Redesign of the President`s Palace in Kazakhstan

El rediseño del Palacio del Presidente en Kazajistán

Author:

Bayan Kaderbieke[1]*
Mira Yeraliyeva[2]
Victor Trofimov[3]
Yuriy Popov[4]

Innovaciencia ISSN: 2346-075X

E- ISSN: 2346-075X
Innovaciencia 2022; 10(1); 1-12
http://dx.doi.org/10.15649/2346075X.2955

SCIENTIFIC RESEARCH

How to cite this paper:
Kaderbieke B, Mira Y, Trofimov V, Popov Y. Redesign of the President`s Palace in Kazakhstan. Innovaciencia 2022; 10 (1): 1-12, DOI:http://dx.doi.org/10.15649/2346075X.2955

Date received
Received: 16 november 2022
Accepted: 25 november 2022
Publicated 01 december 2022

Keywords:
Public park making; Landscape design; Global features of a public park; Global cities index; Social activities city index.

Manuscript presented in International research and practice conference *"Problems of formation of a comfortable object-spatial environment of cities. Issues of architecture, construction, design"* September 19-20, 2022 Opatija, Croatia. Edited by Innovaciencia.

ABSTRACT

Introduction: This paper deals with the renovation process of the President's Palace in Kazakhstan. Diversity is one of our main features expressing the nationwide experience along with its successes and failures. The spatial quality of some public spaces provided them permanence and "sustainability". The aesthetic values of architectural and urban spaces are often determinant factors for urban environmental quality. In fact, our research strategy combines the study of spatial practice and usage with the analysis of design quality. The rejuvenation of urban spaces is a promising experience contributing socially, economically, and physically to regenerating the local urban environment and leisure activity. Sustainable urban development provides city designers with criteria of social and ecological rationality that are different from those available in the market. Consequently, the concept of sustainability becomes the keystone of the urban development process. **Materials and Methods**: This paper puts forward a question about the global features of a public park and continues the discussion on keeping a balance between local architecture and the global 'public park making' trend the method employed is qualitative interviews, observations, and walking tours with public space users. An amount of data is collected for environmental assessment. **Results and Discussion**: The renovated park shows the new way public space is oriented. In President's Palace, a new logic of urban publicity was assembled and built into the landscape. we analyzed the social and technical means. New public spaces of this sort promulgate a conception of the public that not only combine with discourses of democratization, citizenship, and self–development and is connected ever more firmly to consumption and commercial. **Conclusions**: We also do research on the global features of a public park and discuss keeping a balance between local architecture and the global public park-making trend, as well as public facilities and profit, and the role of nature as a universal remedy and tool in reshaping the image of cities.

1* Corresponding author. International Education Corporation, bayan_kaderbieke@acu-edu.cc
2 Almaty Technological University, yeraliyeva_mira@univ-info.org
3 Kokshetau University named after Abai Myrzakhmetov, victor_trofimov@sci-univ.com
4 Kokshetau University named after Abai Myrzakhmetov, yuriy_popov@sci-univ.com

INTRODUCTION

Kazakhstan is a huge country located mainly in Central Asia and partly in Eastern Europe The transitional period towards democracy put all urban centers facing different problems. The Presidential Palace, which was burned down in the violent terrorist incident in January 2022, was severely damaged and could not be repaired. In addition, to the public's desire for a public space for activities, the President suggested that the original damaged building should be demolished and transformed into a city park. This paper introduces the beginning and end of the park renovation design plan. The design combines the local climate characteristics of Almaty, the psychological needs of citizens, cultural characteristics, and the spirit of the place to design a sustainable urban public activity space. The design finally decided to transform the site into a public event space that combines the creative center and park green space with the spirit of Kazakhstan's urban planning and construction. Today's challenge for our cities is management and urban development: urban space, environment, urban identity, and usage[1]. In fact, the urban center becomes not only a place of consumption; but even takes itself a value of consumption. Exported or rather deported to the suburbs, producers come back as tourists to the center from which they have been dispossessed, Today's suburban populations are back to the city center as their place of leisure and free time.

