PROSTOR

26 [2018] 1 [55]

ZNANSTVENI ČASOPIS ZA ARHITEKTURU I URBANIZAM
A SCHOLARLY JOURNAL OF ARCHITECTURE AND URBAN PLANNING

SVEUČILIŠTE U ZAGREBU, ARHITEKTONSKI FAKULTET
UNIVERSITY OF ZAGREB, FACULTY OF ARCHITECTURE

ISSN 1330-0652
CODEN PORREV
UDK | UDC 71/72
26 [2018] 1 [55]
1-216
1-6 [2018]

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POSEBNI OTISAK / SEPARAT | OFFPRINT

Table I The evaluation of concept and meaning dimension based on grounded theory and reviewing the performance of these within the context of Iranian architectural education and professional architectural projects

Tabl. I. Procjena dimenzije koncepta i značenja na osnovu utemeljene teorije i ocjena njihove učinkovitosti u kontekstu arhitektonske naobrazbe i stručnih arhitektonskih projekata u Iranu

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Art, science, and culture	Conceptual Paradigm	**Conceptual Paradigm (metaphoric) has a key role in forming the environment and landscape and attaching identity**	Culture	**Pasban Hazrat**: Jamshidieh Park **Seyed Amir Mansouri:** Deh Vanak Neighbourhood Ab-o-Atash (Water & Fire) Park	– Painting and picturing – Cognition and expression
Landscape extracted from culture					
Landscape extracted from experience, relationship and culture					
Landscape extracted from tradition			Tradition	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Kamran Diba**: Shafagh Park **Hadi Mirmiran**: Iranian Consulate Building in Germany, The Building of Iranian Embassy in Thailand **Bahram Shirdel**: The Iranian Embassy in Brazil	– Cognition and expression – Perspective – Contemporary landscape
Symbolism			Symbol		
Landscape extracted from myths and legends					
Landscape extracted from nature and culture	Natural and cultural identity		Nature	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Pasban Hazrat**: Jamshidieh Park	– Painting and picturing – Basic theory and wisdom
Landscape based on the relationship between human and nature					
Meaning extracted from art works	Artistic concepts		Art	**Mehrdad Iravanian**: Green Land Project in Shiraz, Sadra Park in Shiraz and Chamran Park in Shiraz	– Perspective – Garden history and world landscape
Landscape implied by the three dimensions of life, art, and meaning					
Performing, symbolic, and complex landscape					
Artistic view					
The art of organizing and forming space					
Artistic and natural view					
Environmental psychology	Environment-oriented approach		Environment	**Pasban Hazrat**: Jamshidieh Park	– Painting and picturing – Cognition and landscape expression
Sustainability					
Aesthetic, human, environment			Aesthetic	**Pasban Hazrat**: Jamshidieh Park **Seyed Amir Mansouri:** Deh Vanak Neighbourhood	– Design 2 – Landscape aesthetics
Landscape resulting from changes of the Earth and human imagination			Perception		– Painting and picturing – Urban landscape – Environmental psychology
Landscape as a good place	Spatialism		Space	**Kamran Diba**: Shafagh Park **Nader Ardalan**: Tehran Center for Celebration of Music	
Creating and organizing the space					
Emphasizing on the space					
Semiotic and literature	Meaning and value		Meaning	**Mehrdad Iravanian**: Chamran Park in Shiraz **Seyed Amir Mansouri:** Deh Vanak Neighbourhood Ab-o-Atash Park (Water & Fire)	
Inspired by literary and artistic meanings					
Semiotic and symbols in landscape					
Literary and narrative function of landscape					
Landscape as habitat and beyond architecture and city	Landscape and people		Human	**Kamran Diba**: Shafagh Park	– Painting and picturing – Basic theory – Environmental psychology
The relation between landscape with architecture and city					
Attractiveness of public spaces					

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Scientific Subject Review
UDC 712:72.01:37 (55) "20"
Technical Sciences / Architecture and Urban Planning
2.01.05. – Landscape Architecture
Article Received / Accepted: 5. 12. 2017. / 8. 6. 2018.

