IMPAQT
Integrative Multidisciplinary People-centred Architectural Qualification & Training

ERASMUS Project

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WP1

1.4. Role of the Architect Survey Report

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Introduction

This report is the deliverable of WP1.4; trends in the role of architects; and considered one of the four deliverables of the preparation phase (WP1).

Worldwide, the role of the architect has been shrinking. In Egypt, standardized designs led by real estate developers are built following narrow definitions of function, restricting innovation, hardly sensitive to city dynamics, and blind to contextual factors not only in the ambient environmental sense, but in its socio-physical entirety. Similar phenomena manifest themselves in different parts of the world as well. It discusses the dilemma of defining the role of the architect and its changes over time focusing on the urban challenges facing the architect as well as the interlinkages between other disciplines. The report also discusses the linkages between the university and real practice with an attempt to define the main qualifications that a fresh graduate should have. Finally, it ends with a list of recommendations that will feed into the development of the following WPs and the overall objectives and the vision of the 5-year program as well as the life-long module.

Methodology

Several methods of data collection were developed to gather all the needed information and background data for WP1 as well as prior experiences among the consortium to conduct this survey report; **Expert opinion interview guides;** specially developed for this deliverable; about the role of the architect targeting input only from the consortium partners and their wide experience in research, practice, and civil work.**Two gap analysis interview guides** were developed (one for academics and the other for practitioners) from different countries in europe and egypt addressing; among other educational gaps; the role of architect: definition, challenges and expected/missing graduate qualifications. **Focus group discussions** of professional architects, professors, civil engineers with various educational background and experience. **Online questionnaire** on gap analysis in architecture education that were used for individual interviews as well as for focus group interviews; included parts addressing the role of the architect to feed into this report.

Image (1, 2) shows part of the practitioners focus group, managed by partner BEC

Analysis & Outcomes

a. (Dilemma of Definition) Changes over time/Vision/Definition of the Role

The role of the architect was defined historically by the **professional practice** of distinctive buildings like Cathedrals, Palaces, etc by the motive of creating masterpieces of geometric compositions and abstract forms. the building of dwelling clusters was carried out by a builder based on the needs of the dweller; Builders had the technical expertise of building using traditional materials and techniques. Which makes dwelling communities new to architects. Architects were often seen as master minds “genius” handling all planning and design problems and at all scales.The modernist idea basically maintained and even boosted this view, but also demanded from the architect to utilize scientific thinking and methods and be familiar with many of the ways of thinking and the methodologies of the time. As cities grew, the complexity of the urban environment was increasing , it became less feasible for architects to act as a **know-it-all profession.**

The profile of an architect rather became more **specialized profile** to deal with the urban sophistication of the built environment and the population rapid densification, This role has become ever more complex, Not only have the professions of urban planner and architect separated, but there are several different types of architects, some of which specialized in designing, some in real estate affairs and the like.

As a result, it became more challenging to integrate various specializations that contributes to the formation of the built environment. However, it seems that there are no other professionals than architects and urban planners, respectively, that are willing and able to deal with the complex spatial interaction of most different societal challenges when it comes to building and defining land use distributions, respectively. Therefore, further integration of multi-disciplines and pre-planning of parts of cities was in need.

In the last few decades architects have moved to a more cooperative and socially aware **team players** bringing all parts of the process together, cover different profiles, and specialize in some aspects of the process of conducting the built environment, relies on information from various fields, methods and tools, Today architects become increasingly demanded to balance generalization and specialization; specialization often take place after the university education on some aspects in the construction and design process.

Architects should have the ability to address urban issues and conditions related to the built-environment – buildings, public spaces, urban areas – social, economic and environmental needs in a specific context to a physical product. This product is made of urban complexities and has to reflect accelerated urban changes in its surroundings. The majority of young architects within the European framework are developing works that are far from the huge and expensive projects of the past. The most innovative practices are usually found in small affordable projects, in the capacity of making the most of architectural and urban tools for improving common places, repairing and restoring more than building and retrofitting urban areas more than designing new developments.

