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Recoding Landscape Education: Research-Based Studio Approach

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Abstract: The landscapes and the memory of the landscapes are evolving with natural and humancentered activities. In some places, landscapes continue to reveal their memory ecologically, socially, and culturally. On the other hand, in some places, landscapes lose their ecologic and socio-cultural archive as a result of globalization. This issue causes to emerge fragile landscapes according to lack of water resources, global warming, a decrease in biodiversity. Preserving the memory of landscapes and using it in the practice of landscape is a deeply crucial issue. The paper tries to answer two questions: How can landscape memory be used in design education? How can a research-based design studio pedagogy be conducted on this approach? This paper focuses on the research-based design approach in landscape architecture education to decode and recode the memory of the landscapes in the design process. ITU Landscape Architecture Department 2019-2020 Fall Semester Landscape Design Studio I-II, which is the case study of the research, worked in Savur, Mardin. The study area provides unexpected landscape carpet including browns and greens together in the valleys of the region that have a rich social and ecological structure. The methodological process of the studio was based on the three approaches which are integrated into each other: The Landscape Memory Model, Action-based Design Studio, and Research-based Design Studio. The model provides a guide for reading the memory of the landscape with various memory codes hidden under the visible and invisible values of it. This core process is used by the students for understanding the cultural and ecological values of the study area and implementing them into the design process. The action-based studio approach allows the tutors to find the problematic points in the design process of each student and resolve them in a positive way. Covering these two approaches, the research-based design studio expresses the discovery of the knowledge through a strong research process. The results are as followed: Implementing a research-based process ensured a place-based and innovative perspective to shape a design concept. Using the pre-specified landscape memory model empowered the research phase and helped students to analyze and discern the place with their own perceptions. Action-based flow allowed the instructors to leave the conventional studio performing and helped to use in-situ (special to the studio) instructing techniques within the semester. This paper may be influential for especially landscape design studios and relocate conventional studio approaches with more flexible and progressive techniques to understand the place and beyond.

Keywords: Landscape design studio, landscape design education, design pedagogy, research-based design, landscape memory.

1.Introduction

The landscapes are evolving with natural and human-centered activities such as erosion,

wildfires, drought, floods, urbanization, intense and cultivation over irrigating, interventions and local actions (Stahlschmidt,

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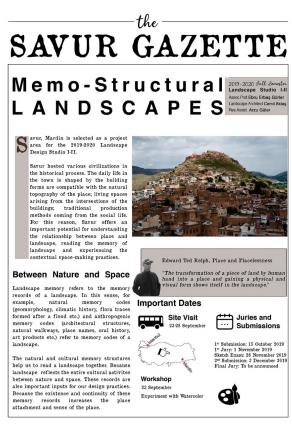
Swaffield, Primdahl, & Nellemann, 2017). Global crises enable us to come up with new solutions in the way of designing and understanding the landscape. In addition to the evolution of the landscape itself, the memory of the landscape is also constantly changing, since the landscape includes natural and human-based activities. However, activities continue to be carried embedded in the landscape, providing no written evidence (Hoskins, 1955), and continuing to build the palimpsest on an ongoing basis. The unique character of the landscape comes from the tangible and intangible morphology of this multi-layered memory. As this morphology begins to break away from its buried memory layers, it turns into a fragile structure; besides creating a landscape crisis that is affecting people in a way of feeling displeasure (Antrop, 2013). Therefore, the proposed approaches should include holistic readings of landscape memory. This reading will enable the creation of resilient landscapes, ensure sustainable water management and store fragile habitats. On the other hand, they will also ensure that human-based memory codes are carried into the future. Thus, place identity, sense of place, and local designs will be created. The design education needs to evolve with the landscape itself from the perspective of students and instructors. The education in architecture should landscape combine different issues (ecologic, aesthetic, ethical perspectives) and approaches (pedagogic and practical perspectives) and make them theoretical and practical attendees of the studio (Freire, 2013). The research on the landscape architecture education focuses on the historic process of the landscape discipline and implementing this knowledge to the design education (Jørgensen, Stiles, Mertens, & Karadeniz, 2020; Treib, 2006), representation techniques and their advantages in landscape education (Montarou, 2006; Schön, 1988; Swaffield & Deming, 2011), and pedagogical approaches (Keswani, 2019; Milovanovic & Gero, 2020; Salama, 2007, 2016, 2021). These also try to combine different studies approaches in other disciplines and creates different possibilities for the future studies. At this point, the main research question of the

study is how to implement multi-layered landscape memory into design studios as a design problem. The aim of this study is to seek an answer to the question of how the tangible and intangible layers of the landscape memory can be used in design education, to form a research-based landscape design studio pedagogy and share its outputs.

