

TEACHING INNOVATION THROUGH CROSS-DISCIPLINARY COLLABORATION IN THE UAE. INTERIOR DESIGN AND ENTREPRENEURSHIP, AN APPROACH TO PROGRESSIVE DESIGN

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ABSTRACT

This paper provides insight on a design led approach towards collaborations between interior design and entrepreneurship professors inside (and outside) the studio. The demographic were Emirati female students who had no prior exposure to work experience and limited knowledge of what entrepreneurship was, yet were able to research, design, test and present their designs with professionalism, ambition, creativity and a healthy demonstration of skills development. When compared with past courses not done in collaboration, students responded positively as they were better able to engage with a potential professional client and engage in a real life-like project. Students participated in discussions regarding the design needs of the client and produced meaningful design proposals. The opportunity exposed the students to the benefits of multidisciplinary design approach and to the concept of learning outside the classroom boundaries.

Keywords: Entrepreneurship, Design Education, Spatial Exploration

1. INTRODUCTION

The art of teaching very closely interlinks and intertwines with the art of learning. As educators, we believe our main responsibility is not to provide answers, but to equip students with the skills to ask the right questions and then work their way into finding the suitable solutions. In addition to instilling in them a passion for design and the determination required to complete the process.

The devised pedagogical approach goes hand in hand with continuous learning, acquiring new methods and improving upon them along the process. Students at the College of Art and Creative Enterprise (CACE) at Zayed University in the United Arab Emirates, have a unique dynamic that quite often confronts traditional teaching approaches and requires the exploration of alternate directions. As challenging as it seems at times, one of the main tasks that we work on devising in our classroom is to nurture dialogue, stimulate interest, present a challenge and increase overall motivation to learn and work hard.

2. PEDAGOGICAL APPROACH AND DEMOGRAPHIC PARTICULARITIES

The students at Zayed University students come from a very specific demographics, with a background that is rich with culture and tradition, situated amidst a global and international setting. However, they are still isolated in a protected sheltered environment with an overall limited exposure and very basic design skills, but with ambition and a willingness to learn. Students spend the first three semesters in university fulfilling university and English language requirements (Zayed University is an English language and gender segregated institution), and join their selected major in semester four. As educators we find ourselves having to address simultaneous two main tasks: instil in them the design thinking process and equip students with the basic required technical tools and knowledge.

Design is a continuous learning process that goes beyond classroom boundaries, and is formulated, but not defined, by the undertaken projects and executed assignments. Due to social and cultural particularities, different to international design schools, instructors struggle to implement and encourage a studio culture. In five hours contact per week in design studios, there is a limit to what can be passed onto the students. And though we agree that a design culture is not a pre-requisite for quality design work, we do believe that it will enable learning outside the classroom, and will enhance students' collaborative thinking, wherein they engage in conversations, share techniques, observe each other's work and learn from each other.

We also continuously strive to add an extra dimension to the projects, thus either extracting or extending them beyond the traditional setting. This paper presents three case studies, in which the following two outlined methods are devised and implemented either independently or in combination;

- Continuing the project across the semesters, therefore keeping the same objectives while altering the approach as well as the input parameters.
- Linking the project to larger body of ongoing research, whereby the class outcomes feed into and supplement the research work.

3. BACKGROUND OF ZAYED UNIVERSITY

Zayed University was founded in 1998 as an all-women's university based on the American liberal arts college system. There are over 8,000 students attending classes on two main campuses, one in Abu Dhabi and the other Dubai. There are five colleges, including the College of Business and the College of Art and Creative Enterprises. The University became co-educational in 2008 with the introduction of the men's program, but undergraduate education remains gender segregated and 80% of the students are female. A great majority of Zayed University's entering students come from the national Arabic-medium K-12 system (80-85%) and 15-20% of students are from the English-medium private educational sector. (Zayed University, 2015)

The founding principles of the university remain unchanged: “We expect students to think independently, and we support faculty in their mentoring role by carefully preserving academic freedom, characterized both by the free flow of ideas that is fundamental to a university, and by respect for the principles of Islam and the values of the United Arab Emirates.”

In the August 2003 Convocation address by the then Vice-President of the University, Dr. Al-Qassimi stated that (Zayed University, 2003): “From the beginning, Zayed University was charged with the responsibility for graduating students fluent in both Arabic and English, able to use the latest technology, capable of doing independent research, having a global outlook, and prepared to demonstrate leadership within their communities” (Zayed University, 2015 (August 2003 Convocation Address)).

