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BEGINNING FROM THE BEGINNING

The Dynamic Character of Beginning Design Education

*"The only constant is change".
Heraclitus*

Abstract

The significance of the first year is obvious even when we simply ask ourselves "Why don't we feel the need to organize a congress on second or third year education?". As in the case of a building, the foundation should be firm enough to carry the rest otherwise it collapses. But the process of designing the first year design education is much more complicated when compared to the building foundation, that's why we keep on asking this "how to" question.

After working on any subject for more than two decades one may come to a point of saturation, however this can never happen in Beginning Design Education. One should keep questioning her/himself as the instructor and search for ways of updating the curriculum. That is the 'pain' and 'joy' of teaching beginners: one should begin from the scratch each and every year.

This paper/presentation aims to reveal the constants and variables of the beginning design education and demonstrate a collection of works representing different dimensions of change experienced throughout the years within a wide range. After mentioning the content- that is the basic concepts and principles of design- as the constant, the variables will be disclosed with reference to the structure, method, teaching staff, physical/social environment and context of the course(s).

The crucial role of the first year experience as a transition period will also be investigated in relation to the pedagogical issues and changing student profile with concrete examples. The thinking preferences and learning habits of students will be disclosed with reference to 'The Four Quadrant Brain Model' put forward by Ned Hermann. In addition to the objectives to be achieved by the end of the first year the transformation in the mindset and behaviour of the students will be discussed.

This paper/presentation is structured as if it is a “Basic Design assignment” and will claim that the first year design education can be designed according to the fundamental concepts and principles of design. By way of this misconception of Basic Design Course as a process of “cut and paste operation” will be criticized and its comprehension as a process of constituting the whole with the concern for the properties of the elements will be stressed. Consequently the paper will present the constants of the first year with an intense emphasis on its dynamic character, as in the case of a ‘variations on a theme’ exercise for the students.

Key words: Beginning design education, design principles, organization, thinking preferences and learning habits of the students.

“Pain” of beginning: *Organization of the content*

The ‘Basic Design’ teaching offers a system of thinking that enables one to maintain logical relations in between the elements of any given subject hence is applicable anywhere including the organization of a course. We can approach the problem of designing the first year design education as such and may attempt to solve this problem as if it is a “basic design assignment”; now the question is to make a multi-dimensional composition.

In order to achieve a successful composition the designer has to identify its elements and determine their properties carefully. S/he should organize these elements according to a generating agent in an orderly manner in such a way that the rules and principles are legible. Above all the composition needs to have a theme.

If we are after composing the Basic Design Course we can focus on its content as the main theme, and discuss different ways of introducing the fundamental topics as the variations on that theme. The main topics of the course can be stated as *the types of organization, the conditions that facilitate perception, the properties of elements and the ordering principles of design*; and these are **constant**. The variables in this respect come into the scene with modifications on the course outline; that is the change in the configuration of the course with respect to the order of the subjects

to be introduced and consequently the assignments to be given throughout the year.

For any composition to be accomplished properly we need to begin with a scheme, known as ‘bubble diagram’ for design studies and this scheme usually calls for a generating agent. One of the constant topics may guide us in this respect: *‘the types of organization’* can be referred when determining the general layout of the course. If any composition is expected to generate form a point, a line or a coordinate system, the course program can be prepared on a similar basis.

It is usually the ‘line’ that establishes the flow of subjects in conventional education systems. However the beginning design experience does not necessarily require a sequential system of learning in contrast to many other courses, even for those in the programmes of design schools. The only thing that goes along a line is the increase in the number of issues to be controlled. Still there is room for a ‘linear organization’, which starts with two-dimensional exercises followed by relief work and terminates with three-dimensional ones until the conception of space comes into the agenda. The *‘ordering principles of design’* are repeated at each step with reference to previous exercises thus the students are provided a chance to think over the fundamental concepts at certain intervals.

We can organize the same course in such a way that the exercises can be designed around a ‘point’, where the concepts stand for the generating agent. Whenever we mention a composition that develops around a point, ‘centralized’ and/or ‘radial’ arrangement of elements occurs to the mind but we should beware of the plain use of this description since it may reduce the high level of conceptuality in “basic design” to mere visuality. As a matter of fact what we mean by ‘centralized organization’ here is related with the generating position of the concept as in the case of a point. One of the *‘ordering principles of design’* is selected and the type of relation between the elements of the compositions produced in different media is revised with consecutive exercises until the significance of these principles in spatial organization is clearly comprehended. Thus the students realize the translation of abstract concepts into real situations.