The Landscape is a culturally shared environment; made up of woods, mountains, waters, and fields, it is where we grow up and live. Design is a highly complex and sophisticated skill. It is an important human activity because it links theory and practice and bridges scientific and creative undertakings when tackling ill-structured, open-ended problems[2]. These two terms are closely related. Cognitive science is increasingly interested in design because of the challenges that it poses to models of mental processes[3]. In addition, the three-dimensional and environmental field of landscape design requires the designer to produce beautiful, practically useful, and well-functioning end products. It also entails very considerable technical knowledge and expertise, along with visual imagination and design abilities. Landscape design is an independent profession and a design and art tradition that is practiced by designers, who combine nature and culture. In contemporary practice, landscape design bridges landscape architecture and garden design.

In cognitive studies, researchers quite often use another term, environmental perception, to describe the human ability to comprehend, interpret, and evaluate the physical world[4]. According to P.A. Bell, T.C. Greene, J.D. Fisher, and A. Baum[5], perception involves experience and memory, a reflection that implies that cognitive processes are involved. Landscape perception is one branch of landscape assessment research and practice. Cognitive psychology is a sub-discipline of psychology that explores internal mental processes. It is the study of human perception, memory, thought, speech, and problem- solving[6]. It is also concerned with the structures and representations involved in cognition.

Landscape design focuses on both the integrated master landscape planning of a property and the specific garden design of landscape elements and plants within it. Practical, aesthetic, horticultural, and environmental sustainability components all merit attention. Landscape design makes meaningful contributions to culture[7]. Its overall objective is the improvement of the physical, environmental, and psychological well-being of people[8].

One of the few important studies of urban cognition is The Image of the City. In this work, Lynch examines the relationship between people and the visual character of the urban environment. He probes the mental images of cities held by residents or visitors. His major concern is to understand the way in which different components or parts of a city weave together in forming a distinct urban image[9]).

In the 1970-the 80s, the quantity and quality of landscape perception and research underwent rapid change. The Most scholarly effort was put into empirical research that aimed to establish reliable and valid assessment methods of landscape perception. The field of landscape perception developed new concepts (e.g., scenic quality, landscape preferences, and visual attractiveness), discovered new methods, and accumulated research data to support its claims[10]. In an influential article, Sell, and Taylor[11] categorize the main trends in landscape perception research in terms of four paradigms: the expert, the psychophysical, the cognitive, and the experiential[12].

Over the years, significant efforts have been put into the analysis of the impact of gender, age, occupation, leisure, academic background, professional experience, familiarity, nationality, and religion on landscape perception and experience[13]. However, the issue of landscape experience remains poorly understood in landscape design theory. In recent decades, inquiry into the meanings of the landscape has flourished. From the 1980s onwards, declarations of meanings began to accompany the published photos and drawings of landscape designs[11]. The creation of meaningful (perceptually and symbolically significant) and experientially rewarding landscapes has always been of great importance in high-quality landscape design[14].

We named it Agora, Agora is a market square in ancient Greek policies, which was a place of general civil meetings. On the square, usually located in the center of the city, there was the main city market and often government offices.

Agora, as a rule, was also surrounded by galleries with craft workshops and temples. Sometimes statues were erected around the perimeter of the agora. Very often the agora was the administrative and economic center of the city. The design is based on extensive research on the city[15]. Based on the walkable urban design concept, in-depth research on the pedestrian system of the base.

Sustainable development has been used to refer to environmental protection to meet the need of the present and future generations[16]. Other definitions on the other hand have incorporated the human perspective in explaining Sustainable Development that is not simply a call for environmental protection (1). It is a development that should be economically, socially, and ecologically sustainable. At the beginning of this millennium, there is a need for a new urban ethic, based on the concept of socially sustainable development that integrates the notions of social equity, environmental sustainability, economic efficiency, and social integration in a multicultural context. Emmitt (2) claims that something must be done to change the way in which we develop, use and recycle buildings so that our natural environment is both protected and enhanced. Contribution to sustainable development will surely come from those actors and users concerned with the project and its close environment. Eventually, to implement a sustainable strategy, it is necessary to involve the different actors in the process of production and management of the city. Basically, sustainable urban development provides city planners with new criteria of social and ecological rationality different from those offered by the market. Consequently, the concept of sustainability becomes the keystone of the urban development process.

MATERIALS AND METHOD

This project is completed by urban planners, landscape architects, architectural designers, graphic designers, interior designers, furniture designers, landscapers, and animation designers. The project is divided into the following stages. At first, preliminary data investigation and analysis stage, park overall planning and design stage, park detailed design stage, plant planting design and seedling statistics, various architectural design, waterscape design, landscape wall, supporting facilities, guide facilities, and other park sketches design, water supply and drainage, Lighting and other special design, technical and economic indicators, budget, etc.

