Current Science International
ISSN: 2077-4435

Volume : 07 | Issue : 03| July- Sept. | 2018
Pages**:** 451-465

Effectiveness of a training program to develop female students' knowledge and skills in hand embroidery

Rehab H. J. Ekram

Doctorate of Philosophy, Fashion Design Specialization, Clothing and Embroidery History.

Received: 15 August 2018 / Accepted: 15 Sept. 2018/ Publication date: 30 Sept. 2018

ABSTRACT

Human resources are one of the most important elements of the economic and social development process. Studies and researches focus on the necessity of activating human capacities through proper planning, assimilation of variables, harmonization of administrative systems and rehabilitation programs with the requirements of development.

Training is the tool of development and its means, which, if invested and utilized efficiently, can achieve efficiency in performance and production. Training has a positive impact on the building of the productive and efficient human factor, which in turn contributes to increased productivity throughout the organization. Experiences and trends of individuals.

The training program was applied to (20) female students at Umm Al-Qari University to Study the scientific foundations of the training process to achieve the objectives of training in skills development and Preparation of a training program to develop the skills of students' knowledge and skills in hand embroidery. As well as, determine the effectiveness of the training program in providing the students with the knowledge and skills of "stitch branch, stitch series, stitch stitching, phaston stitch, flat stitch, stitch prominent."

Keywords: Terrestrial Laser Scanner, Scanning accuracy, geometry

Introduction

Development is the focus of the communities to achieve progress and prosperity, and relies on two key elements: physical element and the human element, the development of any activity can occur only by linking the two elements and integrating them together (shamkhi jamil, 2003:88).
Human resource development is a series of actions and foundations aimed at regulating individuals to obtain the maximum benefit of human competencies and extract their best energies (Mohamed Ayman Abd el-Latif, 2014:372)

Human resources are one of the most important elements of the economic and social development process, where Studies and researches focus on the need to activate human capacities through proper planning, assimilation of variables, and harmonization of administrative systems and rehabilitation programs with the requirements of development (Ibrahim Saber 2004: 15).

Training is one of the most important fundamentals for countries and governments to build their future; as Human resources training is gaining a great importance in contemporary management in response to external environment variables (Walid Al-Halafawi, 2012: 184).

Both training and development are closely related to the development of manpower in order to achieve human development and thus society in all social, economic and cultural fields, Psychologists consider training as one of the solutions to solve modern civilization problems, Training is considered as investing in human capital to enable the individual to play the role In the framework of modern environment, and help him adapt to working conditions. (Eman Marei: 2013: 13).

Training is the tool of development and its mean, which if invested and utilized efficiently enables to achieve efficiency in performance and production, Training has a yield and a return on the building of the productive and effective human element, which in turn contributes to increase productive efficiency at the level of the organization as a whole (Aml Abd el-Rahman: 2016: 243).

Corresponding Author: Rehab H. J. Ekram, Doctorate of Philosophy, Fashion Design Specialization, Clothing and Embroidery History.

Training occupies a pivotal and essential position in modern institutions and organizations and is the backbone of the efforts of these institutions towards development and modernization, Attention to human resources is the only way to promote societies (Tarek el-Suwaidan, 2015: 161).
It is a planned activity aimed at making changes in the information, skills, experiences and attitudes of individuals (Rania Mustafa: 2010: 23).

The importance of training stems from being a continuous process due to the rapid development of all activities and fields, which necessitates keeping pace with this development (Akram Reda: 2014: 73), It is a mean to prepare qualified human cadres to drive the production sectors towards growth and continuity (Hesham El-Taleb: 2017: 35).

There are many studies that dealt with training and its main role in advancing human development especially in the field of clothing such as the study of (Akuratiyagamage and Vathsala: 2005), (Rania Mustafa, 2010), Some studies have confirmed on the importance of training and its effectiveness in providing students with knowledge and skills such as the study of (Uywn VU: 2003), (Alex Blyth: 2004), (Akuratiyagamage & Vathsala: 2005).

Although these studies differ in their objectives and tools, but they all emphasize the role of training and its importance because of its great impact on raising the skills of individuals and refining their expertise.

Perhaps the challenges facing the world and the rapid change in all aspects of life make it necessary to work to achieve the goals of the training system (Hesham El-taleb: 2017: 38).

The Educational institutions are the basis for any comprehensive development process at the level of the state, as it is primarily concerned with the development of trained human resources, which led the researcher to prepare a training program to develop the knowledge and skills of students in handwork embroidery.

Research problem

1- What is the possibility of preparing a training program to develop the knowledge and skills of female students in handwork embroidery?
2- What are the scientific bases on which the training program is based?
3- How effective is the training program in providing the basic knowledge and skills of "stem stitch, chain stitch, blanket stitch, festoon stitch, flat stitch, and prominent stitch"?

Research objectives

1- Study the scientific foundations of the training process to achieve the objectives of training in skills development.
2- The preparation of a training program to develop the knowledge and skills of students in handwork embroidery.
3- Determining the effectiveness of the training program in providing the students with the main knowledge and skills of "stem stitch, chain stitch, blanket stitch, festoon stitch, flat stitch, and prominent stitch"

Research importance

1- Highlighting the role of educational institutions in the development of human resources, through the development and modernization to prepare technical trained cadres where knowledge and skills are available.
2- The results of this research may contribute in developing the training programs to improve the performance of trainees.
3- The research is considered a new addition in the field of training that you can take advantage of it in the preparation of other training programs.

