

AN EVALUATION OF CAMPUS LANDSCAPE: THE CASE OF TOGU CAMPUS

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ABSTRACT. The landscape of university campuses should consist of open and closed spaces that support education and training activities. The open spaces of the campuses must be ecologically, aesthetically, socially and recreationally and economically qualified and comply with the principles of sustainability. Tokat Gaziosmanpaşa University (TOGU) Tasliciftlik Campus, which is the subject of this study, was ranked 14th in Turkey and 256th in the world in 2021 in the Green Metric world university rankings, which focuses on sustainability criteria. TOGU campus has achieved this success in the ranking mostly with the features of the campus landscape. The aim of this study is to identify the deficiencies and develop suggestions for eliminating the deficiencies so that the campus landscape has better conditions. In the study, the SWOT analysis method was applied as the main method and the characteristics of the campus landscape were discussed under three main headings: physical and ecological quality, behavioral and functional quality, and aesthetic and visual quality. As a result of the evaluation, it has been determined that the physical and ecological quality of the TOGU campus landscape is rich in terms of ecology and biodiversity but cannot meet the demands of the users in behavioral and functional terms. In line with these determinations, the physical, ecological, functional and aesthetic qualities of the TOGU central campus landscape were evaluated within the scope of sustainability. It has been revealed that the campus has a great potential for the enhancement of the mentioned qualities, and comprehensive and effective landscape planning, design and management suggestions have been given in order to improve and develop the landscape qualities.

Keywords: *campus landscape, landscape evaluation, swot analysis, TOGU campus*

INTRODUCTION

Campuses are the places where universities are located together with all kinds of structures and activity areas such as classrooms and student dormitories. In terms of spatial diversity and integrity, campuses are also defined as an urban settlement, a living city, a twenty-four-hour university environment, a self-sufficient academic village that offers the necessary living conditions for its users, or the reflection of academic ideals on physical planning [1].

In most of the university campuses, a significant part of the areas outside the buildings are reserved for green areas. Open and green areas in the campuses include; the

transportation system, the boundaries of the area, entrance gates, gardens, outdoor seating areas, sports areas, playgrounds, monuments, fountains and sign boards, campus furnitures and the natural assets of the campuses (if any, rocks, forested areas, small lakes) [2]. Campus open and green areas have some important functions. These can be specified as; to ensure the integrity between the buildings and the campus, to provide the necessary space for the circulation system, to allow the outdoor arrangement to meet the recreational needs on the campus, to ensure the establishment of a relationship between people and the environment within the boundaries of the campus, to create reserve areas to meet the physical development of the campus, to contribute to the aesthetic value of the campus [3]. The open-green spaces of the campuses are the most important elements of the campus landscape with their aforementioned functions and qualities.

Landscape quality can be described as the relationships between landscape features of an area and the effects of these landscape features on individuals. Landscape character is defined as "a distinct, recognizable and consistent pattern of elements in a landscape that distinguishes one landscape from another" and includes the shapes, colors, spatial arrangements and other visible qualities of landscape elements [4]. Assessing the key landscape features that influence the character and quality of the campus landscape will enable the creation of campuses that are effective in ecological, social and economic contexts. Planning and design principles have been determined to improve and develop the quality of the campus landscape. The design of the campus landscape should include these three principles:

a) Physical and ecological quality: is based on principles that address the conditions of use and functionality of natural and environmental characteristics (plants, green surfaces, topography, water elements, etc.) in landscape planning and design. Adopting ecological approaches in planning and design improves physical and ecological quality. Issues and solutions regarding ecological landscape planning and design criteria are shown in Figure 1.1.

