

Game as a mediator in a first year architectural design education

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Suggested Citation:

Birer, E. (2016). Game as a mediator in a first year architectural design education, *Global Journal on Humanities & Social Sciences*. [Online]. 03, pp 237-247. Available from: <http://sproc.org/ojs/index.php/pntsbs>

Received January 18, 2015; revised March 17, 2015; accepted April 05, 2015.

Selection and peer review under responsibility of Prof. Dr. Milan Matijevic.

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Abstract

First year architectural design education can be started with various methods which, through testing within different studio studies, can also give ideas as to how to start architectural education. This study will address the contributions, and results of starting first-year architecture education with game as a mediator. When they start their architectural education, students will have their own unique experiences of form, and space gained since their childhood in their built environment. Therefore, in order to refine the students' perceptions on their built environments at the beginning of the education process, it's necessary to provide them with opportunities that will give them confidence in what they can do about form and space. The aim of this paper is to emphasize the importance of the first year in architectural design education, and to discuss the beginning methods, considerate student, tutor and educational factors together. Thus, the game selected to start the architectural education with the purpose of activating the gaming instinct of the student is the "City Game". The findings of this study provide guidelines for tutors to set up a favorable learning environment from the city and that cooperative learning can be enjoyable by the game for the students.

Keywords: design education, game, mediator, first year architectural education

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1. Introduction

One can make the outside world and the various things and relations existing in that outside world one's subject. The outside world and everything that exists within it will continue to exist regardless of whether one thinks about them or not. Yet, everything that exists, of whatever type, gains meaning only through one's thinking activity. Thinking, which can be performed by an individual as an activity, can only be activated through concepts. And it is through language that we open our thoughts to others and benefit from others' thoughts (Cevizci, 2011). If thought happens through concepts and is communicated to others through language, then concept is seen as the most fundamental tool between the outside world and language. And in the process of transforming concepts into design, creative thinking is needed.

Creative thinking is a way to a holistic design strategy where "learning to learn" becomes more important than the specific knowledge. A process for learning to learn is fundamental for an action-oriented education environment. Students structure their thought process around the observational and theoretical knowledge systems with free abstraction (Aydınlı, 1998).

Based on the "learning by doing" philosophy, the design studio is broadly accepted as an indispensable part of first year design education (Schon, 1987). In a studio environment, students work together to benefit from exposure to many ideas and a wide range of information from peers and tutors (Waks, 2001). A design studio is expected to provide an environment for cooperative learning.

According to Hume (1993), there is no innate idea in our minds. On the other hand, Hume also opposes to causality. He posits that the temporal and spatial relations we build between things are associated not with their characteristics, but with our own experiential habits. Just like Hume's philosophical theory of "Tabula Rasa", which suggests that the human intellect at birth is like a tabula rasa, i.e. a blank slate, the architectural education also starts to occupy the mind as its rules slowly unravel. Nature does not work with rules, and has no formulations. Humans develop systems, formulas and precedence relationships in order to be able to perceive the nature or the facts. This method of building conscious relationships also exists within architectural education, and can reach its goal if designed well.

Freshman starting their architectural design educations are also affected from the spaces or objective judgments coming from their past experiences during the initial design phases (Erdem, 1996). Yet, bringing out the creativity is possible only through a process of "giving up what one has learned" (Dostoglu, 2003). Therefore, one of the purposes of architectural design education in the first year is to equip the student with design strategies, decision-making mechanisms and awareness on the influences that guide these strategies and mechanisms, so as to bring out the creativity in students, all of whom have different cognitive structures and spatial experiences. Architectural design is fundamental to architectural education and is not something that can be taught, but rather something that should be experienced.

First year design studios, where unlike ordinary classroom courses mental activities involving analysis, synthesis and evaluation, such as intellectual debates that involve discussion and drawing and model making take place, have as their objective the acquisition by students of architectural literacy and the development of their skills (Dutton, 1991).

Schon (1985) describes design as a "graphic and verbal language game". Learning to understand architecture and communicate ideas through model and drawing is a new experience for all students. The definition of design is likened to gaming. In fact, gaming allows us to see the realities other than the expressions of the ordinary reality. Gaming is a process that can be designed individually. Hence, game-play can be a mediator selected to start design. The mediator should restrict pressure, aggression and intimidation, demonstrate how to communicate through employing good speaking and

listening skills, and paying attention to non-verbal messages and other signals emanating from the context of the mediation and possibly contributing expertise and experience.