Before the start of the design, we conducted foot surveys, field surveys, field visits, and in-depth research and investigations on the base (Figures 1-3).

Figure 1. Analysis of the current situation of the base

The survey content at this stage mainly includes social data, natural data, basic status data, and so on. In the overall planning stage, based on in-depth research on the park, carry out overall positioning, spatial layout, and special planning and design (mainly including entrances and exits, traffic, vertical, water system, vegetation, buildings, sketches, scenic spots, tour routes, comprehensive pipelines, axes, Line-of-sight analysis, etc.), land use balance, investment estimation, results from preparation (including explanatory text, graphic display, program model, video animation, etc.). In the

detailed design stage, we carry out earthwork and vertical design; garden alignment, structure, and auxiliary engineering design; plant planting design and seedling statistics; various architectural designs; waterscape design (static waterscape design, dynamic waterscape design); landscape wall, supporting facilities, guide facilities, and other park sketches; special design of water supply and drainage, lighting, etc.; technical and economic indicators and estimated budget, etc.

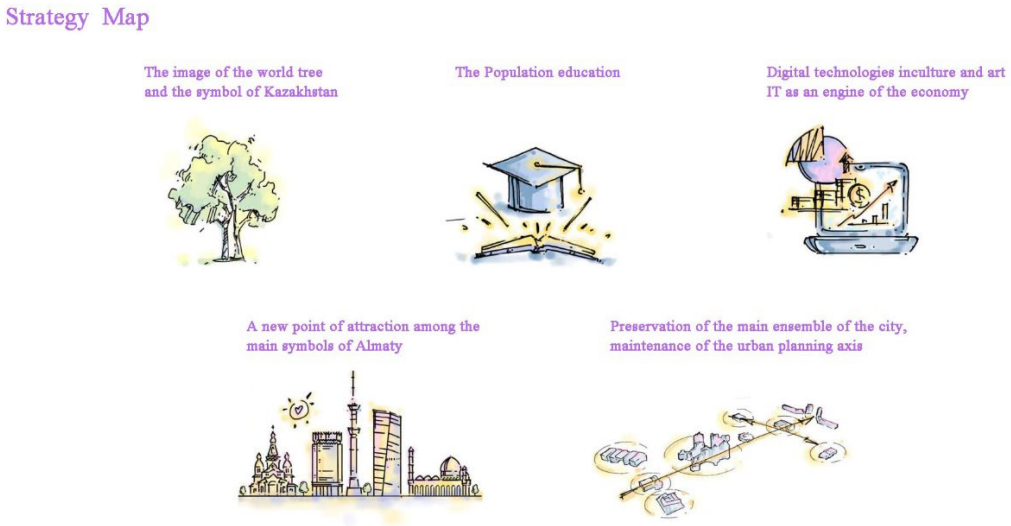
Figure 2. Analysis of the current situation of construction around the base

We conduct field research on residents around the site and tourists who are active near the park, observe the flow of people, and carry out the human-centered design. The quality and civilization of a city are directly related to whether it is suitable for disadvantaged people to live in; Maslow's hierarchy of needs is a theory about the structure of needs. When we design a site, we have been looking for how to truly humanize and put people first rather than shouting slogans, so try to find the target point of design based on this theory, starting from the actual needs of people of all ages.

Figure 3. Site analysis view

The design process follows the principles of artistic aesthetics, ecological principles, behavioral psychology principles, ergonomic principles, continuous development, humanism, place spirit, contextualism, ecological design, low-carbon design, low-impact development, public participation in design, no handicap design, and more. (Figure 4).

