

March 2016

ARCHITECTURAL EDUCATION RELATION TO ARCHITECTURAL PRACTICE

Ahmed El Wafa

Teaching Assistant, Architectural Engineering & Environmental Design Department, Faculty of Engineering & Technology, Arab Academy for Science, Technology, and Maritime Transport, Egypt,
arch.elwafa@gmail.com

Fadwa Khedr

Teaching Assistant, Architectural Engineering & Environmental Design Department, Faculty of Engineering & Technology, Arab Academy for Science, Technology, and Maritime Transport, Egypt,
Fadwakhedr@hotmail.com

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Recommended Citation

El Wafa, Ahmed and Khedr, Fadwa (2016) "ARCHITECTURAL EDUCATION RELATION TO ARCHITECTURAL PRACTICE," *Architecture and Planning Journal (APJ)*: Vol. 23 : Iss. 2 , Article 14.

Available at: <https://digitalcommons.bau.edu.lb/apj/vol23/iss2/14>

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Abstract

Now day's architectural education is criticized, "Architectural pedagogy has become stale". Architectural education did not change over the last 20 years; this is considered to be one of the biggest weaknesses. School of architecture now a days suffer to meet the transforming architectural practice, more over students are not educated to meet the market demand. The gap between the architectural education and the architectural practice is increasing each day due to the rapid change in technologies and market demand, more over architectural school still has traditional design studio, where students do not practice architecture. This paper aims to prove that linking the architectural education with real projects during the undergrad time, improves the students architectural practices after graduating describing an innovative and very successful final year project course that has been provided several architectural schools.

Keywords

Architectural education, live projects, Architectural pedagogy, Design studio

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A. ABOU EL WAFI, F. KHEDR¹

ABSTRACT

Now day's architectural education is criticized, "Architectural pedagogy has become stale". Architectural education did not change over the last 20 years; this is considered to be one of the biggest weaknesses. School of architecture now a days suffer to meet the transforming architectural practice, more over students are not educated to meet the market demand.

The gap between the architectural education and the architectural practice is increasing each day due to the rapid change in technologies and market demand, more over architectural school still has traditional design studio, where students do not practice architecture.

This paper aims to prove that linking the architectural education with real projects during the undergrad time, improves the students architectural practices after graduating describing an innovative and very successful final year project course that has been provided several architectural schools.

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1. INTRODUCTION

"Teaching beginning students is a combination of counselling, monitoring, and inspiring skills through training. Teaching of the beginning is a great responsibility to be reserved for the most mature and the best prepared individual." I love beginnings"" said by Louis Kahn, (Sobhy, 2015)

The future of architecture education is a main topic that is discussed now days. The continues changes in the profession and with the Royal Institute of British Architects' (RIBA) course validation has inspired many educational sources. Live projects are used in all architectural educational stages part 1 and 2. Since it is believed that when students deal will real clients and scenarios, they gain right skill that will help them in their architectural practice (Lofthouse, 2013).

The recent economic crisis has put huge pressure on architectural schools since students that leave universities face high level of un-employment. So architecture schools have to adapt the speed and scale of changes. Moreover students' needs to be taught the market demands such as skills, attitudes..... etc. The main aim of this paper is to investigate the changing nature of architectural education and explore the benefits of implementing live projects into schools of architecture. Since live projects give students the opportunity to gain practical construction skills, as well as to work with real clients (Lofthouse, 2013).

2. HYPOTHESIS

Is that merging between architectural education and live projects for student's participation offer students' additional skills which help the students to get prepared for real architectural practice.

¹ AHMED ABOU EL WAFI & FADWA KHEDR

Teaching Assistants, Architectural Engineering & Environmental Design Department, Faculty of Engineering & Technology, Arab Academy for Science, Technology, and Maritime Transport, Egypt

3. METHODOLOGY

Inductive and deductive methodology was used to explain architectural pedagogy, alternative pedagogy, and importance of live projects in architectural education. Then Analytical Methodology was used to analyze three relevant examples to prove that implementing live projects in architectural education, helps students to get prepared for real architectural practice.

