

Forum

Thoughts About Architectural Education *

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Abstract. The article highlights the key objectives for architectural education both for the present and in the future in universities of the Kingdom of Saudi Arabia. The main premise is that professional practice in research based universities should include knowledge and skills drawn from both theory and practice in the field.

The Saudi society is committed towards maintaining its tradition, and high cultural and moral values. However, new technologies are to be accommodated with traditions and traditional patterns of living. Besides, a sense of continuity is required to be maintained with the architectural heritage of the past. These concerns present new challenges to Saudi architects in shaping the contemporary habitational environment which is appropriate to the Kingdom's traditions and relevant to its future. Therefore, the implications of the traditional values, knowledge and skills are significant for professional education. The article presents fundamental goals and objectives of such educational programs.

Introduction

The topic I was asked to discuss, "the future of architectural education," may be approached from several perspectives. If we were designing research to examine this topic systematically, we might develop a cause/effect model where characteristics of the profession and the academic field of architecture constituting the internal forces effecting change would be assessed with the social and technological trends that may be shaping the *external* environment for education and practice. But consideration of the elements of such a comprehensive approach is beyond the scope of this paper and so, instead, I would like to adopt a more polemic approach that would draw upon the short, intense introduction to the Kingdom of Saudi Arabia that my colleagues and I have experienced over the past several days. In this way, I can present what I believe should be the key objectives for architectural education . . . both now and in the future.

*A revised and expanded *version* of remarks presented in a symposium at the College of Architecture and Planning, King Saud University, Riyadh, Saudi Arabia, on 10 May, 1992.

My remarks primarily relate to first professional degree programs preparing individuals for initial entry into the professions and, only tangentially, to post-professional education for mid-career advancement. Also, while there are differences in approach about what should be included in the courses of study, I believe the essential objectives pertain to first professional degree programs at both the undergraduate and graduate levels. Architecture as a field of general study in the arts and sciences tradition or as a field for advanced scholarship and research is a separate topic beyond the scope of this discussion.

Before proceeding, I should note that I use the word “professional” to refer to individuals who share such sufficiently common knowledge, skills, and values that they are distinguishable from other professionals or fields of endeavor. I should also note that my thoughts are based upon the premise that preparation for professional practice in research-based universities should include knowledge and skills drawn from both theory and practice in the field.

Saudi Arabia as a Context for Professional Practice

It is evident that the Kingdom of Saudi Arabia is experiencing a period of dynamic evolution and change. The population is growing rapidly and the Kingdom is managing one of the most rapid rates of urbanization in the world. Education and health care appear to have achieved high standards of quality over a remarkably short period of time and advanced technologies are affecting most sectors of the economy. Together, these factors are changing the scale and complexity of physical development. But, in spite of these changes, one gains the impression that the Saudis remain a conservative society committed to their traditional heritage. Proud of their role as hosts for the two noblest sites in Islam, the two Holy Mosques in Makkah and Madinah, Al Haramain Al Shareifein, Saudis are intent on maintaining their traditional moral and religious values.

To the extent that this is an accurate assessment, these conditions post particular challenges for the design professions, especially in the field of architecture. The society seeks to facilitate rapid expansion of the habitational environment accommodating new technologies while still maintaining traditional patterns of living. There is also a growing interest in maintaining a sense of continuity with the architectural heritage of the past. Under these circumstances, models of development from other parts of the world may be unsuitable. Their adoption may risk an erosion of both the macro and micro environments of the Kingdom and cause a degradation of the neighborhood patterns that affect fundamental relationships between social activities. At issue is the character of “place” that is at the heart of Saudi tradition.

In such circumstances, it is important that architects, landscape architects, and urban designers play major roles in shaping the habitational environment. Their understanding of the physical environment and the ways that its form and character affect human activity is particularly relevant to the challenges raised. These are the professions that have -- or at least profess to have -- the knowledge and insight needed to create spaces that implement human activities while also achieving expressive attributes that engender meaning.

The current level of public interest in the environment and the rising expectations about its quality and appropriate expression will provide severe tests for design professionals. Designers will be called upon to assist the public in articulating its goals and to provide leadership in the design and development processes. Many others will also contribute ideas and expertise to this process and, therefore, designers will be challenged to work in effective collaboration with persons having differing perceptions and priorities. The capacity to provide leadership in collaboration with others will likely be as important as the traditional knowledge and skills in determining the roles that design professionals, particularly architects, will assume in the design and development processes.