Figure 4. Strategy Map

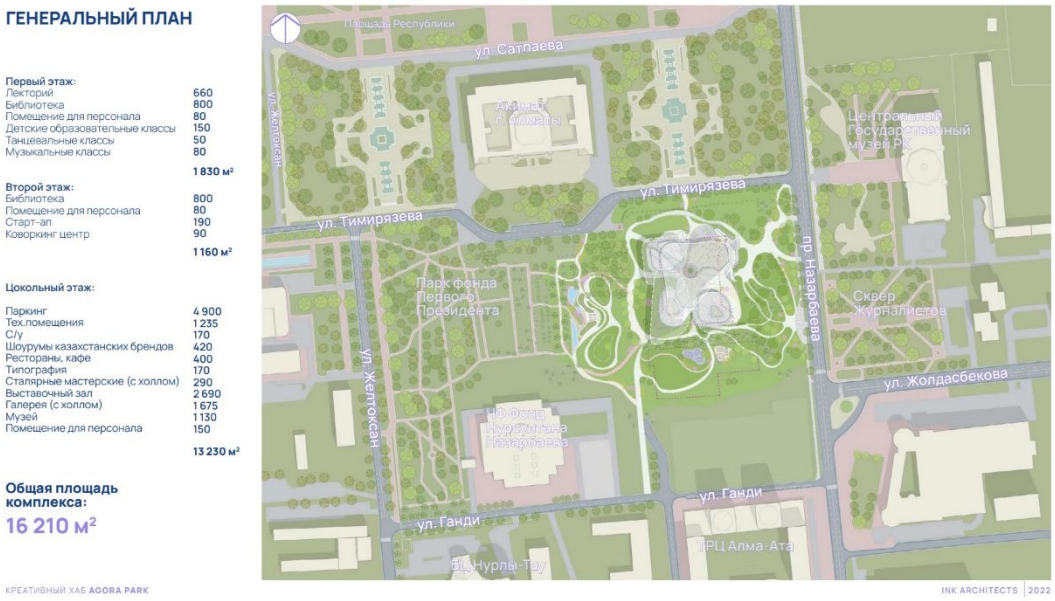


The building is located along the monumental axis of the city and plays a significant role in urban development. Moreover, the Almaty akimat is consistently improving this axis. The residence of the president participates in the formation of the main architectural ensemble of Almaty. This place was historically laid down by urban planners. Residents of the city are requesting a functionally saturated public space on the site of the building.

RESULTS

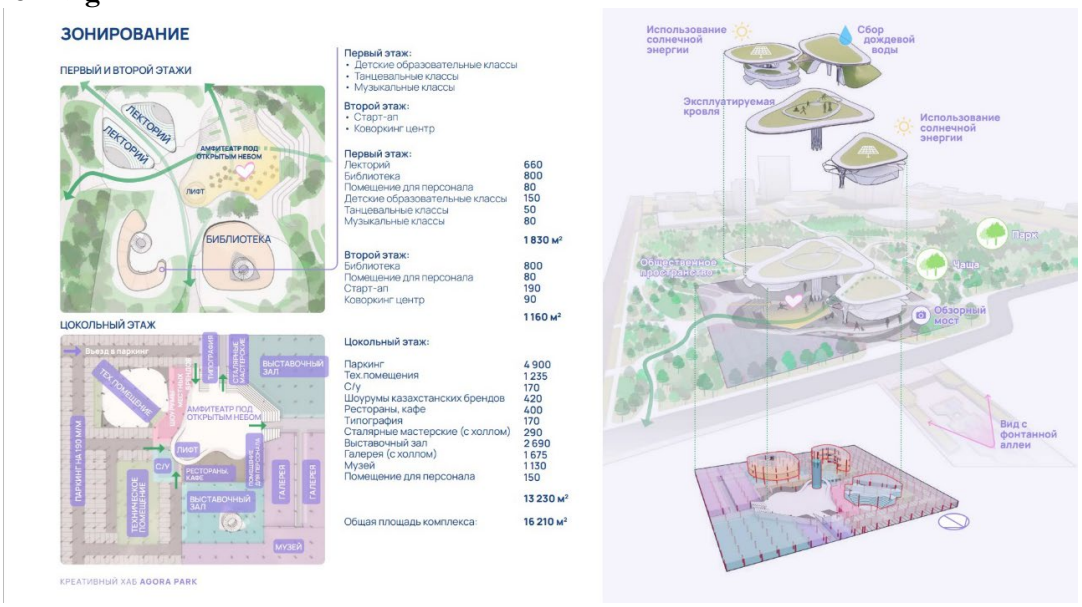
As the central link connecting the entire central area of Almaty, the Presidential Palace plays a vital role in shaping the regional green space environment. We did a lot of research and analysis on cultural background, geographical environment, crowd structure, and entertainment preferences before designing, integrating local characteristics and smart ecology, and striving to create a new concept park in line with Wangjing's modern technology and humanistic background, breaking through the traditional viewing mode, to realize the interaction between people and space. We combined a creative center with an urban park to create a frame-based art space celebrating contemporary art, film, and performing arts, providing the city of Almaty with a transition from an urban park with only arbors and lawns to The public space of the new urban space. The integrated urban space will become a truly active urban landscape, with easy and quick pedestrian access to the surrounding community. The Innovation Center contains and nurtures an atmosphere of creative thinking and communication. It will be a showcase for local talent, as well as an international hub for learning and teaching from the world's top creative minds. The inner areas of the building are creative laboratories that will provide flexible, rational, and robust spaces that can easily accommodate creative thinking, whether collective or individual; and also support creative manufacturing, whether physical or digital. Architecture and landscape are closely integrated, and people wander between greenery and technology: and experience a new urban experience. The Innovation Center is an airy and open facility that welcomes and draws the public through the facility, encouraging passive and active participation. Its functions and uses can easily be modified over time, making it actually a truly sustainable creative space (Figure 5-13).