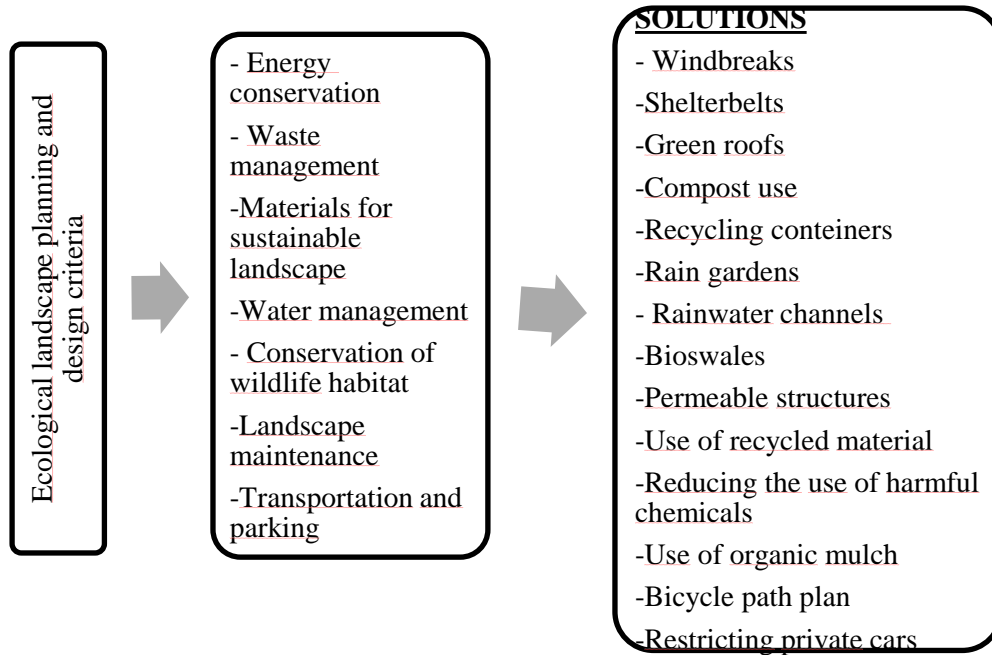


Fig.1.1. Landscape planning and design criteria including ecological approaches [5]

b) Behavioral and functional quality: a quality indicator in which the interactions of physical space and human behavior (educational, social and cultural equipment) is the criterion (duration, frequency, type of activities; physical character of spaces) focuses on the following standards;

- Meeting user behaviors, needs (comfort, ergonomics, safety, health, psycho-social development) and expectations by the elements of the campus landscape
- Functionally defined spaces must meet the needs of users (sports, eating and drinking, resting, working, socializing, etc.)
- Strengthening the relationship between behavior and physical space with principled design strategies

c) Aesthetic and visual quality: since visual preference is based on visual sensation, exterior spaces and buildings have an aesthetic appearance and a common character. This quality based on:

- High aesthetic value of perceptions of natural and cultural landscape elements
- Increasing the visual quality by determining the visual value of the landscape with physical, psychological and psychophysical approaches
- Spatial characteristics are preferable by users as they include compatibility, complexity, wonderfulness and novelty factors [6].

With the concept of sustainability on the agenda, it has become important to ensure sustainability in campuses, which are active living spaces as well as in urban centers. A "sustainable" or "green" campus is one that aims to develop and manage itself in an

environmentally friendly way, where best management practices are consistently adopted. Sustainable campus practices and green design initiatives provide an opportunity for campuses to teach the principles of sustainability and serve as a model for society by demonstrating progressive principles of sustainability. Implementation of the green campus concept on campuses can be possible by ensuring the participation of campus users; students, academic and administrative staff and administrators [7]. Large institutions such as universities take an active role in promoting sustainable lifestyle with sustainable and ecological practices. Thus, sustainable and ecological campus practices have started to spread rapidly around the world due to the role of universities as pioneers and innovators [8]. This is why the green metric rankings were created, which monitor the implementation of sustainability principles on campuses and publish international results using a quantitative scoring system. The UI GreenMetric World University Rankings, released in 2010 by Universitas Indonesia, ranks universities in the categories of region, country, category and campus, and evaluates the universities that apply to be included in the ranking according to sustainability criteria. Sustainability criteria determined in 6 categories under the headings of Setting and Infrastructure, Energy & Climate Change, Waste, Water, Transportation, Education and Research are used to create the international greenmetric ranking. In 2022, 1050 universities worldwide and 83 universities from Turkey were included in this ranking [9]. The criteria for achieving sustainability in campuses are grouped based on the 3 main issues of sustainability under the headings of environmental, social and economic in Figure 1.2.