4. ARCHITECTURAL PEDAGOGY

Education in architecture is decomposed into schools, curricula, design studios, grades, subjects, modules, courses, lectures, lessons, and exercises. (Salama, 2012). Although the general criteria of Royal Institute of British Architects (RIBA) Part 1 and 2 " asks students to have an 'understanding of the profession of architecture and the role of the architect in society, and Part 2 students must show the 'ability to generate complex design proposals showing an understanding of current architectural issues'". However, students always suffer when they begin their first job (Lofthouse, 2013). It is important to clarify architectural basic concepts of debate. It is usually confusing using different terms as pedagogy, education, didactics, and constitutes. Pedagogy always address issues about aspirations, ideals and goals of architectural education. (Melissinopoulos, 2013). One of the biggest obstacles that architectural education is being criticized for is tradition design studio. The design studios works on a brief written by the design tutor, however in practice the brief is usually suggested by clients, with the guidance of the architect of what should be done. Although architecture is a participative process, yet the design studio is isolated from the real world and types of relationships interactions that occur in practice. Usually students are not encouraged to share their ideas with other unless they are working in groups. Also architectural students work in isolation from other related departments, which they will meet in real practice, which will have an great impact on the practical experience of the students. It should be understood that the reason for segregation between education and practice is the lack of technical and business skills, since students learn more by doing but unfortunately the do not take the opportunity to work within construction until their placement years .Many believe that the course should be part time with integrated placements to enable students to work whilst studying. "Education of architecture remains thoroughly in the theoretical rather than practical and there is a huge gap between the expectations of future employers and what tutors are teaching in the schools." (Lofthouse, 2013)

Generally the contents of architectural education should

- Aim to be comprehensive in its coverage as possible
- Focus on sites in which site intervention is important
- Integrate fields of knowledge such as engineering arts, economics, etc
- Allow higher level of knowledge through postgraduates programs and research. (UIA-Architectural-Education-Commission, 2011)

Moreover, "Continuous interaction between (the) Practice and teaching of architecture must be encouraged and protected." (UIA-Architectural-Education-Commission, 2011). Mainly, architectural education prepares students for a professional career, opportunities should be available for the teaching establishments to ensure that teachers, graduates, students and other participants who shape the built environment, are given the opportunity to meet, discuss, connect and establish long-term partnerships for the exchange of information, ideas and experiences. (UIA-Architectural-Education-Commission, 2011)

5. ALTERNATIVE PEDAGOGY.

The following part in the paper will provide us with an over view of some architectural schools , prince wales' architectural institute has offered different methods of working, there were changes in education made by RIBA, the course gave the chance to students to complete building by the end of the year, this course aimed to reintegrate construction industry and design. Furthermore, rural studio is an undergraduate program of school, planning and landscape, has suggested a program that focuses on practical hands on construction and social activism. (Lofthouse, 2013). RIBA has

always been criticized regarding its role in the architectural education. In September 2011 has concluded new criteria for validation, which they saw as an opportunity for universities to review their course content and define distinctive academic agendas responding to a more competitive educational environment. (Lofthouse, 2013). There were 4 key issues that was identified to prompt architects to steer their work into new directions and to act alongside other professions as follows: The environment, politics, economy, and technology (Lofthouse, 2013). Moreover, it is very important to comprehend that the design process of the students in the beginning of their design projects is seen as important as their end product. Chances for monitoring the students' progress are greater for the final stages' projects as the allocated times is probably enough and consequently more focus is given to the design process. First the main focus is driven to self-learning process, and things they benefited from their previous experimentations, second the evaluation of their self-criticism, the idea behind the decision making, and the logic behind their design progress. (Sobhy, 2015)

6. LIVE PROJECTS

“A live project is an assessed component of a Higher Education (degree level) course that engages students with a real project and a real client, for whom the students produce something of value that could not realistically be procured through the typical commercially driven client-architect relationship. Architecture live projects may include the construction of a built outcome, but it is not a requirement.” (James Benedict Brown, Lecturer at Norwich University of the Arts, 2013) (Lofthouse, 2013)