The ITU Landscape Design Studio I-II included 24 undergraduate level students. The "Memo-Structural Landscapes" studio was formulated as a case-study to conduct to answer these questions; How multi-layered landscape memory can be integrated to design studios as a design problem? How can a research-based design studio pedagogy be conducted on this approach? The title of the studio was selected as "Memo-Structural Landscapes" (Figure 1) and focused on a small town in southeast part of Turkey, Savur-Mardin. The cultural landscapes of Mardin is in the tentative list of UNESCO and Savur is announced as an urban protected area (Tuncer, 2013). The project area hosted civilizations in the historical process. The daily life in the town was shaped by the buildings compatible with the natural topography of the arising from living spaces intersections of the buildings, and traditional production methods coming from the cultural and social past, spatial organization shaped by climatic conditions. Topography, climate, accessibility of the natural resources, religion, community life, privacy, aesthetic and building elements have been the main basis of the settlement fabric (Halifeoğlu & Dalkılıc, 2006; Karagülle & Demir, 2010). Thus, Savur offers unexpected potentials to understand the place and landscape, reading the memory of landscape and experiencing the contextual space-making practices. With research-based design approach it is aimed to unbury these potentials and understand all of interrelations between different potentials. This approach was needed to preserve, heal and sustain the structure of the town enriched by natural and human-based activities. The title of the studio, thus, comes from the buried memorial strata under the visible and invisible, tangible and intangible aspects of Savur.

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Including rich landscapes in the meaning of ecologic, economic and social structures, the project area matched the concept of the studio marvelously.



2. Research-Based Design Studio Approach

The design studio structure has components: the landscape memory model at the core, the action-based design studio that covers it, and the research-based design studio that builds the shell (Figure 2). The *Landscape* Memory Model is a guide for reading the memory of the landscape with various memory codes hidden under the visible and invisible values of it. The model was proposed by Güler and Eşbah Tunçay in 2019. While it enables revealing the unique character of the landscape through natural and human-based memory codes, it provides design practices to be more place-based, full of place-identity, and resilient for the natural crisis by using the memory codes (Güler, 2019; Güler & Esbah Tunçay, action-based design 2021). The approach expresses the expectations, outputs and new actions through them during the studio. The actions taken at the points where students have difficulty aim to build an uninterrupted design process. The researchbased design approach, on the other hand, forms the main structure of the studio through the landscape memory model and the actionbased design approach.

Figure 1: "Memo-Structural Landscapes" Studio Poster

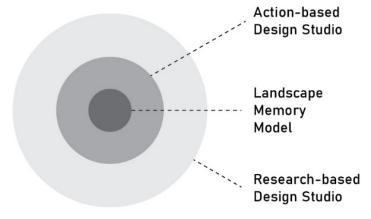


Figure 2: Diagram of the Research-Based Design Studio Approach

For landscape memory model, reading the memory strata and researching the codes of landscape forced the students to look for not only the existing situations but also for the past and then think about the future. Students used the model as a guideline for reading the memory and as a basis of the design idea. They studied the origin of the place-names, cultural background and outputs, land-use practices and place identity, climate, hydrology, geomorphology and biodiversity in Savur. The essence of the model is to encourage users to combine different research titles and make assumptions on them. Thus the model encouraged students to think about the design styles and enabled the students to come up with instinctive analysis and unique design concepts.



Figure 3: Methodology of the Landscape Memory Model

The action-based studio approach basically consists of identifying the points where the student has difficulty in building concept and implementing it into the design with scale transitions and improving the problematic points through instant activities. Three main forms of action spanned the period: Pop-up Events, Self-Media Approach and Pop-up Exercises & Competitions. In order to follow this action-based flow, tutors kept a studio diary throughout the term. This diary includes the mainframe of the studio day, expectations, what the students brought to the studio (income), the action decisions and outcome of them (Figure 4).

