

The ancient formula of master-apprentice relevance in contemporary architecture education.

Ksenia Piatkowska, PhD, Eng. Arch.

Gdansk University of Technology
Gdansk, Poland

ABSTRACT:

The universalization of the methodology for determining the quality of European higher education exposes the aspect of supporting the student in the education process, which takes the form of tutoring or supervising - a modern form of ancient master-apprentice relationship. The 'master' in architectural education has lawful building qualification and is a member in national architect association - a sine qua non with respect to legally working as an architect. The 'master' shapes apprentice's attitudes, explicates professional ethics issues, puts across patterns of acceptable behavior related to the indefeasible intellectual and creative property rights. Maybe for better the formula of master-apprentice relation should be carried on in design offices or workshops instead of education institutions?

INTRODUCTION

The dynamic expansion of the European Union's borders and related to it process of multidimensional integration of structures - including higher education systems, the institutional attempts at Europeanization of higher education systems have led to the standardization of the methodology of determining and achieving the teaching quality. Wider observations evidence of similar tendencies in higher education systems around the world [1], [2].

The functionality and effectiveness of academic education are subject to verification and periodic assessment. The evaluation focuses on the implementation standards' conditions' uniformity and the relationship between the level of teaching and the level of scientific research conducted in a particular university.

The substantive educational framework remains the decision-making field of each individual university institution. The quality of education in this aspect is the result of meritocratic cooperation and the intellectual abilities of the academic and teaching staff of a particular university entity. The universalization of the methodology for determining the quality of education is also manifested in exposing the aspect of supporting the student in the education process, which in most European universities takes the form of tutoring or supervising, which is a modern form of ancient master-apprentice relationship.

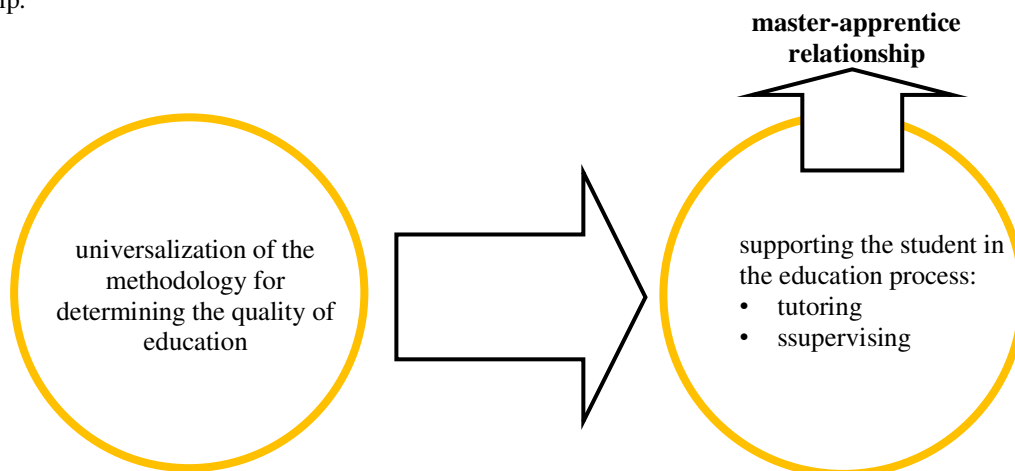


Fig.1. The background of the research explaining the master-apprentice justification in contemporary higher education systems.

This dialogical teaching method present in European civilizations since ancient times and developed, popularized by the way of education in 17th century in England [3], is based on a human personality relationship, which releases educational potential in people involved in the didactic process [4]. And although some authors claim that this is a new formula in some fields of academic education in Europe [4], some fields, especially those with a humanistic background, have been using the master- apprentice method since the beginning of its existence. One may hazard to claim that in some fields of study such as art, including architecture, it was even the first method of acquiring knowledge even before seeking answers to questions in the process of conducting scientific research based on the literature on the subject.

