A social project planned in cooperation with the university for the development of a detached district: a community center project through an architectural design studio

Nevset Gul Canakcioglu, Assist. Professor, Özyeğin University (corresponding author)
gul.canakcioglu@ozyegin.edu.tr
(0090)2165649307
Özyeğin University, Cekmekoy Campus
Nisantepe District, Orman St., AB4 Building
Istanbul, TURKEY 34794

Abstract
In today’s world, where resources are progressively scarce and construction costs are increasing gradually, the concept of sustainability has become an important topic in architectural debate not only with its energy dimension in building construction process, but also in building design phase. In other words, instead of a sustainability approach that is planned to reduce only the energy costs of a designed building which focuses on obtaining certain certificates, a holistic approach has become essential since the first stage of the design phase.

Thus, the necessity of a thoroughly discussion of the sustainability concept through its environmental, social and economic dimensions made the concept essential to discuss this issue primarily in the academic environment. Accordingly, such an approach can lead to a more socially inclusive, cautiously more economical, and much more environmentally friendly projects in terms of resource use. In this context, the concept of sustainability has inevitably been included in both the theoretical courses and design studios as a crucial concept in architectural education.

In this regard, YAKLAŞ_nişantepe project, which is a socially inclusive project coordinated by Özyeğin University Sustainability Platform, has been developed for the sake of people living in Nişantepe district which is located on the outskirts of Istanbul where Özyeğin University was also established. The choice of the word yaklaş for the project comes from the definition that the word has two meanings according to the dictionary of Turkish Language Institution; the first meaning of the word is to progress in a way that the distance decreases, while the second meaning of the word is to evaluate a problem in a certain way.1 “Yaklaş project not only aims to create a common ground for collective, focused discussion, thinking and transdisciplinary work by addressing a problem in depth but also targets to reduce the distance both to the problem but also the distance between the stakeholders by establishing new connections among the multidisciplinary stakeholders.”2

Within the scope of the Yaklaş project, firstly walks were organized in Nişantepe with academics and students from various disciplines of Özyeğin University under ten themes: city and children, gender, colours of the region, urban insights, impact, street names, infrastructure, city rights, city&food and education. In the second phase of the project, panels were held where opinion leaders contributed to the creation of a collective knowledge exchange environment. In the third phase of the project, Yaklaş Nişantepe Collective Thinking Workshops were organized under four main topics (garbage, flowers, education

food, children) identified during the Nişantepe walks with the participation of undergraduate students from twelve different disciplines. Through these workshops, it was aimed that multidisciplinary teams will discuss Nişantepe neighbourhood through all its layers. Through these workshops, all physical and sociological layers of Nişantepe Neighbourhood were debated and searched for ways to collectively create concrete suggestions. Through the report prepared within the scope of CHILD workshop, it was aimed to establish a community centre in order to:

1. educate adults for them to get occupational certificates,
2. establish a soup kitchen,
3. found a nursery for the preschool children to support their social and emotional development, and
4. reduce the burden of the mothers so that they can get the opportunity to participate in employment.

In order to realize this concrete proposal, it has been aimed to construct a syllabus for a design studio through which students would be expected to create unique design solutions for a community centre project. Based on this idea, in the scope of ARCH 201A architectural project studio course instructed by the researcher herself in 2019-2020 spring semester, the students were expected to develop sustainable project proposals through temporary building components since the community center together with the locals of Nişantepe may have to move due to the possibility of expropriation. Therefore, the use of shipping containers has been presented as a mandatory basis for students in the project.

**Introduction**

As globalization has greatly affected many cities in the world, the concept of sustainability, which has found wide debate in many fields since the 80s, has been institutionalized as a critical concept in Earth Summit in 1992 with the participation of world leaders in Rio.³ Rio Declaration consists of various strategic principles of how an agenda should be followed for a future based on sustainable development.⁴ ⁵ The concept of sustainable development, which is widely discussed through consecutive summits and accordingly in the academy, demands three basic developments: environmental, social and economic, as stated in many studies.⁶

Additionally, according to the Global Sustainability Development Report published in 2019⁷, six different entry points have been defined for the goals desired to be achieved on a global scale with a slogan “The Future is Now” until 2030 for a sustainable future:

- Human well-being and capabilities
- Sustainable and just economies
- Food systems and nutrition patterns

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⁶ Purvis, Yong, Robinson, *Three pillars of sustainability*
• Energy decarbonization with universal access
• Urban and peri-urban development
• Global environmental commons.