Research definitions:

Effectiveness:

- Effectiveness is the determination of the desired or expected impact caused by the program in order to achieve the objectives for which it was developed, This effect is measured through identifying the

increase or decrease in the average scores of the sample members in actual situations within the study laboratory (Amal Sadiq, Fouad Abu Hatab: 2011: 66).

Program:

- Is the point laid down for particular action (the brief lexicon: 2003: 47).
- It is a set of experiences which deals with several of topics that are integrated and comprehensive in theory and practice through a specific number of steps to implement a specific task in a specific manner at specific times (Akram Reda: 2014: 55).

Training:

- A continuous organized process centered on the individual, and it aims at making specific behavioral, technical and intellectual changes to meet current or future specific needs, Required by the individual and the work performed And the organization in which it operates (Aml Abd el-Rahman: 2016: 211).
- A continuous systematic effort aimed at enriching and developing the individual's knowledge and skill to perform his work with a high degree of efficiency and effectiveness (Kamel Ali Metwally: 2013: 206).

Training Program:

- A renewed and continuous activity that begins with planning and ends with evaluation, and it aims to provide individuals with knowledge and skills in specific fields to improve their work performance or change their attitudes and patterns of behavior to perform their current or future work, which helps to achieve the goals of this work (Akram Reda, 2014: 56).

The concept of the training program in this research:

- Independent structure of the group of skills to be delivered to the students, which is formulated according to an organized method that starts with setting goals and ends with the evaluation process.

Development:

- The systematic effort to exploit the available financial possibilities and human potential in the society to achieve its various real needs in a balanced manner (Mohamed Munir Hijab: 2010: 834).

Skill:

- The ability to make a deliberate impact in a coordinated manner and accurately with the speed and economy at work (Ibrahim Hassan: 2006: 20).
- The performance of a work and complete it accurately without errors in the fastest time and with minimal effort (Magdy Aziz Ibrahim: 2015: 213).

The concept of skill in this research:

- A group of consistent student responses that grow through learning and practice until it reaches a high level of perfection.

Embroidery:

- Embroidery is the decoration of textiles, after being spun by special needles in colored or metallic threads through decorative design, executed with various embroidery stitches (Elham Mohamed: 2005: 2).

Research hypotheses:

1. There are statistically significant differences between the average scores of students in the pre and post-test of the achievement test and the skillful performance test for the post-test.
2. There are statistically significant differences between the average scores of students in the pre and post-test of the achievement test in favor of the post-test.
3. There are statistically significant differences between the average scores of students in the pre and post-test of the skillful test for the post-test.

Research Methodology:

This research was followed by the experimental approach that because it is fit to achieve the objectives of research and verification in its hypotheses.

Research sample:

The training program was applied to (20) female students at Umm Al-Qura University.

Research Tools:

1- Training program to develop the knowledge and skills of female students in handwork embroidery, through the preparation of "stem stitch, chain stitch, blanket stitch, festoon stitch, flat stitch, and prominent stitch".
2- Achievement test (pre/post) to measure the knowledge contained in the training program.
3- Skillful application test (pre/post) to measure the skills included in the training program.
4- An estimation scale to evaluate training results to measure the skills contained in the training program.

Research limits:

- Set up a variety of stitches "stem stitch, chain stitch, blanket stitch, festoon stitch, flat stitch, and prominent stitch".

Research procedures:

Preparation of the training program: The process of building and preparation of the training program has passed through many stages, as it requires a comprehensive plan including a number of sequential, interrelated practical procedures and these stages are:

The stage of design, preparation and processing:

The stage in which the full conception of the training program was developed and what should be contained in the objectives and material, and the following are the steps to complete the process of preparation and design:

A) Determination of the subject of training:

Prepare a variety of stitches "stem stitch, chain stitch, blanket stitch, festoon stitch, flat stitch, and prominent stitch".

B) Defining the training objectives:

Which the planning of the training program is based on them and setting of the basic steps of the program to serve these objectives, and the identification of the training objectives contributes in selecting the training material and the ways and the methods that will be presented in the presentation

(Abd el-Fattah Diab: 2007: 222). The researcher formulated the training objectives in a behavioral manner; it is the behavior of female students after training, and then the formulation of the objectives for each part of the training program.

The training objectives of the training program were formulated to:

A- *Cognitive objectives: which are interested in information and facts:*
At the end of the training the student will be able to:
* Identify the different stitches.
* Know the stem stitch.
* Know the chain stitch.
* Know the blanket stitch.
* Know the festoon stitch.
* Know the flat stitch.
* Know the prominent stitch.

B- *Self-dynamic goals: which is interested in acquiring skills:*
* Takes into account the sequence of work steps.
* Master the stem stitch.
* Implement chain stitch.
* Mastered blanket stitch.
* Mastered the festoon stitch.
* Implement flat stitch.
* Executed prominent stitch.

C) *Defining and Organizing the Program Content:* defining the content of the program is comes as the next step of the goal setting phase, When determining the content, it took into account its relevance to the training objectives to be achieved, The researcher organized the content of the program logically, taking into account the interconnection between its parts.

D) *The evaluation phase:* The training program was presented to a group of specialized professors to ensure their scientific and technical validity and to express their opinion on the following set of elements:

- The extent to which the question relates to the goal to be achieved.
- The extent to which objectives and content are agreed with the training program.
- The logical sequence of the training program.
- The validity of the scientific method used in the program.
- The extent to which the means and tools are compatible with the content of the training program.

