THE EFFECTIVENESS OF A KNOWLEDGE TRIP IN DEVELOPING PLANNING SKILLS FOR STUDENTS OF THE CLOTHING AND TEXTILE DEPARTMENT

Tasnim Yahya AL-SAYED [1,], Zainab Abdel Hafiz FARGHALY [1], Osama Muhammad HUSSEIN [1], Khaled Mostafa MOHAMED [2]*

[1] Department of Garment and Textile, Faculty of Home Economics, Helwan University, Egypt

[2] Department of Educational Technology, College of Education, Helwan University, Egypt

Abstract

The current research aims to design a Web Quest, titled "Improving Productivity in Garment Industry", and measure the effectiveness of Web Quest in giving the students sample the knowledge and the skills contained in it, in addition to measure trends of the students sample towards the study of the proposed Web Quest. The sample consisted of 39 students, from Clothing and Textile Department, Faculty of Home Economics, and by using calibration tools that prepared by the researcher and consisting of the cognitive collective test and skill performance test and assessment measurement to evaluate the skill performance and trends measurement before and after the application of the proposed Web Quest. The results were analyzed statistically by using the (T test) and use the quarters, the research has found a set of results and the most important one is the effectiveness of the Web Quest in giving the students sample the knowledge and the skills contained in it and that in the presence of statistically significant differences between the average scores of students before and after the application of the Web Quest in favor of the post test, the results also showed positive of the students' trends toward the Web Quest. The researcher recommended to circulate the teaching of the Web Quest for students of clothing and textile department, Home Economics because of its effectiveness in education.

Keywords

Effectiveness, Knowledge, Developing, Planning, Skills, Clothing, Textile.

Introduction:

The ready-made garment industry is one of the industries that need successive development to be able to keep pace with the continuous global developments, which calls for many attempts to use modern manufacturing strategies to improve productivity by reducing waste through proper planning and the optimal utilization of material and human resources to achieve goals. Whereas educational institutions at various levels, including universities, contribute in their role to the development of human resources represented in students to equip them with the skills required for the development of the local and national community, the study programs in the Department of Clothes and Textiles at the Faculty of Home Economics at Helwan University seek to link global developments in the field of industry with the academic goals that support it. By providing a sound scientific system based on distinctive training for students to reach them to human cadres that can achieve development in the field of clothing industry. And in view of the cognitive journeys strategy (Web Quest), which is one of the most important educational strategies aimed at and directed and based on the use and employment of the web

* *Corresponding author*: homeecon@helwan.edu.eg

_____

through specific educational tasks that help the learner to carry out by himself various operations of searching and exploring information on the web, using and employing this information and not just obtaining it .

The current research is directed towards trying to employ this educational strategy to equip students specialized in the field of clothing and textile skills to reduce waste and improve productivity in the garment industry. Where many previous research and studies in other fields have proven the effectiveness of cognitive trips in developing skills for learning, as (Alexandra Okada: 2004) a study on the use of cognitive journey maps in developing the participatory learning skills of primary school students using the 'Microword' program, and the development of communication skills And cooperation between students in building knowledge.

(Hassanein: 2006) discussed in his study the necessary programs for training in the skills of using the Internet for undergraduate students using a computer-based learning method represented by the cognitive journeys strategy.

The study (Abdulaziz Tolba: 2009) also came to measure the effectiveness of using the cognitive journeys strategy in developing some levels of thinking and the ability to make decisions towards facing the challenges of technological educational modernization among the students of the research sample.

Looking at this group of studies, whose results are unanimous on the effectiveness of this strategy in achieving its goals and the students' ability to interact with this type of education strategies, it is clear that the use of this type of strategies in education can achieve what educational programs in various specializations aim for in providing their students with knowledge and skills. Associated with higher levels of thinking.