WHAT FOR A 'MASTER' PERSON IN ARCHITECTURAL EDUCATION?

Architectural education is a typical example of personalized education. Thanks to the direct way of transferring knowledge in the master- apprentice relationship, the reflexivity of the *in spe* architect and associated with it self-awareness, necessary for the substantive pursuit of the future profession, is shaped. Many schools of architecture continue to support a traditional master-apprentice model of education, with 'knowledge as power' underpinning the pedagogical approach [5], [6]. Others by contrast implement critically reflective inquiry into teaching methods and theories that promote successful student learning through collaborative and supportive dialogue. The profession of an architect concentrates on creating space in real forms. The built designs of architects shape our space and significantly impact our wellbeing and ability to function in urban reality [7]. The architect designs in the authentic context of place and time, his spatial decisions have a real effect on the potential and functionality of the place. This is a responsible task. An architect is a profession of public trust with a special nature following a concern for the public interest. Therefore an architect cannot be a dilettante. His knowledge odd to be founded on constant broadening of his knowledge in scopes of construction systems, including current technological, aesthetic or sociological trends.

But above all the most important matter is to understand the specificity of this profession and to perform it with dedication in a sense of mission, whose testimony can be a 'master' person who illuminates all aspects of architect's practice. In the mid-twentieth century, the tutor's innate teaching talent was considered a condition of his didactic success, even an imminent part of the master's personality. This initial emphasis on the 'master's' personality predisposition was over time replaced first by the importance attributed to general knowledge, and thereafter to specialist knowledge. This approach to master's qualities is followed by the formation of the perfect practice proficiency. And nowadays the formula of the 'master' in architecture education should be regarded as such.

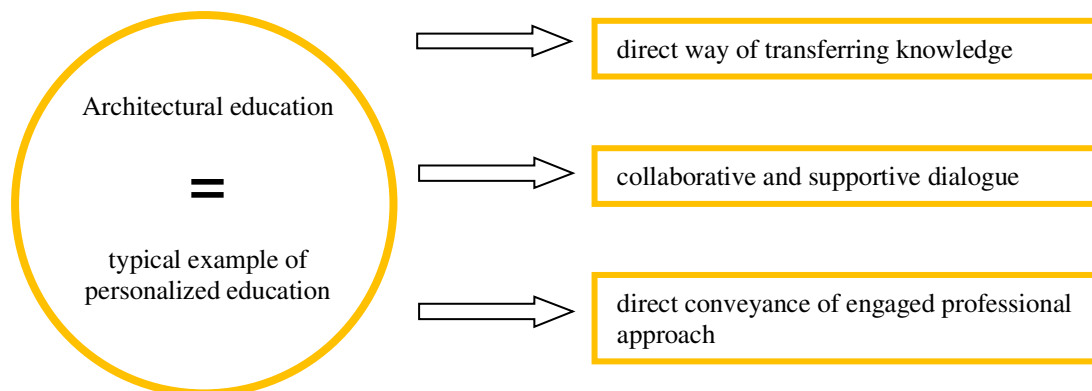


Fig.2. The role of 'master' person in architectural education - scheme.

The 'master' is not an ordinary teacher. The master doesn't teach the basics. First of all the teacher is needed. He instills in the student/apprentice the fundamentals, behavior and knowledge needed in life. Later, in the student's mind (of course not in everyone) the ambition to develop oneself and to broaden ones knowledge is born. Next the student is looking for a 'master', while the process of becoming 'someone' must begin with a personal transformation - with discovering oneself and ones abilities, learning ones strengths and weaknesses, sources of influencing the people, namely - knowing oneself potential [8]. For some young future architects, studies are just the time to look for authorities. A 'master' is someone who helps students develop and use the knowledge they have already acquired. The 'master' indicates directions of possible progress. He may indicate new, undiscovered areas of self-improvement, but it depends only on student whether he heads toward. 'Master' is a personality who has values to convey and is able to share it. Apprentice must know what he wants and must notice his goal in the master's skills. This is a threshold the apprentice strives for, and the 'master' assesses whether he is able to attain it.

