the field of training:

- Respondents' perceptions of the training program's focus phrases:

Show the results of the table (6) The perceptions and impressions of the respondents in the research sample were positive and high regarding the training programmes. The training course programs are realistic and meet the needs of the community, and the training course programs are clear and at the heart of their work and can be applied in practice, as well as that the trainers' commitment to adequate curricula and times for the sessions helped them make the most of the sessions and the importance of the system. Overall, the respondents' evaluation of training programs was high with a percentage of (74%) In light of the total arithmetic mean on the axis expressions, which is (3.69) on the scale consisting of (5) grades. The arithmetic means values of the answers to the axis statements indicate that the first statement is considered the most important, followed by the second and then the third. The values of the standard deviations of the phrases axis of the training programs indicate that the third phrase was the most agreed upon by the majority of the respondents, followed by the first phrase, then the third phrase. In sum, there is great agreement by the majority of the respondents on what was stated in the focus of the training programs. Figure shows (5The relative importance of the training program axis phrases from the respondents' point of view in the research sample.

Table 6. Means and standard deviations of the respondents' perceptions of the training program axis phrases

the level	Importance	standard deviation	average	ferries
high	1	0.711	3.88	Programs of training courses are realistic and meet the needs of the community.
high	2	1.143	3.61	The course program is clear, to the point, and practically applicable.
high	3	0.613	3.58	The trainers' commitment to a curriculum and enough time for the course helped me make the most of the course and the importance of the system.
high		0.692	3.69	The focus of training programs

Source: SPSS-Program Results26

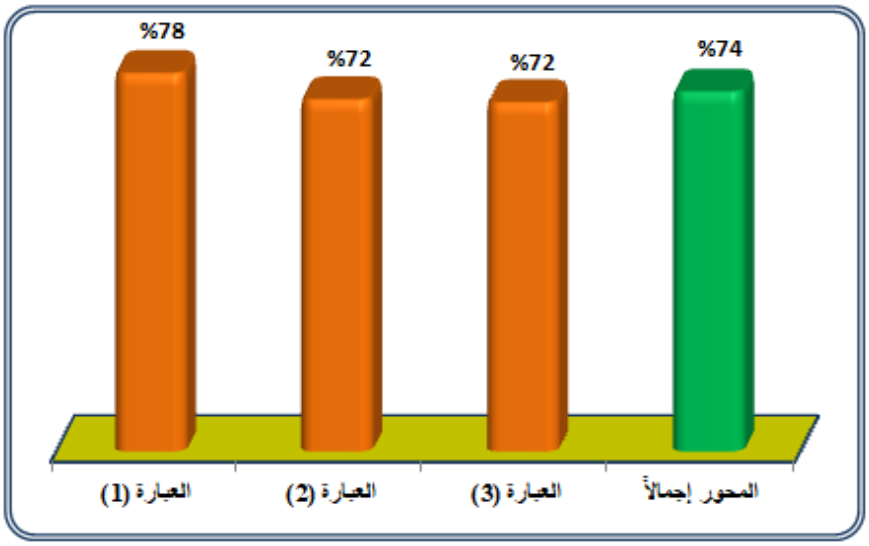

Figure 5. The relative importance of training program focus phrases

Source: Excel

- **The respondents' perceptions of the expressions of the axis of training means:**

Show the results of the table (7) The perceptions and impressions of the respondents in the

research sample were positive and high regarding the means of training. The participatory method used by the trainers helped them build critical and correct thinking, and that the methods used in the training courses helped them in continuous development, and that the training courses helped them increase their activity and effective participation, in addition to the practical experience and laboratories method in the training courses helped them develop their capabilities. Overall, the respondents' evaluation of the training methods was high with a percentage of (71%). In light of the total arithmetic means on the axis expressions, which is (3.53) on the scale consisting of (5) grades. The arithmetic mean values of the answers to the axis statements indicate that the first statement is considered the most important, followed by the fourth, the second, and finally the third. The values of the standard deviations of the expressions of the training means axis indicate that the third statement was the most agreed upon by the majority of the respondents, followed by the first statement, then the fourth statement, and finally the second statement. In general, there is great agreement by the majority of the respondents on what was stated in the terms of the focus of the training methods. Figure shows (6The relative importance of the expressions of the focus of training means from the point of view of the respondents in the research sample.

