

# Approaches / Strategies for Improving Architecture Education in Palestinian Universities

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**Abstract:** *This paper makes the case for establishing and discussing the status of the architectural education and in particular moving towards sustainable development and the role it will play in developing. First, it describes architectural education and what it entails, how architecture pedagogy takes on different criteria ensuring that academia responds to technical advancement, society requirements and future world strategies. This research will present analysis that explores the current examples of Palestinian universities. It is recommended that architectural educators should strive to balance the way in which students view relationships with the physical and social world.*

**Keywords:** Architectural education, pedagogical practices, undergraduate Program's, Master Program, Teaching Philosophy

## 1. Introduction

Architectural education is the manifestation of the ability to conceptualize, coordinate and execute the idea of building, rooted in the tradition of humanism. Finally, it will detail a short sequential review of some schools of architecture in Arabia in terms of their pedagogical criteria, the syllabi specifications for obtaining a Bachelor and Master of Architecture degree and their validation criteria. Modern Arab architecture available today in front of our eyes, and we do not have to invent it, or create it. It is ahead of all its wealth and beauty and ugliness problems, and vitality and contradictions. Contradictions Arab architectural modernity is present today before our eyes and we do not need to invent it or create it a new. It is present with all of its richness and problems, its beauty and ugliness, and its liveliness and contradictions. Architectural education was first started in the middle Ages, when the masons had lodges where they taught their secrets to the members and these were not accessible to the public and ordinary builders.

### 1.1 Objective of the research

This study aims to review the current architecture education statues in the Palestinian universities. Therefore, this study is focusing on the following points:

- The Arab architect will be able to move from one condition to the other in his or her relationship with global thought, and produce local and contemporary elements which insure a living connection, surpassing the illusion of myth to discover a world open to diversity and to continuously renewable authenticity.
- Palestinian traditional architecture had been affected by other cultures, although some techniques and building materials are still in use since the pre history time.
- Developing better building design through improving the educational system, the future of architecture profession in Arabia relies on rethinking how they educate their students and accredit their schools of architecture as part of a strategy towards achievable sustainable development.
- Developing the concept of architecture and urbanism for the students as a social phenomenon which stems from the

renewable needs of the community, and developing their capacity to grasp the factors affecting them.

### 1.2 Justification of methods & Strategies

The study uses a qualitative approach in order to provide a deeper understanding of architectural education process in the Palestinian universities. The methodology of this study is based on:

1. Review of available literature and interviews with concerning the current.
2. Field visits to the concerned architects to conduct discussing the current status.
3. Contact of the local Universities working in the field.

## 2. Architectural Education in General

This paper exhibited how architecture education is developing gradually in many regions around the world in accordance with their national architecture bodies that organize entrance to the profession through ensuring proper architectural education beside other things. Further, it clarified how the Arab region is missing out in this criterion since they lack such a body although it will contribute to achieving sustainable development in the building industry. Creating special curricula that make benefit of clean renewable solar energy through sustainable architecture designs will make a huge break from utilizing oil-based, nonrenewable, unclean energy.

Perhaps the Latin American curriculum can present a good example for the Arab universities to benefit from during their curriculum development process since it responds to their hot arid climate requirements as well as being well established in the three elements of technology, design and humanities [1].

### 2.2 Architectural Education in Palestine

The development of higher education (HE) in the Occupied Palestinian Territory (OPT) is of relatively recent date. Two-year colleges have existed since the 1950s. These institutions which focused on teacher training, technical

educations, or liberal arts, were either organized by the government or UNRWA. It is only since the 1970s that universities came into existence. Created during Israeli occupation, these institutions were part of a Palestinian collective effort to preserve the Palestinian identity as well as to provide young Palestinians with the opportunity to pursue higher education, after it became increasingly difficult for them to go education from Israel to the Palestinian National Authority (PNA) after the Oslo accords of abroad for such studies. However, the sector has expanded only since the transfer of 1990 [3]. Students graduate from a five-year long programme for the Bachelor of Architecture and Town Planning degree.

