

# **URBAN DESIGN BETWEEN UNDERGRADUATE EDUCATION AND PROFESSIONAL PRACTICE**

Arch. Heba Safey Eldeen  
Assistant Lecturer  
Faculty of Engineering  
Misr International University

26, Hisham Labib st., of Makram  
Ebeid, Nasr city. Cairo, Egypt.  
E-mail:h\_safeldin@Yahoo.com

## **ABSTRACT**

This paper places emphasis on a dilemma that can be exemplified by the disintegration between undergraduate courses of urban design and the application of knowledge gained from these courses throughout the professional career. It is a critical analysis performed by a former student of architecture, later an assistant lecturer of architecture and urban design courses as well as a practitioner. The paper is based on a content analysis of the literature review related to topics such as: What is urban design -between planning and architectural design-, and what is urban design -as a discipline-? The paper then moves to presenting how urban design is introduced to the undergraduate students -as an educational aspect- focusing particularly on the faculty of Fine Arts, Cairo. The paper then criticizes the advantages and the disadvantages of teaching urban design in this mode - with respect to the undergraduates as well as the product practitioners-. Finally, the paper ends up with a proposed conceptual framework that aims at lessening the gap between the undergraduate education and the professional practice.

## **KEY WORDS**

Planning - Architectural Design - Urban Design - Dynamics of the Built Environment - Teaching Disciplines - Experimental Learning Model - Undergraduates' Thinking Modes - Professional Practice.

## INTRODUCTION

### URBAN DESIGN BETWEEN PLANNING AND ARCHITECTURAL DESIGN:

Urban Design is the intermediate step between planning and architectural design. Concomitantly, it has characteristics of both. Yet, and for a better understanding of what urban design is, we need to consider first what planning and architectural design are.

*Planning* may be regarded as an analytical activity that ends up with decisions of actions to be implemented. It tends to be a managerial activity that has its definite goal, which integrates social, economic and political resources in order to achieve desired ends requiring regulatory and administrative guidance and approval. In this sense, planning is the most “inclusive” discipline, integrating physical, social, economic, psychological, and symbolic, community aspirations and other concerns (Salama, 1998). Planning is making “plans”, articulating “policies”, and developing “programs” in order to tackle, in orchestrated ways, the symphony of urban life (Antoniades 1993).

Whereas, *architectural design* may be regarded as a mental synthesizing activity that ends up with creating a product related to a certain situation to give satisfaction (Gregory 1966). The main concern of the architect is to create three-dimensional structures of formed spaces to accommodate human activities, considering the physical appearance of a building or of a portion of the built environment, consistent or inconsistent with the city master plan and rarely considering variables considered by the planners, such as the economic and the demographic variables (Salama, 1999).

It is clear that the common major goal between planning and architectural design is to make cities functional and physically beautiful. As such, urban design may be hypothesized as this link that lessens the gap between planning and architectural design.

### WHAT IS URBAN DESIGN?

*Urban design* is that part of planning which deals with the issues of beauty and aesthetics and which determines the order and the form of the city, yet functioning the land uses dealing with the spatial community (Salama 1998). Meanwhile, and based on the prospect that “cities can be designed”, Eid argues that urban design is that aspect that deals with the unpredictable and controllable growth of the city (Eid 1997). According to Halprin, urban design is the ultimate creation of cities, which provides a creative environment for people, that is, an environment with harmonious diversity, allowing freedom of choices and generating the maximum interaction between people and their surrounding. In a close manner, the AIP defined the urban design as the process of implementation rather than the creation or the design of the physical environment. It is the strategic area of interdisciplinary environmental design arts that are concerned with the implementation of public objectives for the built environment. Involving all levels of physical scale-object design, project design and city or environment design. It is process-oriented, user-oriented, framework and implementation focused (Antoniades 1993).

Moreover, urban design is defined by Antoniades as the physical creative element of the city building process. It is dynamic in terms of time, more general than the design of specific buildings, economically conscious, and has realization span longer than that of the architecture design (Antoniades 1993). In this concern, Eid outlines the scope of urban design as follows: 1. Design of space, 2. Regulations of buildings, 3. Relocation of land use pattern versus regulations, and finally, 4. Arranging the relationships of the previously mentioned aspects within the city (Eid, 1997). Thus, urban design may be defined as a problem solving process in order to create a solution that is wholistic and homogeneous.

