

CAREER GUIDANCE FOR THE STABLE PROFESSIONAL DEVELOPMENT OF ARCHITECTS

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ABSTRACT

The process of architectural design brings together many people. An architect is the author of the project who is responsible for its result, including the stability of the spatial environment. This sets up exclusive requirements for the intelligence level, experience and professional training of architects. Schools of architecture involved in the recruitment and selection of the most talented graduates determine their participation in professional orientation, such as giving public lectures, the organization of festivals, and the creation of programs for the supplementary education of children and young adults. Participating in professional-orientation research laboratories within architecture departments allows students to learn new subjects and methods of scientific studies. Public engagement in education is a constant focus of concern for schools of architecture and strategies based on the provision of public interests. Upon getting an academic degree and entering the labor market, yesterday's students had to single-handedly pursue a professional career. Not every architecture school graduate can use the knowledge they have gained; some need support and correction of the trajectory of professional development, and others even require a change of profession. Dropping out from architectural practice does not mean a loss of the knowledge gained. What can universities do to facilitate the creation of life and professional stability for graduates of architecture departments? The problem can be solved by studying the intellectual resources of universities, interdisciplinary and inter-subject relations and the experience of architects who have succeeded in overcoming professional crises. This theme is the subject of study in this paper. The second theme issuing from the first one is concerned with the possibility of joining together public efforts in the creation of a stable spatial environment with the participation of "former" architects.

Keywords: stable professional development, career guidance of architects, continuous architectural education.

1 INTRODUCTION

The creation of the anthropogenic environment takes a long time and is proceeding with the participation of citizens of different hierarchies in the city administration who are engaged in different ways in architectural design. At that it is authors of the project – architects who are responsible for the city architecture and sustainability of its spatial environment. This sets up strict requirements for the intelligence level, experience, and professional qualifications of architects. We shall consider how individuals enter the profession, what helps the architect to fulfill his potential in the profession and what architects who "transition" from architecture into another profession can do to provide sustainable development of the city.

The relevance of finding answers to all these questions is dictated by a set of social, professional and personal interests of architects.

2 INFORMAL AND FORMAL CONTINUING EDUCATION, CAREER GUIDANCE, PROFESSIONAL DEVELOPMENT AND PROFESSIONAL COURSES OF FUTURE ARCHITECTS

Universities and schools of architecture are obviously very interested in attracting those to studies and selecting the most talented school graduates. The already traditional methods of attracting students to Bachelor and Master Degree courses that give an insight into the



profession of an architect and architecture include public lectures, urban arts festivals, and courses for children and young adults.

The classical European approach to education of architects which was also accepted by North American architecture schools uses artistic-aesthetic methods. Methods of prospective students' selection (art portfolio, entrance examinations in artistic disciplines) result from perception of creation sequence of a piece of architecture. The methods also include programs of additional learning for children and activities organized by architecture schools with artistic orientation for promoting their University or college and recruiting new students. One of the objectives of popular educational and cultural activities for children and young adults is a search for talented young people and attracting them to get a profession of an architect. The Cooper Union School of Art (New York, USA), Moscow Architecture Institute (MARCHI, Moscow), French and Scottish arts colleges are among world famous schools of architecture. Creative contests are another aspect of professional orientation for children.

Architectural professions in a number of countries are attributed to the engineering field and leading schools of architecture are a part of technological universities. The presence of strong technology specialists determines specific methods of architectural education, techniques of knowledge dissemination as well as methods of professional orientation. Technological universities which include the famous schools of architecture are Delft TU (the Nederland), Massachusetts TU (USA), TU of Zurich (ETH Zurich, Switzerland); they have found new approaches to career guidance: non-formal additional architectural education – OpenCourseWare in architecture and programs for “minors” for first-year students [1], [2].

3 INTRODUCTION STAGES OF CAREER GUIDANCE OF ARCHITECTS

3.1 Career guidance and attraction of gifted children and young adults to architecture

Schools of architecture and art colleges traditionally set up training courses in drawing, painting, sculpture, photography, computer graphics, styling design and related arts. The ‘academic’ activity is targeted not only at teaching new artistic techniques and developing kids’ natural abilities but also at letting them meet prospect colleagues, “picking up” the right students.

