

The master-apprentice relationship in architecture education

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ABSTRACT: In European higher education supporting the student takes the form of tutoring or supervision - a modern form of the ancient master-apprentice relationship. The *master* in architectural education has a lawful building qualification and is a member of a national architect association - a *sine qua non* for working legally as an architect. The *master* shapes an apprentice's attitudes, explicates issues on professional ethics and promotes patterns of acceptable behaviour related to intellectual property rights. However, it may be time and for the better, that the master-apprentice relationship should be executed in design offices or workshops rather than just in educational institutions. That is the focus of this article.

INTRODUCTION

The expansion of the European Union and the integration of structures, including higher education has led to the standardisation of achieving teaching quality. Wider observations provide evidence of similar tendencies in higher education systems around the world [1][2].

Academic education is subject to verification and periodic assessment. The evaluation focuses on the implementation of standards and the relationship between the teaching and scientific research conducted at universities.

The educational framework remains within the decision-making of each university. The education is the result of abilities of the academic and teaching staff of a university. The education also reveals the support mechanisms for students, which, at most European universities, takes the form of tutoring or supervising: a modern form of the ancient *master-apprentice* relationship (see Figure 1).

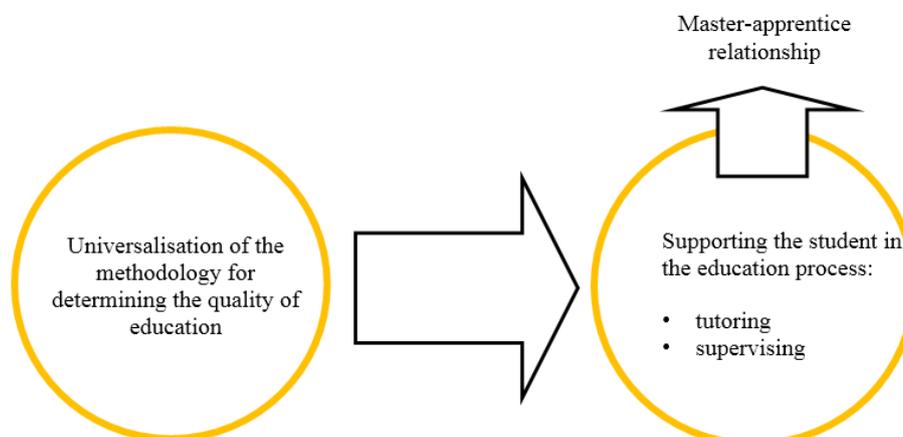


Figure 1: The master-apprentice relationship in higher education systems.

Dialogic teaching present in Europe since ancient times, developed and popularised by way of education in 17th Century England [3], is based on releasing the educational potential of people [4]. Although some claim it is new in education in Europe [4], some fields, especially those with a humanistic background, have been applying the master-apprentice

method since the beginning of its existence. It is possible to claim that, in some fields of study, such as art, including architecture, it was even the first method of acquiring knowledge.

A MASTER IN ARCHITECTURAL EDUCATION

Architectural education is an example of personalised education. The direct way of transferring knowledge in the master-apprentice relationship shapes the putative architect for their future profession. Many schools of architecture continue to support a traditional master-apprentice model of education, with *knowledge as power* underpinning the pedagogical approach [5][6] (see Figure 2). Others by contrast implement critically reflective inquiry into teaching methods and theories that promote successful student learning through collaborative and supportive dialogues.

The profession of an architect concentrates on creating space in real forms. The built designs of an architect shape space and impact the ability to function in urban reality [7]. The architect designs in the context of place and time; spatial decisions have an effect on the potential and functionality of the place. This is a responsible task and an architect is a professional with public trust and a concern for the public interest. Therefore, an architect cannot be a dilettante. Their knowledge should be founded on a constant broadening of the knowledge 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 and a sense of mission; a professional who is a *master* illuminating all aspects of the architect's practice. In the mid-20th Century, the tutor's innate teaching talent was considered a condition for teaching success, even an eminent part of the master's personality. This emphasis on the *master's* personality was over time replaced, first by the importance attributed to general knowledge, and thereafter by specialist knowledge. This approach to the master's qualities is followed by formation of proficiency and perfect practice. Nowadays, the formula of the *master* in architectural education should be regarded as such.