Studio teaching in first year should help the students understand that design is a thinking process in which concepts are formed and are eventually transformed to architectural space. The aim of this paper is to emphasize the importance of the first year in architectural design education, and to discuss the beginning with game as a mediator. The findings of this study provide guidelines for tutors to set up a favourable learning environment from the city and that cooperative learning can be enjoyable by the game for the students.

2. First Year Architectural Design Education

The skills expected to be developed within the studio environment in the first year can be summarized as the ability to reach empirical knowledge instead of precise knowledge, integrate empirical knowledge with conceptual knowledge, and transform this into a flexible knowledge structure, as well as showing the difference between looking and seeing, creating perceptual selectivity, equipping the student with comprehension and interpretation skills in the transition from learning and knowing, and developing lingual and manual skills.

Through the design studies conducted throughout the first year, it is aimed that the students gain the following abilities, in the given order:

- Perception, awareness and looking-seeing practices with regard to the architectural environment,
- Exploration of the human subject, which lies at the heart of architecture, within the context of body-size, motion and action,
- Bringing out intuitive, perceptive and creative skills with regard to comprehension of the space in the human-action-space construct,
- Developing various expression techniques, 2 or 3-D expressions and modelling skills in order to gain the skill to externalize this creative thinking, and
- Using these expression techniques and skills in line with the requirements of our times.

When the developments in how to start the architectural education are reviewed, it is possible to see a classification as follows:

- The approach which gives the student a functionally simple sketch and asks the student to use it for a small architectural project application,
- The partitioned approach which became popular after 1960s and which was based on extremely analytic methods. In this approach, the design problem is divided into small fragments, and each fragment is analysed in terms of function. Then, the suitable form is sought for each function.
- The approach that is essentially based on the fundamental design education and that forms its continuation. This approach aims to develop creativity. However, when doing so, the subject should not be limited to fundamental design principles.
- The approach that attempts to teach the phenomenon of design by using different design problems that are entirely isolated from architectural design.

- Approach that provides the student with various different design problems during one semester in an attempt to teach the various dimensions of the phenomenon of designing and develop the design skills (Erturk & et al., 1995).
- Approach where learning takes place via doing.

Today, when starting design courses in the first year of architectural education, the method of thematic “games” taught and learned while playing and aiming in particular to motivate the student are frequently used. Here, it is very important to know in which entirety the game should be included. Gaming should be addressed as a mediator selected to start the entirety of the process.

The first year architectural design education and training requires an intricate balance of abstract and concrete issues of both architecture and design as an act through an initial recognition, manipulation and justification of overall built environment (Erten &etc., 1998). Therefore it is crucial to recognise, define and integrate each basic element of architecture effectively to develop a total architectural design understanding. It considers the elements of design in their real or concrete standings but in correlation with their conceptual frameworks (Table 1).

Table 1. Relation sequences for rational and fundamental issues of architectural design. (Source: Erten & et al., 1998).

Real Standings	Conceptual Frameworks
elements and elements	form and meaning
elements and people	meaning and function
people and space	function and scale
space and building	scale and design
building and environment	design and architectural project

Elements as real standings refer to the basic design terms such as points, lines, planes, shapes, volumes and forms together with their inherent qualities. First year architectural design product is expected to be developed as a consequence of conceptual relationships of these elements (Erten & et al., 1998).

3. First-Year Architectural Design Education and Game

Game can simply be defined as a method or strategy created to achieve an end. Bower also defines game as development and enrichment of various capabilities in an entertaining environment (Bower, 1974). Game is an alternative way of presenting the somewhat unknown, mysterious object of the design study in a more intuitional form that is suitable for student-centered learning. Game has long been accepted as one of the keywords of learning (Woodbury& et al., 2001). Game is also the fun part of learning by doing.

Architecture is, by nature, a single-player game. The teamwork and communication that is necessary for architectural work is one of the most important aspects that turn architecture into a game and that draw it closer to team play. Architecture students should gain the self-confidence through which they can reflect their individuality, while also becoming good team players (Potts, 2000). Starting the first-year architectural education with group works is the first step towards learning how to combine individuality with teamwork. Regardless of which cities they have come from or in which cultural environments they were raised, game will create a bonding between students.

The way used by architects to understand, explain and communicate their thoughts are a reflection of the shrunk version of the “reality” no doubt reminds us of children’s games and toys (Rybcynski, 1990). The architectural design studio should not rely on the reality as an absolute requirement or enter into surrealistic pursuits in the name of unlocking creativity. By this way, game also brings on the agenda the concept of surrealism.

