

## THE IMPACT OF DESIGN STUDIO ENVIRONMENT ON STUDENT CREATIVITY IN INTERIOR ARCHITECTURE.

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### الملخص

تأثير بيئة أستوديو التصميم على أبداع الطالب في قسم العمارة الداخلية يعتمد التعليم المعماري على استوديو التصميم في جوهره ويعمل أستوديو التصميم كمقرر أساسي بالإضافة إلى بيئة تعليمية لطلابه وعلى هذا النحو، هناك طلب على التفكير الإبداعي، وتوليد الأفكار الجديدة، التي يمكن أن تؤدي إلى حلول إبداعية. وتعد بيئة استوديو التصميم أحد عوامل التأثير الرئيسية التي تعزز الإبداع في استوديو التصميم، إلا أن العديد من الأبحاث الدراسية قد أهملت مساهمتها المحتملة في التصميمات الإبداعية، وتهدف هذه الدراسة إلى تسليط الضوء على العلاقة بين الإبداع وبيئة استوديو التصميم وما يرتبط بها من التعلم الاجتماعي والتفكير التصميمي الإبداعي الناتج؛ من وجهة نظر طلبة العمارة الداخلية. يستخدم البحث أسلوب الدراسة النوعية كما تم إجراء مقابلات غير رسمية مع طلاب العمارة الداخلية، كما تم إجراء استبيان لطلاب العمارة الداخلية للسنوات الثانية والثالثة والرابعة، وتظهر النتائج بان العناصر المادية لبيئة المرسم في قسم العمارة الداخلية يمكن أن تعزز الإبداع في استوديو التصميم.

**الكلمات المفتاحية:** أستوديو التصميم، الأبداع، بيئة المرسم، التعليم فالعمارة الداخلية، طلاب العمارة الداخلية.

## Abstract

Interior Architecture education has the design studio it's core. The design studio functions as an essential course as well as a learning environment for its students. As such, there is a demand for creative thinking, novel idea generation, and effective guidance that can result in creativity solutions. One of the major impact factors that enhance creativity in design courses is the design studio environment, yet many scholastic researches have neglected its potential contribution to creative designs. This study aims to provide insight into the relation between creativity and the design studio environment and the associated social learning and creative design thinking that result from the point of view of interior architecture students. The research uses a qualitative method of study. An informal Interview was conducted by interior architecture students. Also, questionnaire was administered to 2nd, 3rd and 4th year interior architecture students. The results show the physical elements of interior environments that could predict the potential creativity enhance the studio setting.

**Keywords:** design studio, creativity, studio environment, interior architecture design education, interior architecture students

## 1-Introduction

Architecture is a professional discipline that deals with technical structures and construction. As such, it demands a vast ability to engage in creative thinking. The interior designer is a product of a tutelage that has evolved from master-apprenticeship style to a system that now has the design studio as it's main component. The studio setting is a learning environment that provides a work space for design activities. The design studio is essential for its role in developing certain skills in students which encompass interaction and communication in both verbal and visual form. It also involves developing the complex process of creativity in a given design task creativity is one of design studio key elements. In order to develop creativity in design studio education many strategies are considered design studio environment, instructor's communicate with students, design thinking process, curriculum goals etc. Creativity in design education is an important issue that has the attention of many scholars. creativity has been investigated in the dimension of the process and factors that impact on it.

## **1-1 Problem statement**

The literature reveals knowledge gaps and fragmentation in research about the relation between creativity and the design studio. Few studies touched on the physical environment of the studio and the associated social learning and creative design thinking that result from the point of view of interior architecture students. The focus of creativity research had been on assessing creativity based on personal characteristics, creative process and product. Yet many creative thinkers themselves have recognized the potential role of them. The environment to influence creativity.

## **1-2 Aim**

The aim of this study therefore is to provide insight into the impact of the studio as a learning environment on interior architecture students and their creativity.

## **2- Literature Review**

### **2-1 The design studio**

The concept of studio-based work has been central to education within the design disciplines such as architecture and interior design for over a century. <sup>(1)</sup> The studio is where the enculturation of students into the profession occurs, where students undergo a transformation that influences the way they relate to the built environment, to their peers, and to their tutors. <sup>(2)</sup> In describing the studio space, it is a collaborative, highly material and ubiquitous work environment for students to engage in conceiving and designing new projects. It is a place where active interaction between students is done as well as the place where they can show their creativity. <sup>(3)</sup> The studio space is important for supporting and inviting design critiques <sup>(4)</sup> and the strongly fixed practice of showing work and eliciting feedback early and often from their tutors. <sup>(5)</sup>

The study of Sachs, suggests that in traditional practices of architectural and design students, the emphasis in the studio is placed on progress in the creation of the design artefacts and the required representations of it. <sup>(6)</sup> Hence, progress is expected to be visible as a list, or sequence, of design artefacts such as drawings, sketches, storyboards and models—each expanding upon the information in its

predecessors. <sup>(6)</sup> Design artefacts often used and produced during design practices such as paper drawings, physical or graphical models can serve as representations of an ongoing work. Vyas, also, says that it is very important for the design students to showcase their thoughts and ideas and make them visual, not only for themselves.