A School of Architecture was not established in Gaza until 1992. However, there were sufficient numbers of architects who had completed their studies abroad. In 1993, the Islamic University established the Department of Architecture through its Engineering Faculty in Khanyounis and the Palestinian university of Gaza. The staff members exhibit an interesting mixture in terms of background, specialization, which adds to the strength of the departments. The educational system is based on a semester credit hour system. The students must complete 152 credit hours to obtain a B.Sc. degree in Architecture, which takes five years. The curriculum is similar to that adopted by other Universities. This covers mainly Architectural Design, Graphics & Visual Arts, Building Technology, Urban Design, Structural Design, and Landscape & Interior Design. In the west bank the Department of Architectural Engineering in Birzeit University and Najah University was founded in 1989, it provides a curriculum leading to the bachelor's degree with a specialization in architectural engineering in one of the following concentrations: architectural design, urban planning or without concentration (general track). Students are admitted in the Department after the completion of the Faculty's requirements for the freshman year, and based on the terms and conditions mentioned in the University [4].

In Palestine the architect until late 1980s was not the only designer and building process could pass even without the architect's signature. These facts were behind the reason for the static development in the modern architecture styles [5]. This upgrading of the Architecture syllabus requires a programme to produce graduates who are competent in a range of intellectual, spatial, technical, and interpersonal skills; understand the historical, socio-cultural and environmental context of architecture; are able to solve architectural design problems, including the integration of technical systems and health and safety requirements; and comprehend architects' roles and responsibilities in society. Palestinian traditional architecture had been affected by other cultures, although some techniques and building materials are still in use since the pre history time. A series of details and mutual components have been developed, and a set of common elements and details started to be known and used as typical ones. Other techniques materials and details were taken from different cultures. Roman, Byzantine, Crusaders, and many other cultures left their footprints in the traditional architecture, most of what survived from the traditional architecture in Palestine was built in the Ottoman period while we still can see some of

the Mamluk architecture and rarely Umayyad and other different periods. By the end of the first half of the 20th century new materials and techniques started to change the traditional way of building, still there is no edge time to make a distinction between the traditional and the modern architecture.

### 3. Types of Education Institutions in Palestine

According to the Law of Higher Education, HE institutions can be one of the following:

- Universities: consisting of no less than three colleges or faculties, and granting Bachelor degrees or higher.
- University colleges: offering academic, technical or professional programmes and conferring two- or three-year diplomas or ordinary or honours BA degrees;
- Polytechnics: granting diplomas or BA and higher degrees in professional and technical fields.
- Community colleges: offering academic, professional or technical programs of a minimum of one year's duration and leading to diplomas in the respective programs. The community colleges offer programs aimed at preparing a middle level Labour force, which forms the link between specialized and skilled workers. The diploma programmes (equivalent to an Associate degree) take approximately 72 credit hours distributed over four semesters. The programs offered by colleges cover many different disciplines such as Management and Administration, secretarial, Office Automation, Marketing, Graphic Design, Industrial Technology, Electronics, Computer Maintenance, Dental Technology, Air-Conditioning and Refrigeration, Electronics, Computer Technology, Fashion Design etc. In the West Bank and Gaza Strip there are hundreds of training institutions that provide short and long-term training programmes. These institutions consist of vocational Secondary schools, vocational training centers, private cultural centers, charitable there are 23 community colleges offering associations and developmental institutions. Moreover, a different educational program for high secondary school graduates [6].

#### 3.1 Types of Tertiary Education Programmes and Qualifications

Bachelor and Master programmes are offered at Universities and Polytechnics. These can be followed by doctoral studies at University level. According to the Palestinian Higher Education Law, Polytechnics also have the right to offer doctoral degrees. So-called Diploma Degrees (Professional Programmes) are offered by Community Colleges and University Colleges.

#### 3.2 Governing bodies of the Higher Education Institutions in Palestine

There are four types of Higher Education Institutions: Governmental: the Palestinian National Authority runs and finances the governmental Higher Education Institutions in the West Bank (Palestine Technical University-Khadoorie), and the Gaza Strip (Al Aqsa University) which are under the

supervision of the Palestinian Ministry of Education and Higher Education[7].

UNRWA: the United Nations Relief and Works Agency (UNRWA) for OPT Refugees operates one of the largest school systems in the Middle East and has been the main provider of basic education to Palestinian refugees for nearly five decades. The Agency provides primary and junior secondary schooling free of charge for all refugee children in the area of operations.

