



# " Formative Potentials of Epoxy Resin and their Effect on the creation of Multidimensional Textile works "

Master thesis

Introduction as a prerequisite for master's degree in  
Handmade Textile

**Submitted by:**

**Amira Korani Korani Tolba**

Demonstrator at art education department  
B.SC. Specific Education Art Education Department

**Under the Supervision of**

(Main supervisor)

**Prof/ Heba Ramadan Abd El-  
Hamid El Shoshany**

Professor of Handmade Textile  
Art education department  
Faculty of Specific Education  
Fayoum University

**Dr. Etab Nabil Sayed Ahmed**

Lecturer in Handmade Textile  
Art education department  
Faculty of Specific Education  
Fayoum University

2023 AD – 1444 H

# Research Summary

## **Research Title:**

"Formative Potentials of Epoxy Resin and their Effect on the creation of Multidimensional Textile works"

## **Abstract:**

The industrial revolution and the technological renaissance led to an overlap of the fields of arts, where each field simulates new materials that are not limited only to the known materials. Some modern materials have emerged such as epoxy resin, which was used on the floors of buildings and in reinforcing the columns of huge buildings and concrete. This is due to its strength and hardness when transforming from a liquid to a solid material, which allows for using it in many fields, such as handmade textiles .

The researcher believes that using epoxy resin, given its formative possibilities (hardness, transparency, and plastic ability), enriches the textile work in deviating from the framework of traditional looms. This also leads to the achievement of multiple formative visions for multidimensional textile works. The rigidity of epoxy contributes to providing plastic solutions for the implementation of stereoscopic textile artifacts that cannot be easily achieved by resilient textile materials. It also allows for applying templates for warping in multidimensional forms, characterized by various formative values.

## **Research Question:**

- How can multidimensional textile works be created using the formative possibilities of epoxy resin and their impact on plastic textile formations?

## **Significance of the Study:**

- Providing different solutions for the textile formations based on epoxy resin and using them as alternative structures to conventional looms.
- Spotting light on the importance of experimentation with nontraditional materials and on its role in enriching the multidimensional textile work.
- Finding a new approach to teaching handmade textiles by studying the plastic possibilities of epoxy resin and presenting it in the educational field with a different vision that highlights new formative values.

## **The current study comprises five chapters, as follows:**

### **Chapter One: Introduction:**

Chapter one is an introduction that provides a statement of the research problem, the background of the study, the aims and hypotheses of the research, and the significance of the study. The chapter has also introduced a description of the research methodology, definitions of terms and concepts, and a review of the previous studies related to the current research.

### **Chapter Two: Textile Methods and Techniques Used in Research:**

In this chapter, the researcher deals with the techniques of weaving formation using simple and twill weave structures. The chapter also addresses the techniques of textile formation using non-extended wefts and the methods of formation with various decorations. In addition, it deals with the use of the crochet

method and the formation of fabric ribbons as an experimental practice of textile work.

### **Chapter Three: Polymers as a Formative Medium:**

In this chapter, the researcher deals with the nature of polymers in relation to natural and artificial polymers, and naturally modified polymers. The chapter also investigates the thermal classification of polymers and the characteristics of epoxy resin. In addition, the chapter identifies the different types of commercial epoxy resin, the epoxy colorants, and the plastic possibilities of using epoxy and its applications in art in general.

### **Chapter Four: Artistic and Technical analysis of Some Multidimensional artifacts:**

This chapter focuses on studying and analyzing the artworks that deal with unconventional weaving materials, as well as studying the epoxy artifacts.

### **Chapter Five: Applied Experiment:**

In this chapter, the researcher presents the objectives and significance of the experiment, the limitations of the study, and the stages of implementing the experiment consisting of 12 artworks. Further, the chapter provides an analysis of the applied experiment and the results and recommendations of the study.

# Summary of the research

## **The study entitled:**

" Formative Potentials of Epoxy Resin and their Effect on the creation of Multidimensional Textile works "

## **Research Question:**

- How can multidimensional textile works be created using the formative possibilities of epoxy resin and their impact on plastic textile formations?

## **The current study comprises five chapters, as follows:**

**Chapter one:** Introduction.

Chapter two: Textile Methods and Techniques Used in Research.

**Chapter Three:** Polymers as a Formative Medium.

**Chapter four:** Artistic and Technical analysis of Some Multidimensional artifacts.

**Chapter five:** Applied Experiment.