But also, for other people to show what they were doing.

Hence, a typical design studio, professional or academic, has a high material character—in the sense that it is full of material objects and design artefacts. The walls and other working surfaces are full of post-it notes, sketches and magazine clips for sharing ideas and inspiration, physical models and prototypes lying on the desks and so on. <sup>(7)</sup>

Many objects in a design studio may have seemingly little to do with the projects at hand, but in fact serve to challenge and inspire new ideas, to create cross-contextual reminders that lead to breakthrough thinking and conceptualization.

Other views, the physical surroundings of a design studio and the persistence with which different material artefacts are arranged and represented are important to the design activity and serve as organizational memory. This ecological richness of design studios stimulates creativity in a manner that is useful and relevant to the ongoing design tasks. <sup>(8)</sup>

In other views, research has illustrated that ill-considered construction of design studio space could lead to a negative impact on designers' creativity. Flexibility in design studios is found to be important in this study. In the design studio context, the readiness-to-change physical settings are seen to be essential. <sup>(9)</sup> Some of the other aspects of the physical environment that support creativity could be summarized as climate and thermal control, ventilation, light and air quality, acoustics of the space, color, and furnishings.

Fig 1: Function and character of the design studio that affects creative design

## **2- 2Creativity in design studios and Creativity factors**

Creativity is one of the basic constituents of innovation and has a various definition. One of such is definition, creativity can either be originating from nothing or generic and transformative spontaneous or taught and learned, universal or culture specific, imaginative and intuitive or knowledge and skills-based, ineffable and instinctive or quantifiable and testable. <sup>(10)</sup> Other definition, creativity is the ability

to solve problems fluently with original, innovative, novel, and appropriate solutions. <sup>(11)</sup>

Creativity is characterized as a natural element of the design studio process. Other research investigates creative process to determine its relationship with creative products, it was found that there is a high connection between the knowledge steps and the creative products. <sup>(12)</sup>

Creativity in design education is one the important issues. Although there is no exact definition for measuring the concept of creativity yet, solutions can be identified as creative by the evaluation of design process and products. <sup>(13)</sup>

Other studies, suggested that the interaction of the students with design process and the products in the creative environment are elements that can be used to assess creativity in students. <sup>(14)</sup>

By focusing on these elements, they come up with a high correlation between the process and creativity. Nevertheless, their other studies focused on process and products as self-determining elements of the creative, from this perspective, they found that products are the strongest factor in design education creativity. <sup>(14)</sup>

Design creativity is identified as the basic component for judging a design product by the design instructors. Frequently design product is defined as a finalized three-dimensional object

.Fig 2: Minor components in architectural design task

Fig. 3: Basic creativity factors (Source: author)

### **2-3 Interior architectural design studio organization as a creative environment**

Creative environments are normally described as organizations that allow the manufacture of knowledge, facilitation of learning from experience and offering knowledge-sharing. Shortly, design studios are creative environments. Creative environment or the design studio adds to the overall development of creativity by transforming the information that is received within the organizational structure to creative product in an increased active dedication. <sup>(15)</sup>

Other researches, said that the organizational style and structure of the Parallel to design studio affects the creative strategies of students. <sup>(16)</sup>

Since the main aim of design education is to provide different design experiences, to enable knowledge acquisition, exchange and processes, to provide a powerful communication and motivation medium and direct it for student-designers that have different cognitive styles and intellectual superiorities, it is imperative to investigate the environment that facilitates this kind of learning.

### **3- Methodology**

In order to achieve the aim of the study, the perspectives of interior architecture students were sought about the impact of the studio as a learning environment on their creativity.

Hence it involved a qualitative method of study. Interview questions about physical design features of the design studio were drawn from theoretical review and stated precisely. The questions comprise variables like place/location preference for design work, studio space size, visual character of the studio interior, and lighting.

### **Participants**

The students that were selected for the interview are second, third- and fourth-year students of the interior architecture department of Derna University to access the impact of the studio on their creative activities. These three different levels of study were selected so as to be able to glean views from different perspectives as the students would have varying experiences of studio use as they progress level wise. It would also be important to compare those views according to their level of study. At first, a few students were informally interviewed on issues dealing with their design studio. It was thence gathered that a good number of students, especially at a higher level do not actually perform their studio assignments in the design studio. Also, observation of the design studio was conducted by the researchers. Both of this information enabled us to understand the experiences of the students in their studio classes and to structure the questions appropriately.

### **4- Data Presentation and Discussion**

The demographic information of the students is shown in Fig. 4. There were 27% males and 73% females and all student participants had an age range of 18 - 24. Fig. 5 shows the percentage of students that participated in the interviews according to their year/ level of study

Fig. 4: showing gender chart of student participants

Fig. 5 showing percentage of students that participated

The Location preference chart that shows where the students will most likely choose to work when they have design problems to solve and need to generate new ideas is shown in Fig 6.