Preparation of training program evaluation tools:
- An objective achievement test for the evaluation of knowledge included in the program.
- An applied test to measure the skillful performance of the program.
- An estimation scale for evaluating the outputs resulting from applying the skillful test.

1- The objective cognitive achievement test:

The achievement test is designed to measure the level of collection of information gained through the study of the training program, the achievement selection is the tool that is used to measure knowledge, understanding and skill in a particular subject or group of subjects (Amal Sadek, Fouad Abu Hatab: 2011: 273) .

The collection test included a "30" multiple choice question, each containing four alternatives, with the difference in the order of the correct answer in each question.

Test Correction:

The researcher corrected the cognitive achievement test according to the correction key, it is a model Contains the correct answer number for each question, the grades were distributed to the questions by one degree for each correct answer, the total score of the achievement test was 30 degrees.

2- Skillful applied test:

An applied "skillful" test is designed to judge the effectiveness of the skills included in the program, Applied tests are used as objective means to assess the efficiency of the tasks of the process (sensory, cognitive, Kinetic).

3- Estimation Scale:

The researcher design scales estimate for each part of the skillful test parts were presented to a group of specialist teachers, in order to verify the validity of the scale content and its proposed items, and to express an opinion on the appropriateness of the scale items to the content, and these arbitrators have some suggestions, The researcher took this into account when writing the assessment scale in its final form, The scale contained a three-pronged scale according to the "Likert" scale, the researcher has taken into account the logical sequence items when dividing the scale items.

Correction: Was corrected by three specialists in the subject of the program, by marking the estimate that applies to the item on the scale, and the marks that have been put have been translated to scores, two degrees were placed for exact performance, a degree of fairly controlled performance, and zero for uncontrolled performance.

Research tools reliability and validity:

The achievement test reliability and validity:

1- Validity:

The subject of the validity of the test relates to what the test measures and to what extent it succeeds in measuring it.

The logical validity:

- The achievement test was presented on judgmental Commission Of specialized professors, In order to ascertain the ease and clarity of the test phrases, and the link of the objectives to the test questions, The arbitrators unanimously agreed on the validity of the achievement test with making some suggestions, and the following has been modified based on their suggestions:
- Reduce the number of questions.
- Take into consideration the ease and clarity of wording.

2- Reliability:

Reliability means that the test is coordinated in terms of the results; the coefficient of reliability of the achievement test is calculated in the following ways:

A) Reliability using midterm fragmentation:

The Reliability of the achievement test was confirmed by using the midterm fragmentation method, the reliability coefficient value was 0.736-0.859 for the whole test, which is a significance value at level 0.01 for approaching the correct one, which indicating the reliability of the achievement test.

B) Cronbach's Alpha coefficient reliability:

It was found that the alpha coefficient = 0.789 for the achievement test as whole, which is a high value and this is significance of the reliability of the achievement test at level of 0.01 for approaching the correct one.

Table 1: Achievement test reliability

Achievement test reliability	Cronbach's Alpha	Split-half
	0.789	0.736 – 0.859

Average Time for the Performance of cognitive testing:

The time taken by female students was calculated in the post-test, and the average time was "40 minutes".

The validity and reliability of the skillful applied test:

1- Validity:

Logical validity: The test was presented to a group of specialized professors and they all recognized its validity to apply.

2- Reliability:

Correctors' reliability:

The coefficients of correctors can be obtained by calculating the correlation coefficient between scores given by two or more correctors to the same individuals or to the same tests, In other words, each examinee receives two or more degrees of correction of one test.

And the correction made by three of the arbitrators by using the assessment scale in the evaluation process and each corrector made the evaluation process alone.

The correlation coefficient between the three grades that has been put by the correctors (X, Y, Z) was calculated for the post-test test using the grade correlation coefficient for each sample separately, The following table illustrates this:

Table 2: The correlation coefficient between correctors for the skillful test

Correctors	Stem stitch	Chain stitch	Blanket stitch	Festoon stitch	Flat stitch	Prominent stitch	The total
A-B	0.836	0.862	0.751	0.801	0.873	0.913	0.744
A-C	0.924	0.778	0.953	0.702	0.725	0.892	0.825
B-C	0.736	0.813	0.884	0.908	0.841	0.763	0.792

The previous table shows the high values of correlation coefficients between the correctors; and all values are significance at the level of 0.01 for the approximation of the correct one, which shows the consistency of the applied test that measures the skillful performance, as well as the stability of the assessment scale, which is a tool for correcting the skillful test.

Average time for the performance of skillful test:

The time spent by the students was calculated in the post-test was calculated, and the average time for the test performance was 120 minutes.

Implementation of the program:

- Pre-training phase: "implementation of knowledge and skillful pre-tests":

On the first day of the experiment, the cognitive achievement test was applied to students, each student was asked to answer all questions, and the skill tests were applied to the students, each student was asked to perform the skillful tests with its parts.

- Training phase "Study of the Program":

The content of the training program has been implemented, where the program included the preparation of a variety of stitches "stem stitch, chain stitch, festoon stitch, flat stitch, and prominent stitch ".

- Post-Training phase "post-application of cognitive and skillful tests":

After the completion of the study of the program, the cognitive achievement test was applied to the female students, which is the same test that was given to them before the training process, after each student completed the cognitive test; each student was asked to perform the skillful test with its parts.

The researcher corrected the pre/post-cognitive achievement test according to the test correction key, and the post-skillful applied test was corrected according to the performance assessment scale prepared for that.