4. OUR TEACHING PRINCIPLES OF INTERIOR DESIGN

Space designates how we as users occupy a place. How we move through and how we inhabit the place. Space can be measured by distance and the time we use to travel through it - by walking, running or by our vision and hearing, just by standing or sitting. We define feelings by the impression certain colours have on us within a space. Colours are capable of making us feel happy, sad, excited, frightened, uncomfortable and angry.

Spatial exploration in the form of human occupation is the heart of the interior design pedagogical approach at Zayed University. The realization that the spaces we occupy and objects we use are merely a response to our lavish or primitive needs. We grow so accustomed and familiar to our own environments that it becomes a challenge to withdraw ourselves from it, to question what the others term as the ‘norm’ and to challenge our perception and way of thinking.

Throughout the teaching process, three main challenges were identified, and used to devise alternate pedagogical approaches. There were three main objectives;

- Break pre-set conceptions and ideas, and expand on the students’ perceptions and design abilities.
- Equip students with three-dimensional spatial understanding, thus enabling them to think outside the box coming up with alternate creative solution to designated design problems.
- Equip the students with the essential technical skills and representation tools to communicate their concepts and ideas.

5. ENTREPRENEURSHIP IN THE UAE

Entrepreneurship has become a key priority for the United Arab Emirates as illustrated in both Abu Dhabi 2030 and UAE 2021 – two key strategy documents for the Nation (Van Horne et al., 2012). Although there are still key barriers to doing business in the UAE, the 2011 World Bank Doing Business Report ranked the UAE as the 35th in relation to ease of doing business compared to 47th in 2009 among 183 countries. Also, the UAE is in the top tier of 23 innovation-driven economies. This high ranking in innovation is due to the Government’s

heavy investment in the development of infrastructure and their commitment to supporting entrepreneurship amongst Emirati Nationals and on a wider scale (Erogul and Van Horne, 2014).

6. CASE STUDY 01: PROJECT 'I' – FALL 2013 / 'MAKING' SPACE – FALL 2014 / 'MY' SPACE – SPRING 2015

6.1. PREAMBLE

Three projects and three slightly different approaches to the same concept carried across three semesters with three different cohorts; Spatial exploration in the form of human occupation. An approach aimed at purposely 'misplacing' the obvious and challenging the 'known', thus provoking the students' minds and initiating the seeds for creative thinking approaches.

The core theme of students first encounter with interior design studio revolves around spatial inhabitation. The realization that spaces we occupy and objects we use are merely a response to our lavish or primitive needs. We grow so accustomed and familiar to our own environments that it becomes a challenge to withdraw ourselves from it, to question what the others term as the 'norm', to challenge our perception and to question our way of thinking.

6.2. PROCESS AND IMPLEMENTATION STRATEGIES

The first time the project was introduced, it started with an introduction to body proportion and human scale citing a number of famous well-documented examples that dealt with proportion in its essence. Then students were asked to select a 'verb' from a provided list, define it graphically using only lines and body silhouettes, and reflect on their specific personal experiences to come up with a definition and an understanding. This was followed by site selection on the premises of ZU campus, understanding the physicality of the assigned cardboard material, and prototype presentations reflecting students' personal experiences.

For the second round, a 'making' aspect with a more hands-on approach was adopted. Students were asked to select an object that can be contained inside an imaginary 2.3m box, but would be too large for 0.5m one. They then misplaced the position of their selected object, altered their resting planes and changed their orientation. It was astonishing to witness the overall class reaction as they collaged pre-printed silhouettes, and described the results in verbs and adjectives that almost lost all its ties to the objects' origin. Forgetting what the object was supposed to be, represent and does, students started seeing it as an element constructed out of a series of components, that they further shuffled, rotated and sliced. While continuing their intervention with acts such as: omit, shuffle, aggregate, subtract and multiply, students started to explore possible ways of interaction and occupation, thus reforming and totally reinventing their relation to the resultant artifact.

For the third round, students were asked to 'look' at their very own familiar personal spaces (bedrooms). Studying the hidden imposed order that relates to their activities and specific

form of occupation, resulting in a series of analytical documentation. They then looked at their university environment and were asked to design a prototype that either supplements or complements a self-defined experience.

6.3. RESULTS

The three described scenarios culminated with 1:2 cardboard prototypes and drawings, describing various design proposals of students' occupation. Though the brief varied, the main two objectives remained unchanged:

- Introduce students to the body proportion, it being the base for all products and spatial enclosures.
- Free students mind from the preconceived association and introduce them to new prospects and possibilities. For example, the existence of a chair is not a requisite for experiencing the act of sitting, which by itself is a complex phenomenon that does not occur in isolation.