Figure 5. Master plan



As an important entrance to the park, the creative green corridor is connected to the park green space in the west. The design team uses the air corridor as the theme to pass through such as Erqiao Magnolia, Begonia, Siberian iris, Xisun, and yellow iris, which are suitable for rain garden habitats. Dense and colorful flowers, an open city exhibition hall square, unique landscape sculptures, lighting, and music fountains, and other diverse landscapes create a spring-like and shocking landscaped entrance.

Figure 6. Zonning



On the square, musical fountains and buildings with a sense of design complement each other. When night falls, the music plays, and the fountain rhythms with graceful lines. Under the projection of lights, the theme sculptures change colors and interlace lines, conveying a modern aesthetic. At the same time, the plazas and roads are processed and paved with new materials and techniques, which have the functions of decoration and drainage, showing the perfect integration of creativity and technology.

Figure 7. Aerial View

The creative center is equipped with an open and interesting VR interactive experience gallery, which provides a platform for citizens to experience emerging technologies and interact with each other; the exhibition plaza can hold large-scale outdoor activities or exhibitions of different scales and types, and also provides business opportunities for surrounding high-tech enterprises. A stage for interaction and product display, allowing the city and nature to blend with each other.

Figure 8. View of the fountain

The novel and interesting pedal power generation corridor is another highlight here. The design team used a combination of landscape and power generation to convert the kinetic energy of pedestrians stepping on the floor tiles into electricity, and interact with LED lighting on the side walls of the road landscape. This new idea that integrates entertainment, leisure, and experience is not only a new way of smart energy saving, but also a paradise for children to experience the charm of science and technology.

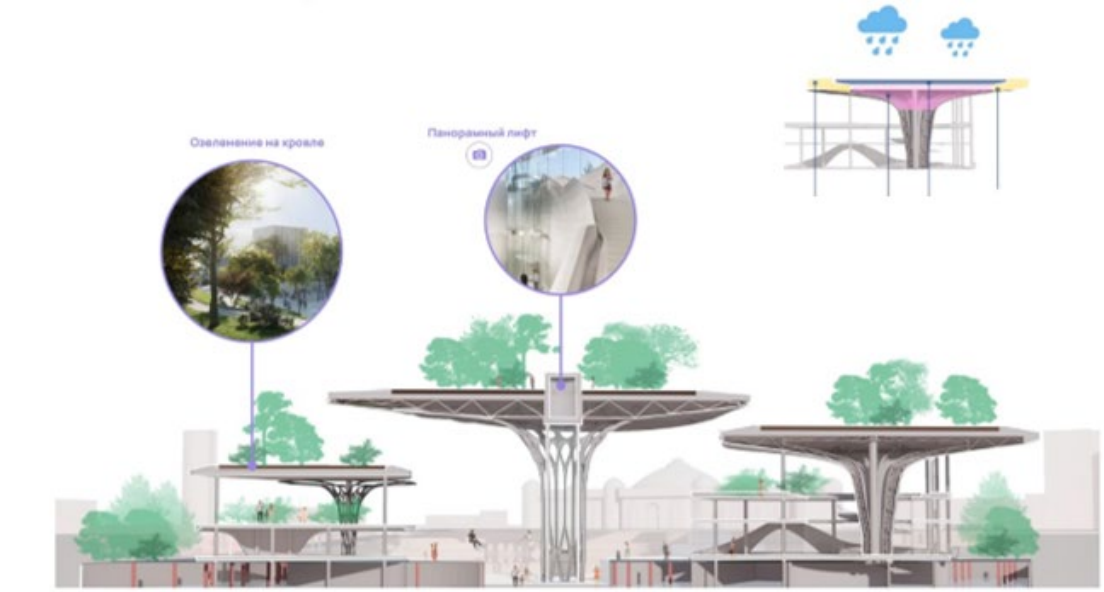
Figure 9. View from the square

At the same time, the Art Green Gallery also extends the internationally popular outdoor office concept to perfectly combine the art space with business needs. There is a charging device under the green corridor, which can be used to charge mobile devices, forming a natural small outdoor reception room. People can communicate and inspire in nature, and create a free and stretchy outdoor negotiation for the surrounding business customers. space.

