• Paper Title:
Research Informed Healthcare Facilities Design: Integration of Dissertation Research with Senior Graduation Project Design

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• Abstract:
Design of healthcare facilities requires special understanding of different users' needs. Healthcare buildings should be designed to support patient welfare and treatment, while helping reduction of stress of staff. Students undertaking senior graduation projects in healthcare facilities design, should be well acquainted with the special nature of these buildings and the unique status of their users. Research activities of the Typical design studio are not sufficient for capturing these conditions. Students need to be engaged with an in-depth research activity that allows them to appreciate the psychological and social environment of these users. This is especially important in a developing county, like Egypt, where users have unique sociocultural values.

This paper reports on an activity conducted in the Department of Architecture at the American University in Cairo, where students of the senior graduation project have chosen to conduct their Dissertation research on a topic closely associated with their healthcare facility Senior Graduation Design Project. Three case studies were chosen. The first was on the restorative effects of the natural and built environments, the second was about the factors that can generate a better, less stressful environment for patients and their families in Emergency Departments, and the third was about achieving a sense of comprehensibility through wayfinding in healthcare facilities.
The paper provides insights on how research has helped students improve the depth of their understanding of the values that should be embedded in the design of their projects. It provides a systematic overview of the research work that was conducted by students and its impact on the design process. The paper also describes the impact of this research on students’ appreciation of the sociocultural and/or other needs of the different user groups, and how this was translated into design. The paper also discusses the constraints and limitations of this integration.

**Authors Biography:**

**Ahmed Sherif**

Ahmed Sherif is a professor of architecture at The American University in Cairo (AUC). He is the founding chair of the Department of Architecture at AUC. The department offers a BSc in Architectural Engineering, which is Sherif holds a teaching record of more than 40 years. He is currently one of the professors leading and teaching the Senior Graduation Project and Dissertation courses in the Department of Architecture at AUC. His area of specialty is architectural design and construction, with emphasis on hospital and public buildings design.

Sherif is actively involved in research on healthcare architecture. He has numerous publications on hospital architecture. He holds a doctoral degree in architecture from The University of Michigan, Ann Arbor, USA, and MSc. and BSc. with honors degrees in architecture from Cairo University. He has more than 40 years of practical experience in architectural design and construction supervision. He is an international associate member of the American Institute of Architects, and the International Union of Architects and the Egyptian Syndicate of Engineers. Sherif is registered in Egypt as a professional architect having the prestigious status of a “consultant”.

**Engy Taher**

Engy Taher is a graduate of the Architectural Engineering Program at the American University in Cairo.

Taher acknowledged for her diligent eye for detail, dedication, and overflowing passion for Architecture. This has contributed to many successes; one of which is visible in her graduation project “The Salutogenic Cardiac Hospital”. She pays great efforts to achieve whatever she puts to mind in the field, yet not just that, but with an inspiring drive that never yields. Taking on a challenging route in hospital design is just one out of many different opportunities Taher enjoys exploring. A few of her current achievements include establishing her own Landscape Design studio and her appointment as a Junior Architect at 3Brothers.

**Lorna El Moghazi**

Lorna El Moghazi is a holder of a BSc. in Architecture Engineering and a minor in Business Administration from the American University in Cairo (AUC). She graduated in Fall 2019.
with High Honors. Her graduation project was a Trauma Hospital focused on creating a less stressful environment and reducing the overall traumatic stress on its main stakeholders.

During her studies, El Moghazi participated in student activities, including several leadership positions, which were concluded with her role as the Vice President of the Architecture Association and a representative of the American Institute of Architecture Students (AIAS) chapter at AUC.

El Moghazi is currently working as a site engineer at a consulting firm and a part time graduate teaching assistant of the Vertical Design Studio at the Department of Architecture at AUC.

Yasmina El Gezeiry

Yasmina El Gezeiry is an Egyptian Architect who attained her BSc in Architectural Engineering alongside a minor in Economics from the American University in Cairo (AUC.) Her thesis design project was a Breast Cancer Treatment Center in rural Suhag which focused on human-centered design rooted in the ontological perspective of suffering. El Gezeiry culminated her educational path by graduating with highest honors and becoming a recipient of the AT&T Scholarship Award.

Throughout her years at AUC, El Gezeiry has taken up progressive leadership roles at the student-led Architecture Association (AA) and ended her journey there by being the President during her senior year. El Gezeiry was also the Co-founder and President of the Egyptian Association of Architecture students (EAAS) which aimed to incite architectural discourse among young architects of Egypt. To add, she was awarded the Exemplary Student Award in recognition of her extracurricular achievement.

El Gezeiry is currently working as a part-time Graduate Teaching Assistant at AUC where she assists in teaching senior design studios.