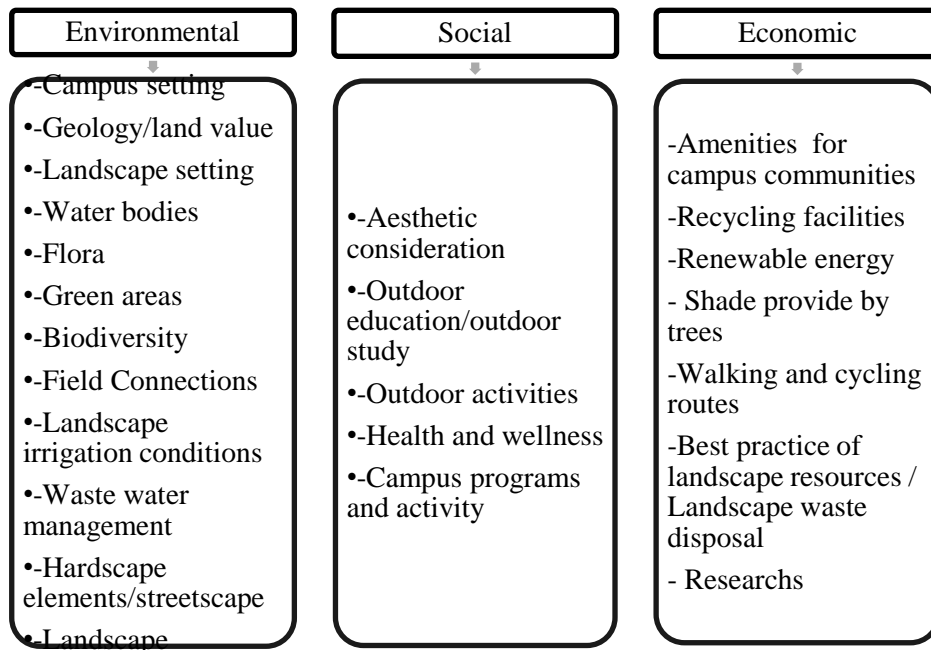


Fig.1.2. Sustainable Campus Landscape Criteria Framework [10].

In this study, the qualities of the campus landscape were evaluated by considering the sustainable campus criteria. The aim of the study is to evaluate the physical and ecological, behavioral and functional, aesthetic and visual qualities of the landscape of

Tokat Gaziosmanpaşa University Central Campus within the scope of sustainability criteria, to reveal the deficiencies and to offer solutions for eliminating the determined deficiencies and improving the campus conditions.

MATERIAL AND METHOD

In this study, the landscape of Tokat Gaziosmanpaşa University (TOGU) Tasliciftlik Campus was evaluated as a case study area. The university was established in 1992 and is the only university in the province where it is located. The campus is located on the Tokat - Amasya road, 9 km from the city center of Tokat, in Tasliciftlik, on 2000 decares of land. More than 25,000 students study in the campus, and nearly 2,500 academic and administrative staff also serve. Educational structures (12 Faculties, 5 Vocational Schools and Graduate Education Institutes), dormitories and a guesthouse, administrative structures, social and cultural structures (library, dining hall, social facilities), a health center, commercial buildings (market, restaurant) religious buildings, sports facilities (multi-purpose gym, stadium, swimming pool, athletics track) and open-green spaces (recreation areas, parking lots, pedestrian paths) are located in TOGU Campus area [11]. The material of the study consists of data on the TOGU campus, the reports of the university and the information and photographs on the official website of the institution [12]. Figure 2.1 shows the map of TOGU campus created using satellite imagery.



Fig.2.1. TOGU Tasliciftlik Campus Map [13]

In recent years, the management strategies of Tokat Gaziosmanpasa University have been oriented around the sustainability, emphasizing education, research and social responsibility, environmental awareness and sustainable environment, and focusing on

the goal of becoming a green campus. In order to achieve these goals, a solar power plant and a compost production facility were established in the university campus, and a zero-waste project was realized between 2019-2022 [13]. Within the scope of the GreenMetric ranking, which measures the sustainability of university campuses according to criteria consisting of structure and infrastructure (SI), energy and climate change (EC), waste (WS), water (WR), transportation (TR) and education (ED) basic classification units, Tokat Gaziosmanpasa University ranked 504th worldwide and 26th in Turkey in 2019, and 412th worldwide and 23rd in Turkey in 2020. In 2021, Tokat Gaziosmanpasa University ranked 256th in the world university rankings and 14th in Turkey. In addition, the university, which was more successful in achieving green campus standards, ranked 11th in Turkey and 185th worldwide in 2022 [14]. The landscape of Tasliciftlik campus, which was selected as a case study area due to the size of the campus area, the high number of users of the campus and the efforts carried out by the university administration to achieve the green campus target, will be evaluated in this study within the scope of the quality of the landscape and sustainable campus principles.