According to Sanoff (1979) playing games is an approach to problem solving. The problem is squeezed into a tight timeframe, which makes it easier to examine its basic aspects. Game is a type of simulation. And simulation is a process where a complex problem is identified and its essence is isolated from the complex whole. Games sharpen perception. It allows one to become aware of things that are not normally perceived as they are very familiar. For example, being “it” in the game will further sharpen perception.

Game also has constructive influences with regard to building self-esteem and developing new capabilities in the early levels of design. By its nature, game is attractive, limited, free and open-ended, all at the same time. The ability to create, process and identify form will enable capability classification of design students. Games also enable the instructor to discover this distinction in the design phases of the first year (Woodbury&et.al, 2001). Games will provide a good opportunity to the studio supervisor in terms of getting to know the student better. This acquaintance and familiarity will also increase the student’s confidence in her/himself and the environment.

Woodbury et al. (2001) identified in their observations that confidence in form-creation for students in the early design stage (first year design education) constitute an obstacle to development of the design process. This situation results in less-talented students being described as less creative individuals with weaker imaginations compared to those born with an innate talent for design, in the initial stages. Representation of design problems via games ensures that the first-year architecture student explores the problem free from debilitating thoughts, revealing a more target-oriented and more impartial solution area.

Oxman (2003) characterizes design education as a discovery-based process that depends on the ability to find and explore the requirements of the user and the appropriate information on design ideas, and advocates that new learning strategies are needed in order to support and provide discovery-based thinking modes. Game allows this with its open-ended and ready-for-change structure. The curiosity, which is the main feeling experienced in the first-year architectural design education, supports discovery and change.

Game contributes to architectural education with the “informality” it provides to the student as a starting point for flexible, spontaneous and intuitive behaviors, and with the “alienation” that occurs through the creation of a reality that is outside the daily, physical and tangible reality (Yurekli, 2003). Playing games is optional rather than formal, and hence is included within the informal education structure of architectural education. Today, there is a concentrated sociological interest in the game-like qualities of thinking. This interest suggests that, based on the analogies made, some cultural practices and some specific design perspectives can be successfully discovered during the design education. Starting design education with fun approaches often focuses on form-production. However, it is necessary to support design thoughts and actions with various sets of rules and selected restrictions. Although there is a world of infinite possibilities before the student, these principles, which resemble sets of rules, determine the decision-making processes and allow creative forms to emerge. The game should take place in a natural environment where these possibilities are increased, and should have a well-constructed structure within the design process.

When starting their architectural education, students are likely to have several form and space-related experiences gained throughout their childhoods in their structured environments. Nevertheless, students should be given opportunities that will give them self-confidence about what they can do with regard to form and space, and that will refine their perceptions on their structured

environments, at the beginning of an education process. Games foster learning abstraction and representation, the form-meaning relationship, creation and arrangement of spaces and forms, as well as the substance of design. They emphasize architecture as a dynamic experience rather than a static / invariant experience.

Games work on the fringes of the abstract forms and compositions that can be perceived as elements that can occur in the structured environment; some games consist of simulating looking out from a window, walking among building masses or being in spaces (Radford, 2000). The main elements of game are hollow masses that sometimes reflect the reality. Here, only what is intended to be shown is emphasized, and perception gets sharper. Inceoglu (2003) thinks the following assumptions on how games can be used as a structure and methodology in architectural design classes should be taken into consideration. Games can be used as a method in architectural design education; alienation has a positive effect in architectural education; under today's conditions, informality of architecture education increases the efficiency of education.

Architectural education no longer deals only with concrete information. Today, architectural education has to focus more on that which is uncertain or hard to define. The partnership of the contradictions, uncertainties, open-endedness, randomness, human relations, flexibility and similar aspects existing in the nature of both architecture and games, and most of the concepts forming today's architectural agenda are associated with games. These abstract characteristics and concepts, which are hard to incorporate into education despite being an important part of architecture, can be opened to discussion and exercise through games. Considering the individual differences of students coming from various different educational institutions, cultures and cities, using games to equip the students with the knowledge and skills aimed in particular in the first year of architectural design education allows creating environments that may minimize these individual differences, because when playing a game, everyone starts on the same terms, with equal changes of being "it."

4. Case Study- City Game

To re-create the perceptions of students on their structural environments at the beginning of architectural education despite their past experiences of form and space gained from childhood in their structured environments will give them self-confidence about what they can do with regard to form and space, will encourage them to take a new look at their structured environments, and thereby will give them the ability to gain selectivity and awareness in the perception of form and space. And these are all qualities that should be instilled in students with priority in architectural education.

