

A Training Program in Clothing Sewing Techniques Using Assistive Technology for People with Hearing Disabilities (Qualify them for Entrepreneurship)

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Abstract:

The current research aims to design and prepare a training program based on the use of assistive technology for people with hearing disabilities to provide them with basic knowledge and skills of clothing sewing techniques to integrate and empower them economically. The research sample consisted of "15" trainees with hearing disabilities, their ages ranged from "18-till 25", and the results of the research confirmed the effectiveness of software and electronic platforms that support sign language in preparing a training program in clothing sewing techniques that achieves continuous interaction between the trainer and the trainee. This is due to the features of this software in the possibility of converting audio and read text into sign language and the possibility of converting it, into sign language-translated video that can be combined with video containing the knowledge and skill needed for training content. The results of the research also confirmed the positive opinions of the trainees towards the effectiveness of the training program to provide them with basic knowledge and skills for clothing sewing techniques. The results of the research also showed that hearing disability does not affect the enjoyment of many characteristics of entrepreneurs, which enable them to achieve leadership in the field of small scale clothing enterprises.

Introduction

The world is witnessing a remarkable increase in awareness of the issues of people with special needs, or as they are called, people of determination, in order to achieve the goals of comprehensive and sustainable development "2030" in order to qualify them for the labor market and integrate into society.

Egypt has witnessed an unprecedented boom in the last five years in the field of care and rehabilitation of people with disabilities, and this was clearly evident in President Abdel Fattah El-Sisi's keenness to guarantee the rights of this category. Law No. "10" in (2018), which guarantees people with disabilities their rights for education, health and work without discrimination, and removes all obstacles that prevent them from enjoying these rights.

Hearing disability is one of the most prevalent disabilities in Egypt and the world. According to the World Health Organization and the World Federation of the Deaf and Hearing impaired, it amounts to about "360" million people worldwide, equivalent to about 5% of the world's population. The number of people with hearing disabilities in Egypt is estimated about "4" million people, equivalent to 4% of the Egyptian population.

Hearing disability is defined as a lack or restriction in the ability to participate and the limitation of carrying out daily activities as a result of a defect or deficiency in the auditory system, which makes people with hearing disabilities suffer from limited job opportunities.

When we follow their employment, especially women, we can find a severe lack of tendency for them to be hired by employers, and this may be a result of the discrimination that people with disabilities suffer from, because they have a disability, or because they are not accepted as partners in the country who have the same rights and have the same duties. Integration to participate in society and the labor market.

So, Egypt and many countries of the world began to support the culture of entrepreneurship and spread awareness of the need to integrate people with disabilities of any kind to establish small entrepreneurial projects that provide them with more job opportunities to empower them economically, in order to achieve the development of society as a whole, from the social or economic aspect.

Today, entrepreneurs with disabilities play a major role in shaping the investment environment. Through their investments, they provide innovative products and new services, giving them job opportunities and the ability to compete in the local and international markets. Small scale clothing enterprises are considered one of the important sectors that support the thought and culture of entrepreneurship, due to their pivotal role in employment, production and income generation. Therefore, the state shows great interest in supporting and integrating young people with disabilities to work in this type of projects, as well as urging educational bodies and humanitarian organizations in civil society to provide the necessary training programs for the development of human cadres with disabilities, in order to provide them with the knowledge and skills that qualify them to establish small scale clothing enterprises.

There is no doubt that universities are the greatest common denominator in any development process within society, so they are primarily concerned with the development of human resources to participate in advancing production by providing training programs to serve the needs of the labor market.

Based on strengthening this positive role and contributing to encouraging people with disabilities to turn towards entrepreneur thought, especially in light of the state's interest in training and rehabilitating them, especially women, the idea of the current research came to prepare a training program in clothing sewing techniques for people with hearing disabilities based on the use of assistive technology for them, which is represented in: Software and electronic platforms that support sign language, which contributes to providing an interactive training environment to provide them with clothing sewing skills that helps them achieve themselves by facilitating their integration into society and directing them towards a culture of self-employment and entrepreneur in the field of work in small scale clothing enterprises.

Statement of the Problem

- 1- What is the possibility of preparing a training program in the techniques of sewing clothes for the hearing impaired based on the use of software and electronic platforms that support sign language?
- 2- What is the effectiveness of the training program in providing trainees with hearing disabilities the basic knowledge and skills of clothing sewing techniques?
- 3- To what extent do the trainees with hearing disabilities have the characteristics of entrepreneurs?

4- What are the opinions of the trainees with hearing disabilities regarding the content of the training program and the extent of its contribution to achieving leadership in the field of work in small scale clothing enterprises?

Objective

- 1- Designing a training program in clothing sewing techniques for people with hearing disabilities based on the use of software and electronic platforms that support sign language to empower them economically and integrate them into the labor market.
- 2- Measuring the availability of entrepreneurial traits among trainees with hearing disabilities.
- 3- Measuring the effectiveness of the training program in providing people with hearing disabilities with basic knowledge and skills of clothing sewing techniques to achieve leadership in the field of work in small scale clothing enterprises.
- 4- Measuring the attitude of the trainees towards the content of the training program.

