# الاستهلال

( قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا

إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ)

سورة البقرة(32)

صدق الله العظيم

*'Architecture is basically a container of something. I hope they will enjoy not so much the teacup, but the tea.'*

*Yoshio Taniguchi*

# Dedication

To my mother, the candle of my life.

To my father , who chosed to bear the hardships of expatriation to give his sons a better life.

To my brother , my second father ,who never spared on effort to support me when I needed him.

To my sisters ,who supported me a long the way.

To my friends who are the source of backup and strength.

To my professors, who are the source of my enlightenment .

To every body who ever prayed for my success.

# Acknowledgments

*"Be a scholar, if you can not, be educated, if you can not, love scientists, if you can not, do not hate them"*

*I thank God before anything for his great gifts and for giving me the will, the courage and strength to fulfill my goal.*

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*I am very grateful to my soulmate ,engineer:Hiba Gasim Elseed because of her –after God- I could obtain valuable resources those were not available in sudan to achieve this work.*

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*Thank to every body who helped us with effort, a word or a pray.*

# Abstract

Interior architecture and it's fundamentals and requirements , recently became attractive to a lot of specialists. those specialists know the importance of interior architecture and apply it's fundamentals to the interior space so it satisfies the user's needs .

The research highlights the concept of interior architecture , its fundamentals and requirements .then the research shows how to apply those fundamentals to the malls design from the early stages so as to result into unique satisfying interior environment .

the problem of the research is that there is misunderstanding of what interior architecture is ,which results in lack of practice for its concepts and fundamentals , given attention from the early stages of deign specially in designing malls as a service building that represents the urban image of the city

The study aims to identify interior architecture (its fundamentals , its elements and its practice ). Also the study aims to develop that meaning in Sudan , and to make a specialized study about interior architecture in malls.

The study was based on descriptive analytical method which had been collected from scientific books , references, reports, information collected from personal knowledge and questionnaire . from literature review the basic standard of interior architecture and it's fundamentals was formed understood also studying international examples and compare their application of those fundamentals and requirements on design of interior space of malls and try to use those applications in Sudan ( to match our environment and society) . A case study has been made by the researcher in Khartoum to find out how far the concept of interior architecture and it's fundamentals are applied in Sudanese malls , negative and positive points had been pointed out and the researcher studied those points and concluded recommendations .

The study found that there is a knowledge gap in the understanding of interior architecture which was not subject to science and methodology .the progress of the design of interior space of malls would reflect the importance of interior architecture' basic concepts and apply them in the interior space so as to enrich it and to make a remarkable space design. The design of the interior space of malls gives consideration to environmental aspects, functional aspects ,

materials, lightening ,colors , textures , …etc. also adding the excitement to user's eye such as plants, fountains, lighting all those helps on attracting users.

The study concluded that Including interior architecture in academic Celebes of specialist department in universities , also Arranging competitions to encourage applying the interior architecture fundamentals to the design for unique malls, as a practice interior architecture must be involved from the early stages of the design process and Using well selected materials , colors and textures that meet the functional requirements and matches the culture and environment of Sudan.

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# المستخلص

ان معرفة العمارة الداخلية واساسياتها ومتطلباتها كتخصص معاصر اصبح جاذبا لكثير من ذوي الاختصاص الذين ادركوا اهميته وكيفية تطبيق اساسياته لاكساب الفراغ الداخلي قيمته وغناه حتى يفي بجميع متطلبات المستخدم ورغباته.

تناول البحث دراسة مفهوم العمارة الداخلية واساسياتها ومتطلباتها ثم تم عكس ذلك في المول وكيفية تطبيق هذه الاساسيات ومراعاتها في عملية التصميم ومنذ المراحل الاولى للوصول الى فراغ داخلي مميز ومبتكر للمولات يراعى فيه كل هذه الاساسيات.

تمثلت مشكلة الدراسة في الالتباس في فهم ماهية العمارة الدخلية والذي خلق فجوة في كيفية تطبيق متطلباتها وعناصرها في مراحل التصميم خصوصا في المول باعتباره نمط من انماط المباني الخدمية والذي يحتوي على انشطة مختلفة ويعكس البيئة الحضرية للمدينة.

هدفت الدراسة الى التعريف بمصطلح العمارة الداخلية ومعرفة اساسياتها وعناصرها وازالة اللبس في المفهوم الحقيقي للعمارة الداخلية وكذلك تطوير هذا المفهوم في السودان بالاضافة الى كيفية خلق فراغ وظيفي يقابل كافة المتطلبات الوظيفية للمستخدمين مع معرفة مكونات الفراغ الداخلي للمول وبالتالي عمل دراسة متخصصة في العمارة الداخلية في المول.

اعتمدت الدراسة على المنهج الوصفي التحليلي والذي اعتمد على المعلومات العلمية الموثقة من الكتب والمراجع العلمية والتقارير وجمع المعلومات الميدانية من مقابلات شخصية واستبايانات حيث تم من الخلفية النظرية الوصول الى المعايير الاساسية للعمارة الداخلية ومتطلباتها وكذلك دراسة النمازج العالمية ومقارنة ما توصلت اليه الدول المتقدمة من تطبيق هذه الاساسيات في تصميم وتعزيز وتهيئة الفراغ الداخلي للمول ومحاولة تطبيق ذلك في السودان بما يتناسب مع بيئاتنا ومجتمعنا وتم اختيار حالة دراسة في ولاية الخرطوم وجمع المعلومات عنها لمعرفة مدى تطبيق مفاهيم العمارة الداخلية واساسياتها فيه وعكس الجانب السلبي وكيفية الوصول الى حلول لتطبيق تلك المفاهيم بصورة واضحة وعملية حتى يتسنى لنا الخروج بتصاميم مدروسة ومبتكرة ومميزة في هذا الجانب.