Finally, urban design can be hypothesized as the physical expression of basic social needs, and may be defined as: the integrated process of space/enclosure design, to accommodate certain activities/programs, utilizing the right technology, meeting the right estimated cost, sustainable along time variables and compatible with its environmental socio-economic and cultural contexts.<sup>1</sup>

- **The Dynamics of the Built Environment That Should be Conveyed While Teaching Urban Design:**

The built environment is composed of tangible and intangible elements. The tangibles are the physical elements, which are open spaces, street patterns and pedestrian ways, views, vistas, topography, individually significant architectural groups of buildings, civic monuments (fountains, statues, murals), street furniture (signs, lamps posts, benches) public indoors and public outdoors. The intangibles are the people acting in and interacting with the previously mentioned tangibles (Antoniades, 1993).

Other interdisciplinary dynamics affecting the built environment are regulations, laws, policies and governmental bodies involved. Besides, there are the historic culture, local climatic conditions and socio-economic contexts.

On the other hand, Salama states that the physical vocabulary of urban design includes all architectural vocabulary examined so far; scale, proportion, rhythm, containment, enclosure, diversity, imageability, ligibility, chaos and monotony –all representing the basic intellectual tools of urban designers (Salama 1998).

The previously mentioned dynamics affect the attitudes, methodologies, strategies, implementation and sustainability of urban design. The undergraduate courses are supposed to convey knowledge about all those dynamics, as well as the interrelationships between them, preparing the undergraduates for the challenges of the real world throughout professionalism.

## **URBAN DESIGN AS AN EDUCATIONAL DISCIPLINE PLANNING OR URBAN DESIGN?**

---

<sup>1</sup> Inspired by Dr. Youhansen Eid (1997).

The introduction of planning and urban design as educational disciplines is relatively new. As a fact, it was introduced as theoretical curricula in the late forties. Slowly the discipline developed as applicable studies encompassing overlapping planning and urban design approaches with no limits to differentiate between them as two independent disciplines. A misleading concept which is still adopted in most of the schools of architecture and planning even after the emergence of independent planning departments in several universities in Egypt.

Except for the faculty of Regional and Urban Planning -Cairo University, it is a fact that most of the schools of architecture teach the urban design courses with this conceptual duality; city planning theoretical lectures and urban design assigned projects, all under one course name.<sup>2\*</sup>

As a former student of architecture, later an assistant lecturer of architecture and urban design courses, I can base an argument on the disintegration between the knowledge offered in the undergraduate courses and the methods of application after graduation gained out of this knowledge.

- **The Urban Design Curriculum in the Faculty of Fine Arts, Cairo:**

The faculty of Fine Arts was established in the year 1908 as a school of art, transformed into a faculty in the year 1925. It offers several departments of art and design under the umbrella of architecture. The architectural department accepts relatively few number of high school graduates, who accomplished high scores and who passed a special aptitude test.

Along the five years of education in this department, the students are subjected to the same curricula taught in all the other departments of architecture in the different faculties of engineering. Besides the concentration on fine arts courses such as history of art, history of ancient civilizations, freehand drawing, sculpture, design fundamentals, art aesthetics and criticism, landscaping and environmental studies. The graduates are classified category "A" in the architectural department -syndicate of engineering, as "Bachelors of Fine Arts, specialized in Architecture".

Along the three final years of architectural education in the faculty of Fine Arts in Cairo, the urban design teaching mode is as follows:

- 1<sup>st</sup> year of urban design education (3<sup>rd</sup> year of architectural education):

In this academic year -along 3 contact hours a week-, undergraduates are introduced to the regulatory laws number 106 for the year 1976 and number 3 for the year 1981. Those two laws are the basic source of land subdivisions and building regulations. The subject is taught as a theoretical curriculum, where the undergraduates are required to study the laws' statements and definitions. Parallel to that section, another subject is taught, in which approaches to history and theories of planning are introduced. Students of that course are assigned exercises of exemplification of the different taught items.

---

<sup>2</sup> Based on a personal investigation.

