

Discovering the Personal Reason for Architecture Education

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Abstract:

This paper is going to discuss architectural knowledge, as the architect's personal knowledge that is acquired through his/her life time, with the guidance of Michael Polanyi's theory of Personal Knowledge. In this regard, an architect's personal knowledge would briefly be described as the collection of his/her memories acquired through personal experiences which is improved by the way s/he integrates available information about the objects of that experience. Parallel to Polanyi's argument that all knowledge is personal, which means that learning is indeed an individual process; the idea should be to make the students discover their own reasons for enlarging their personal knowledge.

As Polanyi argues for all the educated people, who have developed their own personal methods for comprehending the meaningful wholes, the architects learn, assimilate and internalize information that they meet within their experiences with them. This experience does not only necessitate the designing skill that they gather by the help of their coaches in design studios; but, also the skill of understanding all the aspects of an existing architectural whole and comprehending that whole. The important thing is that such an improvement of the creative skills of an architect cannot be limited with the school years of academic training; because, the act of comprehension and therefore, experiencing architecture does not end at any time unless mental

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powers are lost. As the major form of cognition in learning how to design, learning by experience, a major part of which is tacit, occurs together with the act of taking one's own responsibility for learning.

Following these arguments, this paper considers architectural design education as a means for exploring and discovering one's own world through his/her personal knowledge and has much more to do with an internal power of the will to comprehend the world than with the power of the will to be a 'high cumulative student'. However such a point of view does not always shape the behaviors of the studio professors. This paper declares about the impressions that although there are plenty of studies that have been continuing to emphasize the inconsistent personal backgrounds and viewpoints of the students who are beginning architectural education, there might be a persisting false assumption in this regard. The paper is going to give the clues and argue about the general assumptions that continue to persist concerning the confusion between the responsibility of the students on choosing their educational life on architecture and their responsibility for being passionate for participating in the world of architecture. Becoming a part of the world of architecture necessitates experiences of comprehension of that world, which most probably would not have started before architectural education.

Keywords: beginning architectural education, creativity, tacit knowledge, act of comprehension, heuristic passion

Main Text:

The experience based learning as the characteristic of architecture education makes it necessary to adopt the development of architectural knowledge as a life-long learning process. As Duffy also states, a large portion of architectural knowledge is practical.¹ The development of behaviors and skills especially in practical design thinking is the consequence of personal experiences the knowledge of which is mostly inexplicable (tacit). As Polanyi defines, tacit knowledge is basically the inexplicable knowledge that is acquired over a long period of time

¹ F. Duffy, "Education in Architecture." *Educating Architects* (London: Academy Editions, 1995: 120)

with the joint weight of all personal memories of observations and experiences.² According to Polanyi's theory of Personal Knowledge, the act of comprehension is the means to develop personal knowledge, a big portion of which is tacit.³

With regards to this discussion, having the characteristic of being mostly practical, architectural knowledge is indeed personal knowledge, which is developed progressively through life-time. This means that the distinguished educational periods of life as the pre-university, university, professional practice and so forth are not less or more important than each other for the personal knowledge development. Accordingly, the pre-university period of the students of architecture, for having a very important role in their personal knowledge development with their habits of comprehension, and skills for creative thinking deserves considerable attention for those who are interested in architecture education, especially the studio tutors.

When the concern is the insufficient personal education of the pre-university period, it is proper to look at common criticisms on institutional architecture education in Turkey. In order to understand the discussions for the case in Turkey, drawing a timeline might be a proper way to follow for understanding the external supports on personal knowledge development of an architect with the successive periods of pre-university, university, after university, and professionalism (practice and maturity) when the architects' life-long learning is considered. When we look at this timeline as a whole we would see that it is not proper to claim that architecture education starts at the university education period. It is a common consciousness in Turkey that the students of architecture are not ready to comprehend the aims and the scope of architectural education, which inevitably includes the development of the creative thinking skill. It is also a fact that in Turkey, it would be a total misassumption that the students of architecture know what they want and what they will encounter in architectural education even if they have willingly decided to become an architect. It is also important to note that a willful decision of architecture education is not usually the case when the students have more than one choice for their intended professions about which they know quite a few.