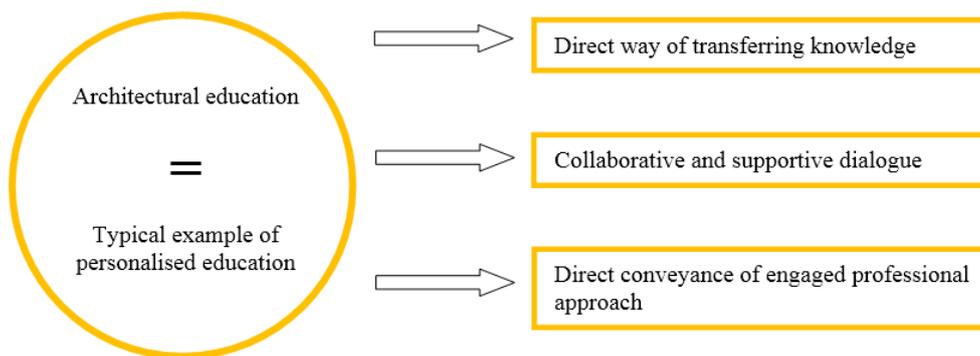


Figure 2: Role of the *master* in architectural education.

The *master* is not an ordinary teacher. The master does not teach the basics. First, a teacher is needed. They instil in the student/apprentice the fundamentals, appropriate behaviour and knowledge needed. Later, in the student's mind, is born the ambition to develop and to broaden knowledge. Next, the student looks for a *master*, while the process of becoming *someone* must begin with personal transformation; with discovering self and abilities, learning strengths and weaknesses, and ways to influence people; namely, knowing the potential of self [8].

For some young future architects, their studies are just the time when they 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 or she may indicate new, undiscovered areas for self-improvement, but it depends on the student whether they head forward. The *master* has a personality with values to convey and to share. The apprentice must know what they want and see their goal in the master's skills. This is what the apprentice strives for, and the *master* assesses whether they are able to attain it.

On the one hand, crucial aspects of architectural education are knowledge, skills, passion and mission. However, another aspect - neglected in the teaching profession's *professionalisation* of architectural knowledge and skills - is the ability to shape the apprentice's demeanour. Although talent, predisposition and the ability to solve new problems dominate desired attributes of the *master* person, Joseph Barnils believes that specialist privities, although essential, are not a priority in the master's personality, although the moral attitude and commitment the master presents are [9].

José Ortega y Gasset claims there is a fatal danger of destroying the liberal arts by the barbarism of specialisation [10], and Jerzy Axer, associated with the precursor of the tutoring method in Poland, calls specialisation not *asylum*, but *escapism* that helps a society evade becoming civil [11].

As the role of the apprentice is to acquire particular knowledge and competencies, the role of the *master* is to shape the attitude of the apprentice, to explicate the issues of professional ethics, to put across patterns of acceptable behaviour

related to intellectual and creative property rights in an architectural professional environment. Because of their demeanour the *master* in architectural education sets an example and, on the grounds of professional experience, conducts debates with future architects about co-operation with other architects, investors, local communities and public institutions.

The master-apprentice co-operation means the *master* influences the young architect's worldview. It happens that, in time, the *master* and apprentice become friends and this relationship lasts forever; even when the apprentice ceases to be a student. A self-taught architect, Peter Behrens, called an *industrial da Vinci*, operated with different aesthetics, but the extent of his interests was similar to those of the 15th Century Italian master. He educated the greatest creators of 20th Century architecture. He was an example of a *master* in architectural education.

In Peter Behrens' Berlin studio in the years 1907 to 1912, apprenticed were, among others: 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, 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 (Deutscher Werkbund: a group of artists, industrialists, designers and architects). Gropius' and Behrens' collaboration was on more theoretical manifestos. In Bauhaus, founded in 1919, Gropius emphasised the social role of the architect-artist, who, with their buildings, *designs social life*, and also regulates the relationship between man, landscape and the space; the idea from Behrens. Examples can be multiplied of intimate relations between icons of architectural history and, at first, their apprentice, then colleagues or competitors. Numerous examples of such a professional relationship proves the person of the master does not only influence the apprentice as a future professional, but also as a conscious and responsible member of society.

MASTER-APPRENTICE FORMULA: IMPACT ON ARCHITECTURAL EDUCATION

In the academic teaching profession, there is striving to improve the level of specialisation in architectural education, which affects the qualification requirements of persons providing education at European architecture schools in the 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, i.e. like *masters*.