Results:

The first Hypothesis:

The first hypothesis states on the following:
"There are statistically significant differences between the average scores of female students in the pre and post-test of the achievement test and the skillful performance test for the post-test".
To verify this hypothesis, the "T" test was applied. The following table illustrates this:

Table 3: The significance of the differences between the average scores of female students in pre and post-test

Effectiveness	Mean	Std. Deviation	N	df	t	Sig
After	19.082	3.037	20	19	43.034	0.01
Before	145.751	9.146				

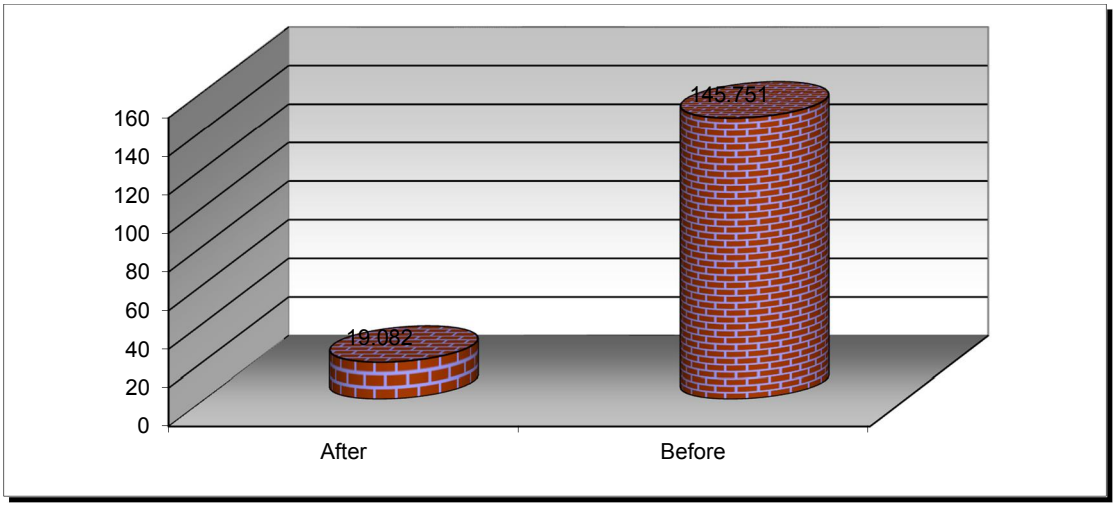

Fig. 1: Differences between the average scores of female students in pre and post test

It is clear of Table (3) and Figure (1) That the value of "T" is equal to "43.034", which is statistically significance value at the level of 0.01, where the average scores of female students in the post test "145.751", while the average scores of female students in the pre-test "19.082", indicating that there are real differences between the tests For the post-test.

To find out the effect volume, the ETA equation was applied: t = 43.034, df = degrees of freedom = 19

$$n^2 = \frac{t^2}{t^2 + df} = 0.99$$

And by calculating the effect volume, it was found that $n^2 = 0.99$

$$d = \frac{2\sqrt{n^2}}{\sqrt{1-n^2}} = 19.8$$

The volume of the effect is determined whether it is large, medium or small, as follows:
0.2 = small effect volume
0.5 = average effect volume
0.8 = large effect volume
this means that the effect volume is great; and so on the first hypothesis is achieved.

This finding is consistent with most of the previous studies that the training program is effective for female students and has been of a great importance in raising the level, efficiency and development of female students such as the study (Anonymous: 2006).

The finding of this hypothesis is also consistent with (Kamel Ali Metwally, 2013: 283), who sees that training provides individuals with the information, experience and skills necessary to perform their work effectively.

The researcher sees that the training programs gave female students all new knowledge and skills, the rapid changes in systems and methods requires the re-configure and development of existing trends and the acquisition and development of new skills.

The second hypothesis:

The second hypothesis states on the following:
"There are statistically significant differences between the average scores of female students in the pre and post-test in the achievement test for the post-test".
To verify this hypothesis, the "T" test was applied. The following table illustrates this:

Table 4: The significance of the differences between the average scores of female students in pre and post-test for the achievement test

Achievement test	Mean	Std. Deviation	N	df	t	Sig
After	3.259	1.023	20	19	18.775	0.01
Before	27.153	3.355				

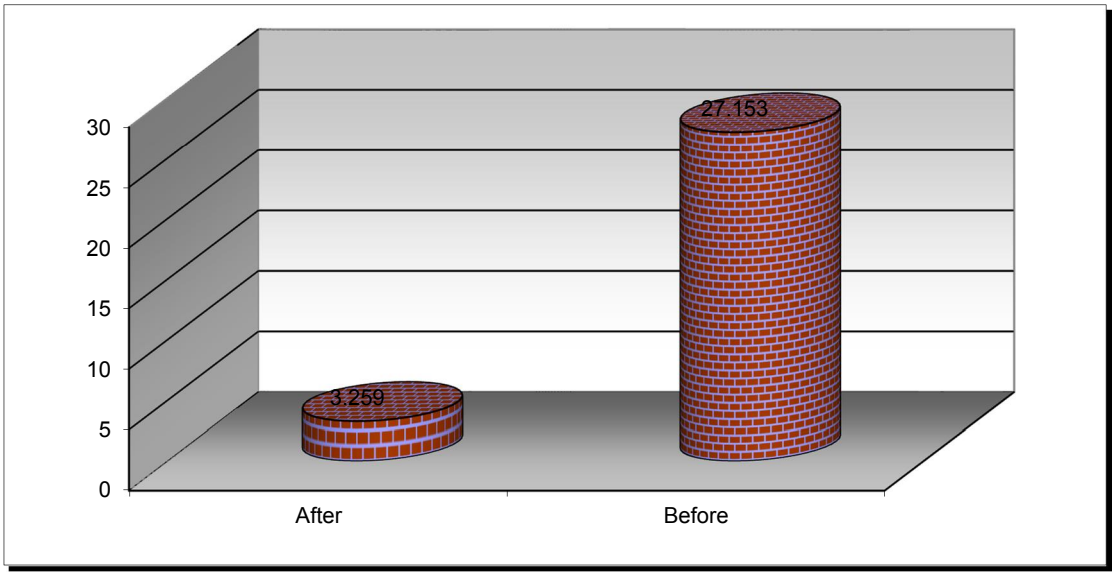

Fig. 2: Differences between the average scores of female students in pre and post-test for the achievement test