Studying creative works during admission is essentially an expert assessment of the creative potential of future students. Teachers engaged in the selection of students, choose the most suitable students in their opinion. Looking ahead, it should be noted that the selection to the master’s courses of The Harvard University Graduate School of Design is based on the same principles. Future postgraduates shall demonstrate both ability for scientific work and wish to participate in scientific studies in definite areas and to cooperate with definite professors.

Competitions for young people give the opportunity to find students with the specified qualities. The theme and task of the competition are indicators demonstrating set qualities of the personality. Having used this MARCHI has been holding the Heirs of V. Shukhov competition since 2012. The first competition was aimed at supporting engineering and design components of the “Bachelor of Architecture” architectural education by finding young people who are good at design and are willing to work with construction materials [3].





Figure 1: Art-objects performed by the Heirs of V. Shukhov competitors.

In the following years, the themes of competitions were associated with ideas of ensuring environmental security: “Gone with the wind” (wind energy using), “3D Rainbow” (collection and purification of rainwater and storm water drains), “Vertical gardens” (creation of “green façades”). Support for the ideas of the competition showed the presence of social activity among the competitors, at the same time it enhanced the understanding of topical issues of architecture and their solutions, directing the creative and artistic energy toward searches for new constructive solutions (Fig. 1).

3.2 Career guidance continuing during university studies

Summer schools for architecture students are a traditional form of Career guidance in Universities. Training in summer schools allows students to get acquainted with current topics in the architectural design, get to know the new methods of design and practicing architects, methods of research, culture and architecture of other countries. Students who work at scientific labs have a better chance of networking with architects. There school students get to know topical issues and methods of scientific research.

An ingenious method of students’ professional orientation is used at Delft TU. The University’s engineering and architectural schools have developed special programs for “Minors” (the first-year students) that introduce sets of specialties and allow making a better motivated choice in further training. Training at the “Minors” programs let students relate their personal abilities with the qualities required to achieve professional success.

New opportunities for getting a better insight in architecture and professional orientation appeared after Universities launched Open Courses. Open Courses online publications inform about new challenges in architecture. A wide range of information provides better understanding of career opportunities and helps to identify own abilities with opportunities to implement them in the profession.

Architectural schools, which are based on the public interest strategy, for example, the London Bartlett School and the New York Cooper Union, search purposefully for alternative places of application of architects’ intellectual efforts. Teachers and students using the experience of spatial environment transformation look for non-formal ways of solving social problems. And future graduates can find new workplaces by methods of social interaction.

3.3 Building a professional career by architecture school graduates. Problems and solutions

On gaining an academic degree and entering the labor market, architecture school graduates have to start building up a professional career unaidedly. Asking why architectural schools rather infrequently render support for graduates' professional development it is logical to suppose that the reason for this is the exit from the academic society. Consequently, and beyond the realm of universities' interests. Employment and successful career of the majority of graduates do not affect the ranking of universities [4], [5]. Sometimes recent graduates need support and correction of a path of professional development. That is why today, when understanding of the opportunities and challenges of the architectural profession is changing, concern about the employment of graduates is a competitive advantage for architecture schools.

4 SOCIOLOGICAL STUDY OF ALTERNATIVE CAREER PATHS WITH THE HELP OF SOCIAL NETWORKS. REORIENTATION WITH KEEPING ARCHITECTURAL KNOWLEDGE BASE

Responding to a question what universities can do to help graduates of architectural faculties in professional career development, or a search for alternative ways, the author studied the feature articles and the internet-blogs. There architects, scientists and architectural critics have discussed the possibility of using "architectural" knowledge and architectural education to overcome professional crises and building up an alternative career [6], [7].

The study resulted in selecting groups of professions in which architects who "shifted" from the profession often find employment. The fundamental idea is that a transition from the profession shall not mean a refusal from the acquired ideas and experiences but getting new opportunities for their implementation. In relation to the topic of this article, the key message is to create conditions for sustainable development of the built environment. Relying on the solution of a socially significant issue of sustainability is an "air bag", which gives a more stable career.