On one hand the crucial aspects in the process of architectural education are knowledge, skills, passion and mission. Another, however - neglected in the spirit of teacher profession's professionalization in architectural knowledge and skills attribution - is the ability to shape the apprentice's demeanor. Although talent, predisposition and the ability of solving new problems dominate the searching for desired attitudes stipulating the 'master' person, Joseph Barnils believes that specialist privities, although essential, is not a priority in master's personality, though the moral attitude

and commitment the master presents [9]. Jose Ortega y Gasset claims there is a fatal danger of destroying the liberal arts by the barbarism of specialization [10], and Jerzy Axer, the precursor of the tutoring method in Poland, calls specialization not asylum but escapism that helps to evade becoming a civil society [11]. As the apprentice's role is to acquire particular knowledge and competences, the role of the 'master' is to shape apprentice's attitudes, to explicate professional ethics issues, to put across patterns of acceptable behavior related to the indefeasible intellectual and creative property rights in an architectural professional environment. Due to his demeanor the 'master' in architecture education sets an example and on the grounds of professional experience is foreordained to conduct debates with future architects about the cooperation with other architects, investors, local communities, and public institutions. The master - apprentice cooperation lies in a confidence too, while the 'master' influences young architect's worldview. It happens that in a flow of time the 'master' and apprentice become friends. And this relationship lasts forever. Even when the apprentice ceases to be a student. Peter Behrens - a self-taught architect, called *industrial Da Vinci*, operated with different aesthetics, but the extent of his interests was similar to those of fifteenth-century Italian master. He educated the greatest creators of the 20th century architecture. He was a recognized example of a 'master' in the field of architectural education. In Peter Behrens' Berlin studio in the years 1907-1912 among the others were apprenticed: Ludwig Mies van der Rohe, Le Corbusier, Walter Gropius, Adolf Meyer and Jean Kramer. Everyone wanted to learn the "great form" from Behrens. Under the influence of Behrens, Ludwig Mies van der Rohe developed a style combining advanced technical possibilities with classicism in the spirit of Karl Friedrich Schinkel and took from his master the saying "Less is more", which he often heard in the Behrens' studio. Walter Gropius, who together with Behrens co-designed the AEG turbine hall in Berlin's Moabit district, learned the secrets of industrial facility design, continued later in his independent architectural practice. From 1910 Gropius collaborated with Behrens in the Werkbund association on more theoretical manifestos. In Bauhaus, founded in 1919, Gropius emphasized the social role of the architect - artist, who - with his buildings - "designs social life", and also regulates the relationship between man, landscape and the space - the idea he repossessed from Behrens. Examples of intimate relations between icons of architectural history and at first their apprentice, then colleagues or competitors, can be multiplied. Numerous examples of such professional relationship proves the person of the master does not only influence the apprentice as a future professional, but as a conscious and responsible member of society as well.

IMPACT OF MASTER-APPRENTICE FORMULA ON ARCHITECTURAL EDUCATION QUALITY

Optimization of the academic teacher profession while striving to improve the level of specialization in architectural education affects the qualification requirements of persons providing education at European architecture schools in Master's degree education courses. There is a tendency to divide classes into groups in which classes can be conducted only by carefully selected supervisors - 'masters' alike. Education aimed to achieve high-level education effects in groups focused on design is expected to be conducted by tutors with significant contributions to the development of the scientific discipline - architecture and urban planning, building qualifications in the architectural specialty and professional experience acquired in design practice. Supervising in the designing classes group may also be conducted in cooperation with other tutors having professional experience adequate to the scope of the activities. Alike in the case of persons entitled to supervise masters diplomas in architectural education, a project elaborated through a master-apprentice formula, supervisors are expected to have - in addition to significant scientific achievements constituting an essential contribution to the development of a given scientific discipline - building qualifications in the architectural specialty and professional experience acquired in design and construction activities as well as significant project achievements.