SWOT (strengths, weaknesses, opportunities and threats) analysis method was chosen as the main method for the evaluation on this study. The SWOT analysis method is a strategic tool for evaluating the strengths and weaknesses of a person/organization/area and for making determinations to take advantage of possible opportunities and to take measures against possible threat [15]. In the evaluation, the qualities of the campus landscape were grouped under 3 headings. Strengths, weaknesses, opportunities and threats were identified for the physical and ecological quality, behavioral and functional quality and aesthetic and visual quality of the landscape. The targets identified as a result of the assessment are based on a matrix of internal strengths-external opportunities (SO), weaknesses and threats (WT), weaknesses and opportunities (WO) and strengths and threats (WT).

RESULTS AND DISCUSSION

As a result of the swot analysis, the identified strengths, weaknesses, opportunities and threats were grouped according to the characteristics of the landscape, and the data related to the analysis was supported by photographs taken from the campus.

Strengths: When the campus landscape was analyzed through SWOT analysis, it was seen that its strengths were mostly related to the physical and ecological quality of the area. The region where the campus is located is rich in geographical, climatic and ecological resources. Considering the functional qualities of the campus area, the proximity of its location to the city center, the topography of the land being convenient for settlement and transportation, and the socio-cultural richness of the region constitute the strengths of the campus landscape. In terms of visual quality, the existence of landscape diversity, which has aesthetic views in 4 seasons, was among the strengths of the area. Table 3.1 shows the strengths identified for the SWOT analysis.

Table 3.1. Strengths determined by a SWOT analysis

STRENGTHS	
Physical and ecological quality	<ul style="list-style-type: none"> • S.1. Favorable climatic conditions (microclimate) • S.2. The high number of sunny days in Tokat • S.3. Being dynamic in terms of topographic structure • S.4. Topographic features that do not restrict access • S.5. Biodiversity • S.6. Natural Vegetation • S.7. Clean Air • S.8. Preservation of local features thanks to geographical location • S.9. Located in a region that has hosted many civilizations • S.10. Soil structure suitable for agriculture
Behavioral and functional quality	<ul style="list-style-type: none"> • S.11. The campus area has the potential to be used in 4 seasons • S.12. The topography of the area is suitable for transportation alternatives such as automobile, cable car, tram and bicycle. • S.13. TOGU campus is close to the city center • S.14. The region is very rich in terms of intangible cultural landscape (handicrafts, gastronomy, traditions, etc.)
Visual and aesthetic quality	<ul style="list-style-type: none"> • S.15. Existence of landscape diversity such as forest landscape, rock landscape, cultural landscape, mountain landscape • S.16. The interesting changes of the campus landscape according to the seasons • S.17. The topography of the land creates panoramic images

TOGU landscape's physical and ecological strengths such as favorable climatic conditions (microclimate), biodiversity, and visual strengths such as high visual quality of the campus in 4 seasons can be seen in Figure 3.1 and Figure 3.2. In addition, Figure 3.3 shows the natural vegetation and convenience of topographic structure of the area, while Figure 3.4 shows the land size and dynamic topography more clearly.



Fig.3.1. Campus open-green spaces 1

Fig.3.2. Campus open-green spaces 2

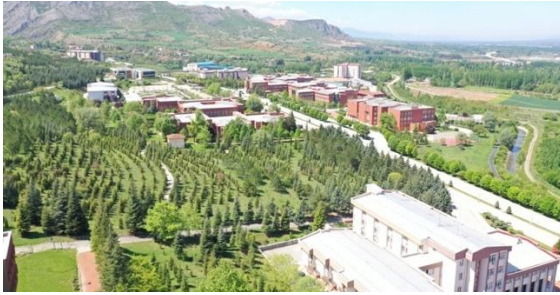


Fig.3.3. General view of the campus 1



Fig.3.4. General view of the campus 2

Weaknesses: The main weakness of the area in terms of physical and ecological qualities is the earthquake risk arising from the fact that Tokat is located on the North Anatolian fault line. The increasing risk of drought due to the effects of climate change and the fact that the wetlands in the area have been reclaimed and drained in the previous periods are weaknesses that may cause negativity in terms of water management in the campus landscape. Weaknesses in the behavioral and functional quality of the campus landscape include the fact that wrong decisions have been taken by administration regarding the planning and management of the area. Also, other socio-cultural weaknesses are the lack of alternatives to meet all the social needs of the users in campus and the fact that the university is located in a province with limited opportunities for socio-cultural activities. In addition, when the area is evaluated in terms of visual and aesthetic quality, the aesthetic incompatibility arising from the lack of a holistic landscape planning system and subsequent design interventions can be evaluated as the weakness of the visual quality of the area. Table 3.2 contains the weaknesses of the campus landscape, grouped according to their qualities.