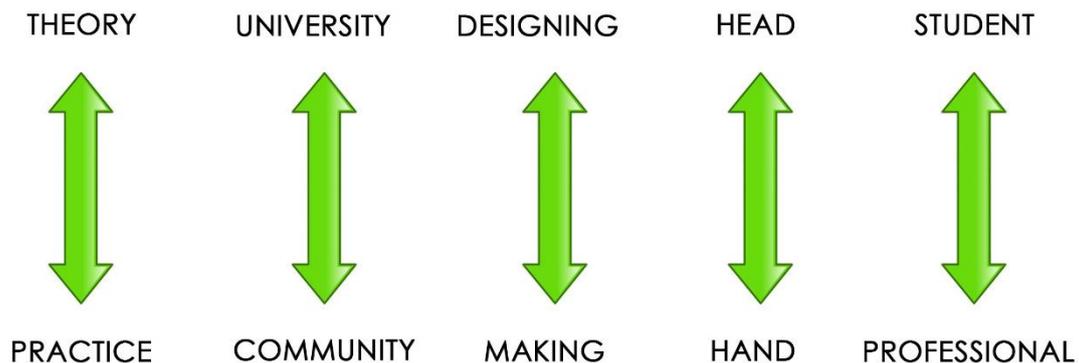


Fig. 1 Live projects sit between the binaries implied by distinctions between ‘work’ and study

Reference: edited by researcher (Lofthouse, 2013)

Live projects mainly focus on the process in which a student formulates a brief as shown in figure 1, determined by external academic factors and how a student communicates within a group. Live projects is a way that educates students, architects and communities of practice. Live projects offer students opportunities to mainstream architectural education and give students empowerment to act in different ways, enabling students to learn and create experience in practice of architecture. (Lofthouse, 2013)

7. THE OXFORD ACADEMY

The following part is going to discuss different experiences in different architectural schools. The first example is an experience of live project in Oxford Academy, in 2010 as a part of a design studio, students were given several projects to choose from as a design project, so a group of

building. So the team reached a conclusion that the best way for the proposal to be successful is to involve the students and community in the three small scale projects. After that the team of students started to develop the idea of green gym and trim trail into learning trail. Then this idea developed to be a network of outdoor classrooms and social area, which would link different areas of school, and the design and construction would be integrated into the school's curriculum and students would have hands on involvement with the projects and would construct or design each element of the brief during the construction. Then the team started to search for other available materials by contacting investors who wanted to get involved in the project, either by donating materials or creating link with the Academy. The students' team started to create a stakeholder map to present the networks that could be formed for each small project. The main concept of the students here was to create future development and regeneration of the school that depends on its wider networks with local companies and businesses, since the economic and educational crisis and educational spending cuts, the force any institution to pause their development. The new designed façade system for the technology block, was with no funding and materials, the design process was difficult and the end designs were not as successful as other areas of the project. The students' team could not change the form of the building or envelope it due to the lack of materials. We therefore had to design something, cheap and easy to construct. (See fig.7). so they focused on the concept of student's involvement and the schools identity. The constraints did inhibit our creativity but we were focused on achieving a feasible outcome. This limited our imagination to an extent and innovation was difficult to achieve in the short time. (Lofthouse, 2013)



Fig. 3 Oxford Academy Initial Technology Block Façade Design (left figure), Oxford Academy Final technology Block Façade Design(right figure)

At the end of the two weeks we presented our design proposals and design construction process to the clients, studio peers and tutors Aiming to please our peer students, design tutors, and also the public, encouraged us and fuelled our motivation to produce something tangible. The most important aspect of our designs was the research and sourcing we compiled; showing how the brief influenced the design and the design influenced the brief .Some of the design aspects were criticized for having little aesthetic appeal. We were acknowledged for the process we used. Instead of designing the end product we designed the process in which the students could be involved and an outcome could be achieved. It was suggested that we continued by presenting our ideas to the school, which meant we had to rethink our presentation to ensure our ideas would be understood. (Lofthouse, 2013)