² :M. Polanyi, "Knowing and Being." *Knowing and Being: Essays by Michael Polanyi* (Chicago: The University of Chicago Press, 1969: 165)

³ :M. Polanyi, "Understanding Ourselves." *The Study of Man* (Chicago: The University of Chicago Press, 1959: 29).

It is indeed commonly accepted that the pre-university period is a very important portion of the life-long learning process of the architects because of the significant differences in the education systems of the pre-university period and university period of architecture students. As T. Aytaç-Dural also underlines, the pre-university education has an exceptionally significant character of obstructing the creative free thinking of the students.⁴ Similarly, Denel states the students face every obstacle possible to dull their curiosity for their environments that is necessary for becoming a designer.⁵ Such an obstruction is very critical especially for the suppression it generates for the children at the age of their primary and secondary education that produces unbreakable obstacles for the improvement of their creative skills.⁶

This obstruction of the development of the creative skills can be explained with reference to Polanyi's theory of Personal Knowledge, which underlines the necessity of learning by comprehension as experience, for the internalization of information as knowledge. Looking through this direction it is visible that the information-based education system of the pre-university period, which generates the tendency to memorize with an overloaded curriculum by leaving no room for the student to improve creative skills, is also an obstruction for the improvement of personal knowledge. Following Aytaç-Dural's inferences for the distinctions of the pre-university and university periods; the 'learning act' by "passive listening" rather than "active participation", 'learning' from "ready information" rather than "exploration", 'evaluation' by means of "multiple-choice testing system" rather than "multiple authorities", and staying on the "safe ground" rather than "risk-taking", focusing on "success" rather than learning from "failure", generating the "self-centered child" rather than a "self-confident individual"; can by no means be legitimated on the grounds of Polanyi's theory of Personal Knowledge as a convenient

⁴ :T. Aytaç-Dural. *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (Ankara: METU Faculty of Architecture Press, 2002: 14)

⁵ B. Denel, "Temel Tasarım ve De i im." *Temel Tasarım/Temel E itim* (Ankara: METU Faculty of Architecture Press, 1998: 52)

⁶ Related with this Gropius asserts that "Creativeness in the growing child must be awakened through actual working with all kinds of materials in conjunction with training in free design." Moreover, adds he "...[i]mperceptibly guiding the child during the very difficult transition from play to work, the teacher – besides giving it the scientific facts and technical advice – must encourage him again and again by trying to stimulate his indigenous inspiration,"

::W. Gropius. *Scope of Total Architecture*, Ed. R. N. Anshen, (New York and Evanston: Harper & Row, Publishers, 1955: 44)

basement for improving personal knowledge.⁷ Indeed, none of the characteristics attributed to the pre-university education period either in school or in adults' guidance⁸ has aspects to generate a confidence for selecting and jumping into a not-given problem (a problem of their own), to generate a heuristic passion to constitute a heuristic act for a solution. Denel also agrees that the beginning architectural students, who are usually declined in their personality and used to accept everything that the instructors mention as 'true', also lack a very big amount of knowledge and skills for acting creatively.⁹

When these characteristics of the pre-university period are considered, the university years of architecture education appear as a transition period for the development path of personal knowledge. Especially the first year of this period deserves noteworthy attention as the turning point from the evaluation of memorized ready information to internalized personal knowledge. The transition of the first year architecture education may be interpreted as a re-introduction of the personal dimension of knowledge to the students, which is going to be a necessary part of the professional architectural knowledge that is the architect's personal knowledge.

At this point, it is proper to re-remind the possible misleading attitude of the first year studio tutors against the disinterest of the students in the design education, which is indeed a very natural consequence when their previous experiences, behaviors, habits, ways to succeed, and expectations are considered. It is apparent that looking from the Polanyi's point of view both the primary and secondary education that continues to build up the students' tacit powers in a different and opposing way than the architectural education. The problem is simply excluding the personal dimension from knowledge and dictating to students that everybody must know everything in the same objective way. A very clear evidence is the testing and examining system that is used during the secondary education, which are evaluated by a single answer key, with questions that must have only one answer that should be given in the same way by each student,

⁷ Aytay-Dural, *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (2002: 16-9)

⁸ As Aytay-Dural quotes from Torrance and Denel in *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (2002: 14), according to both, adults have a tendency to obstruct the creative side of children by discouraging them from free thinking.