5 PARTICIPATION OPTIONS IN CREATING CONDITIONS OF SUSTAINABLE DEVELOPMENT OF BUILT ENVIRONMENT FOR ARCHITECTS WHO TRANSITED FROM THE PROFESSION

The directions of scientific and practical research relating to the creation of the sustainable spatial environment feature a group of aspects the subjects of which are constantly expanding: a "green" design of buildings and territories, including ecological design of integrated energy systems with systems of cleaning and recycling; use in the design of environment-friendly construction and finishing materials and technologies and other measures that limit the negative impact on nature [8]. Many areas of sustainable design are no longer innovative and were institutionalized in the town-planning law providing area zoning and usage modes of different zones [9]. In order to directly promote the ideas of ecology and sustainable design, it is necessary not only to remain in the architectural profession, but also to have a decision-making position.

5.1 New professional activities of architects associated with the design

Usually, the professional activity of "the architect" is perceived (legally, professionally and popularly) as a process of creating a building or a complex of buildings. The shift in the scales of design toward the city (urban planning), environment (landscape architecture and



landscape design), restoration and reconstruction, design of spatial environment, interior design, design of interior elements, including furniture and toys, and other forms of designing space and articles often become a new area of the architect's professional activity.

Table 1 shows options for the architect's career development in design-related careers. The opportunity to support ideas of sustainable design and to demonstrate environmental awareness will appear in the design of systems and subsystems for sustainable urban environment, systems of landscape organization and transport; rehabilitation of urban spaces, the use of environmentally friendly finishing materials and technologies; also, when creating items of object design, designing closed-cycle production, creating innovative designer products.

5.2 Broadening options for architects working in administration, city management, investments and legal support of architectural activity

Like in the public health service measures should be perceived with understanding and obtain public support. Architects who "transited" from the profession get an opportunity to bring together efforts of many people, to attract financing to programs of sustainable development and to support environmentally-oriented urban redevelopment programs.

A striking example of the use of architectural knowledge in management is the life of Brazilian architect Jaime Lerner, who helped create the Institute of urban planning and research of Curitiba in Brazil. Lerner had the opportunity to realize their ideas of urban development become mayor of the city (Fig. 2) [10]. The mayor-architect created systems of environmentally friendly rapid transit (Bus Rapid Transit), built the elongated pedestrian zones, and organized a system of stormwater drainage and waste recycling in Curitiba. But his most important achievement was bringing together the efforts of all residents for garbage cleanup and landscaping [11], [12].

Table 2 shows options for architect's career development and building up sustainable urban development in city administration, investors, lawyers.

Table 1: Participation of the designers in programs of sustainable spatial development.

<i>New profession</i>	<i>Crossover knowledge and skills</i>	<i>Components of continuing education</i>
Urban planning	Knowledge and skills of building design	Additional education in urban planning
Landscape architecture and design	Knowledge and skills of working with space	Additional knowledge of dendrology, ground, innovations in landscape architecture and design
Reconstruction of spatial environment for sustainable design	Ability to design, social knowledge, knowledge of public transport organization	Knowledge of sustainable design, ecology, new transport systems and technologies
Design of architectural environment and interior	Knowledge of designing buildings to create interior spaces, reading blueprints, knowledge of various fire and building codes	Additional knowledge of properties of color, lighting, texture, finishing materials, furniture, fittings, etc.
Object design, including details of the interiors, children's toys (Lego)	Skills to design 3D forms	Knowledge of industrial production technology and materials, design management





Figure 2: Bus rapid transit (BRT) system in Curitiba, Brazil.

Table 2: Participation of architects – representatives of city administration, investors, lawyers in building up sustainable urban development.

<i>New profession</i>	<i>Crossover knowledge and skills</i>	<i>Components of continuing education</i>
Construction management	Knowledge of economics and technologies of construction, building and fire codes	Additional knowledge in management, investments in construction, experience in construction practice, building production technologies
Exploratory design, investment activity	Knowledge in architecture and urban planning; understanding of perspectives of implementation of construction programs and redevelopment of anthropogenic environment	Additional education in programming, economics, GIS, management of client relationship
Stock analyst of construction market	Knowledge of architecture and perspectives of urban planning	Exchange activities, stock management, management consulting
Management of local territories, territory branding	Landscape design, social knowledge, urban planning design	Management and marketing, economic aspects of territorial planning, investments in construction

5.3 Career development options for architects working in mass media and PR

Architects, who shifted the focus of their professional activity from research and design to journalism, have a great potential in bringing together members of different social groups and professions for promotion of ideas of the ecological lifestyle. It's not just about publications in the media, but also about visualization of socially significant ideas through a variety of forms: in book illustrations, movies, computer games, and other images filling people's lives. A careful attitude towards the living environment that distinguishes the creation of a modern architect (Table 3) also manifests itself in artistic images that are not directly related to environmental issues (Fig. 3).