- 2<sup>nd</sup> year of urban design education (4<sup>th</sup> year of architectural education):

In this academic year -along 6 contact hours a week-, the course is divided between lectures and design studio. Throughout the course, the curriculum toggles between city planning and urban design teaching approaches. The undergraduates are introduced to separable bodies of knowledge such as history of city planning, levels of planning, planning process, community and neighborhood planning and design. Those topics are lectured along theoretically, while other topics are taught in the design studio such as site analysis and evaluation based on the performance standards of urban design, ending up with an assigned project of upgrading or redesigning of a district or a portion of a district applying the previously taught performance standards<sup>3</sup>.

- 3<sup>rd</sup> year of urban design education (5<sup>th</sup> year of architectural education):

In this academic year -along 8 contact hours a week-, the course is also divided between class lectures and design studio. Throughout the year, the time span is long enough allowing the educators to teach in full-length lectures, and to apply and follow up in the design studio. The course lectures include a city planning approach of natural studies,

---

**<sup>3</sup> Lectured Topics include:**

- Introduction to planning process:
  - Data collection
  - Data analysis
  - Defining the problems
  - Setting the objectives
  - Alternatives proposals
  - Alternatives evaluation
  - Selection of the optimum alternative
  - Presentation of the optimum alternative
- Introduction to neighbourhood planning:
  - The neighborhood and the social domain
  - The neighborhood and the urban domain
  - The neighborhood as an urban fundamental design unit
- Elements of designing the neighborhood:
  - Residential uses
  - Services pertaining to residential uses
  - Social services
  - Urban open spaces
  - Building and population densities
  - Accessibility to and hierarchy inside a neighborhood
- Introduction to urban design:
  - factors affecting the visual formations such as building shape, housing forms, urban issue, grid type and spatial organization.

environmental studies, socio-economic planning studies, focusing on introducing the quantitative and qualitative performance standards of the built environment<sup>4</sup>.

On the other hand, the design studio focuses on a pure urban design approach, through which the associated lectures introduce completely different topics from those of the class lectures; site development, urban context, urban quality, urban tissue, spatial organization, sense of place, visual forms, size and shape, visual character, urban and architectural typologies, ..., etc.

A project is assigned along the academic year. For achieving the most out of the project, other topics are introduced<sup>5</sup>. Those topics are related to urban physical standards, urban socio-economics standards, urban services and utilities, moving to problems defining and goals setting based on the case study in hand. Students are then assigned to propose design alternatives, evaluate them, select the optimum alternative and finally present it to a jury.

- **Advantages and Disadvantages of this Particular Teaching Mode:**

The undergraduates are theoretically subjected to a brain storming process through exposure to an enormous quantity of separate branches of knowledge. They are supposed to be well trained to being rational, reductive, abstractive and analytic. They are also expected to become aware of the importance of evaluation research; collecting, analyzing and interpreting information and, finally, expressing their thoughts either in reports or in presentations. Yet, they -the students- are highly encouraged to express their artistic talents concerning formal considerations relying on their learning background intuition and imagination. Concomitantly, the fresh graduates are expected to deal with aspects of function as well as aspects of aesthetics, knowing how to put all parts together, producing mastering successful designs.

On the other hand, there are disadvantages of this teaching mode. An important one is that the jury accepts most of the product design solutions, even if they -solutions- are utopist. In addition to the fact that those design solutions generally tend to marginalize or even ignore some of the predefined constraints and preset goals, which are expected to

---

<sup>4</sup> **Lectured topics include:**

Natural studies include the identification of natural resources; water energy, geology, topography, climate, flora and fauna, natural features, ..., etc.

<sup>5</sup>

- Physical studies include surveying of the existing conditions and the analysis of land uses, buildings and spaces conditions, heights, building materials, buildings and population densities, roads and transportation systems, services and utilities, ..., etc.
- Economic studies include land subdivisions, land uses, land values, land costs, inhabitants' activities and income groups and land ownerships.
- Social studies include classification and categorization of local inhabitants, cultural backgrounds of target user groups, literacy status and qualifications, ..., etc.

be handled and dealt with. As such, the highest grades are dedicated to those designs with high presentation quality and quantity.

Another disadvantage of this teaching mode is that the grading jury usually consists of the same educators of the course. Rather, it would have been far beneficial to undergraduates if the grading jury were of representatives of the different parties involved in the real world, outside the faculty borders. Doing so, the undergraduates would have been exposed to real life experiments with all the variables affecting them and pertaining to socio-economic and cultural aspects that are usually neglected or over-simplified.