Table 7. Means and standard deviations of the respondents' perceptions about the expressions of the training means axis

the level	Importance	standard deviation	average	ferries
high	1	0.711	3.88	The participatory approach used by the coaches helped me build correct and critical thinking.
Moderate	4	1.143	3.11	The methods used in the training courses helped me to continuously improve.
high	2	0.613	3.85	The training sessions helped me increase my activity and active participation.
Moderate	3	0.919	3.27	The hands-on approach and labs in the courses helped me develop my capabilities.
high		0.718	3.53	The focus of training methods

Source: SPSS-Program Results26

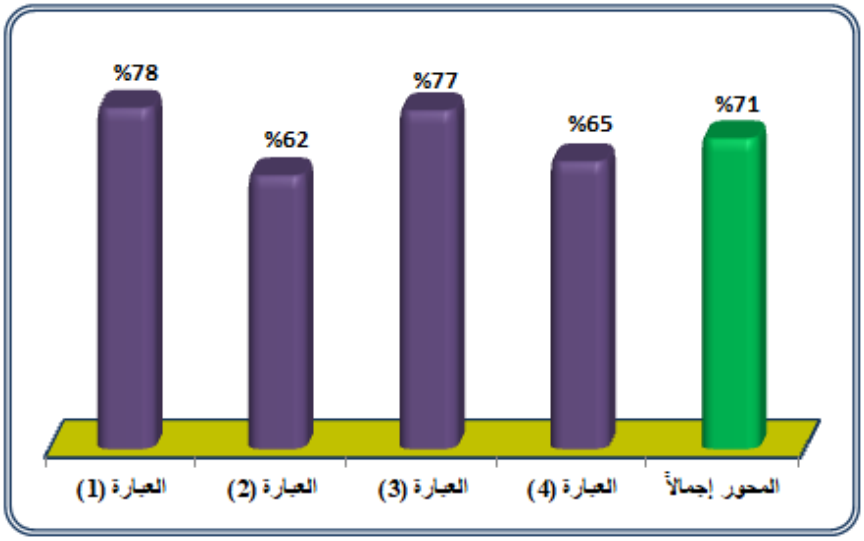

Figure 6. Average responses of the respondents to the expressions of the training means axis

Source: Excel

- **Respondents' perceptions of the training implementation axis phrases:**

Show the results of the table (8) The perceptions and impressions of the respondents in the research sample were positive and high regarding the implementation of the training. The training courses helped them recognize the importance of continuity in training and participation in training courses, and that the training courses helped them a lot in their field of work, in addition to that the training courses helped them in research, development and creativity. Overall, the respondents' evaluation of the training methods was high with a percentage of (76%). In light of the total arithmetic means on the axis expressions, which is (3.82) on the scale consisting of (5) grades. The arithmetic means values of the answers to the axis statements indicate that the first statement is the most important, followed by the second, and then the third. The values of the standard deviations of the phrases of the training implementation axis also indicate that the second phrase was the most agreed upon by the majority of the respondents, followed by the first phrase, then the third phrase. In sum, there is great agreement by the majority of the respondents on the terms of the implementation of the training. Figure shows (7The relative importance of the training implementation axis phrases from the point of view of the respondents in the research sample.

