

Changing conditions in architectural (design) education

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Abstract

Besides its two components -education and profession-, architecture must make use of innovation in order to constantly adjust to the economic and social context. This necessity leads to a compulsory assessment of knowledge, methods and models and seems to increasingly orientate architectural education and practice towards diversification and specialization. The process of segmentation in the practice of architecture versus the generalist one is a consequence of the increasing scale and complexity of interventions, the economic and technological premises and their impact. This brings to debate the issue of the generalist formation and profile of architects.

Architecture schools manifest a certain degree of resilience to change. Consequently, the question arises whether university education should anticipate these processes and to what extent specialization should be encouraged, as a mechanism of reaction given the fact that more than two thirds of European architects work in individual architecture offices[1].

Architecture as creative process, leads to innovation. The design studio is still the core, the incubator of this process. It targets approach a series of particular challenges (complexity, assumption, role) that differentiate the profile of future graduates. Firstly, responding to an increasing complexity means an architecture that does not offer solutions to problems, but explores uncertainties, through transformative learning. Secondly, by encouraging a position within the design process, the studio creates the premises for future professionals' involvement in managing changes and challenges. Last, but not least, the change of paradigm concerning the role of the architect, from creator to mediator, is also reflected in the expectations of the teaching process.

Rezumat

Arhitectura, prin cele două componente: educația și profesia, este nevoită să folosească inovația pentru a se adapta permanent la contextul economic și social. Această condiție conduce către o necesară și permanentă revizuire a cunoștințelor, metodelor, modelelor ce par să orienteze din ce în ce mai mult educația și practica de specialitate spre diversificare și specializare. Este tot mai des pusă în discuție chestiunea profilului specializat versus generalist al arhitectului în raport cu tendința segmentării procesului de proiectare determinată de amploarea intervențiilor, complexitate, impact, premise economice sau tehnologice etc.

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Școlile de arhitectură manifestă astăzi, o anume rețineră la schimbare. Se ridică bineînțeles întrebarea dacă educația universitară ar trebui să anticipeze aceste procese și în ce măsură ea poate încuraja specializarea și fragmentarea ca mecanisme de reacție. Realitatea atestă legitimitatea reținerii: două treimi dintre arhitecții europeni își desfășoară activitatea în birouri individuale de proiectare [1].

Arhitectura, ca proces creativ, conduce către inovare. Atelierul de proiectare este în continuare inima, incubatorul acestui proces. Țintele atelierului de arhitectură par mai apropiate de o serie de provocări particulare (complexitate, asumare, rol) ce nuanțează profilul viitorilor absolvenți. În primul rând, a răspunde unei complexități crescânde a proceselor înseamnă o arhitectură ce nu oferă soluții, ci explorează în spatele unor incertitudini. În al doilea rând, încurajarea asumării unei poziții în cadrul procesului de proiectare creează premisele unei implicări profesionale viitoare în gestionarea transformărilor. Nu în ultimul rând, schimbarea de paradigmă privind rolul arhitectului, de la creator la mediator, se răsfrânge și în așteptările procesului didactic.

Keywords: transformative learning, design studio, innovation, assessment, profile of architect, architectural education process

1. Introduction

The dilemma of the professional target profile in architecture schools remains a critical one. Architecture has reached today, a level of complexity that calls for a complex theoretical approach. The challenges are numerous and consistent: globalization and the economic issues, the political dynamics on planetary level, new materials and technologies, creative valorization of patrimony, climate change, need for resilience, energy resource management, population growth, change of mentality and interpersonal relations, social problems and family structures, extreme mobility etc. Architecture nowadays, as many times in the past, attempts to re-invent and redefine its position within the socio-cultural space worldwide.

2. Architectural (design) education

UIA Charter for Architectural Education [2] emphasis that the understanding of the architectural education is one of the most important concern and challenge of the profession. European and Romanian higher education in architecture is now undergoing a process of modernization and reform. Its fundamental objectives are: to increase the quality of education, focus on student learning, focus on skills specific to each field of study, encourage students and teacher's mobility in Europe and world over, recognition of qualifications, excellence in scientific research and adaptation to real exigencies and specifics.

Given the complex changes of the societies, being a European or world player in the architecture education market, requires a good institutional management that integrates and provides an environment that coordinates all important components of the educational process.