Pregledni znanstveni članak
UDK 712:72.01:37 (55) "20"
Tehničke znanosti / Arhitektura i urbanizam
2.01.05. – Pejsažna arhitektura
Članak primljen / prihvaćen: 5. 12. 2017. / 8. 6. 2018.

Comparative Study of the Performance of Landscape Architectural Education and Professional Landscape Architectural Projects in Iran

Komparativna analiza profesionalne naobrazbe i projekata krajobrazne arhitekture u Iranu

GROUNDED THEORY
IRAN
LANDSCAPE ARCHITECTURAL EDUCATION
LANDSCAPE ARCHITECTURE PROFESSION
LANDSCAPE ARCHITECTURE THEORY

UTEMELJENA TEORIJA
IRAN
OBRAZOVANJE U PERIVOJNOJ ARHITEKTURI
PERIVOJNA ARHITEKTURA KAO PROFESIJA
TEORIJA PERIVOJNE ARHITEKTURE

This paper studies the performance of contemporary Iranian landscape architecture in the two areas, namely that of education and professional projects. It is divided into two sections; the first section being based on the qualitative method of grounded theory which analyzes theories by coding the concepts. The second section uses a comparative approach, whereby the criterion extracted from the first section is discussed in the two aforementioned areas of contemporary Iranian landscape architecture.

Ovaj se rad bavi istraživanjem suvremene iranske perivojne arhitekture iz dvije perspektive: obrazovanja s jedne strane i stručnih projekata s druge strane. Rad je strukturiran u dvije cjeline od kojih se prva bavi kvalitativnom metodom utemeljene teorije kojom se analiziraju teorije putem kodiranja koncepata. U drugom se dijelu rada komparativnim pristupom analizira kriterij dobiven u prvome dijelu u njegovoj primjeni na spomenuta dva područja suvremene iranske perivojne arhitekture.

INTRODUCTION

UVOD

Today, in the early years of the twenty-first century, landscape architects have begun to adopt new perspectives, and have accepted that technical, functional, ecological, economic and aesthetic aspects provide different forces that affect the design material and various dimensions of a concept. What is obvious is that one cannot achieve one's goals without first studying and analyzing the field of landscape architecture. Accordingly, studying these areas can be very effective in the development of landscape architecture in all respects, including education and professional projects. Landscape architectural knowledge has a variety of dimensions that include: the history of garden and landscape architecture, human relationships, environment and cultural landscape, landscape assessment based on sustainability, ecology and ecological planning, the theoretical basis of design, research and teaching methods, urban landscape, urban infrastructure, construction and implementation methods, landscape planning, site engineering, familiarity with planting, professional rules and documentation, values and ethics, and communication technology.[1]

Although world-class landscape architecture has more than a century of professional and academic background, its academic history in Iran is only twenty years old (being in existence since 1998) and has not yet gained its true status in the professional community. This is due to the lack of its comprehensive definition, a lack of clarity of its field of activity and the interference of affiliated fields. Currently landscape architectural education in Iran is available only at master's degree and PhD and its department is located in the art, architecture and urbanism faculties. Currently a practical undergraduate curriculum has not as yet been designed.

In addition, the link between what is presented as an academic section is not well established with the professional aspects of landscape architecture. Therefore, the need for a link between work and knowledge in this field is strongly felt. Predominantly, in both areas, diverse concerns and goals which are influenced by theories related to the field, from social, cultural-identity, aesthetic and artistic dimensions to functional or performance dimensions must be considered. By reviewing theories of contemporary thinkers and theorists, the recognition of the most significant categories which are the prerequisite for the improvement and promotion of landscape architecture in Iran should be carried out. In the following, we try to compare and evaluate the performance of contemporary Iranian landscape architecture in the two areas of education and professional projects based on the categories and theories that are extracted in an analytical process.

THE ORIGINS OF CONTEMPORARY THEORIES OF LANDSCAPE ARCHITECTURE

ISHODIŠTA SUVREMENIH TEORIJA PERIVOJNE ARHITEKTURE

In this section, the most important contemporary landscape architecture theories of the world were categorized. This conceptual categorization is the basis of the grounded theory analysis in chapter four.