The design studio has two main actors: Tutor and Student (TS). From TS perspective, the nature of the studio was built on the intention of searching for knowledge rather than receiving it directly from the tutors (Figure 5). The output of this perspective was the "discovery of knowledge", which is used for enlarging the possibilities of reaching and gaining the knowledge for the student's needs (Aydınlı & Akpınar, 2003). Discovering the knowledge uses the methodology of systematic knowledge, which is constructed by the research by the steps of description,

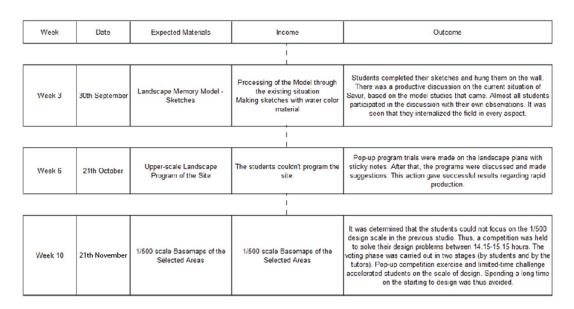


Figure 4: A Section from the Diary of the Tutors for the Action Process

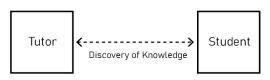


Figure 5: The Diagrammatic Relationship Between the Two Main Actors: Tutor and Student (created by writers)

classification, action research, modelling, interpretation, design, experimentation, evaluation and logical systems (Stahlschmidt et al., 2017). The students get the knowledge of how to make the "practice of the practicum" under the studio tutor who acts as a "coach" rather than a "teacher" (Schön, 1988). With this approach it is aimed that the students access and own the information by themselves, and therefore provide the completion of the semester more efficiently.

3. Case-study: Research based design studio "Memo-Structural Landscapes"

3.1. Landscape Memory Model

In the design studio, the Landscape Memory Model is used as a core tool for the researchbased design approach. The model provides a holistic perspective to read the natural and human-based events shaping the landscape itself (Güler, 2019; Güler & Eşbah Tunçay, 2021). It includes natural memory codes (fauna, flora, hydrology, geomorphology, and climate) and anthropogenic memory codes (land-use-land cover, identity, traditions, social life, cultural outputs, and place names). These different memory codes are processed separately on a timeline from the past to the present time for each title on the model. If there are future provisions for the area, these are also processed above the present line. In the next stage, relationships are started to be established between the memory codes listed under each main theme. Thus, the cause-effect relationships of the events are revealed, the problems experienced in the landscape today are diagnosed, and used as an input in the design solution. At the same time, since the model reveals the value and richness of the

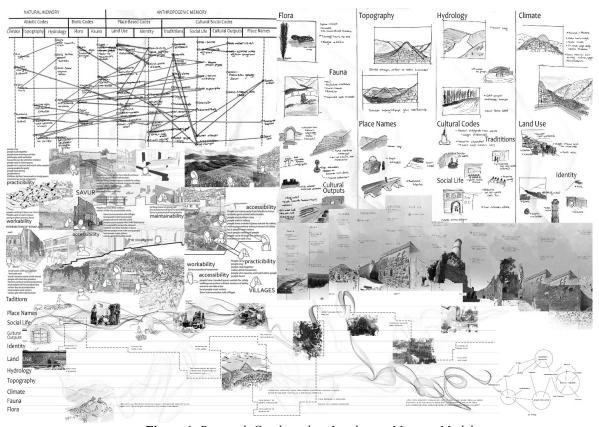


Figure 6: Research Conducted on Landscape Memory Model

place, these memory codes are used as an input in the design to make the design related to the place. At the end, it is aimed that the landscape gains both natural and sociocultural resilience. For the first step, the explanation of the model was given to the students. During and after the site visit, they started to use and fill the model. While processing the model, they started to think about the relationship of every piece of the memory code. Moreover, this relationshipbuilding state was not only singularized under natural and human-based activities but also tried to establish relationships between natural and human-centered ones. They started to ask the questions: How did the topography affect the land-use practices in Savur? How did climate affect public use of roofs which is an essential part of daily life in this region? How did the color of the soil give the identity of building fabric? This way of thinking differs from the traditional analysis techniques such as slope analysis, urban fabric analysis, water resources, etc. The works on the model continued in various approaches such as textbased, collage-based, mixed-used, sketchbased (Figure 6). In the representation of the research on the model, a more flexible way was preferred. Students were invited to explore their strengths in the representation of the

research process. Some students used textual expressions and connecting them with strings; some students preferred the collage method with digital representation techniques. While some students used sketches they produced in the site visit as a model base, some students tried to match the model with abstract expressions.

