

Architecture and Planning Journal (APJ)

Volume 23 Issue 2
SPECIAL ISSUE
RETHINKING ARCHITECTURAL EDUCATION
2016 - TOWARDS A BETTER PRACTICE

Article 20

ISSN: 2789-8547

March 2016

ACADEMIC EDUCATION AND PROFESSIONAL TRAINING TOWARDS ARCHITECTURE BESTPRACTICE IN THE ARAB WORLD

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Recommended Citation

Saridar, Sawsan and El-Aranaouty, Hisham (2016) "ACADEMIC EDUCATION AND PROFESSIONAL TRAINING TOWARDS ARCHITECTURE BESTPRACTICE IN THE ARAB WORLD," *Architecture and Planning Journal (APJ)*: Vol. 23: Iss. 2, Article 20.

DOI: <https://doi.org/10.54729/2789-8547.1089>

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Abstract

Architecture both defines and is defined by social, cultural, political and financial constraints: this is where the discipline and the profession of architecture meet. This mutual sway evolves wherever interferences in the built environment are thought-out and can be strengthened or weakened by the many ways in which the practice of architecture can be undertaken. The more familiar we are about the concerns and factors that control what can be made, the greater the opportunities to propose and make appropriate architectures. Apparently, the criteria in any qualification policy should permit flexibility of approach and will – for reasons including cultural choice, political issues, and son on – vary significantly from country to country. However the weighting of the various criteria have to ensure adequate standards both in educational system as in the professional training. This paper develops, deepens and questions about the regulatory entry routes to the professional practice of architecture in the Arab world. It is also intended to provide an informed basis about strategies for conventional and unconventional models of practice in preparation for the next stages of architect's work experience and professional experience. With the objective of promoting the implementation of adequate built environment in the practice of architecture, a comprehensive analysis of various pathways of access to the profession are selected as case studies, encompassing examples from across the world. The review of such case studies allows the creation of a comprehensive picture in relation to the conditions for qualification of practitioners of the built environment at the level of the Middle Eastern countries and the Arab World. Such investigation considers the following aspects: professional title and domain of practice, accreditation of courses, internship and professional training, professional examination and continuing professional development.

Keywords

Architecture, Internship, Professional Practice, Program Accreditation

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ABSTRACT

Architecture both defines and is defined by social, cultural, political and financial constraints: this is where the discipline and the profession of architecture meet. This mutual sway evolves wherever interferences in the built environment are thought-out and can be strengthened or weakened by the many ways in which the practice of architecture can be undertaken. The more familiar we are about the concerns and factors that control what can be made, the greater the opportunities to propose and make appropriate architectures. Apparently, the criteria in any qualification policy should permit flexibility of approach and will – for reasons including cultural choice, political issues, and son on – vary significantly from country to country. However the weighting of the various criteria have to ensure adequate standards both in educational system as in the professional training.

This paper develops, deepens and questions about the regulatory entry routes to the professional practice of architecture in the Arab world. It is also intended to provide an informed basis about strategies for conventional and unconventional models of practice in preparation for the next stages of architect's work experience and professional experience.

With the objective of promoting the implementation of adequate built environment in the practice of architecture, a comprehensive analysis of various pathways of access to the profession are selected as case studies, encompassing examples from across the world. The review of such case studies allows the creation of a comprehensive picture in relation to the conditions for qualification of practitioners of the built environment at the level of the Middle Eastern countries and the Arab World. Such investigation considers the following aspects: professional title and domain of practice, accreditation of courses, internship and professional training, professional examination and continuing professional development.

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INTRODUCTION

Architecture is one of the earliest professions in which the role of the architect has undergone extensive changes and development since antiquity. Architects have been: powerful closed personals to the pharaohs in ancient Egypt; philosophers and planners in ancient Greece and Rome; artists and craftsmen in medieval times; and “master builders” throughout the Renaissance.