Table.3.2. Weaknesses identified by SWOT analysis

WEAKNESSES	
Physical and ecological quality	<ul style="list-style-type: none"> • W.1. Located on the North Anatolian fault line • W.2. Drought risk • W.3. The wetlands within the campus have been dried before • W.4. Failure to protect biodiversity in new constructions
Behavioral and functional quality	<ul style="list-style-type: none"> • W.5. Land use decisions are at the initiative of university administrators • W.6. Inability to meet all expectations and demands due to the diversity of the user profile • W.7. Since the campus is located in a small city, social and cultural opportunities are limited.

Visual and aesthetic quality	<ul style="list-style-type: none"> • W.8. Failure to create a holistic landscape plan system • W.9. Subsequent arrangements were made without considering the project integrity
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The main reason for the deficiencies in the quality of the campus landscape is the lack of a systematic and holistic landscape plan. Figure 3.5 shows the campus plan included in the institutional reports. The plan only shows the boundaries of the area, the locations of the campus buildings, transportation axes and green areas. The open green areas on the campus are grouped under 2 headings in the plan legend with only "planted vegetation" and "forest area" descriptions. It was determined that the landscape design works conducted in the area were not carried out in a way to ensure visual harmony between the spaces by not considering the campus area in a holistic perspective, and that the spaces were designed independently rather than integrating with the landscape character. The visual in Figure 3.6 is an example of this issue.

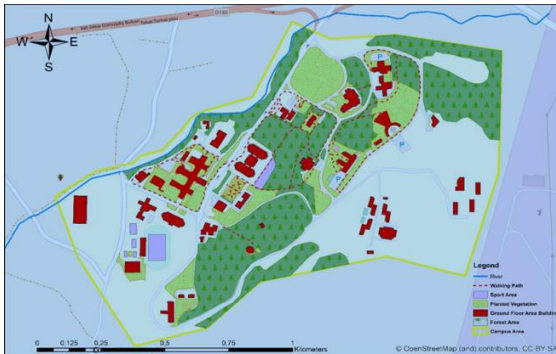


Fig.3.5. Campus plan



Fig.3.6. Campus center

Opportunities: The fact that TOGU campus is constructed on a large area, the uniqueness of the local landscape features, the conditions that will allow the establishment of a green infrastructure system and the richness of the existing plant diversity constitute were determined as the most important opportunities for improving the physical and ecological quality. On the other hand, the efforts made by the university administration to adapt the green campus concept to the campus and the importance given to this issue provide the opportunity to ensure sustainability on campus. For the improvement of behavioral and physical quality, TOGU's rise in international and national student preferences in the last few years, the increase in the number of students and the university's growth trend can be considered as opportunities. The need to develop the campus to meet social and cultural needs, which will arise due to the aforementioned reasons, can be achieved through principled landscape planning and design strategies. When the campus is evaluated in terms of visual quality, it is observed that there are opportunities arising from the fact that most of the existing buildings have a view due to the opportunities provided by the topography, the planting design creates a color effect in 4 seasons, the structure-space balance is preserved in the existing construction, and the building materials used are

compatible with the landscape character of the area in terms of color, shape, texture and size. Table 3.3 shows the opportunities that appeared as a result of the assessment of the TOGU campus.

Table.3.3. Opportunities identified by Swot analysis

OPPORTUNITIES	
Physical and ecological quality	<ul style="list-style-type: none"> • O.1. Large campus area • O.2. Unique landscape (campus area that has not lost its local features) • O.3. Studies on World Universities Green Metric ranking • O.4. Rich diversity in planting design • O.5. Compliance with green infrastructure systems • O.6. No noise pollution in campus
Behavioral and functional quality	<ul style="list-style-type: none"> • O.7. The importance given to the green campus concept and landscaping practices by the university administration • O.8. Increase in the number of students and potential growth of the campus • O.9. The quality of the areas can be improved with principled planning and design. • O.10. The qualified landscape will contribute to the formation of the university identity. • O.11. Being a preferred campus by domestic and international students • O.12. Availability of student accommodation on campus • O.13. Agricultural products such as fruits, vegetables, fish, chicken and eggs are grown on campus. • O.14. Presence of hobby gardens within the campus area • O.15. Considering the seismicity of the area, avoiding multi-storey construction • O.16. Preservation of cultural landscape values in the region compared to other metropolitan cities
Visual and aesthetic quality	<ul style="list-style-type: none"> • O.17. The plantation design is designed to create a color effect for 4 seasons. • O.18. Most of the indoor and outdoor areas are positioned to benefit from the view • O.19. Materials used in structural areas support natural aesthetics in terms of color, shape, texture and size • O.20. Maintaining the mass-gap balance throughout the campus