3.2 Action-Based Process: Pop-up Studio Events

The Action-based studio is based upon identifying the student's difficulties and improving them through pop-up activities. Three main forms of action spanned the period: Pop-up Events, Self-Media Approach and Pop-up Exercises & Competitions.

Action I - Pop-up Events: The first of the actions taken in the studio was to organize pop-up events and workshops: Watercolor Sketching Workshop, Digital Representation Workshop and Sectoral Firm Trip. Organized in the courtyard of the campus at the second week of the semester, the watercolor exercise increased the sense of dynamism in the studio. The aim of the workshop was to encourage the students for using sketch books more effectively and prepare them for the self-media



Figure 7: Images from the Pop-up Events (a-Watercolor Sketching Workshop, b-Sectoral Firm Trip, c-Digital Representation Workshop),
Exercises and Competitions (d-in Studio Competition)

approach in Savur trip (Figure 7). In the week of thirteen, the second pop-up event was organized for visiting the sectoral firms. The aim of the action was to increase the material knowledge of the students especially for the detailed plans. Touching the materials physically helped them to understand the textures, scales, and character of the various landscape design materials. Another pop-up event was about the representation techniques and was conducted on a digital illustration program. The event, helped students to understand the value of the representation to give the main idea of a drawing or diagram. They learned new software and used it on the final submission of the semester.

Action II - Self-Media Approach: According to this approach, the self-media action was adopted by the students during the site visit instead of using conventional media tools. The aim of the self-media approach is to enlarge perception to read the place and feel the spirit of the place. This process can be defined as "intrinsic research" fed by personal or designer experiences in place (Milburn & Brown, 2003). Thus, the approach was targeting in situ sketching instead of taking photos, cognitive mapping instead of using navigation apps, collecting materials instead of Google research (Figure 8-9). With limiting media tools, site

visits and in-situ analysis/observation provided opportunities for students to build a perspective for decode-recode-processing steps of the place. Additionally, implementing hand drawing techniques provided a continuous circulation for hand-paper-creation process besides the in-situ observations. In the sketching processes, the relationship between drawing and body enhances the way of seeing through the body (Montarou, 2006). As Montarou explained, with hand-drawing and recording, a monologue and dialogue start between the body and inside, outside, past and future. This circularity opens the way not only for recording things but also for creative production. In the common era of digital tools, the monolog tools of the architect have started to be forgotten as observed in the design studios. For this reason, the "self-media approach" was made a part of the studio.

Action III: Pop-up Exercises and Competitions: In the semester, two pop-up exercises and one competition were held. The exercises were organized on upper-scale approaches while the competition was focused on lower-scale design. The first design exercise was held at the sixth week of the semester with the aim of help students to program the area in an upper-scale. Students were asked to write the names of their programs on sticky notes



Figure 8: Experiences from the Self Media Approach – Site Visit Works

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Figure 9: Experiences from the Self Media Approach – Site Visit Works



Figure 10: Cover Design Samples from the Final Submission

and place them over their places in the plan (Figure 8-d). The modularity of the note papers motivated the students. The second exercise was held the next day. It was observed that the students could not comprehend the transition between the scales, while they were expected to process the program decisions on their

plans. For this reason, they were asked to implement their program decisions on their plans in a limited time. The exercise provided a productive environment and synergy between the students. The last exercise was organized as a studio competition in the tenth week of the semester. On the studio day, students were

expected to select areas from their 1/1000 scale plans and start to design them on the 1/500 scale. However, it was observed that they could not make this transition between scales. For this reason, a 1/500 design competition was held in a limited time in the classroom. The competitive and focused working environment strengthened the students' perception of the design studio.