Table 8. Means and standard deviations of respondents' perceptions about the training implementation axis phrases

the level	Importance	standard deviation	average	ferries
high	1	0.744	3.92	The training courses helped me recognize the importance of continuity in training and participation in training courses.
high	2	0.653	3.88	The training courses helped me a lot in my field of work.
high	3	1.056	3.65	The courses helped me research, develop and create.
high		0.701	3.82	Training implementation focus

Source: SPSS-Program Results26

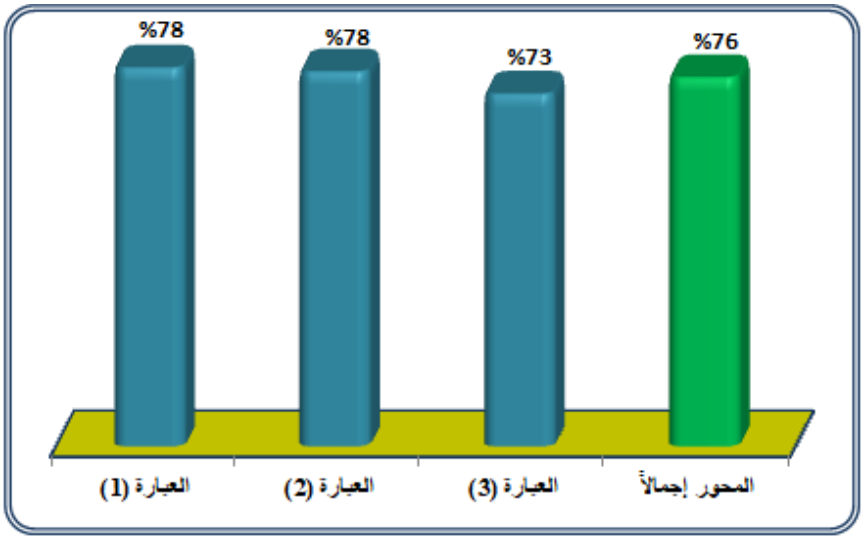

Figure 7. The average responses of the respondents to the training implementation axis phrases

Source: Excel

- **Respondents' perceptions of training evaluation axis phrases:**

Show the results of the table (9) that the perceptions and impressions of the respondents in the research sample were positive and high regarding the evaluation of the training, they see that the evaluation and review method used in the training courses helped them to benefit from and apply them, and that the practical tests held by the training courses helped them to facilitate their application in reality, in addition to the importance of the trainers continuing to communicate with them after the end of the training course. Overall, the respondents' evaluation of the training methods was high with a percentage of (66%) In light of the total arithmetic mean on the axis expressions, which is (3.31) on the scale consisting of (5) grades. The arithmetic means values of the answers to the axis statements indicate that the first statement is the most important, followed by the second, and then the third. The standard deviations of the training evaluation axis phrases also indicate that the first phrase was the most agreed upon by the majority of the respondents, followed by the second phrase, then the third phrase. In sum, there is great agreement by the majority of the respondents on what was stated in the focus of training evaluation. Figure shows (8The relative importance of the training evaluation axis phrases from the respondents' point of view in the research sample.

Table 9. Means and standard deviations of respondents' perceptions about the training evaluation axis phrases

the level	Importance	standard deviation	average	ferries
high	1	0.809	3.42	The assessment and review technique used in the courses helped me to take advantage of them and apply them.
Moderate	2	0.846	3.35	The practical tests evaluated by the courses helped me to be easy to apply in reality.
Moderate	3	1.084	3.15th	It helped me a lot if the trainers kept communicating with me after the training session.
Moderate		0.832	3.31	Training evaluation focus