6.4. PHOTOGRAPHIC REFERENCE

All photographs are courtesy Lina Ahmad

Examples of cardboard prototypes – Project 'I';



Figure 1: 1:2 prototype model. Courtesy; (Left) Asma Mukhaini, (Right) Tasnim Al-Wahedi.

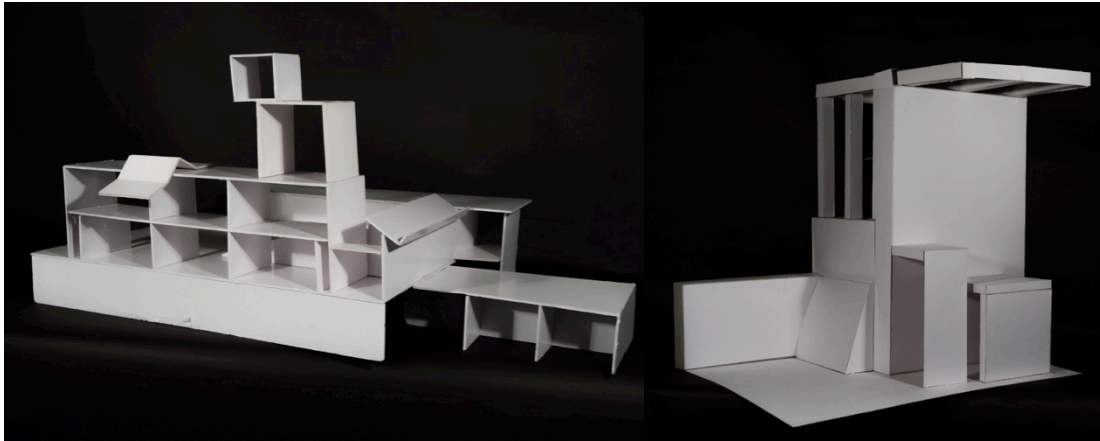


Figure 2: 1:2 prototype model. Courtesy; (Left) Fatima Al Marzooqi, (Right) Alia Al Shamsi.

Examples of students' drawings and process work exploration – Project 'I';



Figure 3: representational drawings. Courtesy; Alia Al Shamsi

7. CASE STUDY 02: CLIENT SPACE DESIGN, ENTREPRENEURSHIP OFFICE – FALL 2013

7.1. PREAMBLE

The project involved intermediate interior design students and they were required, as part of their course work, to design a space that will provide an office for cultivating young graduate Entrepreneurs within Zayed University. The existing site was inside the university campus and was a disused space originally earmarked as retail space in the main promenade of the female campus.

7.2. PROCESS AND IMPLEMENTATION STRATEGIES

To add validity to the academic exercise, a co-operation was initiated with College of Business Faculty who took the official role of 'clients'. Their expertise in entrepreneurship was invaluable as it provided an in-depth insight of the needs of such a facility. In addition, the partnership provided another vital element; allowing students to directly interact with a 'client'; Interacting with personnel, and taking their requests, demands, tastes, likings and preferences into consideration.

Each student had to respond to a real brief set within the boundaries of an existing site condition located within the premises of the university campus, thus allowing the students' to evaluate, survey, observe and analyse. The client-student interaction added an invaluable dimension to the studio project, creating an experience that is usually difficult to mimic in a traditional studio setting.

The clients met three times with the students; at the beginning – thus contributing to the formation of the brief, halfway through the process – expressing their opinions on the proposed solutions, outlining concerns and thus influencing the design direction, and at the end – hence participating in the evaluation process, and expressing their (dis)satisfaction as clients. Some of the students kept in closer contact with their clients using social media as a medium to more closely understand their clients' personalities as well as extract additional information and test possibilities.

Students were given tasks to accomplish and follow the project from initial concept to presentation to the client. The design proposals were developed through primary and secondary research using experimentation of light, materials and spatial conditions. This stage also included research of materials and building systems. One of the intentions was focused on students learning the sensibilities of combining graphics with colours, fonts, drawings and even samples in presentation and "mood" boards. The use of large-scale 3-dimensional physical models played an integral role in the project, and allowed students to visualize their ideas, photograph the spaces and use these representative tools for helping the clients understand the proposals.

Studio investigations of the spaces were articulated by the interaction of individuals and place. Emphasis placed on understanding of design process, light and color, construction systems, and ongoing study of materials. Constant interaction with the 'clients' was carried out throughout the process.