The Knowledge, Skills, and Values that Characterize the Profession of Architecture

Throughout history, theorists and practitioners have described works of architecture in relation to three fundamental attributes:

- the ways that building environments implement human activity and affect social discourse,
- how buildings sustain and interact with the natural and social environments to endure over time, and
- the ways that building environments stimulate the intellect and stir the human spirit.

The underlying ambition to build well physically in order to enhance the quality of life socially and spiritually has been, and still remains, the central values of the profession. While there are contrary views, there remains a strong consensus about the primacy of these three attributes in assessing works of architecture and the contributions of architects. In my opinion, they still provide the best means for evaluating the relevance of the field today and for projecting its potential contributions to society in the future.

The Implications for Professional Education

The three attributes just mentioned form a reasonable, conceptual structure for discussing the topics that should be included in programs of professional study. Graduates of professional degree programs should have sufficient knowledge and skills to examine issues and reach conclusions about the social, technical, and artistic aspects of building environments. They also should have developed their own skills in design sufficient to demonstrate that they can draw broadly upon these three areas of knowledge in conceiving, evaluating, and refining design concepts.

The fundamental goal of architectural education is to teach students how to think like architects. One may describe **four principal objectives** in meeting this goal.

The first objective is to awaken interest in the range of knowledge and expertise that contributes to conceiving useful and stimulating building environments. Students may only assimilate a limited amount of specific knowledge during their formal education and, therefore, *the first goal of professional education should be to develop the capacity for continuing the learning process throughout the professional career.*

The second objective is to familiarize students with aspects of the several areas of knowledge that constitute the field and to develop the capacity to address issues in each area. Students cannot learn everything they need to know for practice during their formal education but it is essential that they do learn the analytical and synthetic skills involved in each area. Architectural graduates should be able to address quantitative problems subject to the computational analyses and social, economic, and political issues considered in respect to empirical evidence, as well as to the visual and aesthetic matters that are open to individual personal interpretation. *Developing the student's capacity for rigorous thinking in each of these cognitive modes is an essential characteristic of professional education in the field.*

The other essential characteristic of professional architectural education is design and, therefore, *the third objective is to achieve mastery of personal skills in design.* The central aspect of architectural education is preparing graduates who can design buildings and their settings to fulfill social, technical, and expressive goals. This process includes the background study and analyses of the circumstances to be addressed, as well as the posing, evaluating, and reformulating of design ideas that form the central cognitive modes of the process. The process begins with pre-design research and programming, continues through the generating and evaluating of alternative conceptual approaches, and concludes with the development and refinement of design and detail throughout construction.

During the design process, professionals consider and make critical judgements about competing objectives and they must be able to pose hypotheses for ill-defined problems. The capacity to consider alternatives and make professional judgements while interacting with peers in the pressured environment of professional practice is an essential characteristic of professional performance and professional education should have a strategy for assisting in developing these skills.

The fourth objective is to develop an interest in, and a collaborative approach to, contemporary problems. While there may be theoretical areas that can be explored in the abstract, the best way to prepare students for the issues they will meet in the *future* is to engage them in today's issues and problems. There is no better laboratory for helping students develop their capacities for professional thinking. There is a risk of becoming like a trade school if students are taught solutions, but if *students work to define problems, as well as to evaluate potential solutions, the benefits outweigh the risks.*

Questions Raised by These Objectives

What are the arguments that may be raised to question these four objectives?

First, there are persons in the field who believe that the description I have set forth is too instrumental, too operational; it defines architecture as essentially a social art, a profession in the service of society. Many persons believe that architecture should be thought of as more akin to literature; they think that building is a medium for personal expression, for conveying one's personal beliefs, and for engaging others through intellectual stimulation. The field, they believe, is guided more by artistic license than by assimilation of knowledge. I understand and, to a degree, support this view but I believe that the two positions are not mutually exclusive. Architecture can serve the role described but the architect's personal and intuitive capacities provide enrichment, rather than substitutes for knowledge and objective thought.