It is clear of Table (4) and Figure (2) That the value of "T" is equal to "18.775" for the achievement test as whole, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "27.153", while the average scores of female students in the pre-test "3.259", and thus the second hypothesis is achieved.

This finding is consistent with the results of the previous studies such as (Rania Mustafa, 2010), which emphasizes the importance of training and demonstrates how effective the training program is in developing individual knowledge.

Training is a continuous and systematic development process to provide human resources with knowledge and skills at all levels, and to improve their attitudes and behaviors. (Mohamed Ayman Abd El-latif: 2014, 292) it is an organized scientific activity aimed at refining skills and developing competencies.

(Eman Salah: 2011: 126) sees that training is a purposeful activity that aims to transform theoretical knowledge into a skillful work by applying science to work.

The third hypothesis:

The third hypothesis states on the following:

"There are statistically significant differences between the average scores of female students in the pre and post-test in the skillful test for the post-test".

To verify this hypothesis, the "T" test was applied. The following table illustrates this:

Table 5: The significance of the differences between the average scores of female students in pre and post-test for the stem stitch

Stem stitch	Mean	Std. Deviation	N	df	t	Sig
After	2.883	0.991	20	19	12.287	0.01
Before	19.227	3.268				

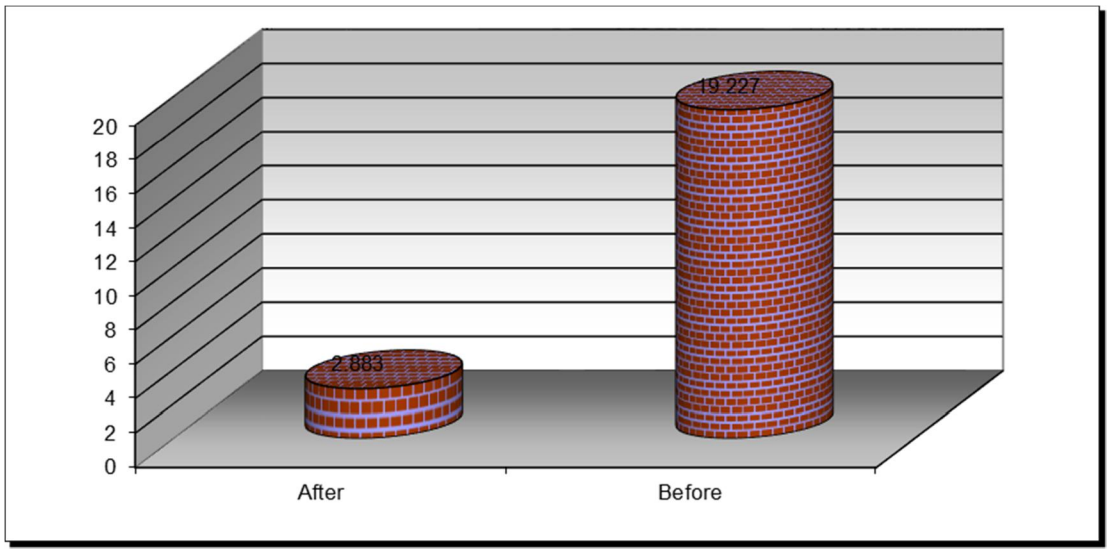

Fig. 3: Differences between the average scores of female students in pre and post-test for the stem stitch

It is clear of Table (5) and Figure (3) that the value of "T" is equal to "12.287" for the stem stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "19.227", while the average scores of female students in the pre-test "2.883".

Table 6: The significance of the differences between the average scores of female students in pre and post-test for the chain stitch

Chain stitch	Mean	Std. Deviation	N	df	t	Sig
After	2.681	0.835	20	19	9.271	0.01
Before	17.459	2.670				