Figure 10. View from the square

The style is positioned as "open, modern, green and natura", and abandons the traditional practice of relocating ancient trees. On the premise of ensuring the abundance of plant species, try to use local plants and 100% native tree species, and set up around each square.

Figure 11. Water recycling system



The rain garden stores rainwater through ecological grooves and guides its infiltration and purification to achieve self-water circulation and sustainable development in the park, alleviate the heat island effect in the park, and turn it into a green park that truly "breathes".

Figure 12. Water recycling system

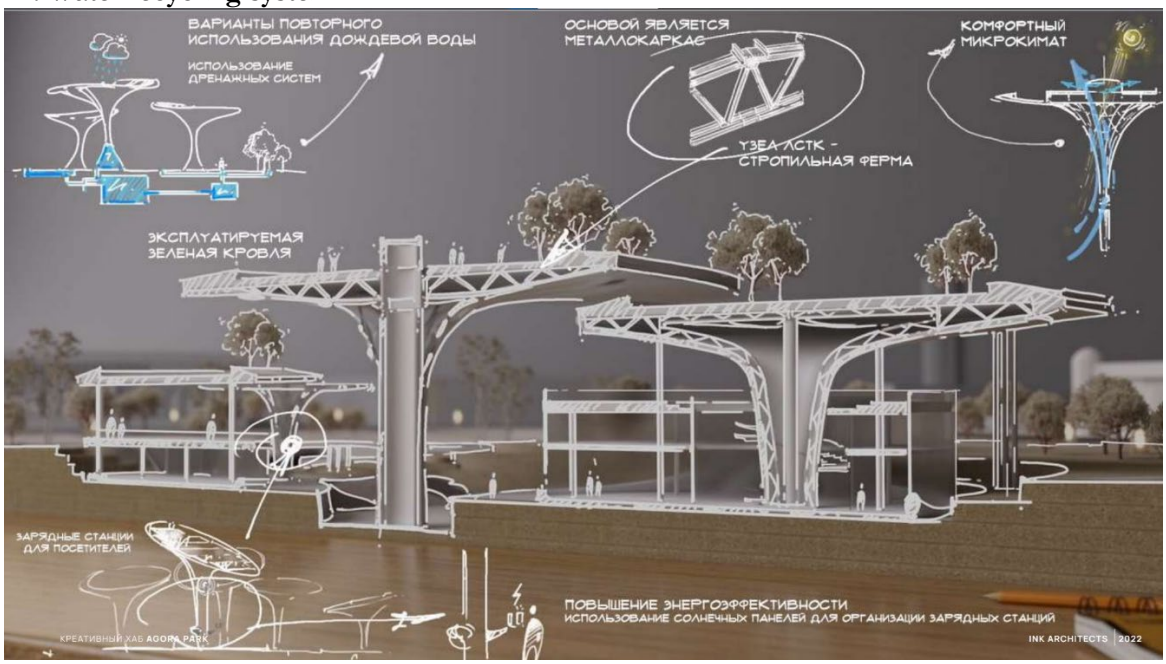


Figure 13. View from the park

DISCUSSION

In the psychophysical approach, the perceived qualities of a landscape are derived from the perceptual responses of different groups of respondents. Considered from the perspective of the cognitive approach, landscape perception becomes a process of interpretation, mediated by emotional responses to sites, perceived meanings, and physiological reactions. Design is thus a cognitive activity made up of thought processes, such as the search for ideas, the generation of solutions, the evaluation of information, the consideration and production of visual representations, and the development of strategies, while learning and experiencing. A clear image of the environment will contribute to wayfinding performance in the future. Thus, to learn the large-scale structure of space, the traveler must necessarily build a cognitive map of the legible environment by integrating observations over extended periods of time, inferring spatial structure from perceptions and effects of actions.