Next, there is some risk involved in a professional education that seeks to develop both understanding and skills in three such diverse areas as humanistic, technological, and artistic studies. Some believe there is a danger that architects may have such superficial knowledge across this spectrum that there are others with greater expertise in all three areas. But again and again over time, it is the intersection of issues and problems in these three areas that have given particular stimulus to the profession and established its unique position among competing fields. I believe the depth of knowledge in each area is not at issue; rather it is the capacity to work collaboratively with specialists and the ability to draw from all three areas in the design process that provide the unique skills of the architectural profession.

age. There are a few exemplary works of architecture in Saudi Arabia that prove the validity of this design strategy.

A major benefit of such a strategy is that it is open-ended; it may evolve and develop over time to create a truly Saudi cultural expression. Adopting this approach will pose a demanding challenge to both the academic field of architecture and the practicing profession, however, because each must develop a deep understanding of the essential characteristics of the traditional forms of habitation, as well as the forces of change. From these understandings, it will be possible to evolve a contemporary architecture that meets current social needs and technological demands while concurrently supporting cultural traditions.

The challenges described present enormous opportunities. The highly subsidized educational programs and support of home ownership, combined with the government's extensive intervention in environmental planning, provide the means for Saudi architects to meet the profession's traditional ambition to create environments that improve the quality of life.

Finally, There are those who believe that the base of knowledge has grown so broad and professional practice so complex that architectural education should produce specialists rather than generalists. Indeed, I have strongly advocated the development of specialized expertise by architects but not in the first professional degree program. I believe the professional degree should prepare generalists for initial entry in the field with the expectation that they will assume several different roles during their careers. I do not believe, therefore, in preparing persons with only a limited understanding of the field so that they do not have the opportunity to evolve and develop their own interests and capabilities over time. The strategy I have proposed -- developing analytical thinking in several modes of thought, together with mastery of design -- is the essential characteristic of the generalist. The development of specialized expertise can proceed over time during practice or with post-professional education at a later date.

Postscript

To conclude, I would like to add a personal *observation about the challenges Saudi architects appear to face in seeking the most appropriate expression for contemporary architecture in the Kingdom.*

The scale, complexity, and pace of development in the Kingdom have natural tendencies to create building complexes and transportation networks that seem alien to the traditional society. Unchecked, this trend tends to erode the qualities of personal and collective life that are held critical to Saudi values. While one cannot stop these characteristics of change, strategies must be developed to meet the challenges they pose. At the extremes, one may distinguish two different approaches: the first is to ignore historic traditions and create heroic structures that are alien to both the natural environment and the cultural setting; the other is to copy traditional forms at larger scales or to affix traditional symbols to non-traditional structures. Either of these extremes, in my view, results in a degradation of the traditional values of society.

There is, however, a more centrist approach that does not ignore or transfer symbols to a scale or setting where they become cartoons. This strategy seeks to understand the essential principles of historic places and to define the relationships between activities, the scale of spaces essential to privacy and particular kinds of discourse, and the qualities of light, material, detail, and construction that characterize traditional structures. Aspects of these characteristics may be achieved in buildings and neighborhoods that meet the demands of new activities and new scales of enterprise with a minimum compromise to the essential characteristics of traditional herit-

إرهاصات حول التعليم المعماري

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ملخص البحث. تبرز هذه المقالة الأهداف الأساسية للتعليم المعماري في الوقت الحاضر وفي المستقبل في جامعات المملكة العربية السعودية. تنطلق المقالة من منطلق ينادي بأن يتضمن موضوع ممارسة المهنة في الجامعات ذات الطبيعة البحثية معلومات ومهارات مستمدة من الإطار النظري والتطبيقي في الحقل. وبالنظر إلى التزام المجتمع السعودي بتقاليده وقيمه الحضارية والأخلاقية، فإن التقنيات الحديثة يجب أن تتواءم مع تلك التقاليد والأنماط التقليدية للحياة. إضافة إلى ذلك، نجد أنه من الضروري الاحتفاظ بتلك الاستمرارية للتراث المعماري القديم. إن الاهتمامات السابقة تمثل تحدياً جديداً للمعماريين السعوديين عند تشكيلهم لبيئتهم الحديثة الملائمة لتقاليد المملكة والتي تستجيب لمتطلبات المستقبل. تبعاً لذلك، نجد أن انعكاسات القيم والمعلومات والمهارات التقليدية على التعليم المهني هي انعكاسات ذات أهمية كبرى. تعرض المقالة للعديد من الأهداف والأغراض التي تبنى عليها تلك البرامج الخاصة بالتعليم المعماري.