"Architects should learn on Urbanization as a trend and not a problem, and as an opportunity to solve environmental, social and economic challenges through supporting a distinct type of cities that are made for and with the users." Expert opinion.

An architect is someone who loves to design, and is specifically trained and licensed to work on the planning and design of buildings. The facets of an architect's role are as varied and fascinating as their work; these are professionals who lead the process of creating functional spaces, from concept and design to a full realization of those designs. The architect has to act as designer and as coordinator of all relevant challenges concerning the implementation of building designs in the process of construction, redevelopment, and refurbishing.

"Within an evidence-based design view, the architect should lie on multiple information, stemming from various fields, tools and methods, for creating an appropriate intervention. In particular, following a user-centered design approach, the architect should take into account the perspective of the different categories of actual and potential users of the target place. This should be done through the use of rigorous and systematic scientific procedures."

Architects are not just involved in the design of a building. As a licensed professional they are also responsible for public safety; creating total environments; functional, safe and economic both interior and exteriors and overseeing of projects. Urban interventions affect people's connections and behaviour.

The following Figure shows the online survey results
Role of the architect: Degree of the problem

Figure (1)

As urban conditions are getting more complex due to many political, environmental and socio-economical changes and uncertainties, the role of the architect is getting more complicated; a *Multi-Scale Designer*: from objects to urban and territorial scale works. Projects related to design and spatial composition, building architectural 'elements' (shelter, mass-housing, offices, facilities, etc.), designing public space, urban design, and mid-scale master plans. Nowadays, the architect shall deal with the climate change, economic crises, political changes, social insecurities and evolving technology. the architect is not only required to focus on architecture, but they are required to work in a multidimensional work atmosphere to be able to face these challenges.

The following Figure shows the online survey results for question '5'
Role of the architect: Rank by order of relevance

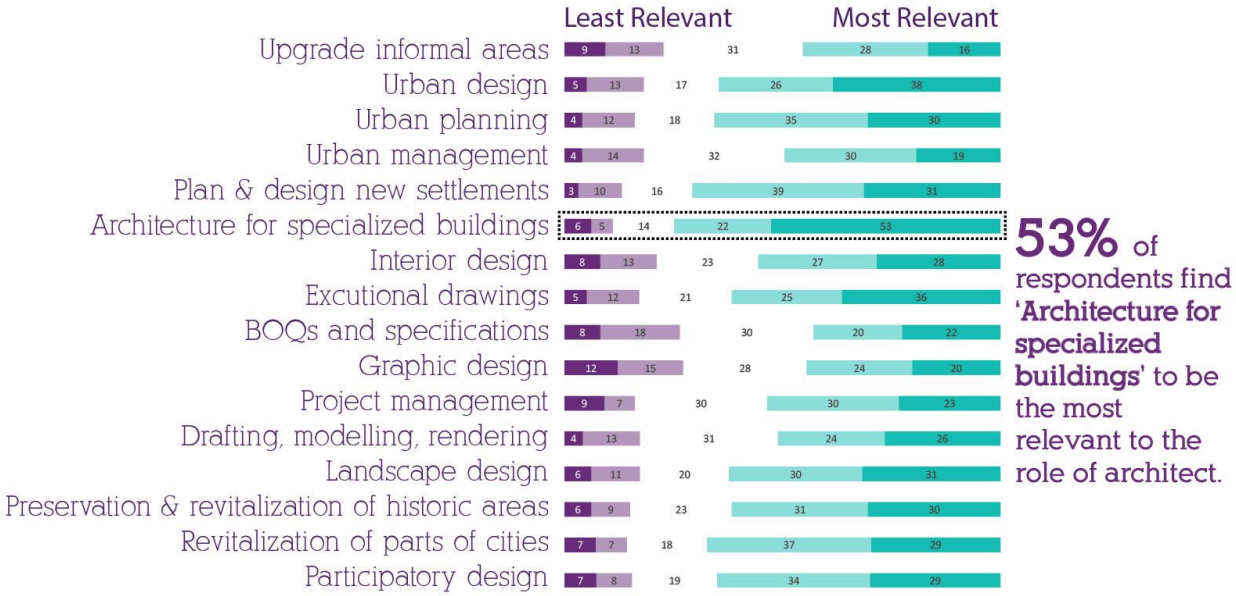

Figure (2)

b. Urban Challenges facing the Architect

From a global point of view, The urban challenges in the ore "classical" sense entail knowledge on demographic; ageing in some countries, youth bulges in other countries, the **demand for urban lifestyles** and urbanization resulted in a high level of complexity in the urban environment to fit the **population lifestyle change** with different income groups.