The size of the campus area, the compatibility of the materials used within the buildings and the opportunities for rich visual quality can be seen in Figure 3.7, which shows a large part of the campus. As shown in Figure 3.8, it is possible to improve the quality of open green spaces on campus in terms of ecological, functional, and aesthetic qualities through principled landscape planning and design strategies. Figure 3.9 and Figure 3.10 show the visual quality opportunities offered by the campus areas in 4 seasons.

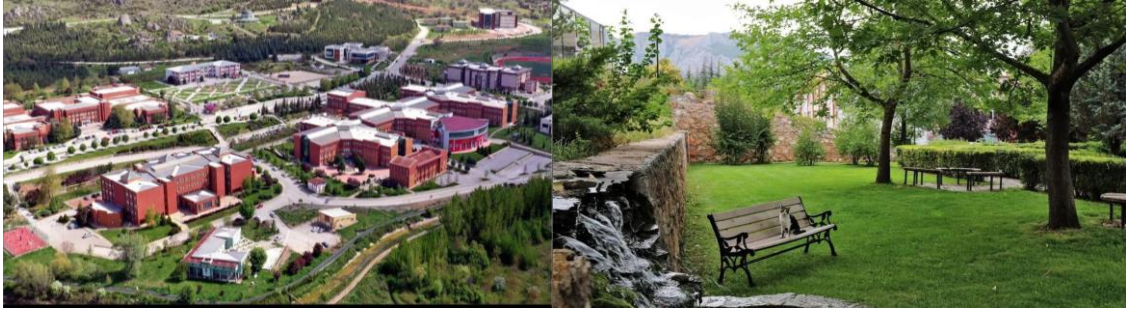


Fig.3.7. General view of the campus 3

Fig.3.8. Campus open-green spaces 3



Fig.3.9. Winter in the campus

Fig.3.10. Campus view

Threats: When evaluated in terms of threats to the campus landscape, it was found that threats to behavioral and functional quality were much more in number compared to the other two categories. In terms of threats to physical and ecological quality, it was observed that the campus was evaluated in a fragmented rather than holistic manner, the presence of air pollution from the nearby main road and the functions of the water canal located on the borders of the campus were not included in the landscape design. Also, it was determined that; the main reason for the threats to behavioral and functional quality is the lack of functional use of the campus landscape in terms of ecological, social, economic and aesthetic aspects. In addition, it was revealed that the elements of the campus landscape are inadequate in terms of quality, quantity and diversity, recreation areas are not designed to meet the needs of users, and there are not enough defined areas on campus for social and cultural activities. At the same time, there are deficiencies in terms of transportation, accommodation and security in terms of making the campus a 24-hour living space. One of the most important threats is the lack of a qualified landscape architect employed within the university unit authorized to plan, design and manage the campus landscape. Interventions in the campus plan and design are not left to the authority and supervision of experts in the field. The visual and aesthetic threats are the lack of landscape design for the entire campus area, the fact that the areas designed considered by landscape features are only the areas near the existing buildings, and the lack of artistic objects on the campus. Table.3.4 lists the threats identified for the TOGU campus landscape according to their categories.

Tablo.3.4. Threats identified through SWOT analysis

THREATS	
Physical and ecological quality	<ul style="list-style-type: none"> • T.1. Considering the spaces not as a holistic, but as a piece • T.2. The fact that the water channel within the campus boundaries is not integrated into the landscape elements • T.3. Air pollution caused by the campus being close to the main road
Behavioral and functional quality	<ul style="list-style-type: none"> • T.4. Inadequacy of landscape equipment in terms of quantity, quality and diversity • T.5. Inadequate recreation areas and activities • T.6. Inadequacy of defined areas in terms of their functions • T.7. Inadequate transportation and accommodation facilities to the campus • T.8. Security issues in 24-hour use of the campus • T.9. The campus landscape plan is not up to date and systematic. • T.10. Unsuitable conditions for disabled users on campus • T.11. Disconnections from unplanned growth • T.12. Lack of eating and drinking areas and outdoor activities • T.13. Lack of open amphitheater and campus square • T.14. Plants on campus are not labeled • T.15. The fact that some structures are built on first-class agricultural soil • T.16. Lack of indoor and outdoor arrangements suitable for disabled access • T.17. Economic deficiencies • T.18. The lack of a unit responsible for parks and gardens and employing landscape architects within the administration of the university
Visual and aesthetic quality	<ul style="list-style-type: none"> • T.19. The absence of artistic objects • T.20. The water element was not used as a landscape design element • T.21. The presence of the landscapes designed on the campus around the building, the lack of implementation of landscape design strategies throughout the campus

