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**TITLE: EXPERIMENTATION VERSUS READY-
KNOWLEDGE**

EXPERIMENTATION VERSUS READY-KNOWLEDGE

In the field of architectural education, acceleration in spread of knowledge, paradigms, methods have been increasing and classroom of architectural school transforms as nomadic classrooms visa verse the world has become a big classroom for the students.

Tschumi argued that architectural school is a place as laboratories of experimentations (**Leach;2007**). This point of view has shifted classroom to laboratories and ready-knowledge to experimentation. In the article, the term of laboratories and experimentation and their reciprocal relation will discuss related to our experience on Design Studies I Course at the first year of first semester design course. It is aimed to explore how it could be designed at first “snapshot” -first year, Under the two main titles, three basic questions on the first year design education will discuss as sub-titles. These are;

Which kind of topics may be discussed in first year design education?

How shall we design first year design studio as an educator?

What are the expectations from first year design education?

Process of study in the laboratories depends on individual’s explorations in order to find “new-knowledge” within a new way of thinking. The first year design education deal with exploration of how architecture speaks with the basic concepts, and what the language of architecture is. Schedule of the first semester is planned weekly and that provide to provoke student’s wonder. The weekly schedule provides to keep student’s interest fresh. We believe that wondering is the first step of learning and internalizing of knowledge. Each individual’s wonder makes him or her to explore concepts and language of architecture deeply. The last step of learning will focus on comprehension, understanding of new language, and specially understanding of themselves. Topics of first semester are; what geometry is, reading city on geometry, balance, and structure dealing with proportion of bodies, texture, and light, as a material art, and architecture relation dealing with concepts of configuration instead of composition.

Concepts could not understand without individual's intuition, which it needs to be developed. The ways intuitive thinking depends on experimentation in order to comprehend the concepts of design, which they are unaccustomed for first year students. Main aim of experimentation-based learning is to develop one's self-knowledge including intuition without denying the importance of rational thinking. Each way helps the student to find his or her own thinking way. Intuitive way of thinking gives opportunity to control the choices. Intuitive way of thinking needs experimentation, forming, re-forming, re-thinking relating such a spoiling, and re-making process. In the way of thinking, it could be understood as instead of diachronic way of thinking, it is a kind of synchronic understanding between topics. Intuitive thinking differentiate from rational thinking on that it does not depend on reaching to false and true solutions at the end of the creative process, it depends on gained experience. Experimentation is gained with the shared experiences between participants of the first year design laboratories who are educators, students. That means in the design laboratories, there are no masters, and learners in a conventional way that linear communication between teachers and students, there are less experienced and more experienced designers even though educator may have more awareness because of his/her gained experience.

Finally, we believe that architectural education could not be structured separated independent semester modules. The whole education process should be thought as a continuous process, but it is not within a linear evolutionary progress. Every step of design laboratories must be designed on more gained experience and each design module become a new experience spaces. The importance of the first year let student to learn how the way of thinking might be for the creative design process. The next step does not depend on more and more complex problem solving, moreover it depends more experimentations. As a conclusion, we agree with Socrates' idea that; *"teaching and learning is a sort of remembering"*

EXPERIMENTATION VERSUS READY-KNOWLEDGE

Nowadays all arguments, discussions, theories, paradigms, in the area of education, science, media, increasingly are dealing with the terms of “knowledge”, “ self-knowledge”, “new knowledge”, know-how” in the information society where we are living in. Information society can be characterized by bombarding proliferation of information. All the information flow on our desk via screen of computers and makes us a wanderers and nomadic when we are sitting in the front of desks on our immobile chairs. World becomes a turning sphere around us and carries all the information to us. The new condition makes us bounded with new images and information around and transforms us a placeless and context-less modern nomad who is looking at placeless and context-less information during his/her journey feeding from global information systems. “...*The principal danger of information technology is its seductive tendency to stand in for embodied experience...*” (McCaan;2005) How the phenomenon should comprehend clearly? Either the phenomenon acknowledge is totally affecting negatively by the split of space-time, the split of mind-body and displace us from our “place” or these phenomenon acknowledge totally affecting positively by bringing new enlightenment on essence of knowledge of it. Answer of such a complex question is amidst positive and negative approaches. This kind of information might be positive if we are aware of it is ready-knowledge and is needed filtering and is transformed to the new knowledge of ones, which is the inevitable core problem of architectural education.