Under these conditions, the Faculty of Architecture must ensure continuity of the quality and performance in the teaching environment, visibility and competitive levels in the academic and professional space, putting its graduates in an advantageous position relative to labor market. Thus, all its policies should be geared toward strengthening school position at national and international level.

The changes in the labor market, aspects of local or regional competitiveness, and issues related to internal economic management have all defined a context with which architecture schools have been particularly challenged in recent years. Within these challenges, some schools have tried local, original responses that have often led to the shaping of particular identities. Though formally looking for convergence, the objectives and visions of schools have become more diverse in the recent period, focusing on specific, distinctive layers in architectural education.

In the attempt of positioning architecture and urbanism towards the goals of Horizon 2020 Program - Excellent science, Industrial leadership and Social challenges - 2018 EAAE Annual Conference held in Porto, identifies three important pillars that should structure architectural educational process: education, research and design pedagogy. The education pillar would refer to the task of architectural schools to prepare students for Permanent Education (Lifelong Learning) and develop educational digital infrastructure while making use of the informational extended database. Research would encompass three main principles: an extended methodology, multiple viewpoints observation processes and the refusal of preconceptions. Last, but equally important, the design pedagogy should embrace diversity, encourage student abilities to simultaneously represent nature and gain knowledge, imagine new condition and spaces, promote an active thinking, and resist the consensual situations.

The current society is characterized by an explosion of knowledge and information. Among architecture schools, however, the dilemma between generalist training and specialization remains acute. Traditionally, the architecture school aimed at architect as an independent professional, the self-employed architect. Today, however, many schools have felt the need for diversification. However, as Herman Neuckermans observes, the specialization raises a new question: which of the graduates can really practice as an architect. [3]

Amid increasing complexity of issues concerning architectural practice, that exceed the limits of an individual reaction, a growing need for multidisciplinary collaboration between individuals with differing expertise is becoming increasingly strong. "We have moved from the age of genius to scenius" [4]. The repercussions of this phenomenon in the educational system challenge the generalist profile and question the opportunity of specialization and diversification. Equally, these changes point to a design studio developed around the idea of liberty discarding the old practice of mentoring. Moreover, the architecture market also promotes a great freedom of movement and exercise of the profession.

3. Rethinking design pedagogy. The design studio – purpose and limitations

Over time, the design approach has generated ways of thinking that proved to be very useful in multiple professional directions. Furthermore, architecture education can provide competencies in a variety of related fields as well as preparing students for professions that do not exist yet. Herman Neuckermans placed extra emphasis on the character of architectural education to give appropriate answers to real problems based on critical thinking, creativity, research, rationality, generalizations and singularization. [5]

As members of an architectural school, it is natural to ask ourselves how education should be positioned against the emergence of mobility and virtuality. Coping with an extremely dynamic context, architecture school are forced to focus more on the issue of how to learn and think.

The diversity of architect training methods provided through a flexible curriculum and encouraged by mobility, creates the premises for a rich cultural development sustained by appropriate answers to local specificities.



Figure 1. City model, 4th year of study, Design Studio Crit, Faculty of Architecture, UAUIM, Bucharest

Placed in the core of the architectural education, the traditional design studio has been criticized by students / graduates and employers for its lack of interest in three important directions: social relevance, practical oriented approach and collaboration. [6] This issue is supported also by the results of RIBA Skills Survey Report 2014 of 149 employers and 580 architectural students in UK. More than 70% of the respondents, from both groups, admitted that architectural schools put theoretical knowledge above practical ability, a practice that determines students/graduates lack in knowledge to build what they design. This study shows a common ground between employers and young graduates that advocate for an increase period spent in improving the practical skills needed to practise architecture. [7]

Another important component that should be questioned is the focus on individual projects with minimal group work. This practice encourages students to adopt defensive position regarding their ideas ignoring the spirit of the architectural studio crit (Fig. 1) - a place of sharing, criticizing and develop ideas and concepts. [8]

In many architectural schools the issue of sustainability is still superficially developed in the university curriculum, without profound implications in the educational process. In turn, developing this aspect of sustainability, Peter Buchanan talks about "a much-expanded vision of what it entails not only needs to become the core of the course but should also be that of a year-long foundation course shared by students intending to become architects"[9]