The rapid growth in population in many countries with limited resources resulted in speedy urbanization **lacking** an **organized developed schemes**, overwhelmed by the urban sprawl, as well as misguided transportation solutions left the poor behind and increased inequality in cities.

Individualization as a **social** trend discouraged cities that are made for users to function as groups, despite the efficiency in resources consumption. **Cultural and political challenges** as **New traditionalism** abiding to the doctrines or practices of a tradition; the beliefs of those opposed to modernism, liberalism, or radicalism. **Information Society** where the creation, distribution, and manipulation of **information** has become the most significant economic and cultural activity, contrasting with societies in which the economic underpinning is primarily Industrial or Agrarian. **Technology** is a new dimension of complexity to the architect. Technological requirements are proliferating in a very rapid way. The architect is required to keep updated with many computer programmes, material technologies and structure and construction techniques.

The increased importance of the service sector in industrialized economies **(Service based economies**); created an **economic challenge** in the form of increasing service companies and fewer manufacturers than in previous decades. As well as, **"flexibilisation" of labor**; where firms are under **fewer regulations** regarding the labor force and can therefore set wages, fire employees at will and change their work hours. The rise of an urban **middle** class of global **consumers** strongly reinforcing **climate change** (energy and resource consumption) and fast urbanization leaving architects in a more complex situation to deal with the **urban** complexity of design and construction challenges. Economy, education, society and governance together affects the profession outcomes to reach a challenging situation of urban sprawl.

From a local point of view, architecture practice **ignored design for quality** and the market forced its dynamics to a more **profit-based** built environment lead to the decline of the **architectural culture** and quality. Architects failed to consider **people's actual needs** in their designs, due to economic and culture constraints as well as, the **mindset** of graduating architects are driven by the real estate market forces which sets the rules because **practicing professors** consciously or subconsciously impose their business perspective in teaching. Also, the High council of education criteria are **outdated** for the current educational programs worldwide as well as teaching methods. Status and titles force politics and bureaucracy in the educational system where older professors pressure younger professors, instructors and teaching assistants to adopt their mindset and style.

In addition to the economic situation that does not enable people to invest in **architects** for **architectural design** while **structural engineers** and **contractors** are eligible to design architectural projects and obtain building license since the law of the syndicate does not reserve this right to the architects, but left it open for any consultant. as well as the implementation of the project; No policy that dictates that only an architect can sign a project for implementation. Further challenge facing the architecture community is of working experience where no

licensing required to work as an architect: no practical experience is required to register in the syndicate, so graduates are registered practicing architects with no experience. On the other hand, in many european countries; two years work experience is a requirement to register in the syndicate to obtain a license. Also, building regulations of practice and codes in the egyptian legislation requires readjustments as a result of creating many problems as unplanned densification.

One of the major challenges facing architects is the **unclarity** of the architect's job to the general public, potential students or the market. It is widely known that the architect's job is to do some cosmetics to building facades to have good appearance. This clarity gap caused misunderstanding of the actual architect job from most enrolled architecture students, forcing architects to deliver on very tight schedules as a result of the unawareness of the design processes and the proper time for design development, leading architects to deliver unsatisfying designs to clients. Which encouraged clients to hire only civil engineers and contractors to carry out the design and implementation of the projects. Also, One of the aspects contributing to clarity gap is the arrogance of the architect towards the public which acts as a barrier for listening and understanding people's needs. Architects should learn from other disciplines to help the public understand the importance of design and planning. Urbanization can be viewed as an **opportunity** to solve environmental, social and economic challenges through supporting a distinct type of cities that are made for and with the users.