Concept, Meaning, Landscape – Knowledge bases for Landscape Architecture Practice in-

1 DEMING, SWAFFIELD, 2011: 25
2 FEIN, 1972
3 BENSON, ROE, 2000: 3; THOMPSON, 2002
4 THOMPSON, 2014; BEATLEY, 2000; MURPHY, 2005: 25
5 MARSHAL, 1981
6 CORNER, 1992
7 CORNER, 1992: 144; CORNER, 1999
8 COSGROVE, 1984
9 JELLICOE, JELLICOE, 1975; LASSUS, 1982
10 LASSUS, 1998; JACOBS, 1991; OLIN, 1998; CORNER, 2006; ALLEN, 1997; SPIRN, 1984: 12; COSGROVE, 1998: 1
11 HUBBAR, KIMBALL, 1929: 1; ELIOT, 1924; SCHWARTZ, 1992; SCHWARTZ, 1985; SCRUTON, 1979: 5; WINTERS, 2007: 4
12 JELLICOE, JELLICOE, 1975; FAIRBROTHER, 1970; CANDON, 1988
13 JACOBS, 1991
14 GIDEON, 1941
15 CANDON, 1988
16 MURPHY, 2005
17 TURNER, 2001

cludes specialized knowledge, skills developed by its practitioners, scientific knowledge of biological sciences and scientific knowledge from social sciences.[2] Landscape is a concept extracted from geological and biological processes, activities, human residence and imagination.[3] Many believe that landscape is a social necessity.[4] In addition to this, Marshal[5] believes that landscape is an art that uses cultural and scientific knowledge. Corner[6] declares that landscape is the result of cultural changes and is, to some extent, a representation of them[7], and thus it is plausible to consider it to be a cultural product.[8] Some others insist on the function of symbolic elements and creation of myths and legends in landscapes.[9] However, the relationship between culture and nature and the bond between them is of great importance, since it has an influence on human's experience in landscape.[10]

On the other hand, some scholars believe that landscape is a representation of art and they consider it to be a subgroup of the fine arts.[11] Many others concur with the view that an artist's work can be viewed as a meaningful form of resource in landscape design.[12] In addition, according to Jacobs' view[13], landscape is a phenomenon defined in space, time and tradition. Another approach considers landscape as a type and subgroup of place which occurs in a direct relationship with architecture. Space and place in landscape architecture plays a more important role than portraiture or human effects.[14] Candon[15] places emphasis on cubist and volumetric space in landscape design. Murphy[16] introduces landscape design as a means of management process and a shift towards the creation of a mysterious and compelling place, and believes that landscape architecture is space making, place making and sometimes depends on buildings. Turner[17] thinks that landscape architecture is the reason for making good places.

Art, Aesthetic, Landscape – Others highlight the literary, narrative and metaphoric functions of landscape.[18] Some landscape architecture scholars have paid more attention to aesthetic dimensions than other issues in designing and planning.[19] Furthermore, it is of great importance to take delight, spirit and emotion into account in landscape experience.[20] Turner[21] considers the spirit of the place as the only acceptable factor in landscape design. In Crowe's point of view, there are essentially two types of delight in landscape: enjoying the growing plant with its unique aesthetic, and enjoying the garden as a whole.[22] Fein[23] also believes that the concerns in Landscape Architecture practice include aesthetics, ecological needs, public welfare, enjoyment, comfort and delight for the individual.

When either the emotional content of the aesthetic or the excellence of the environment is high, the aesthetic experience can give a valuable mental stimulus. Bell[24] expresses that all senses can be involved in aesthetics. Moreover, aesthetics is the perfect way of knowing and it deeply affects the relationship between the human and his environment[25], though the comprehension of the aesthetic of a landscape depends on human's mind.[26] In addition, a mutual perception between the designer and the user was considered a necessity.[27] Using aesthetic language for pattern recognition, Bell[28] believes that landscape design involves balancing function and cost with aesthetics. He and Kaplans divide aesthetic criteria into three categories: diversity and complexity, coherence, and mystery, which is a perceptive characteristic.[29] Others conceive that the aesthetic should be adjacent to human settlement and natural perspectives and believe that its key function is establishing and maintaining nature.[30] Tom Turner[31] is also one of the researchers who adhere to the principle of imitating nature on the basis of aesthetic principles.