Neither the point nor the line simply by itself as the generating agent is enough to organize the beginning design course curriculum. ‘Coordinate system’, as a third agent for generating a composition is almost a must for introducing such a multi-dimensional system of thinking. The ordering principles of design: *balance, contrast, harmony, repetition, dominance* and *hierarchy*, each of which indicating one of the basic types of relations between the elements of a composition, the conditions that facilitate perception: *similarity, proximity, continuity* and *closure*, known as Gestalt principles, should be studied simultaneously. Therefore all the exercises no matter what the generating agent is should be designed to discuss the conditions for grouping the elements and their properties in a composition together with the ordering principles.

Organizing such a complex network of relations requires a tremendous effort to clearly distinguish the definition of certain concepts as they appear within different contexts. Therefore cross-references are of utmost importance and the exercises should be designed in such a way to avoid confusion and misconception.

If we are to give an example in this respect the multiple use of ‘line’ as a word can be mentioned. Line may be a generating agent to determine the location of elements in a composition so is the subject of ‘types of organization’. It is used to maintain continuity thus should be studied within the context of ‘Gestalt Principles’. We refer to “invisible lines” while structuring the composition, consequently the significance of these lines are discussed in relation to the ‘ordering principles of design’. And finally linearity is stated as a ‘visual attribute’ of any design element. The miscellaneous use of each and every single word has to be clarified in the minds of the beginners while forming their professional vocabulary.

“Great expectations”: *discovering the properties of elements*

While making a composition, if we have the chance we can determine its elements; but if we have to work with the already given ones we should make a thorough analysis to discover their properties. The properties of the inanimate elements of any design product are obvious and explicable therefore can be managed more easily. On the other hand when approached as a ‘basic design

problem' the elements of the beginning design course are living beings. Therefore analysing the physical properties do not suffice to solve the problem; one should care for the personal characteristics of the students and try to discover their hidden dimensions. Similarly determining the teaching staff for the first year needs an extra concern to achieve a good composition.

In two or three-dimensional compositions the *visual* and *topological* properties of a single element can basically be studied with reference to *size, shape/form, colour and texture, and position, orientation and visual inertia* respectively. In the case of students, when supposed to be the elements of our composition, other attributes come into the scene. Among number of characteristics, personal and/or common, their changing learning habits appear as a significant tool to modify the course program.

The education method, which can be defined as “learning by doing”, is **constant** and the variations depend on the changing characteristics of each class. Both the class as a whole and the students constituting the class one by one should be analysed and recognized according to their learning habits and behaviour patterns.

It is a commonly agreed observation that the beginners in general are displaying similar symptoms of a memory-based education system rooted during the pre-university years. Knowledge is assessed by means of multiple-choice tests, which totally disregards the development of analytical mind. Manual and artistic skills are ignored; and parents provide no room for the maturation of their children. As a matter of fact the beginners are subject to a significant transformation that should be orchestrated by the teaching staff of the first year. This needs to maintain the delicate balance between a motherly attitude and professional expertise.

When the relation between the teaching staff and the class as a whole is concerned ‘transformation’ is **constant**, however in each class different issues require different degrees of emphasis. The variables in this respect can be determined with reference to the expected achievements.

The memory-based system does not prepare the students for active participation in the course. The tendency to accept what the teacher says as the absolute truth results with a failure in design education. So if the majority of the students in a class are suffering from the consequences of 'learning by doing' method, lecturing more frequently and giving concrete examples may help. This does not mean to give up discussing on their own products and propose direct solutions to the given problems, but to explain how they can handle the process of design more explicitly. Still they are expected to be active participants rather than passive listeners.

Making research is underestimated during the secondary school years. This results with students waiting for ready information and if we are in front of a class as such the assignments should be designed to raise curiosity so to encourage them for exploration. Their fields of interest may be a remedy; therefore it is of utmost importance to follow the subjects up-to-the-minute in the world of the youngsters. Once they enjoy learning by themselves they may prefer exploration to ready information.