A third disadvantage of this teaching mode, is the disconnection among the subjects taught from one former year to the coming one, in addition to the mal-connection and the split between class lectures and design studios.

The last disadvantage to be argued here -which I consider the most important of them all-, is that the educators do not relate the pieces of information; they do not conceptualize the issue as a whole. In other words, the educators do not conceptualize the urban design teaching as a part of a longer process which takes place within society out of the university. This is quite a major disadvantage, as the academic undergraduate teaching does not take into account the realities of the world of practice, and does not address or simulate the interaction with client/target groups that characterizes the professional practice.

Finally, it can be predicted that this teaching mode results in generating designers that deal with buildings and portions of the built environment as artifacts, standing alone on discrete sites, completely isolated from their urban surrounding contexts.

## **URBAN DESIGN AS A PROFESSIONAL PRACTICE**

### **AUTHOR'S VOICE:**

After graduation, Kostof claims that the fresh graduates become rather naïve about those realities or have romantic notions about their roles and quite confused about how they should behave professionally (Kostof, 1986).

As an observer, I can argue that a designer -either working independently or in the largest design bureaus/firms-, most of the designers -from the recently graduated to the retired- deal with the designs as individual works of arts or as single products. Regardless the consistence or the inconsistency of those products with their surrounding contexts, and regardless of the previously mentioned dynamics/variables that are highlighted to be considered while dealing with any design process. The previously stated aspects are criticized by Teymur as follows: "Built artifacts standing on discreet islands that are called sites which happen to flow in a transparent sea that is called the city" (Tymur, 1996).

Even when the design case is simpler, either a new district or a small residential compound. Despite the fact of neglecting the factor of sustainability of those designed products, besides, the variables affecting the dynamics of the built environment are not all considered, such as the climatic variables, socio-economic variables, ..., etc. As a practitioner, I can argue that the previously mentioned issues are merely considered; what

happens to be considered in the urban design profession is applying the regulatory aspects concerning building regulations and densities, as well as the aesthetic ones. What is obvious for any observer of such design projects, is the shallow application of the built environment variables, adapted to the superimposition of the designers' fundamental design skills.

As an assistant lecturer, such issues always float on the surface of lectures and design studios in which some deviations of the curricula become of importance. We -assistants- do such deviations in order to guide the students how to connect their curricula with the real world problems ahead.

## **FUTURE URBAN DESIGN TEACHING DISCIPLINE**

### **A PROPOSED FRAMEWORK:**

As a future urban designer, an undergraduate should be prepared to understand all aspects concerning the nature of realities and the way those aspects are materialized. As such, the urban design teaching mode should be addressed to developing the undergraduates' abilities of exploring issues related to understanding the interrelationships between the dynamics of the built environment. In this concern, the discipline should integrate three domains:

1. Introduction of integrated bodies of knowledge that conveys all aspects pertaining to the urban environment.

In this domain, the urban design educators should avoid being too theoretical and should avoid offer students ready-made interpretations. Rather, field trips should occupy a longer span, as they introduce a true application of the remote theories and concepts taught in class. By then, the undergraduates will learn and understand theories and concepts by experiencing them in their true settings. An aspect that can never be achieved within the enclosure of classrooms where a barrier exists between the students and their environment. On the contrary, this barrier will in return bear seeds of misunderstanding and misconception (Eid 1994).

2. Encouragement of the problem-solving and creation abilities.

In this domain, it is argued that one can not understand the implications of form and the values of designs without realizing the whole socio-cultural context within which they exist and transcend space and time (Eid 1994). Concomitantly, the urban design education should first address the understanding of urban design by reading the city's different landscapes as an open text book, which serves as a reference for comparative analysis of how a particular cultural setting affects a particular urban space function and form. Second, the urban design education should address the development of the undergraduates' thinking modes through the reinforcement of surveys, evaluation researches, chek-lists and questionnaires. The mentioned chek-lists and questionnaires should be explanatory, offering the undergraduates deep understanding before defining the problems, which will eventually float on the surface



by fulfilling the explanatory phase. Third, the urban design education should address comparative urban problem solving process and comparative urban design workshops.