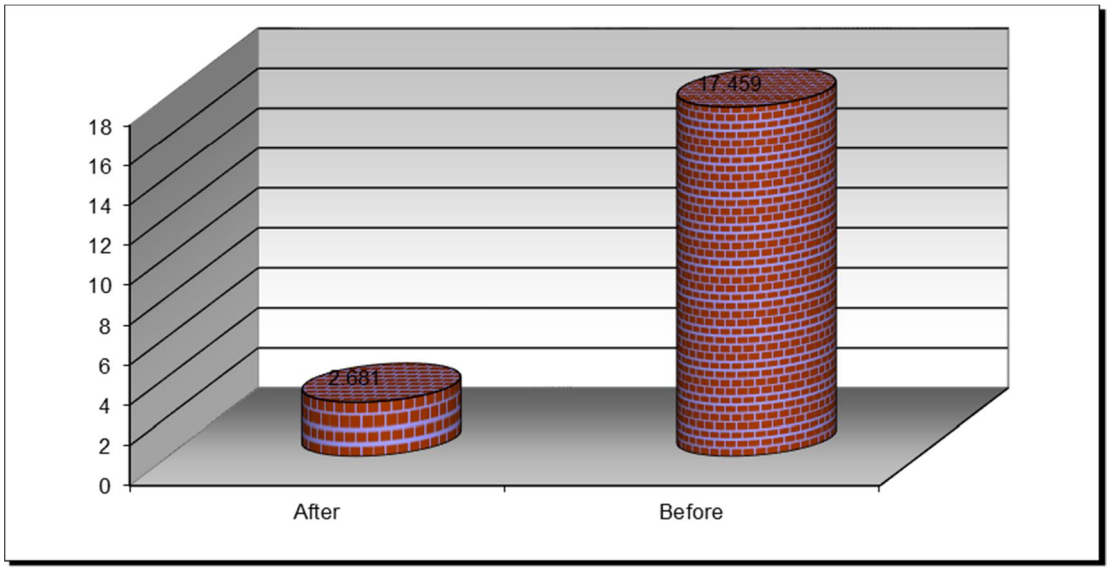

Fig. 4: Differences between the average scores of female students in pre and post-test for the chain stitch

It is clear of Table (6) and Figure (4) that the value of "T" is equal to "9.271" for the chain stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "17.459", while the average scores of female students in the pre-test "2.681".

Table 7: The significance of the differences between the average scores of female students in pre and post-test for the blanket stitch

Blanket stitch	Mean	Std. Deviation	N	df	t	Sig
After	3.557	1.001	20	19	14.088	0.01
Before	22.021	3.998				

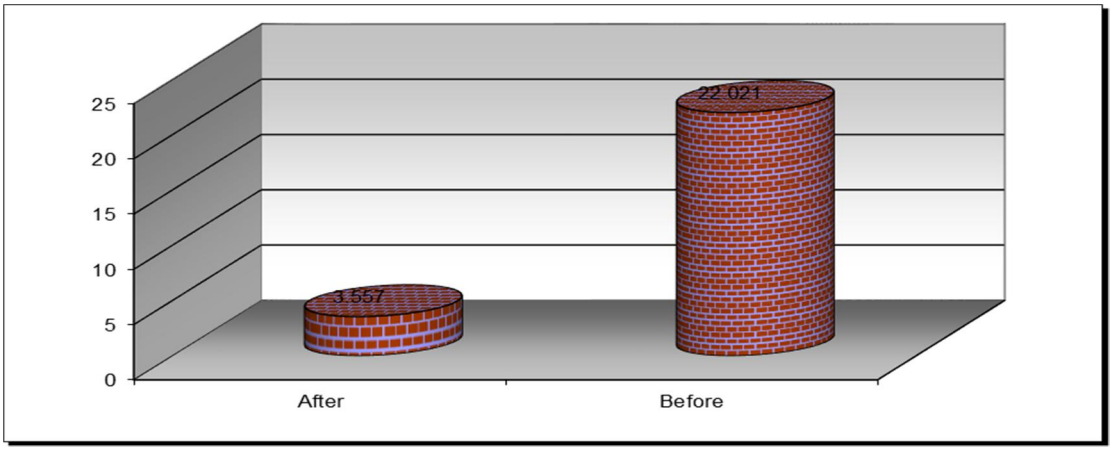

Fig. 5: Differences between the average scores of female students in pre and post-test for the blanket stitch

It is clear of Table (7) and Figure (5) that the value of "T" is equal to "14.088" for the blanket stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "22.021", while the average scores of female students in the pre-test "3.557".

Table 8: The significance of the differences between the average scores of female students in pre and post-test for the festoon stitch

Festoon stitch	Mean	Std. Deviation	N	df	t	Sig
After	1.321	0.657	20	19	11.369	0.01
Before	16.839	2.403				

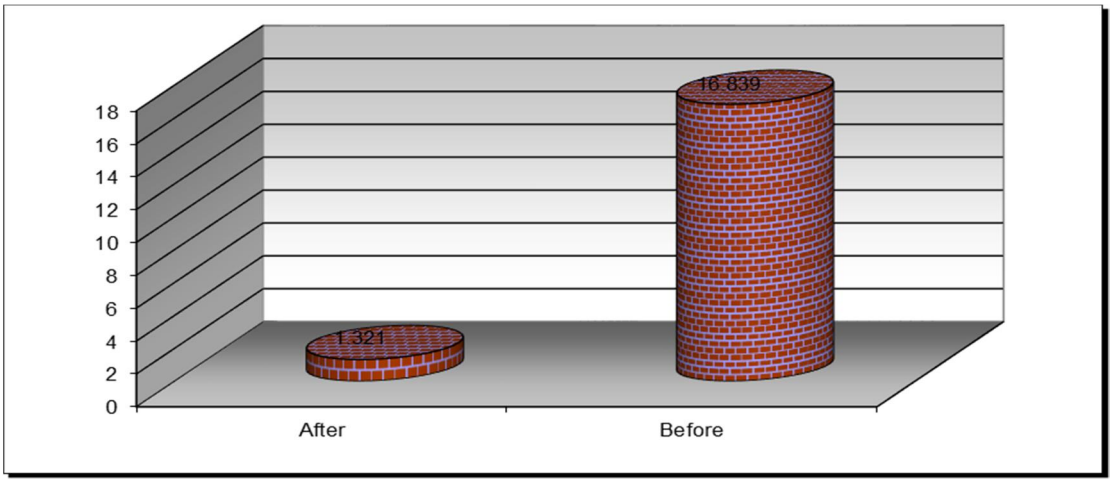

Fig. 6: Differences between the average scores of female students in pre and post-test for the festoon stitch

It is clear of Table (8) and Figure (6) that the value of "T" is equal to "11.369" for the festoon stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "16.839", while the average scores of female students in the pre-test "1.321".