These qualities can be given to students within a well-constructed game, for games will lead to a critical exploration of design practices within the context of the cultural practices and discourses that surround those (Scriver&Wyeld, 2003). If the game is played in the city despite the cultural practices and discourses that surround the students, it will be an exploratory experience even if the city may be of a scary size to embark on this adventure. The game as a mediator helps the students think "outside of the box" for possible solutions to the dispute, broadening the range of possible solutions. Thus, the game selected to start the architectural education with the purpose of activating the gaming instinct of the student is the "City Game". The student starts reading the city from a starting point and through a route that is known to the studio supervisor but not known to the student (Fig.1). To get to the next point, the student tries various city vehicles, i.e. bus, subway, minibus, ferry etc... Then, to reach the next point, the student receives indirect directions to the destination by person X who is waiting at the destination point. In this way, the student encounters the things he is supposed to encounter according to the directions given. People, events, spaces, buildings...the student earns the right to get to the next point with each point of destination he successfully reaches. The time given to travel in the

city and complete the route is set. Using this set time well and completing the course /route on time will give the student more information which he can use in his studio studies.

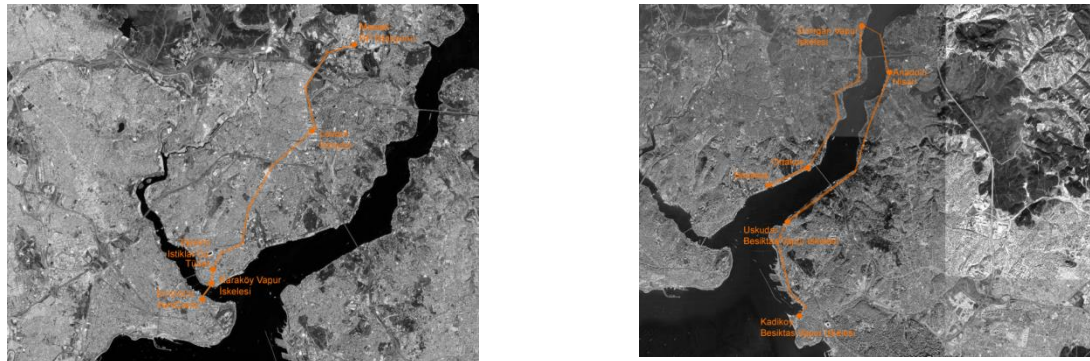


Figure 1. (a) City Game Route -Day 1/Istanbul European Side (Courtesy Google Maps); (b) City Game Route -Day 2 Istanbul Anatolian Side (Courtesy Google Maps).

The city consists of points, lines, planes, shapes and volumes. The city is a community of geometries which may be either separate or combined. This community consists of the elements of the city and the events taking place therein. Events help us understand the geometry. Geometry consists of architectural elements, and combines to create events. Events gain meaning. Architectural elements and events eventually give birth to “space”. Seeing the city with awareness, as a combination of emptied volumes and shapes, in such a short time will sharpen the perceptions of students. After playing the City Game, a series of architectural studies can be done in the studio to make visible the newly acquired selectivity in their perceptions.

Table 2. Relation sequences for rational and fundamental issues of architectural design with city game stages.

City Game Stages	Real Standings	Conceptual Frameworks
Reading the city	elements and elements	form and meaning
Partitioning the city	elements and people	meaning and function
Reading the pieces	people and space	function and scale
Making the pieces visible	space and building	scale and design
Adding the “new” to the pieces	building and environment	design and architectural project(“new”)

The City Game is a tool that enables students to learn in a fun way the knowledge and skills aimed at in the first-year architectural education. Thanks to this tool, the instruments of the architectural education are read on the city and seen with its conceptual framework (Table 2).

4.1. Reading the city / elements and elements / form and meaning

The City Game is played in Istanbul. In the Istanbul Kultur University, Department of Architecture, first-year studio, everyone is left on their own with several architectural studies to gain awareness about what they gain from the game. Students who complete the game and return to the studio are

asked to make a 2-D collage work with materials such as photographs, articles, brochures etc. regarding the city elements that have been seen by and garnered the attention of the student while travelling in the city on the predetermined route. In this collage work, the elements that first strike the eye in the city are emphasized. These elements are an ensemble of inert, eventless points, lines, planes, volumes and shapes. And this ensemble can belong to either one specific zone or the city as a whole (Fig.2.).