The most critical situation, which is at the same time the most common one, is the habit of attaining the correct answer by eliminating the wrong ones; that is the outcome of multiple-choice system. The design education, on the contrary is based on the multiplicity of solutions as well as authorities and this creates great confusion in the minds of the students. In order to break the illusion created by a single authority, but keeping on with the system they are accustomed number of instructors proposing different critics may help. Numbers of choices are offered but the students have to make the synthesis of what the authorities say. While discussing the alternatives both the illusion of 'instructor as a hero/ine' and the fallacy related with the singularity of the solution can be eliminated.

The beginners obsessed by the university exam, which does not tolerate any mistake, are not ready to take risks hence hesitate to produce until their ideas are fully approved. This is an impossible situation for design education. On the other hand, they are all successful students unable to endure failure. Especially at the beginning group works may have great contribution for them to overcome the fear of design. They share the success and failure and do not feel humiliated hence gain the courage to produce even when

they work individually. Forming balanced groups considering the personal traits of the members have positive reflection both on the product and the behaviours of the students.

The first year at the university is a period of transition during which the self-centred kids are expected to transform into self-confident individuals. The pedagogical approach of the teaching staff is of utmost importance; each and every student has to be recognized with his/her special characteristics and this takes time. So at the beginning we can concentrate on their *thinking preferences* and *learning habits*. Ned Herrmann's "four-quadrant brain model" and the research by Edward and Monika Lumsdaine on "creative thinking" may cast light on our attempt to initiate understanding the students. Even though it is important to know each of them individually having a general idea on their preferences help to find out the different groups and appropriate the curriculum.

According to Herrmann's "four-quadrant brain model", the students' dominant learning modes match either one of these quadrants. Design education needs the synchronized functioning of all these quadrants with the emphasis on either one of them for the development of different skills. Herrmann himself says "A *balanced view between wholeness and specialization is the key: The brain is designed to be whole, but at the same time we can and must learn to appreciate our brain's uniqueness and that of others* (in Lumsdaine E. and Lumsdaine M., 1995)".

Learning the thinking preferences of students and making them realize their uniqueness is very important to accomplish the process of transformation successfully. Those students with dominant upper-left quadrant prefer "External Learning", so lecturing with reference to concrete examples provides the opportunity for addressing such students. This should not mean to show the solution of the given problem but a systematic explanation of the concepts with visual examples of other fields would work. Once they are able to find the correlation between an abstract composition and a piece of music, for instance, it becomes easier to cope with all sorts of design problems.

The students with dominant upper-right quadrant prefer to learn through "Internal Learning". Their artistic talents, insights and

visualization abilities are much more developed than the others. Those exercises freed from rules and principles let them express themselves as they like, however all those discussed until then will inevitably be guiding their work.

The lower-left quadrant requires “Procedural Learning”; the students as such are good with testing and hands-on exercises, they have a practical viewpoint and developed manual skills. Instead of listening lectures or reading for hours they prefer to put their ideas into practice. However they have the tendency to complete the assignment as soon as possible but without spending much time on the essential aspects of the problem, contrary to the internal learners who wait for the angel of inspiration for days. Those students that approach the design work like filling in a checklist need to produce many works until they discover something exciting during this process of repetition, otherwise they come up with ordinary projects presented precisely.

Finally it is the “Interactive Learning” that matches with the lower-right quadrant of the brain. This type of students learn from experience, feedback, discussion and values. It is a must to have long discussions in design education however these students prefer talking to making. Time limitation comes out to be a remedy for such students as well as for those waiting for inspiration¹.

Lumsdaines (1995) argue, “*Effective teachers have discovered ways of incorporating each one of these learning modes into their teaching strategies. This goal is not always easy to achieve when the instructor may have strong thinking preferences in only one or two quadrants*”. It is even harder in design education that requires the co-functioning of all four quadrants. So the attributes of the teaching staff come into the scene. It is almost a must to study as a group with changing properties. By way of this students with different learning preferences can be guided properly. Nevertheless even a single instructor should be able to balance these modes of learning by employing all of them with certain intervals to sustain motivation.

A very crucial point to be stressed in relation to the configuration of the academic staff for the first year is that it necessitates a change every year. It is the most laborious period of design education and

special expertise is required; refreshment is an inevitable need both for the teaching staff and for the curriculum. Due to its specific status a total replacement is impossible so at least one experienced instructor should remain **constant** to organize the course and let the others propose the modifications, which will at the same time free the established ones from their obsessions. On the other hand the young staff in rotation will experience teaching beginners as well as internalising the basic concepts to reflect in the coming years more effectively.