Significance

- 1- Shed light on the hearing disability and the problems and obstacles it faces.
- ٢- The research contributes to providing a new addition to the quality of training programs provided to people with hearing disabilities by making use of software and electronic applications that support sign language, providing an interactive training environment in which communication and interaction between the trainer and the trainee is facilitated.
- ٣- Highlighting the role of universities in serving the community and achieving development through training human cadres with hearing disabilities to develop their productive and creative abilities.

Terminology

- **The training program**

- A set of organized and planned efforts to provide trainees with renewed skills, knowledge and experiences aimed at making continuous positive changes in their experiences, attitudes and behavior in order to develop the efficiency of their performance. (Hassan Al-Ta'ani - 2007-14)

- **Hearing disability**

- It is a lack or restriction in the ability to participate and a limitation in carrying out the activities of daily life as a result of a defect or deficiency in the auditory system. The hearing disability arises and its severity and impact are determined by two factors, the first is the presence of a defect in the organs and parts of the auditory system, and the second is a disrupted surrounding environment or not help. (Ahlam Rajab Abdel Ghaffar - 2003 - 95)

- **Assistive technology for the hearing impairment:**

- **Software and electronic platforms**

- Electronic platforms that enable people with hearing disabilities who use sign language to communicate with the community of listeners, and these platforms are available in several languages, to facilitate the process of communicating with the deaf community without the

speaker needing to know sign language, as they can convert written and spoken words into sign language through 3D Characters at the same moment with professional ease. (<http://www.tamkeen.gov.eg>)

• Entrepreneurship

- It is an organized process that includes a set of activities and skills to create a new enterprise capable of producing goods and services. (<http://www.roowaad.com>)
- Establishing creative free work to create new ideas that contribute to solving a problem, or finding solutions in a distinctive way. (<http://www.lakhasty.com>)

Methodology

The research followed the semi-experimental approach and the descriptive approach, in order to suit them to achieve the objectives of the research and to verify the hypothesis.

Hypothesis

- 1- There are statistically significant differences between the average scores of female trainees with hearing disabilities in the tribal application and the post test for the achievement test in favor of the post test.
- 2- There are statistically significant differences between the average scores of female trainees with hearing disabilities in the tribal application, the post test of skill performance in favor of the post test.
- 3- Availability of entrepreneurial qualities among the trainees with hearing disabilities.
- 4- Positive opinions of the trainees with hearing disabilities towards the effectiveness of the training program to provide them with basic knowledge and skills for sewing techniques.

Sample

The number of "15" trainees with hearing disabilities, their ages ranged from "18 till 25".

Procedure

- 1- Determining the subject of the training program:** A training program based on the use of assistive technology for people with hearing disabilities to provide them with knowledge and skills of sewing clothes to empower them economically and qualify them for entrepreneurship.
- 2- Determining the objectives of the training program:** - They are the objectives that are hoped to be achieved from behind the training program. These objectives are results that are designed and approved in advance. It was divided according to the current study into: (General goals - Cognitive goals - Skill goals - Emotional goals)
- 3- Content of the training program:** The researcher organized the content of the training program and prepared it in an appropriate manner. She divided the training program into (24) sessions.
- 4- Designing the training program:** The researcher prepared (20) educational videos that include basic knowledge and skills of clothing sewing techniques, and then translated them into Arabic sign language through software and electronic platforms specialized in sign language "the Tarjuman application" intended for people with hearing disabilities. Then the researcher used the video merging programs "Cap Cut - Video Maker" to merge the translated videos in

sign language with the pre-processed videos that include the knowledge and skills related to the training topic "clothing sewing techniques".

Below are pictures of some of the video screens prepared for the program's content:-



Picture (1)

Picture (2)

Picture (3)

Parts of the industrial knitting machine

Join and operate the machine

French seam



Picture (4)

Picture (5)

Picture (6)

the hidden pocket

Armhole Facing

Hem

5- Controlling and evaluating the program internally: The program was presented to a group of specialized professors, and they unanimously agreed on the validity of the proposed program for implementation, with some suggestions that were modified based on their suggestions.

Conclusion

- 1- The effectiveness of software and electronic platforms that support sign language in preparing a training program in clothing sewing techniques for people with hearing disabilities, which had a great impact in providing an interactive training environment for people with hearing disabilities to integrate them into society and empower them economically.
- 2- Positive opinions of the trainees about the effectiveness of the training program in providing them with basic knowledge and skills for the techniques of sewing clothes.
- 3- The hearing disability does not affect the traits of their families. Through the application of the entrepreneur traits scale to the trainees, the research sample shows that they have many traits of entrepreneurs, which increases their ability to achieve leadership in the field of work in small scale clothing enterprises.

Research Recommendations

- 1- Paying attention to inter-studies in the field of assistive technology for people with hearing disabilities and the field of clothing industry to integrate them and empower them to achieve leadership in the field of work in small scale clothing enterprises.
- 2- To benefit from the training program in designing other training programs for people with hearing disabilities to activate their role and participation in society.
- 3- Emphasis on the role of universities and educational institutions in serving the community and raising the efficiency of the human element.

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