Table 9: The significance of the differences between the average scores of female students in pre and post-test for the flat stitch

Flat stitch	Mean	Std. Deviation	N	df	t	Sig
After	3.325	1.002	20	19	15.220	0.01
Before	24.719	3.487				

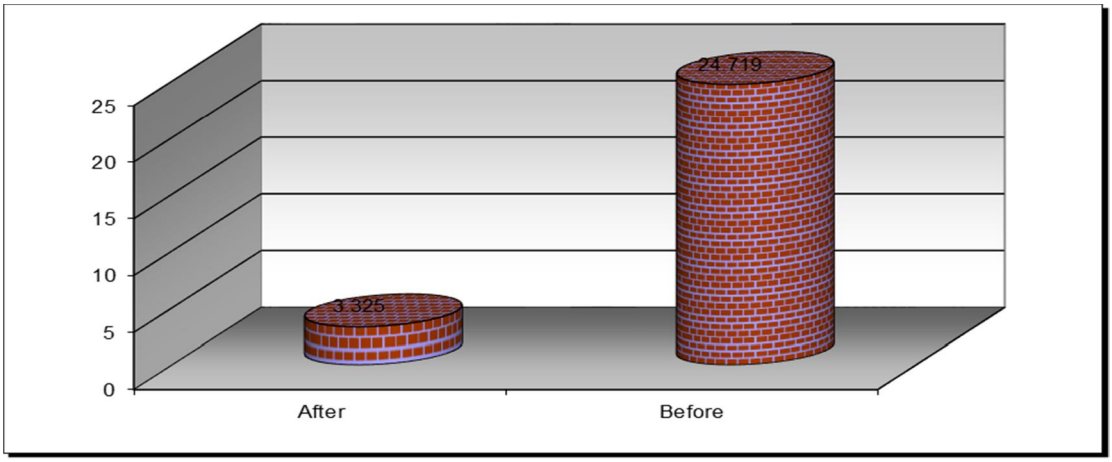

Fig. 7: Differences between the average scores of female students in pre and post-test for the flat stitch

It is clear of Table (9) and Figure (7) that the value of "T" is equal to "15.220" for the flat stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "24.719", while the average scores of female students in the pre-test "3.325".

Table 10: The significance of the differences between the average scores of female students in pre and post-test for the prominent stitch

Prominent stitch	Mean	Std. Deviation	N	df	t	Sig
After	2.056	0.829	20	19	10.572	0.01
Before	18.333	2.432				

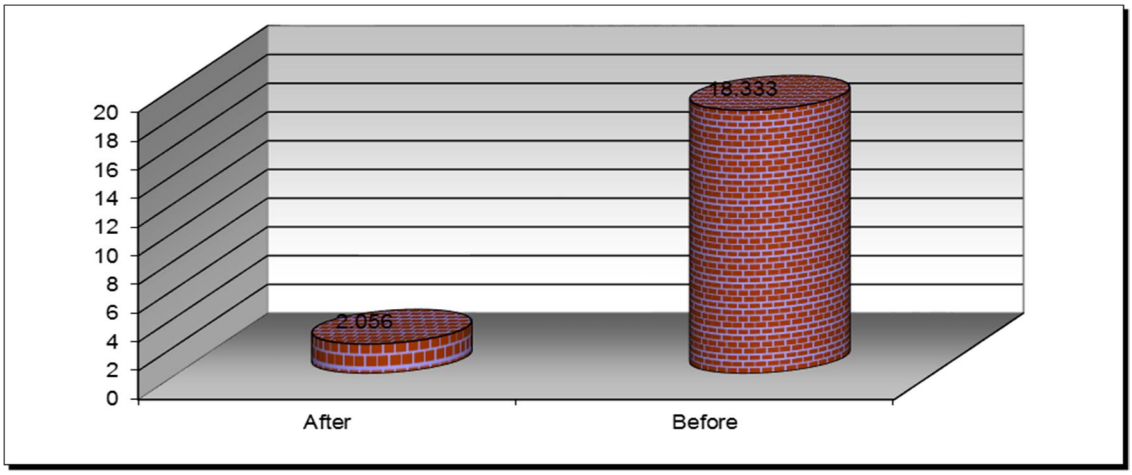

Fig. 8: Differences between the average scores of female students in pre and post-test for the prominent stitch

It is clear of Table (10) and Figure (8) that the value of "T" is equal to "10.572" for the prominent stitch, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "18.333", while the average scores of female students in the pre-test "2.056".