The students followed a series of exercises/stages defining key moments in the design process:

- To develop an understanding of complex space planning
- The students carried out continuous research on designs typologies for a variety of different commercial projects ranging from individual office workspace to a large-scale retail outlet
- Complex conceptual development of an idea
- Experimentation of spatial ideas through large scale models.
- Complex space planning, designing using available furniture and materials and bespoke.
- 2D (plan, section, elevation) and 3D technical drawings (axonometric, perspective) showing the student's design proposals.
- Mood board, material board, CAD and Photoshop visualization perspective views of the design proposal

The students explored a series of design and analytical exercises to understand human behaviour and reaction within diverse interior spaces with various methodologies of color and light applications.

7.3. RESULTS

By the end of the course, students had acquired significant skills in the Interior Design profession and achieved a greater insight in developing a project from conception of an idea to presenting a final project. The student produced a body of work, which consisted of drawings in various media and techniques, mood and material boards, physical models, sketches, photography and the sketchbook.

The Interior Design students also developed a variety of design proposals that varied in concept and approach. The students developed their own concept following a specific design brief and carried out a series of research exercises to explore their ideas. The body of research varied from testing light conditions, historical precedence, material research, surveys, interviews and experiments. For technical tools, they used sketches and computer aided design software. Most importantly, they developed their designs through three-dimensional physical models. These models helped the students understand and visualize their creations and at the same time explore the 'physicality' of the design proposals. Some of these models were then beautifully photographed to capture the specific 'atmospheric' conditions, showing the poetry of light, shadow, space and materiality of the proposed 'places'.

The final process was to produce a series of 1:20 or 1:25 large-scale section drawings (hand and computer) that provided a narrative to their proposals. The body of work accumulated by the students, allowed them to understand the level of exploration, research and quality of finish, which is necessary for a professional Interior Designer to develop design proposals ready for client presentation. The project culminated on a formal final presentation of all the projects to the clients.

7.4. PHOTOGRAPHIC REFERENCE

All photographs are courtesy Marco Sosa



Figure 4: Examples of students' drawings and process work exploration of concepts



Figure 5: Examples of students' drawings and process work exploration of concepts