Figure 3.11, a photograph of the campus center, shows that the quality, quantity and diversity of landscaping equipment is inadequate. In addition, as seen from the design of the area, a user-oriented approach was not adopted, and the photograph of the same area taken from another angle in Figure 3.12 shows that the recreation areas are not sufficient to meet social needs. Figure 3.13 shows that the landscape designs within the campus are only applied around the buildings and that there is not an integrated landscape planning and design strategy in the whole campus area. The visual in Figure 3.14 shows that the water canal passing through the campus is not used in a way to provide recreational and aesthetic functionality to the campus landscape. Figure 3.15 and Figure 3.16 show pictures of the campus roads and walkways that cause transportation and accessibility problems on campus. The walking routes planned within the area have been implemented for short distances and the pedestrian circulation within the campus has not been planned

in detail. In addition, especially in winter months, public transportation facilities are insufficient to meet the needs of students both in transportation from the city center to the campus and in transportation within the campus.



Fig.3.11. Campus recreational spaces 1



Fig.3.12. Campus recreational spaces 2



Fig.3.13. General view of the campus 3

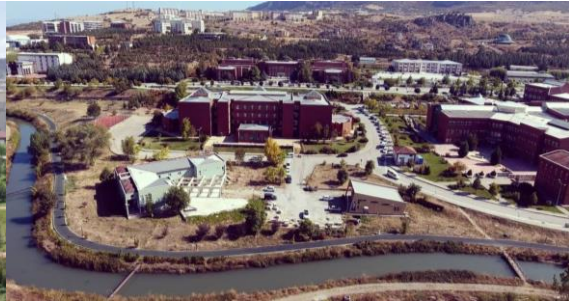


Fig.3.14. General view of the campus 4



Fig.3.15. Campus accessibility 1



Fig.3.16. Campus accessibility 2

Evaluation:

Considering all the qualities of the campus landscape, each of the findings of the Swot analysis showed that the natural landscape of the area has the potential to achieve sustainability in ecological, behavioral and aesthetic quality groups if managed with comprehensive and principled landscape management strategies. This potential is the greatest opportunity for the sustainable development of the campus. Factors that may pose a threat to the campus landscape may occur when land use decisions are made without considering ecological value, when interventions are not made to meet the socio-cultural needs of users, and when sustainability principles are not integrated into management strategies. The findings of the evaluation are listed below:

- Tasliciftlik campus has strong features in terms of natural and cultural landscape.

- ▶ The majority of the problems in practice arise from behavioral problems due to wrong management decisions.
- ▶ In order to ensure sustainability in the TOGU campus, all of the directives determined by the principles of landscape planning and design should be implemented, and the participation of experts should be ensured in the monitoring and supervising processes of the practices.

In line with the determinations made, the objectives to be accomplished for the implementation of the green campus concept in Tasliciftlik campus were determined by creating a SWOT analysis matrix. Accordingly, (SO), (WT), (WO), (WO) and (ST) relationships were established in the matrix and targets were identified to improve the quality of the campus landscape. These targets are shown in Table.3.5

Table 3.5. Targets determined by SWOT analysis

IDENTIFIED TARGETS	
Inner strength- External opportunity (SO)	<ul style="list-style-type: none"> • Aim SO.1. By taking advantage of the climate, open areas with ecological value should be increased as much as possible. • Aim SO.2. Outdoor activities should be diversified. • Aim SO.3. The principle of landscape planning and design should be adopted, in which all elements of the natural landscape are preserved (topography, geology, flora, fauna, soil and water). • Aim SO.4. In terms of social and cultural arrangements, the campus and the city should be equipped to complement each other.
Weaknesses - Threats (WT)	<ul style="list-style-type: none"> • Aim WT.1. All structures should be made earthquake resistant. Awareness should be raised about earthquake • Aim WT.2. Sustainable landscape design principles that protect natural landscape values should be adopted. • Aim WT.3. It is necessary to ensure the participation of experts in the decision-making processes of the people who have a say in the field management. • Aim WT.4. All kinds of landscape equipment and elements need to be improved in terms of quantity and quality.
Weaknesses- Opportunities (WO)	<ul style="list-style-type: none"> • Aim WO.1. Saving water through xeriscape principles and wastewater recycling • Aim WO.2. Designing open areas suitable for temporary settlement to be used in a possible disaster • Aim WO.3. Implementation of planning and design principles in which the original identity of the region is preserved. • Aim WO.4. Opportunity to rank higher in the Green Metric ranking with new regulations focusing on sustainability principles