4.Discussion and Conclusion

Considering the final submissions and studio process, Savur's morphological, ecological and socio-culturally challenges could be overcome by only intertwined approaches in the studio. The model helped to discover the knowledge and connection between the tangible and intangible values of a place. On the other hand, the action-based studio approach, where immediate interventions are expressed, increased the dynamism of studio environment and improved the motivation for design process. These two flexible approaches in the studio were implemented to the final submissions of the projects as well. It was decided by the tutors that the submission could be made in newspaper format instead of conventional poster format in order to reveal the creativity of the students. Newspaper format submissions have been extremely helpful in highlighting the originality of representation and reflecting the researchbased design process (Figure 10).

Leaving the traditional layout format provided the emergence of new ways of representation techniques and composition styles. Coupons and advertisements in traditional newspapers were reinterpreted as coupons for each student's activities in their projects, and advertisements for proposed programs and activities (Figure 11). At this point, there was no intervention by the tutors, and the students discovered the new styles on their own. Informal representation techniques confidence to the students in terms of creating and presenting their designs. With the help of the studio process, the unique designs and representation languages became different from a conventional landscape project since the strong relationship between the place and designer.

Landscapes and the memory of it continue to change with the natural and human effects. In some places, landscapes continue to reveal their memory in the meaning of ecologic, social, and cultural ways. On the other hand, in some places, landscapes lose their ecologic and socio-cultural archive as a result globalization. This issue causes to emerge fragile landscapes according to lack of water resources, global warming, a decrease in biodiversity. Preserving the memory landscapes and using it in the design of landscape is a deeply crucial issue. At that point, this paper tries to find the answers for two questions: How can the landscape memory

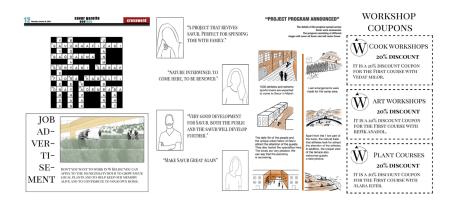


Figure 11: Details from the Inner Pages of the Final Submissions

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be used in design education? How can a research-based design studio pedagogy be conducted on this approach? In a globalized world with information spreading everywhere, design and design issues are also turned into stereotypes. As a result, mass production design projects that can be applied anywhere, emerge. Placelessness not only causes loss of place attachment and belonging (Auge, 1995; Relph, 1976), but also belonging to the environment and nature. In this sense, landscape memory, which helps to read the natural and cultural strata of a landscape, provides designs to be more place-based actions with the natural and cultural identity of it. Concerning the first research questions

mentioned previously, the use of the model in the educational practice strengthens the causeeffect nature of the student's design process. In the Savur's project, using the landscape memory model in the studio supported the intention of the research environment. Reading the memory strata and researching the codes of landscape forced them to look for not only the existing situations but also for the past and then think about the future. This way of research led them to build individual and unique concepts in the design process. For the second question, the model goes beyond only being a guideline but forms the core of the research-based studio. Cross-reading between memory codes and self-discovery

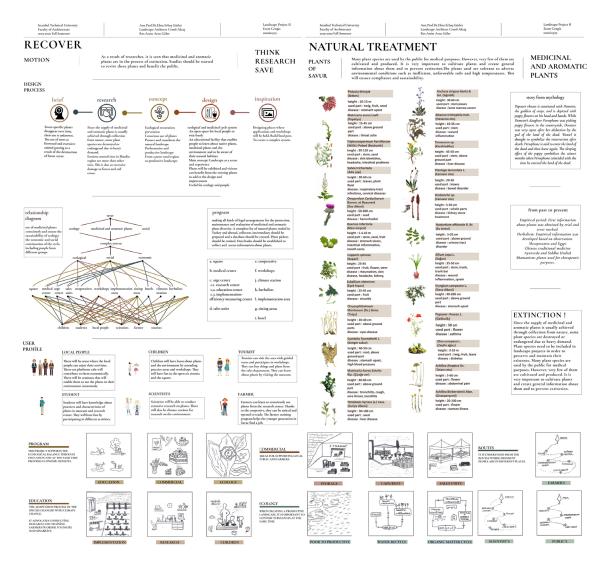


Figure 12. Samples from the Analysis of Landscape through Local Environment Characteristics

knowledge pushed the student to do more research. The research-based design approach based on landscape memory model encouraged students for discovering and using the natural layers of the landscape in their designs. Without any intervention, some of the students looked for the endemic and natural plant species which can be used as design elements in detail. They used the plants for raising public awareness of the local environment and creating sustainable and resistant landscapes for the future (Figure 12).