This report\(^8\) also mentions that four leverage systems which are *Governance, Economy and Finance, Individual and Collective Action, Science and Technology*, must work together in order to achieve these goals, generate the necessary transformations and implementations. In this way, a coherent unity that can be achieved between these public and autonomous systems may result in both the emergence of evidence-based knowledge and the decision-making foci to produce more permanent solutions by making use of this knowledge.

In order to realize the targeted practices through such a collective thinking for a sustainable future, the concept of sustainability must first be comprehended and agreed by individuals of all ages from various disciplines. Indeed, these sustainable development models and implementations that require extensive teamwork are evident that they can only progress with the participation of individuals willing to contemplate about this concept. For this reason, it is important for the content of the concept of sustainability to be introduced properly and to be taught through novel methodologies, in order for individuals to realize that they can contribute in various ways independent of scale.

In this context, this paper aims to present the syllabus and instruction of a course constructed for the undergraduate architecture students for them not only to comprehend the concept of sustainable development but also to analyze a specific urban domain with its environmental, social and economic dynamics and bring design solutions for their benefit and improvement. Thanks to the course, the theme of which was built in collaboration with the University’s *Sustainable Development Platform*\(^9\), students, at their young ages, comprehended that architecture is not only the action of designing within the scope of a given and specific building needs program, but also that they have the power to change the rules of the game for the benefit of inhabitants of a region where a disadvantaged group live.

The selected region is a peripheral residential area in the northeastern part of the Anatolian side of Istanbul, including the campus of Özyeğin University, where Roma families predominantly live.

**Unknown face of the city of Istanbul: Nişantepe**

Nişantepe Neighborhood of Çekmeköy district has become a new settlement area for Roma people with the effect of the acceleration of the transformation projects in the city center in 2006.\(^10\) The district which has grown on the Anatolian side of Istanbul without complying with the zoning laws, where approximately 10,000 people live\(^11\) mainly

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including a disadvantaged group of Roma people. The average of households is 5.22 which is higher than the Istanbul average, while the household income is very low.

When the social and cultural structure of the community is examined, although the culture, music, and dances of Roma people are well known and followed with interest, according to Bahadır\textsuperscript{12}, people living in urban lands of Istanbul do not tolerate this community which is generally described as gypsies defined as nomadic, disrespectful, and bad-mannered in the dictionaries. In addition to the social and physical exclusion of the local people from the city, with the establishment of Özyeğin University and many private schools in Nişantepe region since 2010, areas occupied by private institutions started to increase while the settlement areas of the Roma people became tighter. Moreover, industrial and logistics facilities together with the public housing built by the state, the region gradually became a district with increasing plot value.

Özyeğin University, believing that this region, where urban poverty is experienced so intensely, cannot be observed further from a distance any more, included the event series called Yaklaş\_nişantepe within the scope of the 2019-2020 academic calendar to apprehend the region through an interdisciplinary perspective.

**YAKLAŞ\_nişantepe project introducing the concept of sustainability and local development to undergraduate level students**

Within the scope of extracurricular activities at Özyeğin University, Yaklaş events, the first of which were held in 2018, discuss solutions in order to bring together different disciplines and develop strategic solutions for complex problems. This interdisciplinary knowledge sharing platform shows the reason for choosing the word Yaklaş based on two definitions of the word in Turkish.

\begin{quote}
“Yaklaş is defined in two ways in Turkish Language Association (TDK):
1. To move forward with little gap in between, to decrease the distance or to eliminate completely.
2. To evaluate a subject in a certain way by addressing a problem. Yaklaş aims to create a common ground for collective, focused discussion, thinking and transdisciplinary work by addressing a problem in the new world order, which is becoming more and more complex, where we are exposed to fast and very big amount of (but not deepened) information. This common ground, which is open to all, will establish new connections among multidisciplinary stakeholders, which will not only reduce our distance to the problem but also the distance between stakeholders”\textsuperscript{13}.
\end{quote}