The world of architectural images and the information can be collected easily via “Google,” and it makes make architectural schools as modern nomadic classrooms, and let student to be a wanderer of ready-knowledge within. Even students can reach easily to ready-knowledge out of architectural classes and world become a big classroom for the students (Leach;2007). Information is taken from the internet as form of linguistic relationship and images without any experience. As it is mentioned above, the subtle danger of ready-knowledge is being non-filtered. If it is not filtered, students may lose themselves in such bombarding information. Additionally another cardinal problem about ready-knowledge via global information network is that it is not involved experience of the self. It seems that recently architectural schools

are facing this situation and role of the architectural school becomes more important than before, in order to transform information or – ready knowledge to new knowledge, which involves self-experience. In the article, it will be argued that architectural schools should focus on new-knowledge or self-knowledge is, and how student can gain it as they are living in the information society.

The basic purpose of education can be defined generally that getting knowledge, evaluation of self-knowledge and acquisition of know-how in a proper teaching methods. Besides basic aim of all disciplines of education, architectural education, especially design education focus on creativity throughout creative teaching-learning ways that makes unique. There is reciprocal interaction between teaching-learning process on creativity and matter of teaching is what design is. Teaching and learning process of creativity is not a kind of transmitting of knowledge from educator to student, it involves creating, experimenting, searching process as same as design process of itself (**Yürekli;2007**). Benefit of such a process is to gain self-knowledge based on experimentation different from ready-knowledge. The main aim of experimentation is to develop student's self-knowledge which covers intuitive knowledge via self-experience beside basic rational knowledge. What is the intuitive knowledge and what is the importance on architectural design education? Locke argued, intuition is the most clear and comprehensible knowledge that is not need any other concept or idea for explanation (**Locke;1996**). Kant related to a priori knowledge as beforehand of all concepts with intuition and amplified throughout mathematics":...*Which of the various features exhibited by the empirically constructed figure are allowable grounds of inference? ...the only guides in decisions are the axioms, and theorems of geometry. But before we can use the intuitional X to provide a ground for the synthesis expressed in the axioms, we must have those very axioms in order to determines what X is ...*" (**Coffa,1991:46**).

Experience is the kind of knowledge only is obtained by doing, making, participating, and feelings and never can be transferred from person to person. Experience is a sort of knowledge that can be comprehended within time-space context. The unique character of experience is being in the flux of knowing; flux of existence and flux of meaning (**Güney; 2003**). Bergson explains while rational

knowledge puts absolute principles time goes by and is transformed the absolute principles. Understanding of the time is only possible with the benefit of intuition (**Prigogine,Stengers;1995**). Thereby the obtained self-knowledge constantly will be in change instead of being a kind of stable ready-knowledge.

Experimentation-based teaching and learning in architecture is nourished by many disciplines of knowledge borrowed from poetry, cinema, and drama in order to enrich student inner-world. As Aydınli mentioned that learning by experience need metaphorical thinking which requires a new way of thinking (Aydınli;2007). As a volunteer intervention of the other disciplines, creates architecture meta-language that the new ways of characterizing the reality as it is matter of design. Thinking on meta-language may help to transform the ready-knowledge and given concepts about design issues to self-knowledge which needs critical thinking.

All it is mentioned above about obtainable self-knowledge needs a special space. We believe that place of experimentation in architectural education is design studio as a core of architectural education. For the first year, first semester design studio is a place of “snapshot” point or a welcoming space of architecture at first time for the students. We prefer design studio is a kind of laboratories by the use of analogy between scientific researches and creative process. A laboratory is a space, which fitted with equipment for scientific experimentation and pertaining to methods applied in. As far as understanding of equipment of design laboratories are designed education tools and laboratories are a space of exploration of new-knowledge and for architecture education a space of exploration of self by the way of experience. Process of searching in design laboratories allows the students to explore new way of thinking and explore his or her self-knowledge within interactive milieu. New situations, interactions with educator or participants of the studio, especially within space-time context, let the student to explore his or her ways of thinking by discussing, searching, making, feeling; observing, touching, and perception. This process might be called non-linear process versus linear one. While searching a design issues into the design laboratories, students mind can walk within a sort of intricate path similar to web which there are so many sub-paths. These sort of paths let them to lose into it and there is more than expected

decision point along the design journey. Whenever student meets with a decision point into a web, they need the intuitive knowledge. For such a design process, it is not aimed to reach a profound result. Learning can be obtained during and within the processes of itself as an exploration. As Wittgenstein argued that experimental learning method let us to think that what kind of tools we have for solving to annoying problem (**Wittgenstein,1998**).