Figure 2. (a) Student project ; (b) Student project (Photo by Emel Birer)

4.2. Partitioning the city/ elements and people / meaning and function

The student is asked to pick up a concept that expresses how he felt in the city, so that he can understand the effects of these elements on the city's residents. The process continues with the student performing an interpretation study about how he feels among the emptied inert volumes, planes and lines existing in the city. This concept is described through abstraction within a 3-D cube, and emerges and gains meaning through the relationship built by an element of one part of the city with people. In Istanbul, I am alone, in chaos, lost (Fig.3.).



Figure 3. (a) Student project; (b) Exhibition; (c) Student project (Photo by Emel Birer)

4.3. Reading the pieces / people and space / function and scale

An individual expressing his/her own feelings in 3-D can also describe the city from the view of others. City-dwellers live in the spaces that belong to the city. These spaces are composed of elements and actions/events. In the city consisting of singular and plural lives, the spaces where the city-dweller lives are revealed. This city-dweller can be a child, an old-aged person, or even a dog. Then the student analyzes how the city looks from that city-dwellers eye. The pieces/parts of the city are then reread based on the people and spaces (Fig.4.).



Figure 4. (a) Student project ; (b) Student project ; (c) Student project (Photo by Emel Birer)

4.4. Making the pieces visible / space and building / scale and design

When city spaces transform into structures, the city becomes a complex pile of geometries. This ensemble of masses forms the structured environment. This structured environment is surrounded with various sizes. Seeing this structured environment only with its geometry or with its volumetric situations that describe their reasons for being is a way of understanding the diversity of forms. In this way, the pieces of the city become visible. The city is freed from its excesses, and is revealed in its glorious nakedness (Fig.5.).



Figure 5. (a) Student project ; (b) Student project ; (c) Student project (Photo by Emel Birer)

4.5. Adding the "new" to the pieces / building and environment / design and architectural project

The task of adding a new geometry to this environment is the last step the student encounters. At this point of the study that starts from the entirety of the city and goes down to its individual parts and pieces, the student understands the scale, geometry and semantic size of the new space that will be added to a specific part of the city. This visible situation sheds light on the new design (Fig.6.).

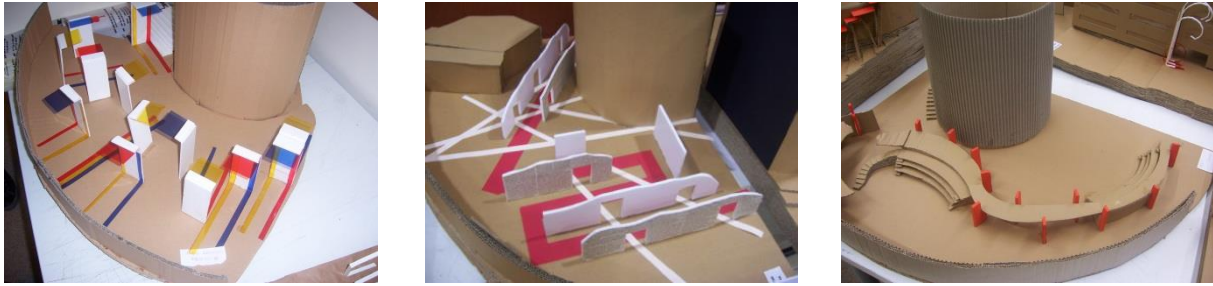


Figure 6. (a) Student project ; (b) Student project ; (c) Student project (Photo by Emel Birer)

5. Conclusion

Game is a tool when starting the first-year architectural education. It has considerable benefits as a “starting” action since it incorporates fun, exploration, team play, bonding, competition, and spontaneity. Games also contribute to architectural education with regard to alienation, rules, motivation, self-confidence, intuitions and common sense, flexibility, coordination, randomness, skill-learning and human relations. The fact that most of the concepts forming the architectural agenda today are related to game is an indication that architecture is also gradually turning into a game.

As games focus on the essence of the subject, they are also useful in that they allow isolating/abstracting and evaluating the substance in an area like architecture, which is prone to be perceived superficially. Isolation/abstraction is also a technique used by the student to show what is important for him in the image he sees or what attracts the highest awareness in his perception. Game helps one to recognize the things one normally fails to perceive due to their being too familiar; and recognizing and making recognizable is a skill that is fundamental and that should be taught in the early phases of architectural education. When starting education with a game, the studio supervisor will feel more relaxed since the motivated student will have increased efficiency, yet a good game requires long and detailed preparation and the informal environments it will involve are difficult to control, which will no doubt be more tiring for the studio supervisor.

Acknowledgements

I would like to thank Prof.Dr. Seviç Erturk for her contributions to the Architectural Design Studio I.

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