E. P. Torrance. *Guiding Creative Talent*, (New Jersey: Prentice-Hall, Inc., 1962: 13)

B. Denel. *Temel Tasarım ve Yaratıcılık*, (Ankara: ODTÜ Mimarlık Fakültesi, 1981: x)

⁹ Denel, "Temel Tasarım ve De i im." (1998: 48)

where it is still possible to cheat in the exams instead of memorizing the expected “only one” answer, both of which have no cognitive value at all for the development of personal knowledge of the students, especially in the way that Polanyi asserts. We see that as a consequence the students do not have a habit of having their own ideas, because what is expected, evaluated, and graded is not personal ideas and knowledge but the expected answer keys; they have not needed to have their personal knowledge. When this is the case, would not it be too much to expect from the first year students a completely conscious will for architecture education?

The scope of this paper is not to defend the unable situation of the students; on the contrary, it is expected to display the defeats and dangers of the current condition and the necessity to take precautions accordingly. One main problem that is believed to be of vital importance for the first year architecture education is the possible attitude of the professors that assumes the students being conscious and passionate about how to acquire architectural knowledge and having a ‘natural’ interest in this concern. The interesting point is that this attitude coexists with a common complaint about the insufficiency of the pre-university education especially in terms of not letting the students develop their own means for comprehending their environments and learning through it. It is apparent that it is expected from the students to fill this gap and behave accordingly. However, is it possible to say that there is a distinctly taken responsibility by the tutors to help them to fill it?

When the theory of Personal Knowledge of Polanyi is examined, it is understood that learning is a personal act and is a consequence of the act of comprehending a meaningful whole with all its subsidiary parts. States Polanyi, with the act of comprehending a new meaningful whole, its parts which we think we know also gains new meanings from which we learn different potentials of things in our environment. According to him this is the irrevocable enlargement of man’s world, which also means that s/he also changes his/her viewpoint, assumptions, belief in the new potentials of things.¹⁰ This means that looking from the Polanyian perspective, we may think that the courage to jump into a difficult and matchless problem, the ability to see the hidden behind the available, and the belief in the idea ‘impossible is nothing’, which are the fundamentals of the creative design skill, can only be the outcome of a developed personal knowledge, and personality with the ability to comprehend new meanings of life.

¹⁰ :M. Polanyi, "The Calling of Man." *The Study of Man* (Chicago: The University of Chicago Press, 1959: 67)

It is evident and also touched by Polanyi¹¹ that the basic needs of this skill are the passion to solve an original problem, which comes about as the heuristic act, and the passion to enlarge ones world to fill the gap between what s/he can do and want to do. Polanyi calls it the 'heuristic passion' with which the problem and the intended idea incubates in one's mind until reaching a satisfactory solution. Here the question is how it can be possible to have such a skill to ask an original problem and be passionate to solve it. It is possible to think that the desire to learn is the basic force that triggers this passion, which also renders the design process enjoyable. Whatever it is, the necessity is the motivation for this task. But, what is motivation? Why is it needed this urgently?

In order to answer these questions, we need to go back to the discussion of creativity. In order to be able to develop personal knowledge one has to act creatively, which means that one has to be able to understand new meanings of life through the act of comprehension. From the point of existential phenomenologist thinking, which is also adopted by Polanyi, it is the desire to feel one's own existence in life that keeps him/her motivated, and makes him/her discover him/herself.¹² This corresponds to being able to find the meanings of things in life, such as the works of art and architecture, and create new meanings as well, in order to prove his/her existence to him/herself.

Therefore, motivation needs the experience of the act of comprehension. For the professors the primary question that should be asked is about how it can be possible for the students to have a special interest in architecture when there is hardly a chance for them to have been experienced any act of architectural; let alone environmental comprehension. In this sense, it is believed that blaming the students for not knowing how to comprehend and for not being motivated would simply be an escape from the responsibility as tutors. The reason for this is that the students especially in Turkey most probably have not confronted a motive and a force to make them discover themselves, and their potentials for becoming creative personalities.