Today, technological and sociological changes have modified both the way architecture is practiced and the role of the architect in society; these changes have generated alterations in services

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and collaboration among the many parties involved in the design and construction process. Thus the architect became commonly a professional service provider. The International Union of Architects (UIA) has attempted to define the “Architect” and to identify the principles of professionalism in architectural practice in *its UIA Accord on Recommended International Standards of Professionalism in Architectural Practice* firstly adopted in 1996 by the XXI UIA Assembly in Beijing and recently amended in 2014 at the XXVI General Assembly in Durban. With reference to the UIA (2014; p.5): the designation “Architect” is ‘*generally reserved by law or custom to a person who is professionally and academically qualified and generally registered/licensed/certified to practice architecture in the jurisdiction in which he or she practices and is responsible for advocating the fair and sustainable development, welfare, and the cultural expression of society’s habitat in terms of space, forms, and historical context.*’

According to the UIA (2014) and the Canadian Handbook of Practice for Architects (1999), the principles of professionalism have to be established in legislation, as well as in codes of practice and ethics regulating professional conducts, and must adhere to:

- Expertise: architect possesses a systematic body of knowledge, skills, and theory developed through education and experience.
- Autonomy: architect provides objective expert advice to the client and / or user, independent of any self-interest.
- Commitment: Architect brings a high level of selfless dedication to the work done on behalf of his/her clients and society
- Accountability: architect is aware of his / her responsibility for the independent and, if necessary, critical advice to his / her clients and for the effects of their work on the society and the environment.

Architecture, which has been described by Fisher (2003) as a social art (and also an artful science), is the only profession whose members are qualified to design and to provide consultation, including technical and aesthetic opinion of the built environment. In granting this privilege to architects, the community expects the profession to provide services and solutions with technical proficiency and aesthetic sensitivity suitable to the physical, social, cultural, and economic environment.

Therefore, the practice of architecture is usually broader than the regulations governing the profession. At the global level, most of architecture professional bodies and regulatory authorities have adopted common admission standards for architectural license / registration to get the full access to the practice of architect which involve: education or training in architecture; experience, or workplace internship; examination (as shown in Fig 1). This pathway to the profession is structured to guaranty the community that when an architect is engaged to perform professional services, that architect has met acceptable standards enabling proper performance of those services. Furthermore, members of most professional societies of architects, including the UIA Recommendations, are charged to maintain and advance their knowledge of the art and science of architecture through a Continuing Professional Development (CPD).

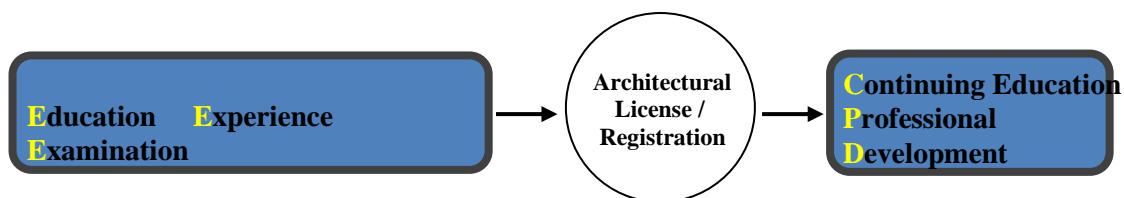


Fig 1 . The main components of the pathway to the profession of architecture.

Consequently, this paper reviews the pathway to the profession in Lebanon and the Arab World (namely the countries that constitutes the labor market of Lebanese architects) and compare these pathways to those in the United States of America, United Kingdom, Canada, Australia and some

European countries, and to the recommendation of the previously mentioned UIA Accord. The methodology for such review and relative diagrammatic illustration are adopted from the *White Paper on Criteria for Professional Qualification*; the outcome of EDUCATE collaborative project edited by Sergio Altomonte and published in 2012. This investigation takes into account the following aspects:

- academic education programs;
- accreditation of courses enabling qualification;
- internship and professional training;
- professional examination; and
- continuing professional development (CPD).

1. ARCHITECTURE EDUCATION

In reference to the UNESCO/ UIA Charter for Architectural Education (2011), the UIA promotes that education for architects (excluding architecture internship) should be of at least 5 years duration, offered on a fulltime basis in an accredited/validated/recognized architectural program in an accredited/validated/recognized university or an equivalent institution, although allowing diversity in pedagogic approach and flexibility for equivalency.

The review of academic qualifications required in the Arab World pointed out that an academic degree of minimum 5 years duration recognized from the relative ministry of higher education is recommended in Lebanon, Egypt, Jordan, Saudi Arabia, Kuwait, United Arab Emirates and Qatar; only Syria requires a degree of minimum 5 years (Order of Engineers at the Arab Republic of Syria, 2012).