توصلت الدراسة الى ان هنالك فجوة معرفية عن ماهية العمارة الداخلية والتي لم تخضع لاسس دراسية ومنهجية .كذلك فهم المتطلبات الفراغية والوظيفية بصورة تفصيلية يؤدي الى تلبية رغبات المستخدم وبالتالي الوصول الى رضى وراحة المستخدم . وان التقدم والتطور في العالم في تصاميم الفراغ الداخلي للمولات يعكس مدى الوعي بأهمية معرفة اساسيات العمارة الداخلية وعكسها داخل الفراغ الداخلي واثراءه والخروج بتصميم فراغ مميز يراعي فيه كل الجوانب التي من شانها ان تعزز وتقوي الفراغ الداخلي بيئياً ووظيفياً من مواد واضاءة والوان وخامات وغيرها . كذلك اضافة عنصر الاثارة والتشويق من وسائل الحركة والعناصر البصرية التي تضفي الراحة لعين المستخدم من نباتات ونوافير واضاءة كلها تساعد على جذب المستخدمين .

أوصت الدراسة بادخال العمارة الداخلية في المناهج الاكاديمة في الجامعات كتخصص منفصل وعمل دورات تثقيفية بذلك .كذلك يجب التشجيع على عمل تصاميم مبتكرة للمولات يتم تصميمها وتطبيق هذه الاساسيات فيها وعمل مسابقات تصميمية لتدعيم هذا الجانب بالاضافة الى اهمية الدراسات التفصيلية منذ المراحل التصميمية الاولى للفراغات الوظيفية ومعرفة متطلبات كل فراغ وكيفية تطبيقها والطرق المبدعة في اختيار الالوان والخامات والاضاءة بما يتماشى مع ثقافة المجتمع السوداني ومتطلباته.

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# Definition Of Terms

| Term | Definition |
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| ***tender documents*** | Documents setting out the extent and qualities of project, provided to companies in order that they may quote prices and terms for undertaking the work. |
| ***quotations*** | A quotation is the offer by a supplier or contractor to undertake specified work to defined standards for a fixed price. It should not confused with an estimate, which sets an approximate cost. |
| ***approvals*** | All building work is subject to rules and laws governing safety, amenity and integrity. Local authorities are responsible for ensuring compliance with these rules and laws, and their approval should be sought before embarking on changes. Changes to the use, size or appearance of the building require Planning Permission Approval. Structural, thermal, access, fire safety, drainage and hygiene standards are defined by the Building Regulations, and the designee is required to show that . this standards have been met by applying for Building Regulation Approval. |
| ***planning supervisor*** | . All commercial activity must accord with Health and Safety Regulations. Building sites are potentially dangerous places and the designer, contractors and personnel all have a responsibility for ensuring that the regulations are met. Commercial work tha exceeds 30 man-days in work and/or more than 500 man-hours falls under Construction Design Management Regulations and will be overseen by a planning supervisor responsible for health and safety. |

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| ***The Modulor*** | Devised by Le Corbusier and patented by him, the Modulor was the subject of his 1948 book, Le Modulor. Intended to be a harmonious scale applicable to architecture and engineering, I has seen widespread use in all aspects of the design industry. It uses the main proportions and dimensions of the human body in conjunction with the Golden Section, Fibonacci Sequence and a ratio of spatial distances to devise a system of measurements to be used when designing buildings and their interiors. |
| ***vista*** | a term borrowed from the vocabulary of the landscape designer, are devices often used to frame or extend the outlook from key viewpoints of grand houses and their grounds |
| ***architraves*** | The element, often a timber moulding, that masks the joint between the door or window frame and an adjacent wall surface. In traditional construction the first being made of timber, the second of plaster, there will always be a crack between these surfaces– a crack accentuated by the slamming of the door or window. With careful detail design and choice of material it is possible to minimize or eliminate this component. |
| ***skirtings*** | The cover strip that runs at the bottom of the wall an abuts the floor. As with the architrave this is a device for reconciling two dissimilar materials. It also provides a tough surface intended to resist the impact of floor cleaning and furniture legs. |
| ***orthographic drawings*** | A set of drawing conventions in which any sense of perspective is eliminated, as if the building is viewed from an infinite distance |
| ***three-dimensional computer model*** | A three-dimensional representation of geometric data, stored and generate by a computer. |
| ***rendering*** | Rendering software uses color and lighting to represent the intended reality of a building using a computer model or image from a computer model. Depending on the quality of the software and computer, and the needs and proficiency of the user, it is possible to create images that are indistinguishable from reality. |

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| ***texture-map*** | Software that applies pattern and texture to the surfaces of a computer model in order to represent real life materials. |
| ***ICSC*** | ***International Council of Shopping Centers*** |
| ***display*** | When working with clients in the retail sector, the interior architect's job, essentially, is to provide a space in which the client's product and brand will be displayed in an appropriate and effective manner. |
| ***brand values*** | All commercial organisations are focused on building and maintaining their business by identifying their target customer and ensuring that the company and the product are perceived as matching the personal standards and aspirations of the customer. |
| ***Ergonomics*** | The study of the body's response to physical and physiological loads and strains. It is concerned with such things as safe weight limits, the effects of repetition, the application of force and the effects of posture. |
| ***anthropometric*** | The measurement of humans'. Statistical data about the distribution of body dimensions in the population used to optimise human interaction design decisions. |