Strengths - Threats (ST)	<ul style="list-style-type: none"> • Aim ST.1. Creating a holistic and systematic structure with planning and design strategies that cover the potential of the existing natural landscape features of the area and sustainability principles • Aim ST.2. Making arrangements (undergraduate education, vocational training courses, festivals, competitions) that will allow the survival of intangible cultural landscape elements that reflect the natural and cultural characteristics of the region. • Aim ST.3. Local materials (red soil, terra cotta, tile) should be chosen as materials for buildings, and endemic plants should be used in planting. • Aim ST.4. Non-purpose use of the agricultural land should not allowed.
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Planning, implementing and managing the campus landscape plan based on sustainable principles is the most important step to achieve the identified targets. The landscape plan to be prepared for the campus area will be the most important tool for the adoption of the green campus concept on campus by increasing the ecological value of open and green areas, ensuring the achievement of all environmental, social and economic criteria of sustainability, and enabling the diversification of activities such as energy generation, agriculture, compost production and recycling practices.

For these reasons, it is necessary to raise the awareness of both the university administration and all users, staff and students, about the relationship between the improvement of the quality of the campus landscape and sustainable development. The campus landscape plan should be prepared and implemented immediately with the participation of landscape architects and all other related professionals who are experts in environmental and sustainability issues. The campus landscape should be managed in accordance with all the directives of the plan, students should be involved in the implementation and management processes and education, research and activities to ensure sustainability should be increased to provide ecological, socio-cultural and economic contributions not only for the development of the university, but also for the city and its citizens.

CONCLUSION

The evaluations made as a result of the SWOT analysis showed that TOGU campus landscape has the ecological and physical qualities to meet the sustainability criteria in terms of topography, area size, local landscape character and biodiversity. The elements that pose a threat to the campus landscape are caused by the fact that since the establishment of the campus, land use decisions have not been taken in a way to improve the quality. Since the management of the campus landscape was not based on a holistic landscape plan, interventions that would have damaged the ecological values of the area were realized. On the other hand, the fact that the originality of the landscape character of the area is still preserved is one of the most important opportunities to increase the ecological quality of the campus. Within the scope of sustainability principles, it is

possible to adapt energy, transportation, wastewater management, recycling and carbon emission reduction practices into the campus landscape.

It can be said that the most threatening factors for the campus are the problems related to the relationship between social behavioral quality and sustainability. The existing social facilities of the campus are insufficient to meet the needs of the users. Campus users face problems in their daily lives due to limited alternatives for transportation, accommodation, security, accessibility, and inadequate spaces for eating, drinking, recreation, sports and cultural activities. Necessary planning and design interventions should be made to make the campus area more functional. In order to reconcile the social quality of the campus with the principles of sustainability, it is a necessity to implement practices that provide opportunities such as sustainable transportation, sustainable energy and recycling within the campus area. It is necessary to raise the awareness of students and decision makers about sustainability practices and to ensure their participation.

From a visual and aesthetic point of view, the natural elements of the campus landscape have high visual quality due to the favorable topography and climatic conditions. On the other hand, it has been observed that the fragmentation of the landscape designs of the campus has led to a decrease in aesthetic quality. The entire campus area was not handled within the design integrity. It has been observed that there are visual quality issues due to the lack of artistic objects on the campus.

In conclusion, this study, which evaluated the landscape of TOGU Central Campus based on SWOT analysis, found that the area has a significant potential in terms of ecological and physical, behavioral and functional, aesthetic and visual qualities for improvement and development within the scope of the green campus concept. It has become clear that a principled landscape plan will be the most important tool to turn this potential into an opportunity. Interventions that negatively affect all the qualities of the campus landscape are due to the fact that an effective landscape plan has not been prepared and implemented for the TOGU campus to the present day. If a principled landscape plan is prepared and implemented, it will be possible to achieve all the objectives identified in this study.

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