In Lebanon, academic professional qualifications of minimum 5 years duration recognized from the Lebanese Ministry of Education and Higher Education confer the title of “Architectural Engineer”. The award of such degree enables only Lebanese Architects to issue Professional Practice Permission from the Lebanese Ministry of Labor. Afterwards Lebanese Architects have to register at the Order of Engineers and Architects in Beirut or Tripoli to get full access to the profession. Despite the differences between the professions of architecture and engineering, it is to note that in Lebanon, same as in all Arab countries, professional engineering of all specialties adheres to the principles of professionalism and is regulated in a manner similar to architecture. Also, architects and engineers have to register at the same professional authority / body.

The differences between the professions of architecture and engineering identified in the *Canadian Handbook of Practice for Architects* (1999) are as follows:

- the educational background required for architecture is different than it is for engineering;
- the experience requirement is more inclusive for architects and more explicit for engineers;
- the architect is supposed to understand, gather, and coordinate between all building-related line of work, whereas the engineer usually focuses in one domain;
- the architect is concerned about buildings and environments for human habitation and occupancy, but often not involved in other structures requiring engineers, such as warehouses and bridges;
- the architect is involved not only in the building design but also is involved in the impact of a building or buildings on the context;
- the architect has usually filled the role of the chief professional responsible for managing and coordinating a project.

Therefore, the regulatory routes to the professions of architecture and engineering in the Arab World should be distinctive from each other.

1.1 Fundamental Educational Requirements

The fundamental educational requirements of knowledge, skill and competence for professional practice as an Architect describe the areas and levels of knowledge, skill and abilities required of an architect who is capable of independent practice at the professional level. Reviewed Standards provide indicators for each element in the form of manageable and clearly defined requirements that are clearly related to the realities of architectural practice.

The indicators outline the specific areas in which an architect is expected to demonstrate expertise, and the level of that expertise. The Architecture Registration Board (ARB, 2002) and the Royal Institute of British Architects (RIBA) identify five major dimensions of practice: 1-Design; 2- Technology and Environment; 3- Cultural Context; 4- Communication; and 5- Management Practice and Law. The National Architectural Accreditation Board in the USA (NAAB, 2014) recognizes four major realms as fundamental requirements for architecture education: 1- Critical Thinking and Representation; 2- Integrated Building Practices, Technical Skills and Knowledge; 3- Professional Practice; and 4- Integrated Architectural Solutions. The UIA (2014) identified three main areas of acquisition: 1- Design; 2- Knowledge (Cultural and artistic Studies, Social Studies, Environmental Studies, Technical Studies, Design Studies and Professional Studies); and 3- Skills. By comparing the above mentioned requirements, it is noticed that standards have almost very similar major areas of practice. Consequently, the following section analyses available architecture programs in Lebanon with relevance to the UIA fundamental requirements to assess whether these particular requirements are given adequate emphasis in the architectural curriculums.

Fig. 2 illustrates the architecture professional programs offered at nine universities in Lebanon. Architecture education in Lebanon dates back to 1943 with the first school of architecture, L'Academie Libanaise des Beaux-Arts (ALBA), followed by the American University of Beirut (AUB) in 1951, and 11-15 years later by Beirut Arab University (BAU) and Lebanese University (a public institution), respectively. Later, in the last 5 decades, additional 5 private universities offered degrees in architecture: Holy Spirit University of Kaslik (USEK) in 1978, Lebanese American University (LAU) in 1993, Notre Dame University in 1999, Al-Manar University of Tripoli (MUT) in 2006, and the latest Al-Azm University in 2015. Fig. 2 shows diversity in programs' structure, duration, and degree awarded; durations vary between 3-4 years non-professional degree to 5-6 professional degrees. All programs include period(s) of internship except for LU degree; 3 programs are accredited or in the process of accreditation for international validation board: ALBA degree is recognized from the French Ministry of Culture and Communication for four year since 2013-2014, BAU degree validated for RIBA – Part for 5 years since 2011-2012, and LAU is seeking validation from the NAAB.