Source: SPSS-Program Results26

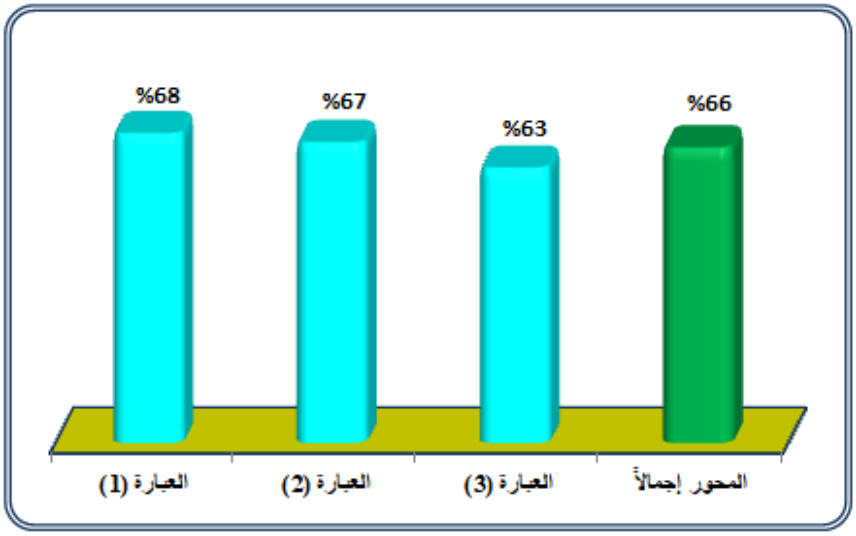

Figure 8. Averages of respondents' answers to the training evaluation axis phrases

Source: Excel

The respondents' perceptions of the field of environmental improvement

Show the results of the table (10) that the perceptions and impressions of the respondents in the research sample were positive and high regarding the improvement of the environment. The training courses helped them learn how to invest and improve the environment, and that the training courses worked to develop their environmental awareness, and that field visits and trips organized by the training courses helped them increase environmental, economic and social awareness, and the training courses helped them identify the importance of the role of institutions in achieving development In addition, the training courses focused on sustainable education. Overall, the respondents' evaluation of the field of environmental improvement was high with a percentage of (69%). In light of the total arithmetic mean on the field expressions, which is (3.46) on the scale consisting of (5) grades. The arithmetic means values of the answers to the domain statements indicate that the fourth statement is the most important statement, followed by the first statement, then the fifth statement, then the second statement, and finally the third statement. The values of the standard deviations of the terms of the environmental improvement field indicate that the first phrase was the most agreed upon by the majority of the respondents, followed by the fourth phrase, then the fifth phrase, then the third phrase, and finally the second phrase. In general, there is great agreement by the majority of the respondents on what was stated in the terms of the field of environmental improvement. Figure shows (9The relative importance of the terms of the field of environmental improvement from the point of view of the respondents in the research sample.

Table 10. Means and standard deviations of the respondents' perceptions of the terms of the field of environmental improvement

the level	Importance	standard deviation	average	ferries
high	2	0.587	3.77	The courses helped me learn how to invest and improve the environment.
Moderate	4	1.107	3.12	Training courses develop environmental awareness among the trainees.
Moderate	5	1.047	2.85	The field visits and trips organized by the training courses helped me to increase my environmental, economic and social awareness.
high	1	0.834	3.85	The training courses helped me recognize the importance of the role of institutions in achieving sustainable development.
high	3	1.041	3.73	The courses focus on sustainable education.
high		0.799	3.46	environmental improvement field