Finally as a component of design education the space should be mentioned. The required properties of a design studio are known to everyone; so **constant**. However a change from time to time is believed to increase the motivation of both the students and the academic staff. Excursions in the city and field trips to other cities have great contribution to education for many reasons that will be mentioned in the coming part, but total or partial alteration of space is a tool for refreshment. Having an out-door jury or arranging the studio furniture in a different way may act as a new start especially for those having difficulty in concentration.

“Joy” at the end: *the final projects*

Apart from orchestrating the transition period of the beginning students with reference to number of variables, the professional goal of the beginning design education is to prepare them for architectural design projects. As a matter of fact the ability to make *spatial organization* with the consideration for the properties of different spaces is aimed to be accomplished. So the **constant** for final assignments of the year can be stated as an all-inclusive project that will associate the fundamental principles of design experienced on an abstract basis with the concrete conditions of architectural design. The final project can be approached as turning point in this respect and it is not fair to reduce this last attempt of the year to an exercise for mastering spatial organization.

While designing the final assignment we should pay due attention to the constants within the ‘main constant’; the variations at this stage come into being with respect to these ones.

It has been stated that the final assignment should cover all those studied throughout the year so the subject of properties of the elements is discussed with reference to the characteristics of different spaces. Asking for spaces to house different activities provides to study *size* variation; *colour and texture* are now the properties of the elements that constitute the space and *shape/form* has to be enhanced with the concern for other attributes such as light. It is not enough to benefit from geometric relations to determine the *position* of spaces within the environment and with respect to each other; the students should realize the significance of activities in relation with one another. *Orientation* means more than placing the elements of an abstract composition; one should care for the geographic inputs. In addition to these already experienced issues, different degrees of privacy and closure appear as new definitions for design elements. The distinction between static and dynamic spaces, consequently circulation has to be comprehended. The relation of the given site with its nearby environment and the series of relations in between the spaces within the boundaries of the project area should also be studied. The final project is a means to discuss *hierarchy* as the most critical ordering design principle with reference to previous studies in a comparative way.

The conditions that facilitate perception are referred once more with the architectural design project that requires grouping of certain activities. The students realize that *similarity* is not limited with the use of elements sharing visual properties; *proximity* can be utilized to form groups of spaces serving for the same purpose; *continuity* is not simply a line appearing in the composition but a condition that unites different spaces; and *closure* provides the limits in between spaces as well as relating them.

The final assignment should have a ‘story’ but not in the form of a building program. The students are expected to imagine the activities and try to find ways of proposing different relations thus experience the act of relating in another medium. So the story is a **constant** but changing every year.

As mentioned before organizing field trips can be stated as another **constant** of the first year program. The pedagogical contribution, as a means for refreshment towards the end of the year is surely an advantage both for the students and the instructors, but it is mostly a

great experience for those kids leaving their protective family behind for the first time in their life. Learning to act as a group and sharing the responsibility with others, accepting the unbearable conditions at times, suffering the consequences of not being punctual and working more than ten hours a day without interruption provide a great opportunity to grow up. What is it that changes every year is the location of the site, however we aim to visit an archaeological site and prefer to select an environment with rural properties as an alternative to urban life. The students are expected to analyse the environment and make measured drawings as a part of the objectives of the course.

Closing remarks: *my basic design assignment*

This essay, which will be supplemented by visual examples of students' works during the presentation, reflects my personal approach to beginning design education. This is the product of a teaching experience over twenty years established on the basis of the *fundamentals of design*. With a strong belief in the power of *basic design discourse* as a universal system of abstract thinking, I have the tendency to see anything as a composition and analyse it on this basis. As a result of this it is possible to say that the beginning design education can also be organized accordingly and that is what I try to do. So this essay as a *composition* should also be considered a *basic design assignment* I give to myselfⁱⁱ.

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ⁱ The learning modes mentioned here by name are directly quoted from Lumsdaine E. and Lumsdaine M. (1995); their interpretation in design education is the contribution of the author.

ⁱⁱ I would like to express my gratitude to my colleagues Nihal Bursa, Selahattin Önür, Türel Saranlı and Haluk Zelef, whom I shared the beginning design studio experience for years in METU.