Education aimed at achieving high-level education in groups focused on design is expected to be conducted by tutors with significant contributions to the development of the discipline: architecture and urban planning; building qualifications in the architectural specialty and professional experience acquired in design practice. Supervision in the design classes group also may be conducted in co-operation with other tutors having professional experience adequate for the scope of activities (Figure 3).



Figure 3: Design class in the Architecture Faculty at Gdańsk University of Technology, supervised by a professor of architecture and supported by a civil engineer tutor.

In the case of persons entitled to supervise master's diplomas in architectural education, supervisors are expected to have not only significant scientific achievements constituting an essential contribution to the development of a given scientific discipline, but also building qualifications in the architectural specialty. They also require professional experience in design and construction activities, as well as significant project achievements.

Present modifications in higher education programmes in architecture faculties are aimed at improving competencies and general learning outcomes: in 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 issues; understands the relationships between humans and architecture and between architecture and the surrounding environment, as well as the requirements to adapt architecture to human needs and human scale; they also are acquainted with laws and procedures necessary to implement building designs.

Essentially, the student knows and understands the nature of the architect's profession, their role in social development and the responsibility for the consequent impact of their activities. Because of the complexity of architectural education, verification of learning outcomes requires different forms of student assessment appropriate to the categories of knowledge, skills or social competencies to which these outcomes relate.

Learning achievements in the category of skills in design courses are verified by evaluating the completed project, including periodic reviews, as well as by assessing the level of student creativity demonstrated during the design process, and direct individual and team consultations implemented using a master-apprentice formula, which allows the recognition of the individual abilities of the student. Putting the master-apprentice formula into practice enables the graduate to apply the experience gained during studies to formulate conclusions about design in an interdisciplinary context. This formula trains students in analytical methods to formulate and solve design issues.

As a result of education based on the master-apprentice method, the graduate is able to:

- a) Take up creative activity in architectural and urban design.
- b) Gain professional qualifications.
- c) Perform independently in construction and design, and to manage construction works in architecture.
- d) Co-ordinate the work of interdisciplinary design teams.
- e) Manage design studio architectural and urban planning, independently conduct business activity, where they solve functional, construction, engineering and technological problems to the extent of ensuring safety and comfort in the use of the designed facilities.
- f) Undertake scientific activity.
- g) Apply the principles of professional ethics, as well as present a dignified/ethical professional attitude.

DISCUSSION AND CONCLUSIONS

In view of the above and trends in architectural education, the *master* in 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 in the contemporary city, a *master*, tutor or supervisor ought to be a person equipped to invent, design and finalise the construction process.

The master works actively in the profession, every day they solve matters related to both the conceptual design and the implementation of the design; as well as preparation and co-ordination of technical documentation with relevant institutions; obtaining building permit decisions; carrying on supervision during the construction phase; and being familiar with procedures for commissioning the facility. Only such a person may legitimately answer the questions bothering the apprentice. Only such a person shows them the correct solutions or looks for alternatives to unravel a particular design problem due to their proficiency in the profession.

The rife practice in European faculties of architecture where architectural design is taught by supervisors with only theoretical knowledge, without or with only meagre 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 working legally as an architect, appears incomprehensible or even bizarre. How can theoreticians teach a practical profession?

To illustrate the matter of doubt, the author could 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 design problem with the student, but only directs a student to literature, where they probably will find a solution, be named the *master* in architectural education? The present imbalance 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 of students, seems to be irresponsible.

Does teaching of architecture reflect standards imposed by the teaching methodologies of European schools, where the teacher's expertise comes from textbooks and often outdated sources? The results of such an architecture education might be observed after the graduation of students and while the young architects attempt to enter the labour market.

There are complaints from practitioners in the field that students are unprepared for practice [13], that the educational process fails to successfully prepare an architect to practise. Architectural offices and professional designers report that

although most graduates have a satisfying level of computer graphics abilities, few know the principles of correct design, and the application of relevant regulations shaping the three-dimensional space while controlling the use of designed objects.

Studies of architecture in most European faculties take between six and ten semesters (Bachelor's and Master's degrees). If such alarming results of this education system are observed as discussed above, it might be stated that architectural education as it is at present is a waste of time for apprentices. Whatever ...*a university is probably not the best home for an architectural school* [13], and the master-apprentice relationship should be carried on in design offices or workshops instead of at educational institutions.

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