Fig. 3. The designing class at the Architecture Faculty of Technical Gdansk University supervised by the professor of architecture supported by the civil engineer tutor.

Current modifications in higher education programs at Architecture Faculties are aimed at improving competences and general learning outcomes: in the field of knowledge and understanding a student knows the structural, construction and engineering problems related to building design; is acquainted with issues related to architecture and urban planning useful for designing architectural objects and urban complexes in the context of social, cultural, natural, historical, economic, legal and other non-technical conditions of engineering activities integrating knowledge acquired during studies; understands the relationships between man and architecture and between architecture and surrounding environment and the requirements to adapt architecture to human needs and human scale, as well as is acquainted with laws and procedures necessary to implement building designs. Essentially the student knows and understands the nature of the architect's profession, his role in social development and the responsibility from consequent impact of his activities. Due to the complexity of the architectural education process, verification of achieved learning outcomes requires the use of different forms of student assessment adequate to the categories of knowledge, skills or social competences to which these effects relate. The required learning achievements in the category of skills in designing courses are verified by evaluating the completed project work, including course and review (transitional), periodic reviews as well as assessing the level of student creativity demonstrated during the design process, direct individual and team consultations implemented precisely by using a master-apprentice formula which allows to recognize the idiosyncratic abilities of the student. Putting the master-apprentice formula into practice is to enable the graduate to use the experience gained during the studies in order to make a critical analysis of the determinants and formulate conclusions for design in an interdisciplinary context. This formula trains the use of analytical methods to formulate and solve design issues.

As a result of education based on the master-apprentice method, the graduate is able to: 1/. take up creative activity in the field of architectural and urban design; 2/. gain professional qualifications, 3/. perform independent functions in construction, design and manage construction works in the architectural specialty; 4/. coordinate work in interdisciplinary design teams; 5/. manage design studios architectural and urban planning, independently conduct business activity where he solves functional, construction, engineering and technological problems to the extent ensuring safety and comfort of using the designed facilities; 6/. undertake scientific activity and above all 7/. apply the principles of professional ethics, present a dignified / ethical professional attitude.

CONCLUSIONS

In view of the above-mentioned modifications trends in the architectural education programs the 'master' in the process of architectural education should be a person with reliable and measurable professional experience, because "a real apprentice never complains about a master, because he knows that although he goes into the unknown himself, his guide was already there" [12]. Thus, in architectural education focused on the essence of the architect's job related to shaping space through veritable interventions in the contemporary city context a 'master', tutor or supervisor ought to be a person equipped in a apprenticeship in inventing, designing and finalizing the construction process. The master works actively in profession, everyday he solves matters related to both - the conceptual work of design and the process of implementation of these design, preparation and coordination of technical documentation with relevant institutions, obtaining building permit decisions, carrying on author's supervision during construction phase, be familiar with procedures for commissioning the facility. Only such a person may legitimately answer the questions bothering the apprentice. Only such a person shows him the correct solutions or looks for alternatives to unravel a particular design problem due to his proficiency in the art of the profession.

Therefore, in view of agenda mentioned above, the enough rife practice in the European faculties of architecture where architectural design is taught by supervisors with only theoretical knowledge, without or with meager professional experience, or even no lawful building qualification, or national membership in any architect association, which in most European countries is sine qua non with respect to legally working as an architect, appears an incomprehensible or even bizarre phenomenon. How can theoreticians teach a practical profession? To illustrate the matter of the doubts we may ask 'how can dental extraction be taught by dentists, who know this process only from books, lectures or e-learning'? How can a teacher, who is unable to solve the current design problem with the student during consultations but only directs student to a literature where he probably will find a solution, be named the 'master' in the process of architectural education? The present imbalance occurring between the proportion of practitioners with significant professional achievements and experience, who are able to teach the multifaceted realities of the architectural profession, and the researchers who complement the theoretical knowledge base of students seems to be the result of an irresponsible act.