The instinctive analysis coming from the results of the model enables the students to

create unique concepts in the studio (Figure 13). In this sense, the students included their individual memory codes in the design processes. Among the outputs, it was observed that the natural bird species in the area turned into bird watching routes, the diverse range of religious culture of the region was turned into the memorial surfaces, the poplar trees transported over the streams of Savur were reinterpreted as a landscape element. In this context, students' free design processes have led to the emergence of different concepts for each of them, since their approaches to the landscapes are different in the meaning of understanding and interpreting it.

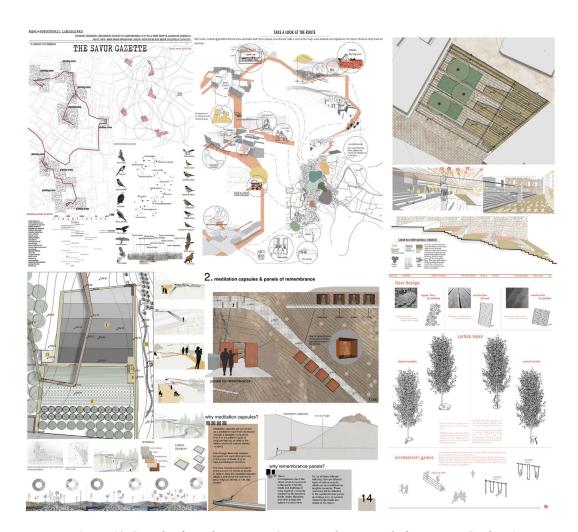


Figure 13. Samples from the Designs (Upper-scale to Details for Various Students)

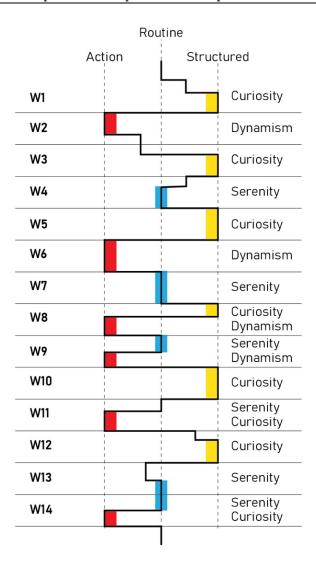


Figure 14: The Timeline of the Action Flow and The Changing of Atmosphere of the Studio

Provided to heal the problematic points faced by students throughout the term, the actionbased design studio was held. Tutors kept a studio diary to track this action-based flow and understand the results of actions on students and studio environment. The diary revealed the wider perspective of the period. It provided an output of the changing atmosphere in the studio after the actions taken (Figure 14). It has been observed that new actions generally increase the dynamism in the studio. In such activities, students seemed more active and energetic. On the other hand, it was observed that the sense of curiosity increased in structured activities contrary to the traditional studio process. Activities such as the landscape

memory model explanation, seminars, examination and discussion of sample projects from the previous studios increased the students' sense of curiosity. The routine studio days conducted on desk critics or collective discussions created a calmer atmosphere. As a result, design studios are like a constantly working machine.

While implementing a research-based design approach to the studio pedagogy, the first challenge encountered was the introduction of the landscape memory model while the undergraduate student was learning landscape design for the first time. In order to make it easier for students to feel an attachment to the

project, it was thought that the site selection should be appropriate with the concept. Therefore, Savur, Mardin, where the socioecological landscape layers are perceived as a whole, provided a strong medium for the project. Another point was to understand the model with their own interpretations rather than using the model as it is and to explain that it is something that can be developed with their own ideas. As in this way, the student was able to make sense of the model, implement it and interpret it. Another challenge was that the students were more accustomed to the traditional studio process. The traditional studio processes are conducted on strictly structured pre-defined analysis (occupancy gap analysis, green areas, land-use, transportation, etc.) and from upper-scale to lower-scale design. The schedule of the process continues with this structured approach. This difficulty was overcome with the action-based studio approach. The action-based design studio, the decision of how and which the analysis will be done is left to the students, and back and forth design transitions are encouraged.

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