The curriculum contents of professional degrees offered at Lebanese universities are analyzed with regards to the UIA fundamental educational requirements (Refer to Fig. 3). This analysis indicates that Design Studios constitute more than 50% of the curriculum; the 6-years postgraduate diploma at ALBA has the highest of 73% while the Bachelor of Architecture at MUT has the lowest percentage of 45%. Modules addressing communication skills have different percentages in studied programs varying from 6% at BAU to 18% at LAU. As for the modules addressing knowledge in cultural and artistic, social, environmental, technical, design and professional studies, percentages varies depending on the pedagogical approach adopted by each school. Mostly social studies, environmental studies, and design studies are integrated within design studios. BAU and LU are more distinguished in offering a higher percentage of technical studies. Professional studies have low percentage, and which require for more consideration in offered programs.

1.2 Accreditation / Validation / Recognition of Programs

The UIA (2014) defines Accreditation / Validation / Recognition of programs as 'the process to determine that an educational program meets a standard of achievement. Its purpose is to assure the maintenance and enhancement of an appropriate educational foundation'. Experience shows that standards may be synchronized and upgraded by regular, external monitoring, in some countries, in addition to internal quality assurance audits.

According to the UIA Accord (2014), an architecture program must be accredited/ validated/recognized by an independent relevant authority, external to the university at reasonable time intervals (usually no more than five years).

In Lebanon, like all Arab countries, there are no independent professional authorities that accredit/validate architecture programs; programs are recognized permanently by the Ministry of Education and Higher Education without any regular monitoring. The Ministry considers the firstly launched programs in Lebanon as a benchmark to recognize new programs, without considering their changing content and structure.

Today, in order to enhance competition in as tight labor market in Lebanon and the Arab World and to insure regional and international mobility of their graduate, architecture programs are seeking accreditation/validation from international bodies such as the RIBA, NAAB, UIA, etc.



Fig.2 . Diagrammatic illustrations of architecture programs offered at Lebanese Universities showing variety in their structure, duration, and degree awarded (The Authors, 2016)

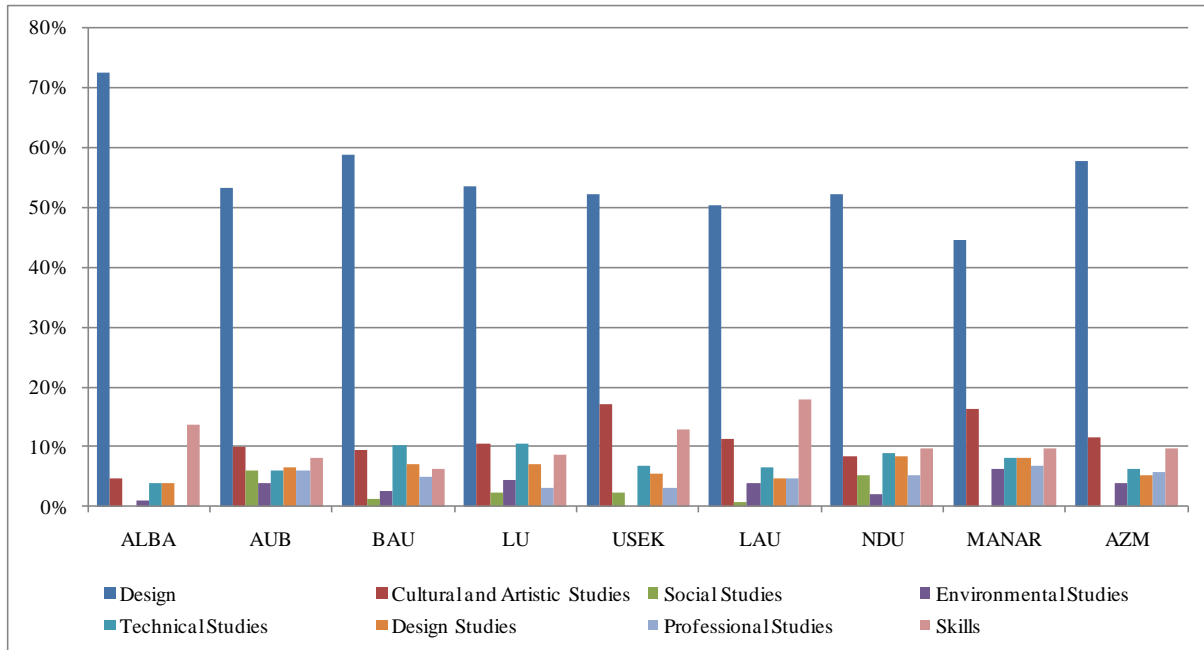


Fig. 3. Analysis of curriculum content of professional degrees offered at Lebanese universities with regards to the UIA fundamental educational requirements (The Authors, 2016)

2. EXPERIENCE

Practical experience/training/internship is a directed and structured activity in the practice of architecture during architectural education and/or following the award of a professional degree. It provides a transition between formal education and registration/licensing/certification. The objective of internship prior to registration is to ensure that graduate of architecture gains experience in various work settings of architecture practice, and meets generally recognized standards of practical skills.