¹¹ :Polanyi, "Knowing and Being." (1969: 131-2)

¹² In light of the existential phenomenological influence, Polanyi states that the problem of pure objective knowledge can be studied only when the distinction between tacit and explicit knowledge and the decisive power of tacit knowledge is recognized. :Polanyi, "Understanding Ourselves." (1959: 12-13)

In *The Universal Traveler*, which as Denel suggests is not used in architecture education program in Turkey as a guide for the self-development of the creative ability; it is advised to be self-motivated to the design students. This means that Koberg and Bagnall's book considers the act of motivation for the solution of a problem, which is highly related with the argument of this study about the heuristic passion, as a responsibility of the student.¹³ This consideration appears quite relevant with the undertaking of the self-responsibility for learning; however, this does not mean that this issue should not be considered in the design of the exercises by the tutors. At least the students should be allowed to understand that they are expected to motivate themselves for their problem-solving processes. The book advises the students to take every problem as a challenge for self-motivation, which is called as "the generator of the process."¹⁴ It is important to note that Denel appears to be quite interested in the personal motivation in the design process; however, he has not offered any solution or proposition on developing and maintaining it.¹⁵

On the other hand, although it is not a common discussion for today's basic design education agenda, in the history of the basic design course, we see familiar intentions for achieving students' motivation for the creative behavior. For example, Itten has generated and applied several methods for providing what he calls "the necessary atmosphere for creativity." He has applied the idea of starting the instruction with a prayer or a song in order to "concentrate the students' wondering thoughts" and enabling their "mental and physical readiness for intensive work through relaxing, breathing and concentrating exercises."¹⁶ Such an attitude is interesting especially when considered with the time and context that it occurred; because, in the case of Bauhaus there was an obvious agreement for the need of a new attitude in the unification of the design thinking and mass production and an intellectually supported consciousness about the design thinking of our era in the students' minds such as the understanding of and opposition for the romantic individualism.¹⁷ Remembering the discussions about the problems of architecture

¹³ :D. Koberg and J. Bagnall. *The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving and the Process of Researching Goals*, (Menlo Park, CA: Crisp Publications, 2003: 11)

¹⁴ Koberg, *The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving and the Process of Researching Goals*, (2003: 17)

¹⁵ Denel, *Temel Tasarım ve Yaratıcılık*, (1981)

¹⁶ J. Itten. *Design and Form: The Basic Course at the Bauhaus*, (New York: Reinhold Publishing Corporation, 1964: 11)

¹⁷ As Dorner explains Bauhaus was an attraction point for those who wanted to find a new way of life after "catastrophe of 1918" in contrast to those who were clung to the past. This explains that there was a strong motive

education in Turkey today, it is clear that the case is not the same with that of the post-war Germany and a need for motivation for making architecture an aid for personal knowledge development is much more necessary than that of Itten's time.

Blaming the students for not having an interest in architecture is an attitude that disregards their educational behaviors, let alone their underdeveloped skills of comprehension. It must be admitted that it is usually if not always the first time that the students question what architectural comprehension is, in the first year of architecture education in the university. Having chosen and decided to become an architect and having entered the department, it is the students' task to develop their skills for comprehending architectural meanings, which is the only way to have a real interest and passion to become an architect. It is far more than the will to be a successful person; it is the discovery of ones self and knowledge through the medium of architecture. As a design studio tutor with five years of experience¹⁸, I can see that, in most of the cases even when the students appear to be very keen on their projects and design problems, their most sensitive concern is the grading of their tutors, not only for the beginning architecture students but also for the third or fourth year students. This means that the most important motive of the students is still the high grades they get at the end of their design studio courses. This might be the consequence of the unconscious conversion of the unquestioned criteria for praise or criticism into rules of success in the design studios. In other words this might be the consequence of the tutors' habit of motivating or applying sanctions with grades rather than providing the proper circumstances for personal motivation of problem solving and self-development.

for the first group because of their extreme fraction from the second in the so called "confused period of the Post-War Germany," as Dorner expresses, even for those from outside Germany in: A. Dorner, "The Background of the Bauhaus." *Bauhaus* (Boston: Charles T. Branford Company, 1952: 9)

¹⁸ Research assistance from 2003 to 2006 in the third year architectural design studio at Middle East Technical University (METU), Department of Architecture, and research assistance since 2006 for the first year basic design architectural design courses at Gazi University, Department of Architecture.

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