Vocational and technical training courses are given in the eight UNRWA vocational training centers. The Agency also runs an extensive teacher-training program, and offers university scholarships to qualified refugee youth. Private: these institutions are run and financed by several foundations, charitable societies, religious denominations, individuals and companies.

Public: most higher education institutions (universities) were set up mostly during the period of Israeli occupation of the West Bank and Gaza. The majority are non-profit and originally created and owned by local charity associations and NGOs. They depend on fundraising and receive partial government funding [8].

The Vocational and Technical Education and Training in OPT: These institutions are supervised by several bodies, consisting of the Ministry of Education and Higher Education, Ministry of Labour, Ministry of Social Affairs, UNRWA, charitable and religious associations, international nongovernmental organizations, developmental organizations and private sector institutions. The governing bodies of HEIs are mentioned above.

## 4. Comparisons between Architecture Programm's at the Palestinian Universities

### 4.1 Undergraduate Programm's

The central goal of the undergraduate program is the mastery of solving architectural problems, mainly the contemporary and the emerging issues, studying the inveterate and well-known solutions, as well as developing and improving these solutions. The architect's dynamic role in building industry, and in the society as a whole, makes it imperative to plan a well-balanced education. Thus, the following broad subjects are included in the program: Environmental and Architectural Design, History and Theory of Architecture, Construction Materials and Systems, Structural Concepts and Design, Environmental Systems in Architecture, Urban Design and Planning, Computer-Aided Design (CAD), in addition to Islamic and Palestinian Architecture. Starting from the fourth year, there is an opportunity to focus on one of the architectural main fields through elective courses introduced by the department. In 2010, a survey was conducted on architectural education in the Muslim World, in which it was found that the curricula within the surveyed areas tend to lack a clear orientation [9].

### 4.2 Master Program

It is widely recognized that the Arab countries suffer from a basic weakness in research skills. Palestine is no exception. This research has consistently addressed the need to reform the educational system as a pressing issue that encompasses education at the school level as well as at the university level. Both Palestine and the Arab region have a majority of youth who are inadequately educated, facing a shrinking job market in countries under the sway of neo-liberal economic agendas. Part of the enormous challenge facing any long term successful political and social transition lies in the failings of the educational system: rigid in its structures: inadequate in its transmission of knowledge, providing the wrong pedagogical model. The need for educational reform has never been greater. It has previously addressed this issue in the Palestinian context with different projects that addressed critique of the Palestinian school curricula to the critique of higher education. Comparative analytic studies of the educational shortfalls of selected Arab countries with definite policy recommendations for reform would be urgently needed. The need to develop research skills within the social sciences cannot be overstated since any long term and sustainable development of Palestinian society depends on the capacity for the incremental process of knowledge-production. The aim of the program will be to ground students in the qualitative research methodologies of their specialized fields, as well as to train them to develop their writing skills, the process of argumentation, and the ability to reach well-grounded conclusions [10].

#### 4.2.1 Master Program of Engineering in Architecture

The Master of Architecture is designed to develop the emerging architectural professional to be fearless in their design ability, as well as possess the confidence to change the world and the habitats of the future through their creative design skills, imaginative vision, strategic thinking and technical proficiency. Delivered through a comprehensive design studio environment, current issues are debated through historical and philosophical architectural thought as well as contemporary states of urban habitation, challenges to a sustainable ecology and the ramifications of modern technology. Professional architectural concerns in law, contracts and ethics are also examined which prepare students for the commercial world of architectural practice.

A student is granted a Master Degree in Architectural Engineering after the successful completion of the following requirements:

1. Finishing pre-requisite courses determined by the Department.
2. Completing at least a total 36 credit hours with grade point average of not less than (75%): Housing Issues and Policies, Islamic Town Planning and Architecture, Theory of Architecture, Urban Design, Advanced Architectural Design, Housing, and others Seminar.
3. Compulsory Courses: (18 Credit Hours)
4. Elective Courses: (12 credit hours)

Thesis: (6 Credit Hours) A graduate student must submit a thesis and pass an oral defense related to his/her thesis [11].