The UIA (2014) requires that graduates of architecture must have completed at least 2 years of acceptable experience/training/internship prior to registration/licensing/certification to practice as an architect (but with the objective of working towards 3 years) while allowing flexibility for equivalency. Fig. 4 compares the regulatory routes of selected case studies to the UIA recommendations, identifying the education and professional training required by authorized bodies:

- The National Council of Architectural Registration Board (NCARB) in the USA recommends that architects must acquire 3,740 hours to satisfy the Intern Development Program's (IDP). The IDP requires a minimum number hours of training in specific categories: 260 hours in Pre-Design, 2,600 hours in Design, 720 hours in Project management, and 160 hours in Practice management (NCARB,
- The Architecture Registration Board (ARB) in the UK requires a minimum of 2 years experience; field of experience are not specified.
- The Canadian Architectural Certification Board (CACB) requires interns to complete a total of 5,600 hours of experience in the following categories: 2,800 hours in Design and Construction Documents, 560 hours in Construction Administration, 280 hours in Management, 80 hours in Related activities and 1,880 hours Discretionary.
- The Architects Accreditation Council of Australia (AACA) requires a minimum of two years practical experience under the supervision of an architect or 3300 hours.
- The National Order of Architects in France requires one year of professional practice experience comprising: professional experience of 6 months and professional course of 150 hours.

In Lebanon and in the case studies selected from the Arab World, professional experience/training/internship is not compulsory prior to registration in authorized bodies. Fig. 2 shows that in Lebanon experience is restricted to architecture internship recommended within some educational programs; internship period varies between 6 weeks, 8 weeks, 16 weeks, 24 weeks and 32 weeks performed during summer and have to be completed before the last year of any program. Therefore, authorized bodies in the Arab countries should reconsider the requirement of structured professional practice prior to registration in order to comply with recommendations of regulatory routes at the global level.



Fig. 4. Selected case studies of routes of education and professional training required by authorized bodies in the USA (NCARB), United Kingdom (ARB), Canada (CACB), Australia (AACA), France and the UIA Accord (Adopted from EDUCATE, 2012)

3. EXAMINATION

The objective of architecture registration/practice examination is to demonstrate the knowledge and ability of an architect in the comprehensive practice of architecture. The UIA recommends that

architect must complete at least one examination after the completion of the requisite education and practical experience/training/internship. The NCARB Architecture Registration Examination (ARE) comprises nine parts or divisions: Pre-design, General Structures, Lateral Forces, Mechanical and Electrical Systems, Materials Methods, Construction and Documents, Site Planning, Building Planning and Building Technology. Same exam subdivisions are adopted by the CACB. In the UK, a compulsory professional examination by a mixed jury of academics and professionals is prescribed by the ARB and validated by the RIBA. In Australia, examination includes a one hour written exam and 45 minutes to 1 hour interview conducted by two examiners.

As for the case studies selected from the ARAB World, no registration examination is required except for Qatar. Lately, the Order of Engineers and Architects in Lebanon is planning to set a qualification exam for architects, as well as for engineers; this plan is at a preliminary phase and is not executed yet. In Saudi Arabia, according to Habor (2015), all Saudi and expatriate engineers will have to undergo certain tests before they get licenses to work in Saudi Arabia; There will be two tests: the first is on the principles and basics of engineering for fresh graduates and the second for engineers who have completed 10 years of service to qualify them for project director's post.

4. REGISTRATION / LICENSING / CERTIFICATION

Registration/licensing/certification is the official legal recognition of an individual's qualification allowing him/her to practice as an architect, associated with regulations preventing unqualified persons from performing certain functions. The UIA promote the registration/licensing/certification of architects to a statute in all countries. Nevertheless, within the cases studied in this paper, architects in the UAE may practice architecture just by holding a recognized certificate from the ministry of Higher Education and Scientific Research and do not have to register in any professional authority; membership at the Society of Engineers – UAE is optional.