Human, Culture, Landscape – Landscape architecture can play a significant role in the creation of social and public spaces of biological complexes. Dixon Hunt[32] claims that landscapes are a kind of socio-environmental art. Some others place emphasis on the qualitative and quantitative relationship between human and landscape spaces, and refer to this importance in landscape designing.[33]

Newton[34] subscribes to the view that the only intelligent assessment of a successful design is through the impact it has on its users. Many researchers have always approved of social participation in this process and studies on the attitudes and behavioural patterns of the citizens.[35] Because of the use of new concepts, theories and prospects in direct contact with people can give deeper insights

18 Potteiger, Purinton, 1998; Dixon Hunt, 1992
19 Turner, 2001; Thayer, 1994; Simo, 1999; Zube, 1998; Thompson, 2014
20 Treib, 1995; Thompson, 2014; Walker, 1997
21 Turner, 1996
22 Crowe, 1958
23 Fein, 1972
24 Bell, 1999
25 Nassauer, 2002; Richards, 2001; Carlson, 2001; Leopold, 1989
26 Solomon, 2005: 900; Holm, 2006: 342
27 Robinson, 1993; Warnock, 1976: 27
28 Bell, 1999
29 Kaplan, Kaplan, 1989; Bell, 2004
30 Hubbard, Kimball, 1929
31 Turner, 1987
32 Hunt, 1992
33 Eckbo, 1950; Spirn, 1988; Cranz, Boland, 2004
34 Newton, 1973
35 Hester, 1974; Arnstein, 1969; Armstrong, 1993; Corajoud, 2000; Halprin, 1969

to the designer.[36] Garrett Eckbo[37] is of the opinion that landscape architecture is primarily for human living spaces and it does not include agriculture or forestry. Moreover, landscape architecture has an important role in developing habitat landscape to be more appealing than the general one.[38]

Nature, Ecology, Landscape – Designing on the basis of natural principles and human understanding[39], along with more coherence and unity between human and nature[40], can be considered as a pattern in landscape architecture. This is due to the fact that nature is the resource of many spiritual and aesthetic human satisfactions.[41]

Many theorists define nature as the only available source for landscape design.[42] In fact, nature is considered the criterion of landscape assessment.[43] In landscape, life and design with nature and also preservation of health and diversity in ecosystems, as well as the personality of landscape, have been the focus of attention for others.[44] Therefore, as landscape departs from its natural conditions on account of physical development of human elements, the isolation increases.[45]

In fact, ecology is the single indispensable basis for landscape architecture and regional planning.[46] McHarg[47] establishes a method called GIS, by which location was carried out on the basis of layers. Ecological design can stimulate human desires, so awareness of cultural expectations and human joy is a type of assessment for ecological efficiency.[48] Many others claim that landscape is implied by ecology.[49] Lyle[50] believes in composition of various ecological periods (old and young ecosystems) and divides landscapes on the basis of fundamental ecological laws. However, ecological design involves aesthetic ideology[51] which refers to visual specifications and necessities of landscape.[52] This also refers to the preparation of information in relation to visual qualities of landscapes, and implications which rise from developmental activities in landscape is its purpose.[53]

Furthermore, inspiration from local sceneries in landscape design[54] and the key role that cultural phenomena, climate, geology, and biology play in forming it have great significance.[55] Robert Thayer[56] suggests sustainable environmental technology could replace current technology. Lyle[57] suggests the idea of Regenerative design, placing emphasis on the cyclic process of landscape, in order to preserve the existing recourses without harming the environment. This attitude accentuates preserving and monitoring resources and reducing energy consumption.[58] It also refers to the idea that landscape architecture involves an environmental aspect[59], and that it is flexible as an ecosystem.[60]

Form, Function, Landscape – Downing[61] sees landscape and buildings as an integrated whole and expresses that architectural beauty should be a combination of ground and landscape aesthetics. Many other researchers discuss heterogeneity and diversity of species in landscape.[62] Other landscape designers such as Brown believed in designs unlike features of formal gardens.[63] Fractal geometry has been mentioned by a group as the basis for modern aesthetics.[64] Marta Schwartz[65] adhered to the group who were inspired by art and used unusual materials and artificial plants in designing landscapes.