Table 11: The significance of the differences between the average scores of female students in pre and post-test for the skillful test as whole

Total skillful test	Mean	Std. Deviation	N	df	t	Sig
After	15.823	2.441	20	19	37.211	0.01
Before	118.598	6.326				

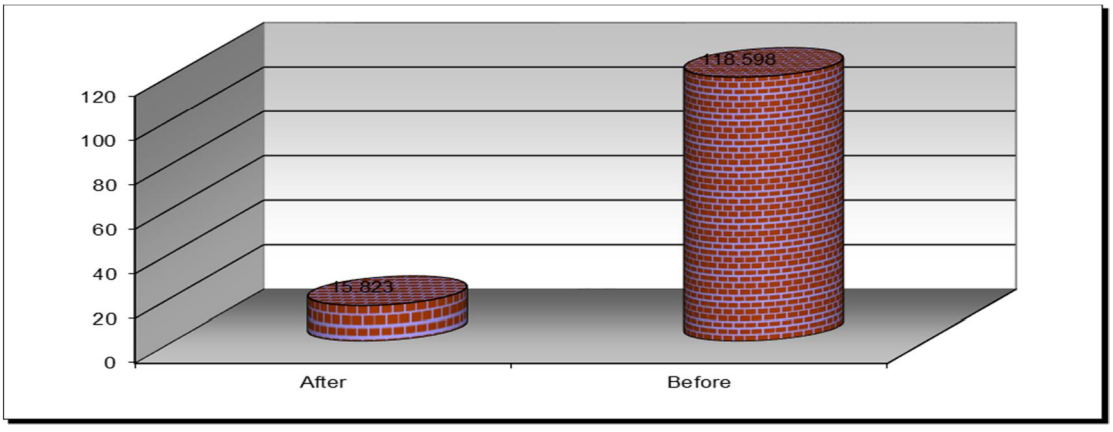

Fig. 9: Differences between the average scores of female students in pre and post-test for the skillful test as whole

It is clear of Table (11) and Figure (9) that the value of "T" is equal to "37.211" for the total of skillful test as whole, which is statistically significance value at the level of 0.01 for the post-test, where the average scores of female students in the post test "118.598", while the average scores of female students in the pre-test "15.823", and thus the third hypothesis is achieved.

This finding is consistent with the study of (Eman Salah Ali Sharf, 2011), that training leads to increase competence and skills of individuals and improves their productivity.

Training is a structured effort aimed at developing individuals' skills and changing their behavior in order to achieve the specific goals (Hesham El-taleb: 2017: 46).

The researcher sees training is a continuous activity to provide individuals with the skills, experience and attitudes that enable them to perform their work better.

Research recommendations:

1- Emphasize on the role of universities in the service of society through the continuation of training processes in order to cope with the rapid changes considering it as an essential element of human development.
2- In line with global trends and openness to the world to learn about modern training methods.
3- To benefit from the training program in designing other training programs.

References

Abd el-Fattah Diab, 2007. Human Resources Management - Member of the Faculty of Commerce Business Administration Department Bani Suef University, Cairo University, and Chairman of the Arab Consultative Group, Cairo.

Akram Reda, 2014. Training of Trainers Program, Islamic Publishing and distribution office, Cairo.

Akuratiyagamage and Vathsala, 2005. The Training Programs Effect on the Management Development Requirements in Apparel Factories in Sri Lanka" Sri Lanka.

Alex Blyth, 2004.Training and Qualifying Program for Workers in Nike Company in Europe" Netherlands.

Amal Sadek and Fouad Abu Hatab, 2011. Educational Psychology, the Anglo Library, 6th Edition.

Aml Abd el-Rahman el-Sayed, 2016. Human Resources management, Faculty of Commerce, Cairo University.

Anonymous, 2006. The Effect of Program Organize for Sales Managers Training on Sale Value in Levi Strauss Company" UK.

Elham Mohamed Yousry: Machine-embroidery and its use in the manufacture of clothing supplements, "unpublished master thesis, Faculty of Home Economics, Helwan University.

Eman Marei, 2013. Small Projects and Development, International Comparative Experiences and the Egyptian Case, Center for Political and Strategic Studies.

Eman Salah Ali Sharf, 2011. A proposed vision for a training program to develop some skills in the technology of education for teachers' trainers in the basic education in the Sultanate of Oman, Journal of Specific Education researches, Mansoura University.

Hesham El-taleb, 2017. Manual Leadership Training Guide, Arab Science House.

Ibrahim Hassan, 2006. Technology of Education and Training, Cairo.

Ibrahim Saber Mohamed, 2004. Effectiveness of training program for the skillful performance of knitting techniques, unpublished PhD thesis, Faculty of Specific Education, Ain Shams University.

Kamel Ali Metwally Omran, 2013. Human Resource Management, Faculty of Commerce, Cairo University.

Magdy Aziz Ibrahim, 2015. Effective teaching "What is it, its skills, performance", the Anglo-Egyptian Library, Cairo.

Mohamed Ayman Abd El-latif, 2014. Human resources management at the work sites - The scientific foundations and the applied practices, Faculty of Commerce, Cairo University, 1st. edition

Mohamed Mounir Hijab, 2010. The Media Encyclopedia, house of El-Fajr for Publishing and Distribution, part 3, Cairo.

Rania Mustafa Kamel Abd el-Aal, 2010. Effectiveness of a training program for the production of women's outerwear for the service of small industries, Journal of Home Economics, Helwan University.

Shamkhi Samih Jamil, 2003. Development of human resources in the State of Kuwait, an integrated model for the development of national employment, unpublished doctoral thesis, Faculty of Commerce, Suez Canal University.

Tarek Al-Suwaidan, 2015. Training and Creative Teaching, Al-Kitab Al-Arabi office, Beirut, Lebanon, 2015.

The Arabic language glossary, 2003. The brief lexicon, the General Authority for the affairs of the Amiri printing press.

Uywn, V.U., 2003.Textile Firms Co-operate to Weave Training" Canada.

Walid Salem Al-Halafawi, 2012. Modernization of Educational Technology in the Information Age, first print, Jordan, Amman, house of El-Fikr.