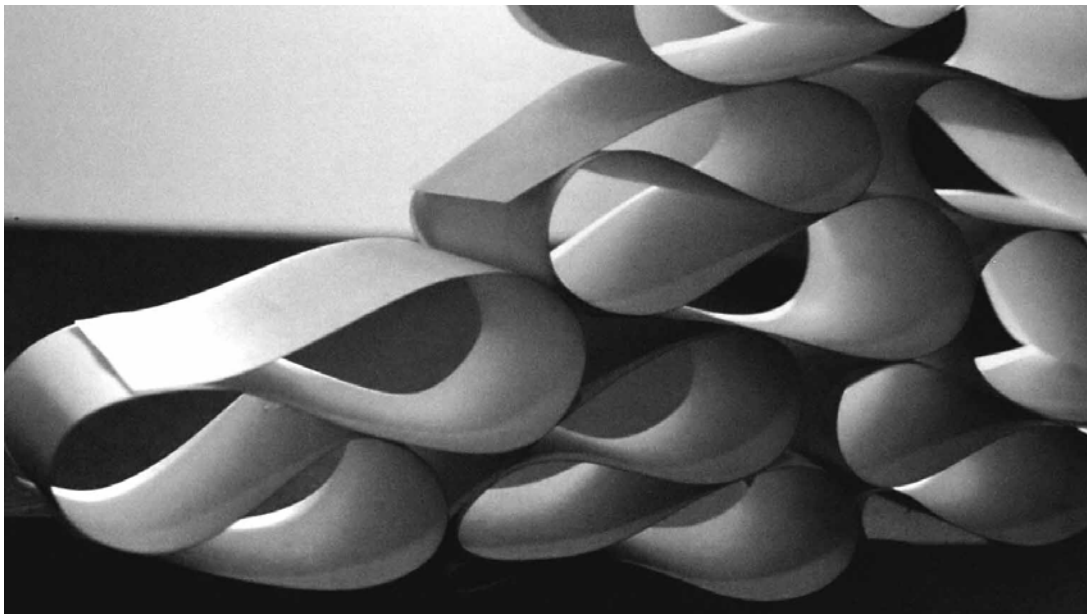


Figure 6: Examples of students' model and process work exploration of concepts

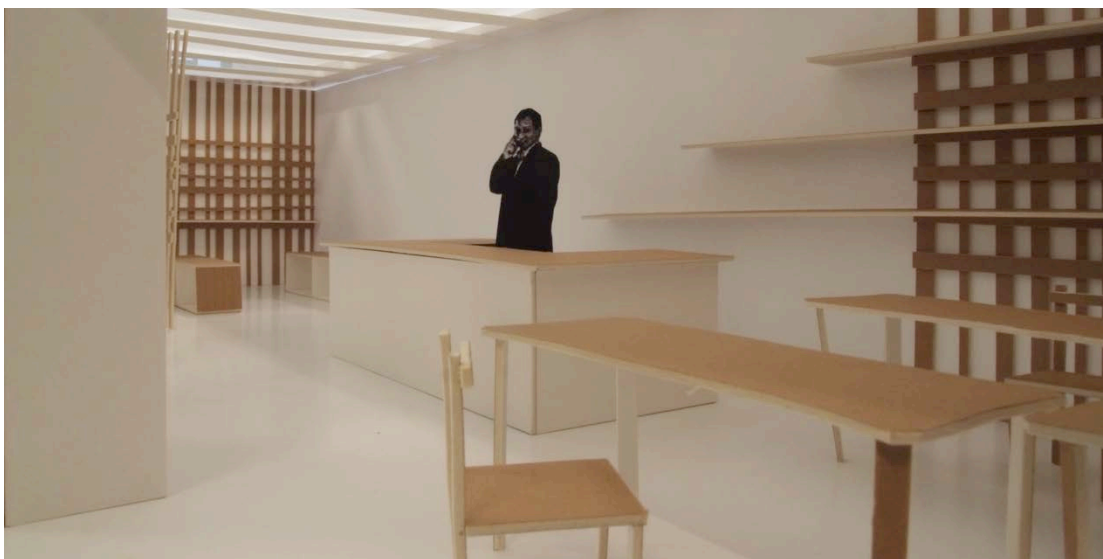


Figure 7: Examples of students' drawings and process work exploration of concepts



Figure 8: Final presentation in the presence of external jurors and external professors

8. CASE STUDY 03: PHASE 'US', ZAYED UNIVERSITY INCUBATOR SPACE - FALL 2014

8.1. PREAMBLE

The main objective of the process focused on introducing students to the aesthetic and the practical sides of the interior design world with an emphasis on three-dimensional spatial understanding, design developments, and physical and technical resolution. Simultaneously it also incorporated basic client analysis, programmatic evaluation, space planning and understanding of essential materials and finishes. After charting and designing a personal space, students were asked to build on what they have learnt, and transform their outlined individual experiences into a spatial proposal, adapting it to new site, audience and programmatic requirement.

8.2. PROCESS AND IMPLEMENTATION STRATEGIES

The course structure focused on introducing students to the basic fundamentals of interior design. The process was split into eight 'Acts' - a connotation that symbolizes students' making and creation process via smaller increments of 'actions' culminating into a spatial design proposal, with specific requirements for each stage to demonstrate skill development.

Act 1: The term 'Incubator Space' was introduced. Case studies were used to familiarize students with the definition, to understand the function, to predict the users' primary and secondary needs, and to establish an overall understanding for the needed services and facilities.

Act 2: Dissecting and understanding the provided client's brief, students were asked to further analyze, articulate, and represent it in a series of spatial and relationship diagrams. ZU Incubation Space located within Zayed University Library was introduced as a site. It presented a mediating zone between the academic world - where students are prepped with skills and knowledge, and the outside world - where ideas crash against existing realities; social and financial among others. Incubator was defined as an in-between zone; a facility created to 'incubate' groups and individuals and their ideas, nurture further prior to release and manifestation. Students were grouped into three and asked to combine and expand on

their personal defined 'I' experiences; appropriate them further and propose an alternate design scheme for the incubator space.

Act 6: Students took their created experiences and interlaced them into the new space program and users; ZU students and graduate. The students either integrated it and / or transformed and appropriated, thus creating shared experiential moments with and for the others. Keeping the specificity of the site, and the relation to the overall spatial and programmatic brief, students were asked to think and reflect upon different ways in which existing architectural elements can emphasize (or hinder) the meaning and value of a space, or on the contrary accommodate it. This stage culminated in concept design presentations.

Act 7: Students were asked to take their designs to the next level of detail, expressing different elements, focusing on their tectonics and materiality. This crucial stage transformed their ideas into interior design spatial proposals. This stage culminated in detailed design desk critique and discussion sessions.