The Yaklaş\_nişantepe events, which were programmed within the 2019-2020 academic calendar, were directed towards the Nişantepe region where Özyeğin University is located, and towards the disadvantaged Roma group living in this region to understand their urban and social dynamics. The activities were programmed in four different levels to better understand the region where education, housing, employment and social exclusion are the primary problems. Within the scope of events with the participation of both students and academics from different faculties and departments, (1) conversations

\textsuperscript{12} Bahadır, Bilinmeyen Sokak
\textsuperscript{13} www.yaklas.org
that started in October 2019 are followed by (2) walks, (3) panels and (4) workshops until December 2019.

1.5-hour walks were organized between 14-18 October attended by academics and students from different faculties of the university. Accompanied by academics and sustainability platform experts who led the walks where voluntary participation was essential, students had the opportunity to discover different faces of the region under ten themes such as:

1. city and children,
2. gender,
3. colors of the region,
4. urban insights,
5. impact,
6. street names,
7. infrastructure,
8. city rights,
9. city & food, and
10. education

Ten walking groups, starting from the school and experiencing various routes, sometimes had the opportunity to observe the area where the borders can be more clearly observed outside the university. During their walks with a new perceptual attitude, groups chatted with the people on the streets, listened to their troubles, accompanied the games of the children who were playing freely outside, and sometimes could only listen to their complaints and reactions calmly. As a matter of fact, the emotions and thoughts of the groups when they started the walks and the situation they were in when back to school were completely different from each other.

The panel series, which is the second phase of the Yaklaş Nişantepe events, where the leaders of local government and non-governmental organizations were speakers, took place in the forum area of the University where the entire university had the chance to participate as a listener. With the speakers from members of various institutions and organizations who had the opportunity to work with disadvantaged groups, the neighborhood was discussed collectively with questions from the audience.

Workshops were the last stage of Yaklaş Nişantepe events. Yaklaş Nişantepe Collective Thinking Workshops were organized under the headings of

1. Garbage,
2. Flower,
3. Food, and
4. Child

which were identified during Nişantepe walks. The aim of these workshops was to collectively and systematically discuss Nişantepe Neighborhood through its specific layers and create a multidisciplinary discussion environment. The instruction of workshops with students from twelve different departments, administrative staff and academics, was carried out by Sustainability Platform employees and Özyeğin University faculty members.

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14 www.yaklas.org
In the first session of the workshops, the discussion topics were determined and the process of generating ideas started. In the second session, the ideas generated were presented and knowledge was exchanged within the group. At the end of the day, two speakers from each workshop were selected in order to convey ideas of the group to the audience.

**Yaklaş_nişantepe ‘child’ workshop**

The ‘Child’ Workshop which is instructed by the researcher of this paper from Faculty of Architecture and Design, a PhD candidate from Design, Technology and Society PhD program and an architect from Özyeğin Sustainability Platform, 8 students attended from the departments of architecture, interior architecture, aviation, psychology and computer engineering.

The workshop is started with the introduction of the participants and the reasons for their participation in this project. In order to convey the observations during the walks to the students who did not participate in the walking event, it was continued with a presentation of photographs taken in Nişantepe. After sharing some concrete statistical information about the region and the physical and sociological conditions observed in Nişantepe with various anecdotes, the group was divided into two in order to discuss the topic under two titles: public domain and private domain of the child. The public domain of the child is comprised of the urban pattern such as the streets that the children of Nişantepe are used to play, while the private domain of the child is comprised of his/her home and the its nearby environment. Within these two different groups, not only the unique cultural patterns and codes and daily practices of Roma people but also child-specific problems such as right for education and qualified play environment, the use of child in labor force and tendency to crime in young ages were discussed through an interactive dialogue via taking notes on Flipcharts.