So is it reliable teaching of architecture in terms of standards imposed by the universalization of teaching methodologies in European schools? Or rather affectation of teaching a profession in circumstances, where the teacher's expertise come from textbook exploration of the architectural issues and often outdated sources? The results of such approach to the architectural education's level matter might be observed after the graduation and while attempts of young architects to enter on the labor market. There are complaints from practitioners in the field that students are unprepared for practice [13], that the educational process fail to successfully prepare an architect to practice in today's world. The architectural offices' owners and professional designers report that although most of graduates have a satisfying computer graphics abilities, about the principles of correct design, application of relevant regulations, shaping the three-dimensional space while controlling the use of designed objects know few. Studies of architecture in most European faculties take between 6 to 10 semesters (Bachelor and Master Degree). If such alarming results of this education system are observed it might



be stated that architectural education in the current shape is a waste of time for apprentices. Whatever [...] *a university is probably not the best home for an architectural school* [13], and the formula of master-apprentice relation should be carried on in design offices or workshops instead of education institutions.

REFERENCES

- [1] Wang, L., Jin, X., Shi, Y., Cao, L., An evaluation of the quality of university education based on multidimensional time series analysis, *World Transactions on Engineering and Technology Education*, Vol.11, No.4, 406-411, (2013);
- [2] Zhu, Q., Li, Y., Quality evaluation of university teaching, based on an improved least squares support vector machine, *World Transactions on Engineering and Technology Education*, Vol.13, No.4, 474-479,(2015);
- [3]Wilson, Ch., *England's Apprenticeship 1603-1763* (Social and economic history of England), Longmans, (1984).
- [4] Karpińska-Musiał, B., Academic tutoring as a reconstruction of the Student-Master relationship in relation to the massification of higher education. An attempt to integrate the concept into the context of the internal education quality assurance system as one of the university accreditation criteria, *Science and Higher Education (Nauka i Szkolnictwo Wyższe)*, 2/40/2012, Warsaw, 55-70, (2012);
- [5] Parnell, R. & Sara, R., *The crit: An architecture student's handbook*. 2nd ed., Boston Architectural Press, (2007);
- [6] Webster, H., The analytics of power: re-presenting the design jury. *Journal of Architectural Education*, 60 (3), 21-27, (2007);
- [7] Piatkowska, K., Moving Towards Competence in Teaching Architecture: The Relationship of Research and Design in Academia, *Procedia Engineering, Elsevier Limited*, Oxford, UK, DOI: 10.1016/j.proeng.2016.08.613, (2016);
- [8] Barrett, R., *The New Leadership Paradigm*, Barrett Values Centre, (2011);
- [9] Barnils J.M., Tutor - someone who can give himself, Interview done by Piotr Czekierda with Joseph Maria Barnils the 10 of April 2011 during the Conference Challenges of Contemporary Family Personalized Education, Warsaw, (2011);
- [10] Ortega y Gasset, J., *Rebellion of the masses and other sociological journals*, (*Bunt mas i inne pisma socjologiczne*), (trans.) Piotr Niklewicz and Henryk Woźniakowski, PWN, Warszawa, (1982), cit.: Barbarzyństwo specjalizacji [in:] *Wielkie eseje w nauce*, Prószyński i S-ka, 149-155, (1998);
- [11] Axer, J., Autonomia uniwersytetu i innowacyjność, *Nauka* 2/2010, 7-10, (2010);
- [12] Treffler, S., Apprentice and Master, Everything most important, *Piękno nauki*, No 4, May 2016, 28-29, (2016);
- [13] Buchanan, P., The big rethink part 9: Rethinking architectural education. *The Architectural Review*, 28 September 2012, <http://www.architectural-review.com/academia/the-big-rethink-part-9-rethinking-architecturaleducation/8636035>. article