## 4.2 .2 Master Program of Engineering in Urban and Regional Planning

A student is granted a Master Degree in Urban and Regional Planning after the successful completion of the following requirements:

- 1) Finishing pre-requisite courses determined by the Department.
- 2) Completing at least a total 36 credit hours with grade point average of not less than 2.5 (75%).

Compulsory Courses: (15 Credit Hours)

Elective Courses: Student must select 15 credit hours

Thesis: (6 Credit Hours)

The Faculty of Graduate Studies should be concerned about diversifying its graduate programs in such a way to cover a wide range of scientific subjects and their applications and is also concerned about its distinctive performance in research and knowledge production and as a result of organized efforts to be in harmony and consistent with the criteria laid out by the quality assurance and excellence adopted in various parts in the most progressive. Following this architectural study in West Bank and Gaza Strip, these findings and recommendations resulted from analysis of the research and observations made during fieldwork and interviews:

1. In design and construction process we should be more aware to the importance of orientation, finding the best orientation for the building can reduce heat loss in winter time and heat gain in summer time. And by well orientation architects can achieve better natural lighting and ventilation and air circulation in summer time.
2. Some architectural elements should be taken in consideration, we should be
3. aware to the opening and its treatments; opening sizes in different elevations are important valuable element, especially in southwest and east elevations. Glazing is not less effecting factor single, double, and triple glazing as well as reflected glass can give totally different thermal loss in summer and winter.
4. Building materials must be studied more, in order to use new building materials and techniques for isolation. This can be achieved by organizing building materials' exhibitions and public lectures in different places in West Bank and Gaza Strip. Experience, proven and appropriate Computer software's for local climate may help architect and engineers to calculate thermal loss.
5. Studying traditional architecture and its effect on saving energy. Beside these elements massing and shading on elevations should be considered as well as landscape elements.

## 5. Recommendation

### 5.1 Teaching Philosophy

The teaching philosophy of the Architectural courses should provide the students with support and guidance in expanding their individual expertise in the field of "Integrated Urbanism and Sustainable Design" while at the same time learning to work on complex, practice-based case-studies in

interdisciplinary teams. It aims to equip the students with the necessary practical and conceptual skills to develop holistic, interdisciplinary, collaborative and innovative approaches to sustainable urbanism and design and to apply this knowledge to practical tasks in order to solve complex problems in a collaborative way. To promote critical thinking and the ability to bring several people "to the table", students are trained to become generalists with a specialty" with the ability to link engineering considerations with architectural, environmental, and socio-economic approaches to sustainable shaping and management of man-made environments, navigating the complexities of the field and exploring their interrelationships and mutual dependencies. As the program of Architectural courses progresses, the teaching methods shift from a more theoretical approach to the study of concepts and tools to practical application of the acquired knowledge and tools to the design tasks. The teaching methodology combines:

### 5.2 Professional Outcomes

This Masters program academically prepares the graduate to acquire the requisite work experience to gain eligibility towards the professional status of architect in Palestine or in the Arab region. This Masters program enables graduates to enter the architecture profession in a variety of careers including architectural firms, government, construction, development, and infrastructure and planning industries.

The strategic thinking, visual creativity, public engagement, design and technology skills, strategic management and entrepreneurial outlook developed in this degree also provides graduates with a wide range of career opportunities in the creative industries. Many architectural graduates establish careers in design studios, virtual design, web and graphic design, fashion, advertising, industrial design, arts management and the visual arts.

The Master of Architecture also prepares graduates for a pathway into higher education. The research dissertation offers a level of academic work in a student portfolio that is typically acceptable in applications for doctoral studies. Architecture students should be made aware of alternative viewpoints including the view of the material world as something to be respected rather than to be conquered and controlled. In 2000, a survey was conducted on architectural education in the Muslim World, in which it was found that the curricula within the surveyed areas tend to lack a clear orientation. They contained little movement towards the inclusion of cultural issues. The teaching methodology was very much influenced by the foreign models and western references, depending heavily on the literature and text books of the west. Furthermore, it appears that there is little interest or effort in architecture schools to develop inter-regional relationships within the architectural schools through student/staff exchange or even organize field visits to exchange expertise. And finally, the majority provides their undergraduates with compulsory courses, which deprive the students from exercising any choice, even when the elective courses are there in the school booklet [12&14].]. The survey concluded that in spite of the efforts of different well recognized organizations, such as Aga Khan Award for Architecture and architectural education