In a local context, architecture education is always bound between either form, arts and aesthetics or engineering that controls the design. Architecture education usually focus on developing design skills for students to be designers, ignoring theory, research which breeds a generation of architects with less knowledge base and skills to adopt any other type of architect but the designer architect. In addition to, the misuse of computer-based tools limit the scope of work to that of the software capabilities. therefore, bridging between different softwares and simulation tools will achieve further capabilities. Adopting accurate computer drawing tools in the thinking stage can obstruct the free expression of swiftly transfer thought to paper using hands, turns the thought into an image by means of sketching, modeling or any kind of physical representation. Therefore, architects should identify the purpose of using the tool/software to enable the maximum utilization of the tool for their designs.

The dilemma of the generalized education and further specialization is a challenge facing young architects freshly graduated since they know little about everything but not enough to specialize in something. Which downgrade their profile in the market compared to engineers; who already graduate with a specialization. Due to the broad spectrum of disciplines within the architecture and urban design scope; it is always a challenge to feed in general ideas and to specialize during the undergraduate study. Furthermore, it is crucial to acquire a team-based working skills to enhance the integration of multi disciplines and guarantee a coordinated outcome.

c. Linkages to other disciplines

The more urban cities grow the more specializations emerge to recognise the pace of developed communities, which produce a new challenge of fragmented knowledge, understanding architectural practice as an integrative work that includes buildings and also public space and urban structures. Only a coordinated functioning of these elements can guarantee better living conditions in a more sustainable built environment. The need for a multidisciplinary approach, where urban planning, design, social sciences and building sciences all play an important role to minimize this challenge and deal with the urban issues in an integrated manner.

In an academic context, it is beneficial to Include a number of experts from multi disciplines other than architecture, as permanent staff in an architecture school, teaching specific subjects; to enhance the ability of students to work cross-disciplines. Ongoing learning after graduation; joint seminars and workshops with student from other disciplines; creates an ‘integrated community’ that generates a continuous update for professionals.

The acquisition of knowledge and skills from various disciplines related to the human actions and reactions to spatial and physical dimensions, widen the students’ knowledge and abilities as well as their awareness to surrounding urban conditions in order to give added value to their architectural designs with social, artistic or technical emphasis.

The analysis of the experts partner opinions shows a wide spectrum of linkages to other disciplines, as follows:

1. Environmental and Architectural Psychology.
2. Engineering: civil engineering, industrial engineering...
3. Social Humanities: sociology, anthropology, …
4. Fine Arts
5. Political Sciences
6. Social/Economic Studies
7. Environmental Studies
8. Art, Sculpture, Drawing
9. Social Sciences
10. Math, Physics, Statistics
11. Urban Sciences
12. Urban Sociology
13. Urban Planning
14. Real Estate Economics
15. Ecology
16. physics/mathematics/computer science
17. culture and arts history

18. psychology and sociology
19. Urban Climatology
20. Civil Engineering
21. Architecture
22. Urban Planning
23. IT, software
24. Management
25. Town planning

1. Linkages between university and Real practice

Linking academic orientation with good professional practice fills the gap between the university and real practice in order for the students to be ready to work in the real market once graduated.

field work should be an important part of the degree path; Traineeships and internships, with professional institutions and firms. It is recommended to Include local practitioners as university staff, which can facilitate coordination with local professional and industrial groups: Union of Architects and industrial network, through a Foundation or a Board of Trustees linked with the school.

In the academic learning context, a proper amount of time should be devoted to practical activities during the undergraduate study time where “real life” professional situations are simulated. Moreover, real world studios that are problem-based should be adopted,“Project-based learning” pedagogy with real projects, Involving real urban problems and challenges, provide 24/7 studio work promotes social engagement and sense of belonging, Schools can opt to put their emphasis on practice-oriented profiles and technical competence. Promoting measurements campaign for those who are interested in the Environmental Impact. As well as, exchanging students locally and internationally.

Conclusion

Graduated architects should be **competent** to and **have the responsibility** to respond to all relevant challenges concerning the implementation of building designs in the process of construction, redevelopment, and refurbishing, culturally sensitive and “design-wise” creative professions with capability to integrate multiple requirements and competence to work in teams.