Table 3: Architects' participation options for promoting ideas of sustainable urban development through the media, film and video industry.

<i>New profession</i>	<i>Crossover knowledge and skills</i>	<i>Components of continuing education</i>
Architectural and art criticism, journalism	Knowledge of history of arts, culture and architecture, understanding the influence of architecture and space on the fabric of people's lives	Acquisition of writing and critical thinking skills
Artwork in publishing, cinema industry, theatre, animation	Team management skills, ability to place yourself in an imaginary space, knowledge and skills in the graphic arts, skills of creative work	3D modelling, animation and visualization programs; technical aspects of film production
Web-design, PR, social media, video filming, logo design, etc.	General artistic skills: graphic skills, knowledge of composition	technical skills working with digital editors, management, accounting, finances, intellectual property rights
Placemaking/planning of a building or a community to make it more attractive and compatible with the people who use it	Landscape design, social knowledge, ability to design, team management skills, creativity skills	Management and marketing, investments in construction, PR
"Pep-talk" professionals	Understanding of the prospects for realization of reconstruction projects of building environment, knowledge of history of architecture and culture	Knowledge of management
Management and marketing	Skills of design, planning activities, social interaction skills, visualization	PR skills, knowledge of management, verbal communication skills
Law in architecture, land use, environmental protection	Knowledge of architectural design, reading blueprints, understanding of positions of different parties	Negotiations skills, knowledge of law in architecture and land use



Figure 3: Planet Earth as part of the universe in the animation "Belka and Strelka. Star dogs" (Russia, 2010). Director: architect Inna Evlannikova.

5.4 Environmental education, education of the younger generation by architects working in the field of education

For architects, a changeover from design to education – general, additional, professional – gives a great opportunity for upbringing the younger generation in the spirit of careful attitude to environment, circulating the idea of sustainable development and together with students finding new approaches to provision of sustainability (Table 4).

6 ADVANTAGES OF ALTERNATIVE CAREERS FOR ARCHITECTS

The advantage of the abovementioned career path transitions is the ability to remain among activity managers and, through this, to direct activities of others. To complete the research, we should mention the paths of a career growth for architects based on the use of information technologies, for example, WEB design, development of IT programs for design and construction. The capability to support ideas of territorial sustainable development is limited by the artistic essence of the activity of the architects (Table 5).

7 CONCLUSIONS

Architectural schools and faculties benefit from maintaining intellectual relationship with its graduates. Architects both remaining in the profession and transiting from it, assist in spreading the socially important ideas.

In the context of the global economic crisis, graduates of architectural faculties require post-graduate professional orientation, information on alternative professional development in related fields and further education for retraining. This fact should be taken into consideration when developing new courses of continuing education for architects.

Table 4: Promotion of ideas of sustainable spatial environment. Search for new ideas and opportunities during education.

<i>New profession</i>	<i>Crossover knowledge and skills</i>	<i>Components of continuing education</i>
Education including general, additional and art	Art, composition, design, social, historical and cultural knowledge and skills	Methods and techniques of education, psychology

Table 5: Architectural knowledge instrumental in alternative career in IT.

<i>UX-designer (user experience)</i>	<i>Creative and innovation approach to design</i>	<i>Communication skills</i>
E-builder	Knowledge of design, technology and construction management, building industry	knowledge in financing and project management, BIM design technologies
Application software development, design of graphic interface or mobile applications	Skills in design, knowledge of set of works	Knowledge of APL, programming skills



Architects who have transitioned from the profession into another retain not only the knowledge and skills, but also the mentality. And they can support the idea of sustainable development of territories and implement them in other professional fields. The key quality acquired in the process of architectural education is the ability of the architect to organize teamwork and to take responsibility for the result. It is this quality that provides flexibility in professional changeover.

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