

## Using Contemporary Painting Colored Lighting Style to Create Interactive Mural Designs with Colored Lights

**Prof. Abo Bakr Saleh Alnawawy**

Professor, Decoration Department, Faculty of Applied Arts, Helwan University, Egypt

[abobakrelnawawy@gmail.com](mailto:abobakrelnawawy@gmail.com)

**Prof. Reham Hassan Mohsen**

Professor, Decoration Department, Faculty of Applied Arts, Helwan University, Egypt

[dr.reham.mohsen@gmail.com](mailto:dr.reham.mohsen@gmail.com)

**Researcher. Mustafa Mahmoud Siyam**

Artist and Designer, Bachelor of Applied Arts, Decoration Department, Helwan University Egypt

[mustafa.m.siyam@gmail.com](mailto:mustafa.m.siyam@gmail.com)

### **Abstract:**

Using colored lighting in paintings has been demonstrated by some of the contemporary painters like Ignat Ignatov and others, this paper is an extract from a thesis to apply the same lighting techniques on mural painting designs. This research aims to study the effects of colored lighting on a mural painting in order to create an interactive dimension with the viewer. Therefore, the research has been done to analyze the use of colored lighting and representation of light with paint, studying pigments limitation and how to overcome these limitations. The composition and lighting by prominent Egyptian director Shadi Abdelsalam has also been studied and analyzed as an Arabic and Oriental example of mixing light with color in scenes that can be interpreted as modern mural painting style and as a source of inspiration. Furthermore, studies have been done of modern color theories; most importantly subtractive color mixing, and the problems of traditional color theories, and how to utilize them to contribute with the technology to create a virtual interactive dimension with the viewer. For example, how the effect of colored lighting can change the color of a painting by subtractive mixing, and here comes the role of technology to link the interaction with the passerby when a passive sensor or camera detect them, it sends a signal to the lighting system to change, thus, the colored lighting changes and the shape of the painting or the mural changes too, and this can create a sense of motion, morphing, statement, or atmosphere. The experiment of the study is about paintings with pre-planned color schemes in the purpose of obtaining certain color affects when directing colored spotlights on that painting.

In conclusion, cross disciplinary collaboration between art painting and other fields like interactive mural design can provide a significant contribution for the Applied Arts and Design field with unlimited ideas.

### **Key words:**

Interactive Mural Design - colored lighting - Color Temperature - Meanings of Color - Wheel of Emotions