Based on the above discussion, it is evident that the configurational properties of the environment are important variables in acquiring environmental knowledge. Cognitive representations and legibility comprise a subjective evaluation of the urban environment. It seems impossible to understand human-landscape interactions and specifically the experience of the landscape without knowledge of their psychological foundations. Experience is first and foremost a psychological phenomenon. More consideration should be given to the management and development of cities: urban space, environment, and urban usage. For memory, the old quarters and downtowns would not be conserved and integrated into contemporary life unless their new destination complies with their morphology and scale. One of the reasons why so many interventions for urban development and regeneration continue to fail lies in their focus on the physical dimension. Any overall strategy for dealing with the development of urban systems should reconcile policies concerned with social processes which take place in the city with policies designed to change its spatial form. It is this kind of view, looking in the direction of both space and society, which has so far lacked in conceptualizations of urban development.

Many cities in the developing world countries, including those of colonial creation, have reserved, now or in the past, enormous urban areas for military purposes. These areas continue to exist as negative spaces in the old centers. Such a situation, when these spaces are recovered, offers invaluable opportunities to put the city on ecological order. The fact that these urban spaces are large and central is already a unique opportunity for these cities in order to produce a "Lung of oxygen". Contrary to business centers, like El-Ali Tower- type, the revitalization of this area requires special consideration which may culminate in physical expression. We must also recognize always the need to undertake such projects with appropriate consideration for the users and the historical site. The rejuvenation of such an urban space is a promising experience contributing socially, economically, physically, and aesthetically to regenerating the local urban environment and leisure activity.

Preserving this urban heritage does it not act against one of the major objectives of sustainable development which is urban densification? To densify by increasing housing supply and facilities in the attractive city centers may face the

idea of preserving the inherited old quarters. The principle of "rebuilding the city on the city" may contradict the desire to preserve the urban heritage. The nature of the land use around the public space should ensure a variety of people flow activities. Detailed planning must ensure the diversity of the nature of the land use around the public space, and there are different people flow activities. Avoid places with few people and are not open to the public (such as government agencies). door) to arrange a large square or a large green space. Advocate the characteristic small road and small garden in the living area. Habitat III pointed out: "The main body of public space is streets, sidewalks and bicycle paths, plazas, waterfronts, gardens, and parks". The landscaped plazas at the entrance of the government are not included.

The interface design of the public space should be kept small and recognizable. The image of the interface building should be recognizable and unique, and the facilities (catering, convenience store, toy store, bookstore) should be arranged to serve people. Small scale, with affinity. The public space should be integrated into the surrounding material and human context (Context) and respect the historical context. Integration into the environment is not only reflected in the physical form, but also in the context of protecting the social network. The transportation organization in public spaces should be based on walking, advocate slow traffic, walking, and public transportation, reduce car crossings, and strive to keep the flow of people in public spaces.

Overall, the world has entered the age of cities. "Urban Issues" was the theme of the 1976 and 1996 UN Habitat Summits. The theme of the 3rd Habitat Summit in 2016 was "Building Sustainable Cities and Human Settlements for All (Quito Declaration)" The central view of the conference was the belief that cities are made up of diverse and conflicting interests. The activities of the city are very diverse and high-density, so social integration is required, and social integration requires public space. Public space is an important carrier of material communication. In Habitat III "New Urban Agenda", the connotation of public space is defined: urban public space includes streets, sidewalks, bicycle paths, squares, waterfronts, gardens and parks, etc.; the evaluation criteria of public space--safety and inclusiveness , convenient, green and high-quality multi-purpose use; the ultimate goal of public space construction is to ensure human development, build a peaceful, inclusive and participatory society, and promote coexistence, interconnection and social inclusion, which is also the ultimate goal of contemporary urban design.

CONCLUSIONS

The park is located in the center of Almaty, north of the government building, and is the most prosperous regional center in Almaty. Near the park are commercial areas, residential areas, parks, museums. The park is closely connected with its surroundings, so the park is designed as an open public activity space. The park is integrated into the surrounding environment and reflects the design concept of adapting to local conditions. The internal functions of the park take into account the leisure and relaxation of the residents in the surrounding residential areas, so a large number of walking paths and rest seats are set up, such as the setting of seats, the setting of trash cans, the setting of lamps and the setting of toilets, etc., all taking into account the activities of people Streamline and convenient practicality. The connection of the park to the external street also takes into account the walkability of the residents and enhances the comfort of the residents. The park design highlights the theme of the creative center. The modern organic form combines vertical greening and sponge city technology to arrange landscape spaces such as sky gardens and rain gardens to reflect the sustainability of park design. In order to enhance the interest of the park, interesting public activity spaces such as sunken square, outdoor theater, sunken park, forest trail, fountain coffee, and rooftop coffee are set up.