Fig 6: showing design location preference of interior architecture students in the 2nd, 3rd and 4th level

The students in the 2nd and 4th year prefer to generate their design ideas and to work in the home more than the 3rd year students. The comfortable home is an essential criterion. The reason for this view may be due to the fact, furniture is uncomfortable and un sufficient and may need wider space and the physical size of the studio space was evaluated by the students and is presented in Fig 7.

Fig 7: Studio space size as perceived by students at each level.

The studio size is one of the most important variables that can affect a student's creativity. It was understood from literature that creative inspiration is positively connected to the large size of the studio. Students feel cramped when the studio space is small. In the perspectives of the students, a large percentage believes that their studio space is big enough for their creative activities.

The visual character of the studio is perceived by most of the students as less colorful and pale, which has a negative impact on the creativity of the students.

Fig. 8 shows the perspective of the students about the character of their studio

Fig. 9: showing evaluation of the students about their studio lighting

Majority of the respondents have shown from the interviews that they are un satisfied with the lighting of their studio. However, second and third year students who do use the studio perceive it as insufficient. Fourth year students see it as dimly and insufficient. This is one of the reasons that the students do not use the studio and a few of them students use the lobby instead of the studios.

## 5- Conclusion and Recommendations

The study was designed to investigate the impact of the design studio environment on the interior architecture. Second, third- and fourth-year interior architecture students were recruited to participate in the interviews that were conducted. A number of variables which were

investigated location for designing work, studio space size, visual character, and lighting.

The results of the lower location a strong location of the study location 2nd year students and the higher levels, 3rd and 4th year students. The impact of the space density on creativity is perceived as high, so also is the visual character, and lighting. However, the students have a number of complaints about the furniture which does not make provision for storage. The students have to convey their design materials in and out each time they come to work.

Yet, the location preference has a great impact on students' performance in the sense that accordingly with the literature, the use of the studio for design assignments offers the students varieties of experience to collaborate and share ideas, hence, the students have the opportunity to sharpen their creative minds, hence their creativity is influenced positively.

In conclusion, studio environment has an important impact on student's creativity. This paper recommends that improvement of the studios space should be done by organizing the furniture in a way that student can feel more comfortable. They should also be provided private spaces such as storage facilities where each student can use keep their private materials. Fourth year students can be assigned to a separate studio where they can call their own in order to encourage the use of the studio by this level. The studios could also be sound insulated to make students concentrate on their work and have creative final products.

## **E. Appendixes**

### **QUESTIONNAIRE FOR STUDENT**

### **THE IMPACT OF DESIGN STUDIO ENVIRONMENT ON STUDENT CREATIVITY IN INTERIOR ARCHITECTURE DEPARTMENT OF DERNA UNIVERSITY**

**GENDER: Male , Female**

**AGE: 18 – 24**

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1. If you had a design problem to solve and needed to generate a lot of new ideas, where would you most likely choose to go?

- a. Design studio    b. Your dormitory or home    c. Other places; please specify.....
2. How often do you use the design studio for your architecture assignments?
  - a. Never                      b. Sometimes                      c. Always
3. How do you find the size of your design studio?
  - a. Small                      b. Medium                      c. Large
4. How do you find the visual character of your design studio (walls and working spaces)?
  - a. Colorful and Interesting    b. Colorful but boring    c. Pale but Interesting    d. Pale and boring
5. How do you find the lighting level of your studio?    a. Brightly lit and sufficient  
b. Brightly lit but insufficient    c. Dimly lit but sufficient    d. Dimly lit and insufficient
6. How do you find the furniture in your design studio?
  - a. Fixed                      b. Movable                      c. flexible/ foldable

**THE IMPACT OF DESIGN STUDIO ENVIRONMENT ON STUDENT CREATIVITY IN INTERIOR ARCHITECTURE**

7. How do you find the acoustics of your design studio? a. Poor and uncomfortable b. Poor but comfortable c. Good but uncomfortable d. Good and comfortable

**Please rate the following features of your design studio as it affects your creativity.**

**SD- Strongly Disagree, D- Disagree, NS- Not sure, A- Agree, SA- Strongly Agree**

		<b>SD</b>	<b>D</b>	<b>NS</b>	<b>A</b>	<b>SA</b>
8.	If I were to work in the design studio, the size of the studio will affect my creative inspiration?					
9.	Visual character of a design studio (by the use of posters, sketches, story boards, etc.) is a motivation for inspiration and can affect my creative activities positively.					
10.	Flexible furniture is a better option that affords the studio to be an effective creative environment.					
11.	The number of people working in the studio after school hours affects my choice of working in the studio					
12.	The kinds of people (e.g. friends) working in the studio affect my choice					

	of working in the studio					
13.	My design studio is well equipped with furniture and furnishings and it supports my creative abilities					
14.	My design studio is not well ventilated as such it affects my creative thinking negatively					
15.	The sound proofing in my studio is bad and it affects my concentration to design thinking.					

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