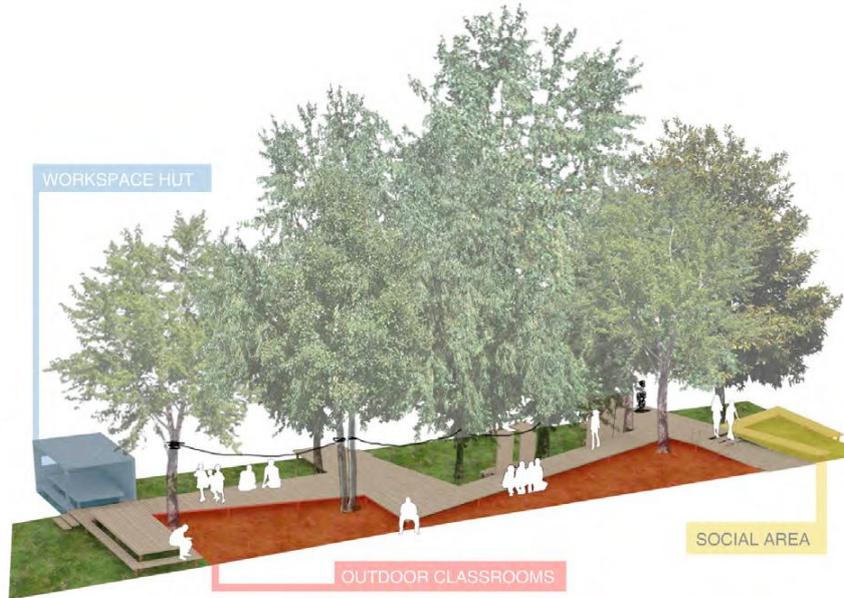


Fig. 4 Oxford Academy Learning Trail Concept
Reference: Lofthouse, 2013



Fig. 5 Oxford Academy Learning Trail Design (left figure), Oxford Academy Entrance Design
Reference: (Lofthouse, 2013)

Another example of the application of live projects in architectural education is in Department of Architectural Engineering & Environmental Design College of Engineering and Technology Arab Academy for Science, Technology, and Maritime Transport. As the students in the first phase of the graduation projects are given real sites. In Design 6 course students are divided into groups to start analyzing the graduation project site, merging their previously studied analysis in Urban Design Course. The main aim of giving the students real site plans is to fully understand the site potentials, constrains, and what are peoples' priority projects types. Even more, students are asked to analysis the surrounding building heights, land uses, building structures, main accessibility to the site and main site problems. Also, students are asked to analysis the sites' historical background architectural trend in the area. All these analysis should effect their type of project selection, the projects architectural trend, and even more it should add a potential or solve a problem in the site. After the students fully understand the site main constrains and potentials. Each student is asked to submit a proposal for their graduation projects, according to the concluded analysis the perceived from the urban studies analysis. This process is done in another course called Research and programing, in which each students submits a detailed program for their graduation projects, putting the priority to residents needs. After the students are settled down on the program, the design phase begins. The main aim of this whole process is to make the students understand the importance to interpret projects in a site the adding a value to the area, also to make them

understand that each given site has special potentials and constrains that should be taken in consideration while designing by researcher.

Another examples of the application of live projects in architectural education is in Faculty of Architectural Engineering Beriut Arab University, the students where give a sites of an area 3655 meter square, they were asked to design an environmentally friendly villas , taking advantage from the site potentials ,view and natural typography. The first phase was a group work assignment, each group should study the following:

- Study the main theories and space requirements such as (zoning- spatial relations- use spaces)
- Analyze 4-5 examples according to their previous analyzed data
- then conducting an architectural program of their assigned project

Then , the second phase begins, this phase is an individual work, each student is given different type of client such as: state man, an athlete, a novelist, a performing artist, a visual artist and retired military , on which the villia is going to be designed as the client request on personality, so at that phase the students had to choose their own clients, and determine the main key factors of the personality who they are design for, and understand the clients different traits related to his job, and finally to determine the clients preferences in house design dedicated by the client personality such as special rooms or zone according to each client profession. The following figure 7 shows each evaluation stage that was followed by a feedback session. And finally the following figure 8 shows the projects samples the students submitted according to different clients. (Sobhy, 2015)



Figure 6: Client options
Reference: (Sobhy, 2015)