In the report that came out at the end of the workshop, the most obvious research questions raised were as follows:

- How should the play environments of children be designed?
- How can children’s future prospects be extended?
- How can the unique potentials of children be discovered?
- How can children feel that they can create a success story themselves?
- How can the resistance of the local people to change be overcome?
- How can solutions be presented to the people living in the region?

In the context of the private domain of the child, the importance of the teacher’s relationship with both students and parents was emphasized as well as the commitment of parents to their children. It was emphasized that the behavioral attitude of teachers towards their students is a factor that determines not only the academic life of children but also promotes their social and emotional development outside of the school environment. It was shared with the group that absenteeism, smoking and substance abuse in children were among the biggest problems of Nişantepe Primary School. It was also emphasized that the family’s attitude towards the child as a source of income must unquestionably be changed.
In addition to the need to educate the family in order to achieve lasting changes in children, a special approach should be taken to care about their psychological condition in order to make it easier for children to adopt this change. It was highlighted that peers had a significant impact on the child's behavior, especially during adolescence. It was agreed that the school teachers also should act through this awareness. For this reason, it was decided that school teachers who are in one-to-one communication with children could also be involved in an educational process so that they could play a significant role in solving these multidimensional problems.

In the context of the public space of the child, the issue of how convenient the two playgrounds in Nişantepe are for children is discussed. As a matter of fact, the disassembling and sale of playground equipment as scrap by the local people is the main obstacle to the sustainability of the parks in the region. On the other hand, for those children who are accustomed to play on the streets—especially those under 5 years of age—the issue of public accessibility of these parks has been raised as the parks are located in a remote location. It was agreed that parks should be located not only in specific areas in the area, but away from which children of all ages can be safely accessed. In order to prevent the sale of scrap, the issue of upcycling can be designed using recycling materials that are not directly metal and do not threaten the health of the child. Considering that children living in Nişantepe reach school on foot with their parents or older children on their own, creative ideas on how to make the child's school path both a fun and an instructive route were presented.

Additionally, the issue of the lack of public spaces in the area that bring people together coincidentally was questioned. It was discussed that there is no common public place where people can be aware of each other and provide solidarity because the existing areas such as mukhtar, mosque, family health center do not share a particular square or a common area. It was agreed that a community center project that could be provided to the region would enable the local people to work here, meet here and gather here. If they benefit from it, they would own it and strive to keep it alive. It was mentioned that there could be areas such as a training center where people could receive certified training, a play center (nursery) for the children, and a closed/semi-open bazaar area where the people of the region could sell or trade what they produce.

In summary, at the end of the three stages of Yaklaş_nişantepe events, it was agreed that the people of the region can gain multidimensional benefits by a community center although it is a project that can be realized in the long term. The aim of the community center was projected to include a soup kitchen where students from the University's gastronomy department could provide food aid to the neighborhood, to establish a nursery for children of pre-educational age, to reduce the burden of mothers and to create opportunities for them to participate in employment through certified trainings, and accordingly to increase household income as a result. Furthermore, due to the increase in household income seen as an indirect result of this community center project, it was hypothesized that school-age children used as labor force who are generally working on the streets or in informal jobs, could benefit from their right to education again.

Consequently, the idea of the acquisition of a community center in order to ensure the environmental, social and economic development of the Nişantepe region and to ensure the sustainable development of this project is an intellectual outcome of the Yaklaş_nişantepe activities. It was agreed that a course content with the theme of the design of a community center would be an effective way as a learning method for the students.
studying in the Department of Architecture in order to deeply question and examine the concept of sustainability.

The construction of a syllabus of an architectural design studio course that serves as a bridge in the embodiment of collective thinking

ARCH201A Architecture Design Studio II, presented in spring semester of 2019-2020 to the second year students of the Department of Architecture, on the theme of Community Center in Nişantepe, focused on developing an analytical understanding and creative design solutions in order to generate a building program for a ‘collaborative, public-owned, shared, and accessible community center’ that the student (1) grasps a critical thinking on the concept of inclusive and integrated design strategies for the benefit of the locals of Nişantepe (2) comprehends the notion of modular building methods – basically container architecture; and (3) searches ways to create interactive indoor and outdoor spaces fusing various spatial functions needed in the district under one ‘roof’.