Source: SPSS-Program Results26

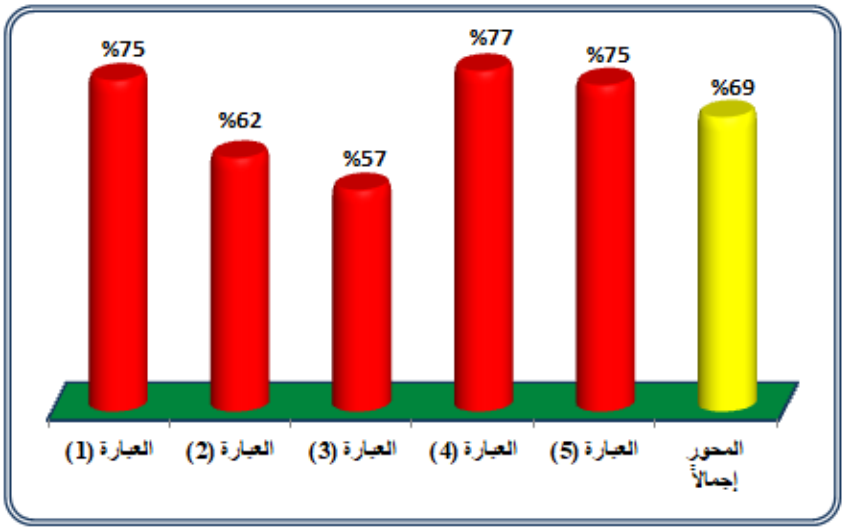

Figure 9. the relative importance of environmental improvement field phrases

Source: Excel

3. Research Hypothesis Testing

The main research hypothesis states that "there is a statistically significant relationship between training and environmental improvement". To test this hypothesis, we calculate Spearman's rank correlation coefficient Spearman)) between the respondents' answers on the axes of the field of training and the field of improving the environment. schedule (11) shows the values of the Saberman correlation coefficients in addition to their corresponding probabilities.

Table 11. Spearman's correlation coefficients between training axes and the field of environmental improvement

environmental improvement field		Training axes
probability value	correlation coefficient	
0.000	0.775*	training programs
0.000	0.905*	training methods
0.000	0.826*	Implementation of training
0.000	0.810*	Training evaluation
0.000	0.940*	field of training

***The correlation is significant at the level of significance (0.05)**

Source: SPSS-Program Results26

The first sub-hypothesis test

The first sub-hypothesis states that "there is a statistically significant relationship between training programs and improving the environment". from the table (11We note that the value of the Spearman correlation coefficient between the focus of training programs and the field of environmental improvement was (0.775), and this value is high, positive and statistically significant at a significant level (0.05(Depending on the probability value of the correlation coefficient, which is)0.000) which is less than (0.05), which indicates a positive and strong correlation between training programs and improving the environment, meaning that the respondents in the research sample see that whenever the training programs are realistic and

meet the needs of the community, and that these programs are clear and at the heart of the work and can be applied in practice, in addition to the existence of maximum benefit Of the programs as a result of the trainers' commitment to the curriculum and the time of the course, whenever this leads to an increase in the respondents' conviction that these training programs will contribute to improving the environment through sound investment in the environment, developing environmental, economic and social awareness, as well as recognizing the role of institutions in achieving sustainable development.

The second sub-hypothesis test

The second sub-hypothesis states that "there is a statistically significant relationship between training methods and improving the environment". from the table (11We note that the value of Spearman's correlation coefficient between the axis of training means and the field of environmental improvement was (0.905), and this value is very high, positive and statistically significant at a significant level (0.05(Depending on the probability value of the correlation coefficient, which is)0.000) which is less than (0.05), which means that there is a positive and very strong correlation between the means of training and improving the environment, meaning that the respondents in the research sample believe that whenever the trainers' style is based on building critical and correct thinking, and the means used in training courses help in continuous development, as well as following The method of practical and laboratory experiments will increase the activity and participation of the respondents and develop their capabilities, whenever this leads to an increase in the respondents' conviction that these training programs will contribute to improving the environment through sound investment in the environment, developing environmental, economic and social awareness, as well as identifying the role of institutions in achieving sustainable development.

The third sub-hypothesis test

The third sub-hypothesis states that "there is a statistically significant relationship between the implementation of training and the improvement of the environment". from the table (11We note that the value of Spearman's correlation coefficient between the axis of training means and the field of environmental improvement was (0.826), and this value is high, positive and statistically significant at a significant level (0.05(Depending on the probability value of the correlation coefficient, which is)0.000) which is less than (0.05), which means that there is a positive and strong correlation between the implementation of training and the improvement of the environment, meaning that the respondents in the research sample believe that whenever there is continuity to participate in training courses, and that there is benefit from these courses in their fields of work, as well as their benefit from these training courses In research, development and creativity, whenever this leads to an increase in the respondents' conviction that these training programs will contribute to improving the environment through sound investment in the environment, developing environmental, economic and social awareness, as well as identifying the role of institutions in achieving sustainable development.