Lecture & Main

2D01 - TO DWELL : EXPERIENCING ARCHITECTURE	INPUTS	
	LECTURES & MAIN STUDIO ACTIVITIES	<p>Lecture 1 Architecture & the Fulfillment of Human needs 1 (Masiow Expands Pyramid)</p> <p>Lecture 2 Residential spaces (Design Logic and Use Spaces)</p> <p>Lecture 3 Matrix & Bubble Diagram</p> <p>Lecture 4 Architecture & the fulfillment of human needs 2 (role playing circles)</p> <p>Lecture 5 Site Analysis</p>
	STAGE TITLE	
	BRIEF DESCRIPTION	<p>STAGE 2</p> <p>RESIDENTIAL SPACES RESEARCH (DATA & CASES)</p> <p>RESIDENTIAL SPACES RESEARCH (DATA & CASES)</p>
	DELIVERABLES	<p>Programme & Main bubble Diagram</p>
	EVALUATION	<p>Research Document PPT Presentation</p>
	BRIEF DESCRIPTION	<p>STAGE 3</p> <p>(ANALYTICAL (GIVEN & NEEDS SITE & ARCHITECTURAL PSYCHOLOGY</p> <p>Individual work Assigning Assistant staffs & students to their clients typology</p> <p>Introducing the site in Debbien and its building regulations Site Survey</p> <p>Client research Typological & Personal Treats + Architectural Concerns Site Analysis</p>
	DELIVERABLES	<p>Final Modified Programme & Bubble Diagram</p>
	EVALUATION	<p>Final Modified Programme & Bubble Diagram</p>
	OUT PUTS	

Fig. 7 Evaluation table
Reference: (Sobhy, 2015) edited by researcher

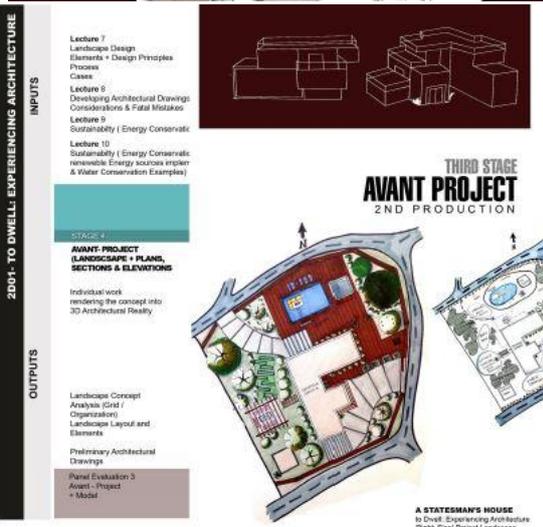
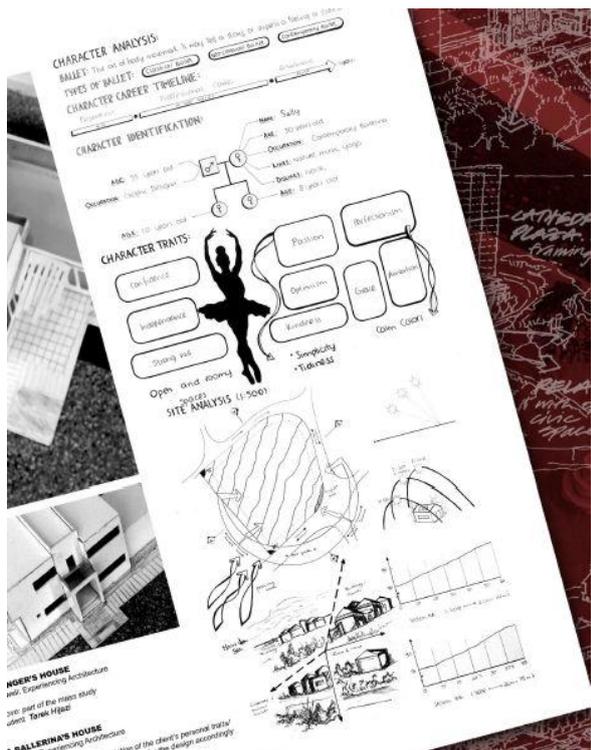


Figure 8 Students proposals
 Reference: (Sobhy, 2015)

8. CONCLUSIONS

Finally this paper highlights the importance of engaging students in live projects, this experience make students more aware of the professional live practice. Also, the implementation of live projects in the architectural education phase of the students, helps to improve the student's skills, and enables them to improve their skill to start their professional life. Moreover, one of the most important point aspects of implementation live projects in architectural education, is that students get the opportunity to understand that each project has its own economic social and environmental constrains, these problems are the main problems that face the students when they start their architectural practice.

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