All explanation shows us the role of intuitive knowledge is the core of the creative learning beside rational knowledge, which can be gained with experimentation. In design laboratories, exploration is the target of the individual creativity. There is a subtle point that the success of the each student exploration or getting their own self-knowledge depends on proper design methods designed by educators.

The first year design laboratory is the most important year in the education in virtue of being as a snapshot point for student with the architecture. Students encounter with language of architecture in the world of architecture and start to look from the frame of the architecture. At the first year design, laboratories as it are locus of experimentation, student start to obtain the heuristic ways of thinking, evaluating, judging. As being a design laboratories educator, we are trying to apply what we explain in the above as a design laboratories method. In the rest of the article, our first year design experience will be explained.

The first year design laboratory is designed the on answers of these three questions:

- 1-Which kind of topics may be discussed in first year design education? (On Content)
- 2-How shall we design first year design studio as an educator? (On Methods)
- 3-What are the expectations from first year design education? (On Target)

On Content

Generally, most of the architectural schools start with Basic Design Course, which is an inheritance of Bauhaus School. The content of the basic design course is rooted from Bauhaus based on language

of architecture translated to abstract Euclidian shapes and forms during we percept them. The course of main aim is uncovering the secondary qualities of design object by dividing in two under dualistic approach. We believe that experimentation-based learning and teaching subsume primary and secondary qualities of the design object under the holistic approach. Selection of the topics of the course based on awareness of primary and secondary qualities of the designed and design object at the first year first semester in architectural design laboratory.

First year first semester design course content is designed for the students to understand what the core design concepts are and to experience of them. Basic topics of the semester are related to comprehend the geometry via poems, city, second is relation between art and architecture, and using basic concept as opposite concepts pairs of art, like unity and variety, rhythm and emphasis, harmony and contrast. The third topic is exploration of the body via balance and principles of structure, the fourth topic is experience of the surfaces, material and light.

First topic is understanding of what the geometry is and meaning of geometry is via poems and literature and drama. Using poems and drama for explanation of what geometry is allow student to think metaphorically. The assignment of the student is to observe the city where they live in order to uncover of hidden geometry while they are smelling, touching, seeing, and hearing the city. What is the translation of a dome in the world of geometry or what is the perceptual world if translated into geometry. The final mission is to present their images what the city told them and what they heard from the city.

Second topic depends on understanding of relation between art and architecture. Basic opposite concept pairs of art are explained and discussed like unity, variety, rhythm, emphasis, harmony, and contrast supporting with literature, drama. Assignment of the topic is given to create the abstract concepts within a third dimensional configuration instead of two-dimensional composition (Figure 1).

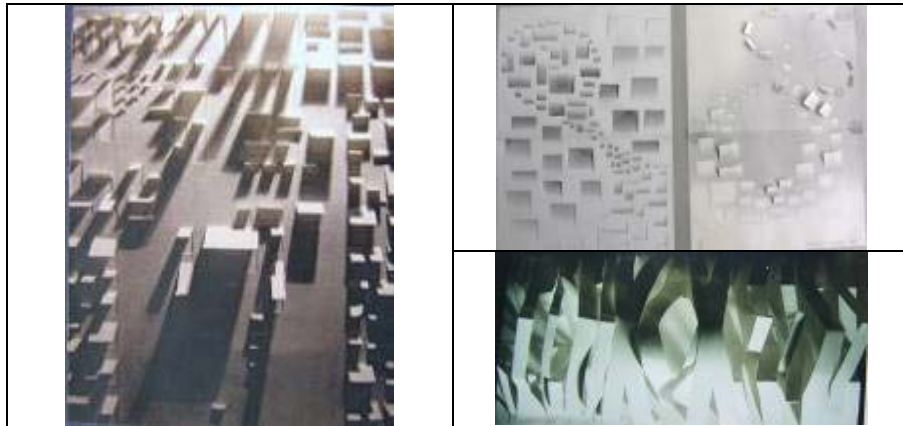


Figure 1. Examples of unity and variety, rhythm and emphasis, harmony and contrast experiments

Third topic is to exploration of the body in order to comprehend what balance and principles of structure is. They are asked to discover a stable position with one or two bodies referring an unsupported structure and represent the position in third-dimensional model (Figure 2).

