

Design Values in the Interior Architecture of Suakin: An Analytical Study of Aesthetic and Functional Elements

Prof. Ola Ali Hashem

Professor of Furniture Design Department of Interior Design and Furniture- Helwan University

Dr. Ebtesam Mohamed Khamis

Assistant Professor Interior Design and Furniture Faculty of Applied Arts, Helwan University

Alaa Mohammed Al-Fadil Ahmed

Lecturer - Department of Interior Design Technology - Al-Jereif East College, Sudan Technical University- Khartoum State - Republic of Sudan. Alaaelfadilelfadil@gmail.com

Abstract:

This research aims to study the architectural values specific to interior design in Suakin architecture by analyzing spatial vocabulary, materials, techniques, and influential cultural and social factors. It also addresses how identity, privacy, and the local environment are expressed through the interior design of Suakin's traditional houses. This report highlights the interior design values of traditional buildings in Suakin by analyzing their essential elements in terms of aesthetics, function, and environmental performance. These buildings, constructed with architecture ahead of their time, demonstrate the ingenuity of Suakin's architects and their deep awareness of the surrounding weather and climate. The houses and palaces, typically three stories high, were built of white coral stones interspersed with wooden panels to absorb moisture, enabling them to withstand the passage of time for centuries. The ground floors and mosques were constructed with a special stone extracted from the sea, locally known as "sword stone". Professor Abdel Rahim Salem, the talented architect and artist, expressed his astonishment at Suakin's architecture, stating: "I found in its architecture something that amazed and occupied my mind. I had never imagined that there was anything like this in Sudan. Suakin and its architecture dominated my thoughts and feelings, and I could not ignore it or escape from the idea of continuing research to learn about the lives of its inhabitants and try to uncover the secret of that genius that produced this heritage, and the thought behind it that was advanced compared to the societies of that time". Just as the architecture of Suakin amazed Professor Abdel Rahim, he was preceded by the art professor Pierre Greenlaw, whose admiration led to his renowned book *The Coral Buildings of Suakin*, considered a vital document of the city's architectural heritage. Similarly, British architect D.M. Matthew also studied Suakin's architecture and coined the term "Red Sea Style." However, Professor Salem disagreed with this term, considering Suakin's architecture as distinct from its counterparts in Jeddah and Massawa. Wooden frameworks were used to help align coral stones and provide flexibility. Stones were laid on a clay mortar, with the cavity between wall layers filled with a concrete-like mix of clay and small coral fragments. Coral stone, composed of shells, crustaceans, and sand bonded with lime, forms underwater and has unique properties: it is lightweight, easy to cut, thermally insulating, and abundantly found around Suakin. It is evident that Suakin's architecture was not a random product but rather the result of a well-grounded philosophy aligned with available resources and the geographical and environmental context.

Research Problem: Despite the growing interest in the exterior architecture and heritage of Suakin, there is a notable lack of studies focusing on the interior design values of its traditional houses, particularly in balancing beauty, functionality, and environmental harmony.

Research Question: What interior design values are embodied in Suakin's architecture, and how do these values influence the quality of life and cultural identity of its inhabitants?

Research Importance: Filling a gap in architectural knowledge about Suakin's interior design, not just its external appearance. Providing in-depth documentation of interior elements threatened by alteration or loss due to improper restorations. Offering a valuable reference for designers and engineers in historic building renovation and maintenance. Raising awareness among the local community about the importance of preserving the internal identity of their homes, thereby supporting cultural tourism and the local economy.

Research Objectives: To describe the interior design elements in Suakin's traditional houses (materials, colors, spatial layout, and decoration).

To analyze the aesthetic, functional, and environmental values associated with these elements. To explore the relationships between these values and the city's social and religious patterns (e.g., privacy, gender

separation) and their impact on the formation of the Suakin architectural style..

Research Methodology: The research adopts both descriptive and analytical approaches to examine the interior design features and their cultural and environmental significance

Conclusion: Documenting and analyzing this architectural style is important not only for its preservation, but also for understanding how architectural heritage can inspire contemporary designs that draw on the past while responding to present-day needs. Suakin’s architecture represents a unique model that embodies the profound integration of aesthetic and functional values derived from the local environment and culture. Through an analytical study of the interior designs of Suakin’s buildings, it was revealed that these spaces were not solely designed to perform physical functions but rather carried a deep cultural identity reflecting the value system of the region’s inhabitants—both visually and symbolically. The research findings demonstrate that Suakin’s interior design is based on solid principles of harmony, simplicity, and the intelligent use of natural materials, along with consideration for climatic and social conditions. These values, despite their apparent simplicity, express a profound understanding of the relationship between people and place, contributing to the formation of an architectural identity that is both humane and sustainable.

In light of this, reviving and drawing inspiration from these values in contemporary architectural practice becomes an urgent necessity—not only to preserve architectural heritage, but also to reinforce concepts of identity and belonging. The study also recommends the integration of heritage-based concepts into modern academic and design curricula, contributing to the production of architecture that balances authenticity with modernity and meets current needs without compromising the legacy of the past.

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