Whereas the list of the bachelor's in the clothing and textile department of the Faculty of Home Economics - Helwan University suffers from a deficiency in conducting field training for students during the educational program, which was followed by a weakness in the apparel and textile department students with the concepts and skills for improving productivity through reducing losses due to the difficulty of practicing and applying training in factories, he directed Current research is to try to use this strategy to provide students with these skills.

Research problem:

The research problem was identified in the following questions:

1- What are the steps and procedures required to prepare a knowledge journey (webguest) to improve productivity in ready-to-wear factories? .

2- What is the effectiveness of the knowledge journey (webquest) on the knowledge, skills and attitudes of students of the clothing and textile department in planning to improve productivity

_____

by reducing waste?

First: Designing the cognitive journey:

Design The cognitive journey: Researchers have adopted the Mohammed Attia Khamis model, 2007: for educational design and development, due to the comprehensiveness of the model, the expensive steps and stages that can be relied upon when designing the cognitive journey, and the model includes five main stages: analysis, design, development, evaluation, dissemination, use and follow-up These stages will be presented as follows:

The analysis phase included the following steps:

A- Analyzing the problem and assessing needs.

B- Analyzing students 'characteristics and behavior.

C- Analyzing the learning environment.

D- Defining general goals.

Design phase: It included the following steps:

A- Designing educational goals.

B- Design and organize the content of the web tasks.

C- Selection of learning resources.

Web assignment environment design: Web assignments have six basic elements and components as such

next one:

Component One: Introduction to the Web Task Environment Component Three.

The second component: tasks.

The third component: operations.

The fourth component: the sources.

The Fifth Component: Calendar

The Sixth Component: Conclusion.

- *Designing assessment tools*: The researchers designed the measurement tools to suit the research objectives, achievement test, skill test, grading scale, and trend scale, and they will be discussed in detail in terms of design and construction, and the calculation of validity and reliability of each tool separately in the focus of building research tools and authorizing them.

The development phase: This phase included the following steps:

A- Determining the requirements for producing web tasks: The production requirements of hardware and software have been provided and indicated as follows: (A computer connecting to the Internet, creating the site on the Zunal site)

B- Producing the web tasks environment: A web tasks house has been produced with all its

basic components.

D- *Formative evaluation of the web task environment*: by presenting the web task environment that was produced by presenting it to a number of specialists in the field of educational technology and specialists in the field of clothing industry before its actual application, in order to ensure that it works with all its components and links correctly

- *The evaluation stage*: The web task environment produced was evaluated by presenting it to a group of arbitrators, then amendments were made that were agreed upon by 90% of the judges to be in the final image applicable to the research sample students. 5- The stage of publishing, use and follow-up: The web assignment environment has been published on the Internet in order to allow students to use and interact with them, and a domain has been reserved for entry through the web assignment environment under the name:

http://zunal.com/webquest.php?w=364357

Second: Designing Research Tools:

1- Achievement Test:

The researchers prepared this test with the aim of measuring the cognitive side of the students of the research sample, and the test was prepared using six types of objective questions: They complete the following phrases and consist of

(12) vocabulary, and the choice is multiple and consists of (5) vocabulary, true and false and consists of (8) vocabulary, the arrangement and consists of (5) vocabulary, write the term and it consists of (6) vocabulary, connect from column (a) what fits the column (B) It consists of (6) vocabulary.

2- Skill test: This test is designed to include (4) questions to include all the skills included in the trip, the first question is concerned with the skill of correct classification of the worker's behavior, the second question is specific after the sum of observations pertaining to each behavior, the third question is for calculating losses, the fourth question is for identifying ways to improve Productivity, and the test was corrected according to an assessment scale that was prepared to evaluate skill performance.

3- Attitudes scale: This scale aimed to measure the students 'attitudes of the research sample, as the vocabulary of the scale was formulated, and it included 15 items, and the five-year estimate was used to determine the probabilities of responding to each of the measurement vocabulary, which varies in intensity between strongly agreeing and strongly disapproving It was taken into account in estimating the responses that they fall from (5 - 1) as follows: Strongly agree (5), agree (4), hesitate (3), disagree (2), strongly disagree (1).