Fourth sub-hypothesis test

The fourth sub-hypothesis states that "there is a statistically significant relationship between training evaluation and environmental improvement". from the table (11We note that the value of Spearman's correlation coefficient between the axis of training means and the field of environmental improvement was (0.810), and this value is high, positive and statistically significant at a significant level (0.05(Depending on the probability value of the correlation coefficient, which is)0.000) which is less than (0.05), which means that there is a positive and strong correlation between training evaluation and improving the environment, meaning that the respondents in the research sample believe that whenever there is a method for evaluation and review followed in training courses to show the benefit gained from these courses, and that there are practical tests that help to apply The topics of the courses realistically, as well as communication with them after the training courses, whenever this leads to an increase in the respondents' conviction that these training programs will contribute to improving the environment through sound investment in the environment, developing environmental, economic and social awareness, as well as identifying the role of institutions in achieving sustainable development.

Overall, there is a very strong relationship between training and environment improvement, depending on the value of the correlation coefficient (0.940and its probabilistic value0.000) which is less than (0.05This indicates that there is a strong positive correlation between training and improving the environment, the more positive impressions and perceptions of the respondents about training in its four axes: programs - means - implementation - evaluation, the more this helps to improve the environment better.

From the above, the main research hypothesis has been achieved to a very large degree.

4. Conclusions

1. The perceptions and impressions of the respondents in the research sample regarding the training axes were positive and to a high degree (more than70%), where the axis of the implementation of the courses occupies the first importance with a percentage (76%), followed by training programs with a percentage of (74%), then the training means occupies the third importance, with a percentage of (71%), while the axis of training evaluation was of the fourth importance, with percentage (66%).

2. The perceptions and impressions of the respondents in the research sample regarding the field of environmental improvement were positive and to a high degree69%)).

3. There is a positive and strong relationship between training programs and improving the environment, the more realistic the training programs meet the needs of the community, are clear and at the heart of the work and can be applied in practice, in addition to the maximum benefit from the programs as a result of the trainers' commitment to the

curriculum and the time of the course, the more this contributes to improving the environment through investment. sound environment, developing environmental, economic and social awareness, as well as recognizing the role of institutions in achieving sustainable development, and vice versa.

4. There is a very positive and strong relationship between training methods and improving the environment. The more the trainers' method is based on building critical and correct thinking, and the means used in training courses help continuous development, as well as following the method of practical and laboratory experiments, it will increase the activity and participation of trainees and develop their capabilities. So in improvement, and vice versa.

5. There is a positive and strong relationship between the implementation of training and improving the environment, the more there is continuity to participate in the training courses, and that there is a benefit from these courses in their fields of work, as well as the trainees benefit from these training courses in research, development and creativity, the more this contributes to improvement, and vice versa .

6. There is a positive and strong relationship between training evaluation and improving the environment. Whenever there is a method of evaluation and review followed in the training courses to show the benefit gained from these courses, and the presence of practical tests that help to apply the topics of the courses realistically, as well as communication between trainees and trainers after the training courses end. The more it contributes to improving the environment.

Recommendations

1- Expansion of training courses, research centers and continuing education centers.

2- Holding on-site training courses in the dysfunctional state institutions and companies.

3- Paying attention to training programs because of their impact on society, as the study showed a strong relationship between training programs and improving the environment.

4- Providing the necessary and special means to implement the training, such as laboratories and workshops, and following the practical and modern methods in the training centers.

5- Follow-up of trainees even after the end of the training course because of its great impact on the implementation of training programs

6- Activating the element of participation, scientific trips, practical visits and real examples in the community.

7-

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