One of the generally agreed upon critique [10] regarding the relevance of the design studio in the future professionals' career is that there is too much emphasis on the project appearance rather than on the actual process and this lack of balance considerably affects the ability to confront real-life projects. Higher education institutions should manage to equally tackle the more pragmatic aspects of the profession and the aesthetics in an attempt to compensate for the requirements and standards in the majority of architecture firms. The studio should become more of an instrument of negotiation and a constant lesson of pragmatism in tackling complex and challenging projects, in this way ensuring that students gain the necessary skills to understand the multiple layers of the practice. At the foundation of architectural education, two main principles should always prevail:

"the ability to engage study and respond to the human condition and the conceptual and physical manipulation of the built environment [11], the aesthetics being subordinated to this.

4. IMUAU - Academic position statement

In one of his essays for Architecture AU - Frontier land: the future of architectural education [12] – Stanislav Roudavski addresses a question that all architecture schools should ponder on: "What should the architects of tomorrow learn?".

The answer to this question reflects the major transformations that have taken place in Romanian society since 1990, as well as the important mutations that have marked the evolution of contemporary society all over the world in recent decades. It can be formulated through a series of prerogatives, focusing on:

- an architecture education that responds to the rapid change of values in contemporary culture, everyday life and current attitudes;
- an architecture education that is sensitive to the rapid progress of information technologies;
- an architecture to cope with the growing instability of the labour market and the increasingly specialized professional practice;
- an architecture education ready to cope with the explosion of completely new materials and technologies;
- an architecture education aware of the rapid degradation of the environment and the imperative need to build a more sustainable environment;
- an architecture education sensitive to traditional values and local identity;
- an architecture education that promotes creativity in the enrichment of the existing urban context.



Figure 2. Laser Valley Magurele Competition 2016, Consortia between Universities and Research Centers

In the present dynamic, fast-changing, competitive global context, any new skill that an individual can acquire, especially an unique, distinctive one, represents an undisputable advantage. This is more so the case of architecture, a field in which, as stated before, there is a clear tendency towards

specialization. In this professional paradigm, high education institutions such as "Ion Mincu" University of Architecture and Urbanism (IMUAU) must become incubators of innovation (Fig. 2) and challenge the traditions of architecture education.

Throughout its 125 years of existence, IMUAU has managed to maintain its capacity to adapt and stay relevant for this branch, adaptability and flexibility being some of the skills that we wish to pass on to our future generations and which represent highlights in our academic position statement. This translates into offering students a well-balanced curriculum that integrates both technical and theoretical aspects which correspond to the demands of Romanian architecture practice. A more integrative background generates more options and opens up more choices after graduation, and therefore is valuable in forming competitive and engaged architects. The success of our curriculum is reflected by the fact that the majority of our graduates can find jobs in architectural design offices from the country and overseas.

By acknowledging the necessity of innovation, IMUAU has accompanied its sense of tradition with a more endearing projection in the future of the practice – skills such as hand drawing are still highly valued and cultivated (between 2nd and 5th year, students undertake a one-day sketch evaluation), but at the same time, the courses connect hand crafting abilities to digital skills and technical knowledge. There is a need for a more rational approach of the design studio process, as highlighted by Fathi Bashiern [13]. The educational process exposes students to different stages of complexity throughout the six years of study, in a progression that leads from analysis to concept design, from poetic to pragmatic, from Introduction to Basics to Synthesis and culminating with the most substantial project - the Diploma Project, in the last year (Fig. 3).



Figure 3. "Ion Mincu" University of Architecture and Urbanism - Design Studio, Annual Exhibition, 2017

The first year (corresponding to Introduction to Architectural Design) represents a first phase of "apprenticeship" regarding space and the study of form and a study of the means of expression and

representation in the design process. The next cycle, corresponding to the Basics of Architectural Design, approaches varied themes targeting the relation between form and space on one side and building functionality on the other but also the responsibility of architecture as a social, economic and cultural activator. The ability to tackle the spatial-functional mix in complex urban situations, the relation between the existent context and new architecture interventions as well as gaining a critical overview of the historical, cultural and social environment, represent the common concern of the architectural design studios in the 4th and 5th years of study corresponding to the Synthesis of Architectural Design cycle.