- Grading scale: where the aim of building the grade scale was to design an objective tool to

_____

evaluate the skill performance outcome of each student separately.

Third: Conducting a research experiment:

It included the application of research tools and experimental processing materials, where the experimentation process went through the following stages:

1- *Selection of the research sample*: The research sample was randomly selected from students of the fourth year, Department of Clothes and Textiles, Faculty of Home Economics, Helwan University, for the academic year 2018/2017, who numbered 39 students.

2- Application of experience:

- The researchers held a session with the sample students, in order to familiarize them with the aim of the research and how to benefit from it. They were also given the name of the website for the web task environment in order for them to enter the site, study its content, find out what is required of them and determine a period of fifteen days to deal with the web task environment and then meet Them to take a post-test.

- The achievement test and the skill test were pre-applied with the aim of measuring the extent to which students knew the content of the educational material that would be presented to them, through a tour of the web tasks investigation environment in both cognitive and skill achievement.

The application of the basic research experiment took fifteen days during the first semester of the academic year 2017/2018, from Thursday 10/12/2017 until Thursday 10/26/2017.

3- Application of telemetry tools:

- After the students got acquainted with the content of the educational material that was presented to them through the web task environment and conducting reviews on it, the two search tools (achievement test, skill test, attitudes scale) were applied by tele. And after completing the application of the basic experiment of the research, the researchers corrected and monitored the scores of each of the achievement test, the skill selection and the trend scale, in preparation for dealing with them statistically.

Results and their interpretation:

Where the data extracted from the grades of the students of the research sample were analyzed, which were processed statistically by appropriate methods to verify the validity of the hypotheses by calculating the significance of the differences between the arithmetic averages using the (T) test, and also the fourths of the students 'attitudes towards the proposed cognitive journey were calculated. The results are interpreted and discussed in the following manner:

The first hypothesis: Presentation, interpretation and discussion, which states that: The proposed cognitive journey in (improving productivity within ready-made clothing lines) has

_____

an effectiveness to verify the validity of this hypothesis. Black's equation was used for the modified gain ratio.

The second hypothesis: Presentation, interpretation and discussion, which states that: There are statistically significant differences between the mean scores of students in the cognitive (pre-post) test in favor of the post-post.

The third hypothesis: Presentation, interpretation and discussion, which states that: There are statistically significant differences between the mean scores of students in the skill test (post-pre-post) in favor of the post.

The fourth hypothesis: Presentation, interpretation and discussion, which states that: The attitudes of the students studying towards the cognitive journey are positive.

Recommendations:

1- The seams of the Garment and Textile Department of the College to review and amend the department's own regulations regarding field training for students during the educational program.

2- Communication between the Garment and Textile Department in the faculty and the ready-to-wear factories to solve problems, exchange experiences and benefit from the research carried out in the department.

3- Urging those in charge of developing curricula to use the cognitive journeys strategy because of its effectiveness on learning outcomes.

References:

1- Ahmed Hussein Al-Laqai, Ali Al-Jamal: A Dictionary of Cognitive Educational Terms in Curricula and Teaching Methods, 2nd Edition, The World of the Book, (1999).

2- Hassan Shehata, Zainab Al-Najjar: Dictionary of Educational and Psychological Reforms, Cairo, Cairo Lebanese House, (2003).

3- Nabil Abd al-Salam Harun al-Mujam al-Wajeez, Cairo, Academy of the Arabic Language, (1994). :

4- Nawaf Ahmad Emara, Abdul Salam Musa Al-Adili, Concepts and Terminology in Educational Sciences, Bahrain, Dar Al-Masirah for Printing and Publishing, (2009).

5- Islam Jaber Ahmed Allam, The Impact of Web Page Design (Interactive Fixed on Achievement and Motivation for Achievement among Student Teachers, Journal of Educational Technology, Egyptian Society for Educational Technology, Volume 23, First Issue, (2013)).