Another approach applied a composition of ground art, sculpture and design in their landscape designing, which appeared with a specific integration with its surrounding environment.[66] For instance, Repton (1752-1818) was one of the people who used painting in landscape design and held the belief that landscape function should take precedence over landscape aesthetics. Thompson[67] defined function as one of the most important components of landscape. Colvin[68] points out that function and landscape aesthetics are definitely complementary with one another.

Designing, Planning, Landscape – In landscape planning, patterns are a means for simplifying complex processes which are efficient for discovering relationships and modelling of landscape knowledge. The PAKILDA method was introduced by Turner[69] which was a design style based on bee movement. Steinitz[70] process also used "fundamental concept modelling" in the landscape design for making decisions. Some believe in designing a program in order to reach flexibility and working with programs for developing particular works rather than focusing on form.

36 HESTER, 1974
37 ECKBO, 1950
38 HITCHMOUGH, 1993
39 KOH, 1988: 180
40 ECKBO, 1950; MCHARG, 1969
41 THOMPSON, 2014
42 TREIB, 1995; MCHARG, 1969
43 NECKAR, 1995
44 MURPHY, 2005: 12; BEATLEY, 2000: 4
45 GERGEL, TURNER, 2001
46 MCHARG, 1967
47 MCHARG, 1969
48 NASSAUER, 1995; HALPRIN, 1969
49 TREIB, 1995
50 LYLE, 1985
51 POTTEIGER, PURINTON, 1998
52 COLVIN, 1972
53 FEIMER, et al., 1981
54 JENSEN, 1992; BEATLEY, 2000
55 WOODWARD, 1997
56 THAYER, 1994
57 LYLE, 1985
58 LAURIE, 1986: 10

Table II The evaluation of the aesthetic dimension based on grounded theory and reviewing the performance of these within the context of Iranian architectural education and professional architectural projects

Tabl. II. Procjena estetske dimenzije na osnovu utemeljene teorije i ocjena njezine učinkovitosti u kontekstu arhitektonske naobrazbe i stručnih arhitektonskih projekata u Iranu

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Priority of aesthetic dimensions	Landscape and Joy	**Delight is an integrated part of landscape function and should be internalised in it**	Delight	**Pasban Hazrat**: Jamshidieh Park	
Semiotic, experience, delight					
Delight and spirit in landscape					
Five senses and delight					
Major and minor delight					
Sense of the place			Sense of place	**Nader Ardalan**: Iran Center for Management Studies (Imam Sadegh University)	– Urban landscape
Designer's thought and perception	Perceptive dimension		Perception		– Painting and picturing – Urban landscape – Psychology of environment
Effect of Aesthetic in perception and relation between human and non-human environment					
Imagination of human in landscape					
Mentalism					
Adaptation between organisms and environment	Aesthetic and environment		Art and nature	**Mehrdad Iravanian**: Green Land project in Shiraz, Chamran Park in Shiraz **Pasban Hazrat**: Jamshidieh Park **Farhad Ahmadi**: Saba Garden in Tehran	– Perspective – Garden history and world landscape – Painting and picturing – Basic theory and wisdom
Using aesthetic basics and a balance between function and Aesthetic					
Aesthetic of art and painting	Nature-oriented Art				
Aesthetic and nature					

Setting a goal and defining the problem prior to writing the design program is of great significance.[71] As such, process and holistic methodology in landscape is the chief focus.[72] Landscape design is the conscious process of organizing, planning and making physical changes in the landscape.[73]

Landscape design is the pattern of function, flow pattern and shape pattern.[74] The design process involves problem definition, development of ideas, implementation (changing the idea to design) and design evaluation.[75]

Site planning, which is organizing the outdoor environment in order to adapt it for human behaviour, is a circular process which should include the quality of place, infrastructures, ground, and also life activities.[76] Three aspects of landscape design are social equity, ecological coherence and a sense of belonging.[77]

Halprin[78] introduced RSVP cycles, which used privileges for describing all processes in art complexes. This was developed for a more creative design, rather than the more traditional "planning". McHarg[79] mentions layers of information and regional specifications in landscape planning.