### 3. Examination of live urban experiments.

In this domain, the experimental learning model should be employed, through which the urban design teaching mode should become decentralized out of the classes and the studios, and made transparent, so that the undergraduates are introduced to identifying the existing dynamics and variables within their contexts. In addition to the introduction of the undergraduates to the key players, actors involved in the process, as well as representatives of the real local groups and initiating dialogues between them and the undergraduates. Another important concern of this domain is the simulation or even the real examination of different urban problems. Such problems in which the acknowledgement of political, socio-economic, behavioral and cultural variables are incorporated. Doing so, will offer the undergraduates a better understanding of societal needs and will introduce them to the know-how of confrontation of those needs and finally how all the above affects the design implementation process.

Summing up, the following table conceptualizes the proposed framework of future urban design teaching mode:

<b>Objectives:</b>	Introduction of integrated bodies of knowledge that convey all aspects pertaining to the urban environment.	Developing the undergraduates' abilities of exploration and understanding the interrelationships between the different variables of the built environment.	Gaining skills through demonstration of live experiments.
<b>Modes:</b>	<b>Class Lectures:</b>	<b>Design Studio</b>	<b>Experimental Learning Model:</b> <i>Utilizing the built environment as an open text- book.</i>
<b>Means of Achieving Objectives:</b>	<ul style="list-style-type: none"> <li>• Introduction of history, theories and regulations of urban design.</li> <li>• Introduction of quantitative and qualitative standards of the built environment.</li> <li>• Introduction of aesthetic considerations of urban design.</li> <li>• Reinforcement of socio-economic &amp; cultural studies.</li> <li>• Introduction of socio-behavioral studies.</li> </ul>	<ul style="list-style-type: none"> <li>• Reinforcement of the analysis and evaluation researches.</li> <li>• Introduction of case studies that simulates and demonstrates political, socio-economic, behavioral and cultural dimensions.</li> <li>• Introduction of group discussions with different educators as well as real representatives.</li> <li>• Guidance and assistance in implementing different design solutions and their evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>• Assigning numerous site visits and walk-through exercises.</li> <li>• Introduction of various key players and actors, and identifying their effective roles in the group discussions as well as in the evaluations.</li> <li>• Close examination of real urban design problems and solutions.</li> </ul>

A table illustrating the proposed framework of future urban design teaching modes.

Finally, I can argue that fitting the previously proposed recommendations –as a future urban design teaching discipline- will eventually develop the systematic learning of gaining skills through demonstration of live experiments, and thus developing the undergraduates thinking modes. A discipline that would lead to a truly collaborative urban design process, by today undergraduates and tomorrow professionals.

## REFERENCES:

- Antoniadou, Antony (1993). **Architecture and Allied Design: An Environmental Design Perspective**. Kendall, Hunt Publishing Company.
- Eid, Youhansen. (1994). **Realizing Culture: An Attempt to Understand Value and Tradition in Teaching**. Architectural Exercises In the Study of Traditional Environments. Volume Seventy Three.
- Eid, Youhansen. (1997). **Urban Education in Transition: Reflections on Architecture Education in Post Colonial Cities**. Proceedings of UIA-MIU Conference on Cultural Heritage and Architectural Education, Cairo – Egypt.
- Kostof, S. (1986). **The Education of Muslim Architect: Architectural Education in the Islamic World**. Geneva: Aga Khan Award for Architecture.
- Salama, Ashraf. (1998). **A New Paradigm in Architectural Pedagogy :Integrating Environment-Behavior Studies into Architectural Education Teaching Practice**. Proceedings of the 15<sup>th</sup> Bi-Annual Conference of the International Association for People-Environment Studies (IAPS).
- Salama, Ashraf. (1998). **Architectural Knowledge and Socio-Behavioral Studies in Middle Eastern Schools of Architecture: Expanding the Knowledge Base in Design Pedagogy**. Journal of Architectural & Planning Research, Department of Architecture, Faculty of Engineering, Al Azhar University – Egypt.
- Salama, Ashraf. (1998). **Human Factors in Environmental Design**. The Anglo Egyptian Bookshop.
- Salama, Ashraf. (1999). **Planning and Architectural Pedagogy in a Time of Paradigm Change: A Responsive Argument for Future Professional Practice**. Proceedings of the 2<sup>nd</sup> International Symposium, Faculty of Urban and Regional Planning, Cairo University – Egypt.
- Tymur, N. (1996). **City as Education: Habitat 2 Education**. London: Question Press.