6- Ashraf Abdel Hakim Hassan, Ahmed Fathi Baybars: The effectiveness of an educational unit in learning to draw and color flat design fashion for women using Adobe Illustrator CS5,

_____

published research, Conference on Applied Human Sciences and Technology in the Third Millennium, Faculty of Home Economics, Helwan University, (2013).

7- Enas Mahmoud Khalaf, the effectiveness of a program to learn the skills of implementing children's clothing using hypermedia), Ph.D., Faculty of Home Economics, Helwan University, (2008).

8- Rania Saad, Nisreen Naqib,: The effectiveness of an educational unit in learning the basics of dressing and coloring a blouse product on a mannequin using Adobe Illustrator CS3, published research, Journal of Science and Arts Studies and Research, Helwan University, (2013).

9- Sarah Ibrahim Mohamed Mahran, a program in developing the skills of designing female flat models using multimedia, a PhD thesis, Faculty of Home Economics, Helwan University, (2014).

10- Shawky Mohamed Mahmoud Mohamed, The effectiveness of web tasks based on smart systems in developing the skills of producing graduation projects and the cognitive aspects associated with them among students of the Faculty of Specific Education and developing the motivation for their achievement, Journal of Educational Technology, Egyptian Society for Educational Technology, Volume 25, First Issue, (2015).

11- Abdel-Aziz Talibah Abdel-Hamid, The Effectiveness of Using the Web Search Strategy in Developing Some Levels of Thinking and Decision-Making Ability Toward Facing the Challenges of Electronic Educational Modernization, Journal of Educational Technology, Egyptian Society for Educational Technology, Volume 19, First Issue, (2009)

12- Afaf Ali Hassan Badawi, The Effectiveness of Teaching a Unit in Science Using Educational Computer Games on the Development of Innovative Thinking and the Approach to the Subject of Science among Preparatory School Students, Master Thesis, College of Education, Ain Shams University, (2008).

13- Laila Ramadan Essam Al-Juhani, The Effectiveness of the Cognitive Journeys Strategy via the Web (Webquest) in Learning Science on Developing Some Skills of Science Operations among Middle School Students, Master Thesis (unpublished), College of Education, Taibah University, Saudi Arabia, (2012).

14- Muhammad Abdo Al-Hayes, The Effectiveness of Using the Web Search Strategy in Developing Web Page Designing Skills for Students of the Higher Institute for Specific Studies, Journal of the College of Education, Al-Azhar University, Issue 156, Part Two, (2013).

15- Mohamed Attia Khamis, Educational Technology Development, Cairo, Quba House for Printing, Publishing and Distribution, (2003).

16- Mahmoud Ahmed Abdel Karim, The effect of the relationship between the style of presenting an open web-oriented survey strategy and the level of self-learning ability (high and low) on achievement and production of electronic achievement files among educational technology students, Educational Technology Journal of the Egyptian Society for Educational Technology, M22, Issue Three , (2012).

17- Hala Al-Ghoul, Lectures in Production Engineering, Institute of Fashion and Design, (1997).

18- Hala Muhammad Mustafa: Effectiveness of a proposed program to learn fashion design using computers, PhD thesis, Faculty of Home Economics, Helwan University (2013).

19- Dodge,B: " WebQuest Homepage", san diego state university , 1997.

20- Hassanien, A : An evaluation of the webquest as a computer-based learning tool", research in post-compulsory education, 2006.

21- Okada,A Collaborative learning using microworld and WebMapQuest, world conference on educational multimedia, hypermedia and telecommunications, 2004.

22- Amal Abdel-Razzaq SALAMEH, STUDY THE EFFECTIVENESS OF THE ART OF IMPLEMENTING AN EXTENSION PROGRAM ON THE FEASIBILITY STUDY ON THE DIRECTION OF UNIVERSITY STUDENTS KING ABDUL AZIZ TOWARDS SMALL PROJECTS, International Journal of Education and Learning Research, Vol. 2, No. 1, 2019, pp. 5-14.

_____