5. CONTINUING PROFESSIONAL DEVELOPMENT

Continuing Professional Development (CPD) is a lifetime learning process that maintains, improves, or develops the knowledge and continuing abilities and skills of an architect. At the international level, several professional bodies and regulatory authorities require CPD for renewal and continuation of membership, and ask their members to devote time to maintaining existing skills, expanding knowledge, and exploring new areas. Fig. 4 shows that CPD is required in the UK, USA, Canada and Australia, while CPD is not demanded in any Arab countries. The UIA urge its member sections to establish regimes of CPD as a duty of membership; Architects to maintain a known standard in a variety of areas described previously under the "Fundamental Educational Requirements" section by devoting typically at least 35 hours per year.

6. COMPARISON OF TIME IT TAKES TO QUALIFY

Following the above review of regulatory routes, Fig. 5 summarizes the requirements of professionalism in the selected case studies, and identifies the minimum duration it takes to qualify architects in order to get full access to the profession. This diagrams shows that minimum duration varies between countries; Hungary has the longest path of 12 years while Syria has the shortest of 4 years.

Today the European Union seeks to establish more uniformity across Europe, making mutual recognition of the architect's title easier between countries. According to RIBA Education (2015), the UK system of Part 1, 2 and 3, and the duration of courses urgently needs to be re-evaluated in order to reflect the changing needs of the profession, widen the path towards inclusivity and work to remove the multiple 'obstacles' currently faced by architects. Several alternative pathways have been agreed on which are illustrated in Fig. 6.

Accordingly, there is an urge to develop in the Arab World a uniform pathway to Architecture Profession that complies with global requirements, allowing flexibility with regards to local contexts and programs' identities, in order to allow architects mobility at the international level.

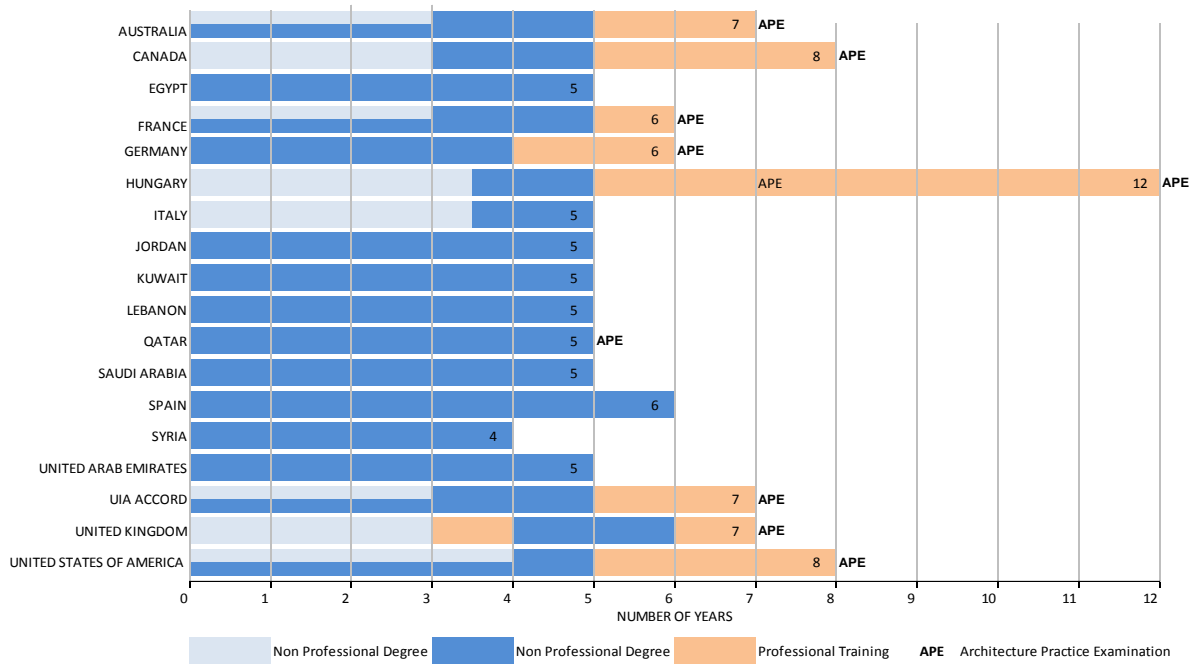


Fig. 5. The minimum duration it takes to qualify architects in order to get full access to the profession in selected case studies (The Authors, 2016).