did not have a high priority in governmental education. Sad to say, in 2007, architectural education is still not a governmental priority in those countries [13]. questioned the reasons behind the low number of creative architects in the Arabian World, wondering whether it is attributed to “our bad educational luck, that the graduates produced could only be considered as half an architect, in other words only half qualified”, or is it possibly attributed simply to the architecture practice atmosphere that does not push them towards creativity. He questioned the role of society and its educational and professional institutes in such situations since Arab architects excel in other countries around the world [13].

- Traditional approaches to the new situations. Identity is dynamic; therefore, it is changing continuously in application. Architects should think “globally,” a composite term to convey looking back to the local from their global position.
- Accreditation comprises three elements and generally involves three steps with specific activities as follows:
- Self-assessment is a self-evaluation process conducted by the faculty, the administrators, and the staff of the higher education institution (HEI) or academic programmes, resulting in a report that takes as its reference the set of standards. Architectural education should become more responsive to sustainability and sustainable development realms. The academic community should be involved in providing opportunities for future architects and urban designers to develop more socially responsible and environmentally responsive architecture. Furthermore, it stressed that the undergraduates’ years are characterized by a maturation of their worldview and personal learning habits. For that, universities and colleges should provide the right environment in which undergraduates form their environmental awareness and sustainability thinking at all levels, so they later invest those acquired principles in their personal and professional lives [14]. There was a time when professionals in the building construction such as carpenters, contractors and masons took the job of the architect designer out of sheer experience rather than study, when architects actually involved themselves in designing churches, palaces and other monuments.

## Reference

- [1] Ministry of Education and Higher Education, Education Development Strategic Plan 2008-2012, MoEHE, Ramallah, July 2008.
- [2] Dr. Mohammed M. Al Subu', General Aspects of Higher Education, and Quality Assurance System in opt, AQAQ, Ramallah, opt, November 2009
- [3] General Directorate for Technical and Vocational Education and Training at the Ministry of Education and Higher Education, VTETin opt, MoEHE, Ramallah, opt, 2009.
- [4] World Bank, West Bank and Gaza strip UPDATE, the Quarterly Publication of the West Bank and Gaza Office, Ramallah and Gaza, Palestine, April 2006.
- [5] Badawy, Usama, Traditional Architecture Construction, Published in the, Second Jordanian Architectural Conference in Amman, PP 1-20, 2000.
- [6] Badawy Ussama, und Waltz Victoria. : Actually Wohnungsbauprojekte in Gaza streifen-Actually Housing Condition and Projects in Gaza strip-Published in Bauwelt International journal, No, 9. 1999. Pp.422-428.
- [7] Waltz Victoria, and Badawy Ussama.:1998 Housing Condition in the Gaza strip in CIM actual Journal, No1, and pp.7-8 (German).
- [8] Badawy Ussama.:Urban Planning Problems and aspect of solution for the Gaza Strip, with Special Respect to the City of Gaza and the Refuge Camp Shati.Diss, Berlin 1997.
- [9] Principles and Design Rules, Passive-Solar Residential Buildings in Israel Ministry of Energy and Infrastructure, Division of Research and Development, 1993.
- [10] The Arab House, University of Newcastle upon Tyne, school of Architecture, Center For Architectural research and development Overseas, 1986.
- [11] <http://www.greenbuilder.com/sourcebook/PassiveSol.html>, Christensen, B Passive Solar Options for North Carolina Homes.
- [12] <http://www.ncsc.ncsu.edu/02option.htm> (local copy). Zaslow, S. & Cox, B.
- [13] A Simple Design Methodology for Passive Solar Architecture.
- [14] Abu Ghazze, T. M. (1997) Vernacular Architecture Education in the Islamic Society of Saudi Arabia: Towards the Development of an Authentic Contemporary Built Environment. Habitat International, 21 (2), 229-253.
- [15] Blockstein, David E. and Julie Greene (eds). 2003. Recommendations for Education for a Sustainable and Secure Future. Washington, D.C.: National Council for Science and the Environment.