Act 8: Students presented their proposal to the client representative and other jury members.

8.3. RESULTS

One of the main targets was to widen the students' horizon, and formulate the basics of their interior designer education; clearly distinguishing and clarifying itself from what is termed as Interior Decoration. It also formulated an important reference point that continues to be quite often used in the consequent studios; Human scale and spatial occupation.

The positive outcomes were numerous:

- Students were exposed into a varied learning experience that goes beyond the classroom realm.
- Students had two different audiences to convince and sell their proposals; their direct instructors and other interior design professors, as well as the client representative, a professor from the business school. Student very quickly realized that same language and terminology can be used when presenting to both parties, and the areas of focus and interest vary as well. This was instrumental in them taking on the skill of self-critique and evaluation using their own judgments and reasons for executed actions; an approach that is totally different to them whereby they are used to following certain fixed steps and orders.
- The studio culminated in an exhibition, wherein students' work remained on display for a two week period.

There were also some obstacles presented such as the following:

- The ZU incubator site is an irregular one, with curved and exterior inclined walls. With the interior design studio being an introductory one, students were not equipped to adequately deal with the site challenges. Site opportunities, such as the

extended desert landscape views, the in-between space defined by the building's exterior and the roof cascade, the outdoor direct access, and library adjacencies, are among other unique aspects students failed to be capitalized on.

- The students were separated into groups of three. The incubator program was defined to consist of three parts; Individual working zone, communal working zone and outreach zone. Students were given the freedom to interlink and expand, but were asked to each select a focus and maintain the coordination with the other two members. Even though, this is a common practice in the industry, students failed to understand the merit behind it, and each concentrated on her own design with minimal communication with the other group members.

8.4. PHOTOGRAPHIC REFERENCE

All photographs are courtesy Lina Ahmad

Selected Site, Zayed University Incubation Area.

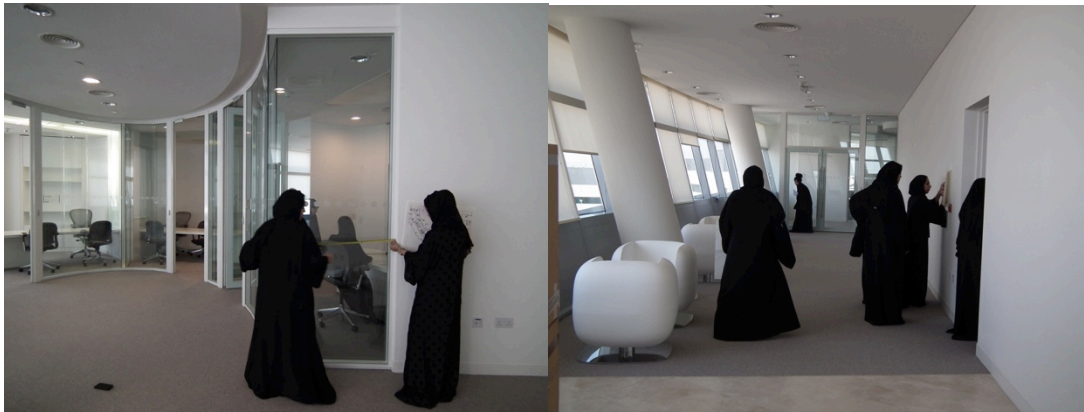


Figure 9: Snap shot of the student in a surveying process.



Figure 10: External site visit



Figure 11: Brainstorming Session



Figure 12: Final Presentation attended by external visitors, took place in Al Fonoon Gallery – Zayed University, Abu Dhabi Campus on Saturday.

9. CONCLUSION

The three case studies combine the new skill development, hands on learning, complimentary outside classroom boundary learning, and the cultivating the ambition to achieve further, higher and wider than perceived. There is a major difference between 'being a designer' and practicing design. Whereas the later is linked to the project one is involved in, directly responding to the demands and the directions pointed out by the client (or studio instructor), and is a process that usually ends with the project successful execution, the first intertwines with continuous knowledge inquiry, self-growth and progression. It requires having the ability to assess the situation and plan the actions accordingly; knowing when to push boundaries and when to stand by the limits. It requires one to grab every single opportunity and make the best out it. At the Interior Design department of the College of Art and Creative Enterprises at Zayed University Abu Dhabi campus, through our pedagogical approach, we are working collaboratively and strive towards bypassing the basics, in order for our students to start knocking on the doors of 'innovation'.

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