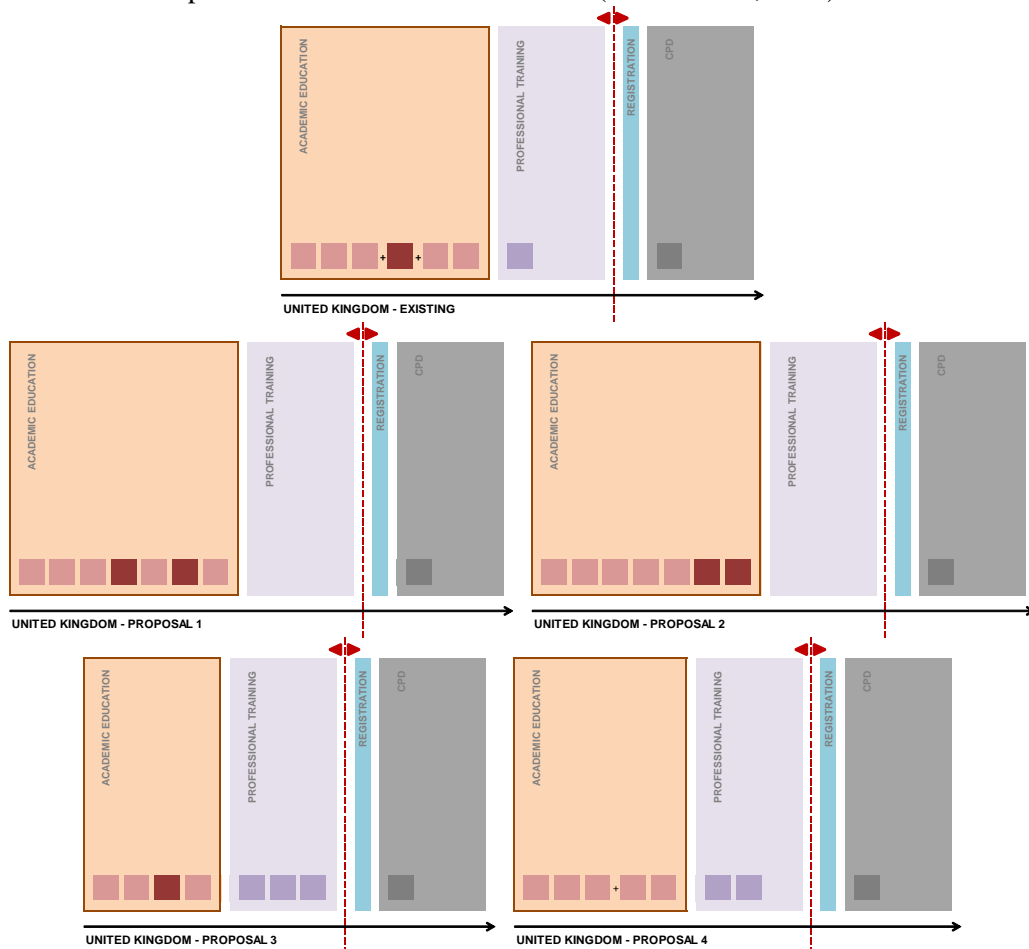


Fig. 6. Proposed alternatives suggested by the RIBA Education to Change UK Education pathways (The Authors, 2016)

7. CONCLUSION

In most Arab countries, whether professional bodies do not exist or full access to professional practice is limited to a permanent registration / membership at professional authorities following the award of a recognized professional degree only, should seek to ensure that their members adhere to the international standards, and the requirements of the UNESCO-UIA Charter for Architectural Education. The minimum duration of architect training should be updated to better reflect the broadly accepted standards in architectural education, in particular the need to supplement academic training with professional experience under the supervision of qualified professionals. Regulatory routes should also consider to keeping up-to-date architect's knowledge and skills through CPD generally contributing to the development of the society they serve.

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