The design of the park shows the local cultural characteristics of Almaty, combines the elements of Kazakh national culture, and retains the original fir forest on the site, which reflects the regionality, rather than a cookie-cutter park. During the design process, the customs and culture of the area where the park is located were deeply excavated. Kazakh national literature and art and pattern art are integrated into the design, Kazakh language stories, traditional patterns, etc., are reflected in the forms of structures, park sculptures, relief walls, relief columns and so on.

In the design of the park, the principle of adapting measures to local conditions is followed, the original terrain and vegetation are preserved, and the nature is combined and shaped. In the design of the park, full consideration is given to the opposite scenery of the park road, the changes of left and right visuals, as well as the line type and vertical height of the park road to give people the psychological feeling. It makes people feel different landscape changes when they play in the park. The park roads are clearly graded and divided into main park roads, secondary park roads and trails.

In a word, the design of the park tends to be more shared and open; from a plane to a three-dimensional space; the park design focuses on the creative center, reading space, art exhibition, exhibition activities, leisure and entertainment activities and other multi-functional integration, creating a new era of Public activity space; it reflects more excavation

of regional culture, expresses colleagues and takes into account the environmental and ecological benefits of the park, making the park a sustainable public activity space.

REFERENCES

1. Challenges, dilemmas and commitments of a common urban agenda executive summary Forum of Ministers and High Authorities of Housing and urban development of Latin America and the Caribbean. 2016. Available at: https://repositorio.cepal.org/bitstream/handle/11362/40657/4/S1600985_en.pdf Accessed: June 22, 2022.
2. The value of urban design, A research project commissioned by CABE and DETR to examine the value added by good urban design. 2001. Available at: https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/the-value-of-urban-design_0.pdf Accessed: June 22, 2022.
3. Johnson-Laird PN. Mental models in cognitive science. Univ of Sussex Cognit Sci. 1980. 4: 71-115. https://doi.org/10.1207/s15516709cog0401_4
4. Sanoff H. Visual research methods in design. London: Routledge; 2016. https://doi.org/10.4324/9781315541822
5. Bell PA, Greene TC, Fisher JD, Baum A. Environmental psychology. New York: Harcourt College Publishers; 2001.
6. Ash MG. Gestalt psychology in German culture, 1890-1967: Holism and the quest for objectitavy. Cambridge: Cambridge University Press; 1998.
7. Kara B. Landscape design and cognitive psychology. World Conf on Psych & Sociol. 2012. 2012: 54-62.
8. Pretty J, Barton J, Bragg RE, Sellens M. Green exercise in the UK countryside: Effects on health and psychological well-being, and implications for policy and planning. J of Env Plan & Manag. 2007. 50(2): 211-231. https://doi.org/10.1080/09640560601156466
9. Lynch K. City sense and city design: Writings and projects. Cambridge: The MIT Press; 1960.
10. Daniel TC. Whither scenic beauty? Visual landscape quality assessment in the 21st century. Landsc & Urb Plan. 2001. 54(1): 267-281. https://doi.org/10.1016/S0169-2046(01)00141-4
11. Taylor K. The historic urban landscape paradigm and cities as cultural landscapes. Challenging orthodoxy in urban conservation. Lands Res Vol. 2016. 41(4): 15-29. https://doi.org/10.1080/01426397.2016.1156066
12. Heijgen E. Human landscape perception. 2013. Available at: https://www.highweald.org/downloads/publications/uk-landscape-research-reports/1057-human-landscape-perception-of-the-high-weald/file.html Accessed: June 22, 2022.
13. Rapoport A. Human aspects of urban form: Towards a man—environment approach to urban and regional planning. Oxford: Pergamon; 2013.
14. Köpsel V. New spaces for climate change: The societal construction of landscapes in times of changing climate. Berlin: Springer; 2019. https://doi.org/10.1007/978-3-658-23313-6
15. Pearce D, Markandya A, Barbier E. Blueprint for a green economy. London: Routledge; 2013. https://doi.org/10.4324/9781315070223
16. Bibby P, Henneberry J, Halleux J-M. Incremental residential densification and urban spatial justice: The case of England between 2001 and 2011. Urban Stud. 2020. 58(31): 18-27. https://doi.org/10.1177/0042098020936967