The assessment of the Diploma Project represents one of the unique and strong achievements of our Faculty (Fig. 4). The project is presented in front of a panel of international professionals in high education and renowned practitioners, which represents a valuable feedback on the quality and viability of our educational process as well as an introduction in the real challenges of the actual profession for the students.



Figure 4. Diploma project international Jury - IMUAU July 2018

One of the most recent prerogatives of the Faculty of Architecture has been to integrate and formulate the specific competences established through the Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications [14] and those formulated by the Royal Institute of British Architecture in a structure that addresses the difficulties and challenges of the profession. The six general competences and three complex competences proposed by IMUAU cover aspects related to the design process, to arts and theory, urbanism, social and environmental context, research, technical information relevant in the design process as well as legislation. The present structure integrates Bachelor and Master in a continuous development process in which the design studio represents the core, covering more than 50% of the curriculum (Fig. 5).

is, therefore, a mediator between students and their future employers and actively encourages students to gain awareness of the many possibilities ahead, preparing them for constantly specializing.



Figure 6. Erasmus + - VVITA Project, Filicudi, Italy 2018

The purpose of higher education in architecture should be to constantly stay aware of the pulse of the profession, and help the new generations of future architects to be competitive, valuable and relevant to the contemporary practice of architecture.

5. Conclusions

Honest, open and qualified commitment and interaction supports the values of transparency and equidistance and inevitably relates to students' capacities to understand, process and interpret data and information. This approach enable school to use all the human, material and informational resources it possesses.

Among other aspects, increasing the quality of the didactic process involves adjustments on the way in which we, as members of the teaching staff, perceive and understand the dynamics of the educational process and relate to it. This complex goal may be achieved by improving and completing systems functioning, updating the parameters of communication and interaction with students, constantly reconsidering new architectural directions while promoting the experiment as a working method.

Equally, the overall quality in education will increase when all involved members, equally the students and the teaching staff in its entirety, will assume social, professional and personal responsibility on the educational activity

6. References

- [1] Mirza & Nacey Research, *The Architectural Profession in Europe 2014*. United Kingdom: Mirza & Nacey Research Ltd, p.7, 2015
- [2] UNESCO / UIA Charter for Architectural Education. International Union of Architects. Paris: UIA, 2011
- [3] Neuckermans H., European architectural education in motion. *A/Z ITU Journal of the Faculty of*

Architecture, **Vol. 2**, pp. 8, 2005

[4] Buchanan P, The Big Rethink Part 9: Rethinking Architectural Education. *The Architectural Review*, <https://www.architectural-review.com/essays/campaigns/the-big-rethink/the-big-rethink-part-9-rethinking-architectural-education/8636035.article>

[5] Neuckermans H., European architectural education in motion. *A/Z ITU Journal of the Faculty of Architecture*, **Vol. 2**, p. 9, 2005

[6] <https://archtrace.wordpress.com/2015/01/14/architecture-pedagogy-thinking-out-of-the-schoolbox/>

[7] RIBA Skills Survey Report 2014, https://www.paintsquare.com/ckfinder/userfiles/files/skills_report_2014.pdf

[8] Parnell R, Sara P, Fear and Learning in the architectural Crit. *Field Journal*, **No. 5**, 2014

[9] Buchanan P, The Big Rethink Part 9: Rethinking Architectural Education. *The Architectural Review*, <https://www.architectural-review.com/essays/campaigns/the-big-rethink/the-big-rethink-part-9-rethinking-architectural-education/8636035.article>

[10] Bashiern F. Reflections on architectural design education: The return of rationalism in the studio. *Frontiers of Architectural Research*, pp. 424–430, 2014/ 3

[11] Brown R, Yates M D, Where Have You Gone Joe Dimaggio? Environment-behaviour studies and its absent place in architectural education. AEE2001 Conference Cardiff University, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.542.9461&rep=rep1&type=pdf>

[12] Roudavski S. Frontier land: the future of architectural education. *ArchitectureAU*. **Vol. 101, No. 5**, 2012, <https://architectureau.com/articles/frontier-learning/>

[13] Bashiern F. Reflections on architectural design education: The return of rationalism in the studio. *Frontiers of Architectural Research*, pp. 424–430, 2014/ 3

[14] <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32005L0036>

[15] <http://commonedge.org/architectural-education-is-changing-lets-hope-the-profession-can-keep-up/>