Within the scope of the design studio, the students were expected to present a new building program and integrate it to the existing urban context on the site and to create innovative design solutions for the selected site which consists of an existing, one-floored reinforced concrete building which was supposed to be used for the workplace of mukhtar, reconfigure its interior spatial domain depending on the new proposed building program, offer the rest of the spatial functions through a modular building method using ready-made shipping containers as many as it is desired.

The students were also expected to consider that although there are some public buildings in Nişantepe such as mosque, school and health center, there is a lack of a shared public space to help people come together, have education providing solidarity. In this sense, a community center, where people of the region may both give and receive vocationally certified education, obtain health care and public service, participate in recreational activities and etc., is assumed to fulfill the responsibility of increasing the solidarity between different cultural groups. On the other hand, this center may also host preschool education facilities and present play indoor and outdoor play opportunities for different age groups of children so that the mothers can also contribute into labor force.

In this sense, the building to be designed is not only a public domain meeting the public’s needs, but it is rather a setting where people both benefit from and work for the benefit of others so that the center is owned by the community as a living entity. Regarding the building program, students were expected to create their own unique spatial functions and programs, but the following spatial functions in the community center were considered as a priority:

- a training center where people can get certified trainings,
- a children’s play center (nursery) for women to be employed earlier,
- a gym center where especially children can get basic gym education,
- indoor and outdoor sport facilities for youngsters,
- a closed / semi-open bazaar area where the local people can sell or trade what they do,
- a public soup kitchen and etc.
The students were anticipated to envisage the fact that such a center which will be located in the region, may improve the issue of walkability in the district, and thus, the streets can be more livable and safer. Also, the urban vitality resulting via the community center may increase the opportunity for the local people to find jobs in new commercial areas that are likely to open, it is thought that it may contribute to the dialogue between the residents of Nişantepe, as well as an improvement in the income situation of the local people especially the women. In addition, this improvement is also important for the local children whose educational rights are taken from them since they become more worried about earning money for their household through begging on streets or collecting garbage.

Other predetermined issues regarding the project theme and its execution process can be summarized as follows:

- The project site is on a location where Kavaklı, Susam and Badem Street are intersecting.
- There already exists a vacant building (82.54 sqm) which was built for the workspace of mukhtar. A spatial function for this building is supposed to be developed by the students.
- The existing situation of the site is used as a park in the present condition consisting of a playground and outdoor sports facilities. However, the public in the district are complaining about the daily usage of the site because of the crime rates.
- The building method of this project theme is based on designing a temporary building so that the community center may also move whether the locals of Nişantepe move to another district in Istanbul.
- The temporary structure will be designed with ready-found shipping containers. As Schwarzer mentions\textsuperscript{15}, “(…) the shipping container functions primarily as metaphor for a specific type of individual freedom: mobility.”

Within such a holistic debate of thinking, the community center may activate the underutilized spaces and can cause a new way of transforming neighborhoods and urban spaces through public participation and encouragement. Within this context, students were required to build up a unique building program enriched by public educational, healthcare and recreational spaces and re-examine interactive and flexible indoor and outdoor spaces (Figure 1 and 2).

The students were also expected to generate analysis in the neighborhood where the project will be conducted in order to

- get a heightened perceptual awareness about the physical and social parameters of the environment,
- to propose a way of organizational model for the realization of such a cooperative and educational facility, and then
- to develop a design solution for it.

Student projects of ARCH 201A Design Studio II course

Within the procedure of the course, after the introduction of the theme of the project, a literature review on the keywords of modular building, inclusive design, walkability, and temporary building were covered and a site trip to the project site was organized. Students who had the opportunity to observe the area from a physical, social and economic point of view during the site trip, presented their analysis about the setting through their own prepared videos. After the analysis phase, the students first prepared the building needs program of the community center to be designed with their reasons. One of the preconditions for the project was that the project was designed using ship containers, as the sustainability of the community center depends on the possibility of this building to be moved with the local people in the future. For this reason, a container company’s production center was visited so that students could learn about container architecture (Figure 3).
A total of 9 students participated in the course, which was held face to face until 11 March, when the first Covid19 case in Turkey came out, and then was conducted online until the end of the semester. Students who are accustomed to present their ideas through two-dimensional presentation tools as well as a physical model prior to the pandemic carried the model process into virtual environment via using computer aided design tools after the pandemic. During the semester, 2 in-semester juries and a final jury were held online during the semester (Figure 4).