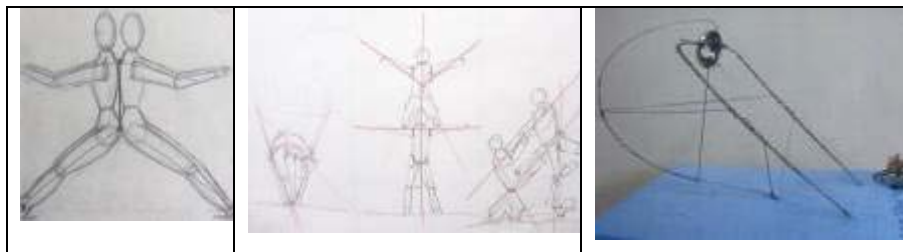


Figure 2. Examples of exploration of the body

Next step is experience of surfaces, material, and light. The topics depend on exploration on material search and explanation of texture and pattern and combination of material (Figure 3). Same texture and pattern effects are studied with different basic material like wooden, metal, and transparent materials and under the daylight and artificial light. Final step of the topic is making a montage from previous images and transform them in to get a new image (Figure 4).



Figure 3. Examples of exploration of texture and pattern and combination of material.



Figure 4. Examples of montage

On Method

As it is mentioned above, we believe that the aim of the experimental design learning process is needed to design method and tool of the design studio. As well as known learning depends on wonder, to be oriented, aware of, understanding and cognition phase. Schedule of the first semester is planned weekly and that provide to provoke student's wonder and flexible way of thinking. Weekly schedule provides to keep student's interest fresh. We believe that wondering is the first step of learning. Each individual's wonder makes him or her to explore concepts and language of architecture deeply. All term and basic terminology of the weekly topic is discussed in the laboratories and produce many question about the design topics supported by literature and drama. The aim of the assignment related to the week of the topic is to give students an opportunity, sort of explorations and to obtain experience. Implementation abstract concepts to their assignment become designing embodied self-knowledge and understanding. We never expect them to reach perfect level of complementation of his or her assignment. Student can face so many difficulties during the design process. Surprisingly when they face the difficulties they have obtain individual self-knowledge unconsciously. *“My concern about the information society and “new knowledge” is that*

it leaves less room for the discernment of the emotional world. The world is not black and white. Difficulty is the beginning of color, richness, depth, and resonance. And difficulty is the birthplace of the modern soul.” Importance of the difficulty open the door of creativity (Lewitt;2005). Because of these we encourage the student to face the difficulties of design issues in order to improve their creativity.

On Target

Finally, designed content and method’s main target is to donate student with their self-knowledge in a way of self-exploration. While experimentation-based teaching and learning depends on gained self-knowledge, they experience their creative potential via educators, friends, and themselves. We as educators, always let student believe themselves they can do and creativity can be learned and gain with such a proper teaching learning experience. It is obvious that creating ‘new’ needs an embodied mind built with experience. Instead of representational modes, embodied minds should experience the reflections of new knowledge, which means self. Self-knowledge has not any due for making the right action but it should be experienced the all aspects of decision-making process. Students tend to follow true-false acceptations, but experience has a great power to reach their self-knowledge. By this way, they can explore the hidden dimensions of decision-making process during understanding of the problem instead of solving it. Student should experience what makes him or her move. This evocation both in mind and in intuition is what we are really looking for.

Conclusion

As a conclusion, in architectural education especially in the first year design laboratories should focus on obtainable self-knowledge, which depends on experience, intuition, metaphorical thinking, and critical thinking in self-mind. The unique point of the self-knowledge is being in the flux vise verse ready-knowledge.

Being members of the information society as an educator or a student make us to focus on what knowledge of itself is. Architectural education could not be far away from this situation. Bounded with context-less and placeless information and being a

flesh who percept the world throughout smelling, touching, seeing, hearing it cannot be understood that cause a totally confliction. It needs to improve student's sensational world by experimentation. Students should aware that knowledge needs a place and time context in order to obtain critical way of thinking. Locus of knowledge should be placed in their sense and mind within a flux in order to transform what they gain as their own self-knowledge in the first year to the next levels.

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