When the final projects of the students are evaluated, it is noticed that students generally included public service areas such as nursery, health center, certified training courses in the building programs in order to facilitate local people's access to education, health and job opportunities (Figure 5 and 6). In some students’ projects, it is considered that outdoor spaces are as important as indoor spaces and therefore outdoor bazaar areas, celebration and gathering areas are included in projects for the solidarity and cultural sustainability of the people of the region. Since labor forces such as dancing, musicianship, floriculture, garbage collecting, poultry farming are observed in the region, it has been noticed that
some student projects included spatial solutions for these activities through an upgraded form - such as upcycling - so that these lines of work can contribute to the economic sustainability of the region (Figure 7 and 8).

Figure 5 and 6. Student posters (Edadeniz Baysan)

Figure 7 and 8. Student posters (İremnur Yurteri)
When the physical and environmental sustainability of the projects are evaluated, it has been noticed that students use container architecture in a manner consistent with the residential texture and volumetric appearance of the area, as well as that some projects reflect the area's roof geometry in their projects by interpreting it in an inventive way as a metaphor (Figure 9 and 10). However, it is obvious that a holistic contribution to environmental sustainability that can affect the entire region is limited because the students worked on a single plot and designed an architectural design project.

![Figure 9 and 10. Student posters (Sena Balaban)](image)

When the questionnaires which are sent by the university administration to the students in which student opinions are obtained anonymously are examined, it is observed that the project studio assisted students to comprehend the concepts of sustainability and sustainable development. When the Learning Outcome section of the questionnaire filled out by 7 students out of a total of 9 students is examined, the comments on the concept of sustainability of the results in Table 1 are noteworthy.
Table 1. Learning Outcome Section of the Course Evaluation of ARCH 201A

<table>
<thead>
<tr>
<th>THE LEARNING OUTCOME</th>
<th>very low</th>
<th>low</th>
<th>moderate</th>
<th>high</th>
<th>very high</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design:</strong> Integrating factors in the design process with creative thinking in the context of universal design principles (accessibility, sustainability etc.); abstraction and integration of collected data; reaching to new and authentic solutions.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Critical Thinking:</strong> Asking open and proper questions (questioning), expressing abstract thoughts; evaluating opposite views; questioning reached results with appropriate criteria.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Research:</strong> Evaluating the knowledge related to design processes comparatively; documenting, representing and implementing the knowledge in design comprehensively.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Sustainability:</strong> Diminishing the environmental impacts of design on future generations using different instruments based on the knowledge pertinent to natural and built environment.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
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</table>

**Conclusion**

Since the concepts of sustainability, local and regional development include many layers of physical, social, environmental and economic dimensions, these multidisciplinary scopes need to be examined in a holistic way when a sustainable development project for a particular region is projected to be realized and taken into action. Therefore, it is important for individuals of all age groups to learn and examine these concepts in depth before taking action on any project.

Although the concept of sustainability is always a necessary topic in the courses of undergraduate architecture students within their curriculum, especially in Architectural Studio projects, the concept of sustainability is not sufficiently assimilated by the students among other specific issues of design such as the content of the project theme, multidimensional discussion of the design concept, the scope of the building needs program and technical drawing problems. Therefore, it may be a good opportunity for the students to reflect their intellectual knowledge obtained in extracurricular activities onto their courses in their compulsory courses in their curriculum.

Supporting this idea, the aim of this study was to discuss the effects of Yaklaş...nişantepe extracurricular events organized within the scope of a sustainable development project planned for Nişantepe region and the impact of a compulsory course content constructed to enable students to better assimilate the concept of sustainability.
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References