According to the research mentioned above, certain concepts and criterion were identified that have been emphasized by theorists in each of the aforementioned six areas. These concepts will be analyzed and categorized textually as explained in the material and methods section below.

Material and Methods

Materijali i metode

This research was conducted in two sections: in the first section, grounded theory was used for data analysis, which is a problem-centered method and is related to linking of the steps that contribute to the theoretical structure of a problem. In this process, the collected data were converted to concepts

59 Mozingo, 1997
60 Prominski, 2005
61 Downing, 1841
62 Noss, Harris, 1986; Corry, 2005; Ward, et al., 2002; McHarg, 1967
63 Thompson, 2014
64 Spirn, 1988
65 Schwartz, 1985
66 Entwistle, 2008
67 Thompson, 2014
68 Colvin, 1972
69 Turner, 2001
70 Steinitz, 2001
71 Wall, 1999
72 Hester, 1974; Treib, 2007: 47
73 Motloch, 2000: 21
74 Lynch, Hack, 1984
75 Motloch, 2000: 286
76 Lynch, Hack, 1984
77 Jacobs, 1991
78 Halprin, 1969
79 McHarg, 1967

TABLE III THE EVALUATION OF THE SOCIO-CULTURAL DIMENSION BASED ON GROUNDED THEORY AND REVIEWING THE PERFORMANCE OF THESE WITHIN THE CONTEXT OF IRANIAN ARCHITECTURAL EDUCATION AND PROFESSIONAL ARCHITECTURAL PROJECTS

TABL. III. PROCJENA SOCIO-KULTUROLOŠKE DIMENZIJE NA OSNOVU UTEMELJENE TEORIJE I OCJENA NJEZINE UĆINKOVITOSTI U KONTEKSTU OBRAZOVANJA U ARHITEKTURI I STRUĆNIH ARHITEKTONSKIH PROJEKATA U IRANU

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Studying people's attitudes and beliefs and their participation	Participation	**Landscape has not been apart from human and his activities and these two are dependent on one another**	Participation		– Urban landscape
Social participation					
Participation in Designing process					
Profession and participation					
Pluralism and social participation					
Public participation in designing					
Measurement and collective unconscious					
Inspiration from traditions	Time and landscape		Tradition	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Kamran Diba**: Shafagh Park **Hadi Mirmiran**: Iranian Consulate Building in Germany, The Building of Iranian Embassy in Thailand **Bahram Shirdel**: The building of Iranian Embassy in Brazil	– Contemporary landscape – Cognition and expression
Anti-culture					
Modernism and rejection of old traditions					
Cultural nativism			Culture	**Pasban Hazrat**: Jamshidieh Park **Seyed Amir Mansouri:** Deh Vanak Neighbourhood Ab-o-Atash Park (water & fire)	– Painting and picturing – Cognition and expression
Importance of historic and cultural landscape					
Humanism	Human landscape		Social	**Mehrdad Iravanian**: Sadra Park in Shiraz	– Recreational spaces – Psychology of environment
Social life in landscape					
Language					
Landscape as the socio-cultural art				**Pasban Hazrat**: Jamshidieh Park	
Life Social dimensions of landscape					
Strengthening the quantitative and qualitative relationship of human and environment				**Kamran Diba**: Shafagh Park	

and encoded into a processor-coupled continuum.[80] As a result, the data were encoded in three stages (open, axial, and selective). Encoding is an analytical process in which data is segmented, conceptualized and integrated so that a final theory can be formulated. In the process of encoding, the unit of analysis is the concept.[81]

In the first stage, the theories related to the conceptual part (the origins of contemporary theories of landscape architecture) were categorized and in the open coding stage, the initial concepts (level 2), in the axial coding stage, the major categories, and in the selective coding step the core was extracted. The core should have analytical strength and accommodate other categories.[82]

In this way, the initial information from the six sections included: concept and meaning; aesthetics; socio-cultural; nature and ecology; design, form, function and planning, and design process, in order for the process of ground theory to be completed. Finally, the core or the final theory was extracted.

In the second section, a comparative method was used to measure and evaluate the categories extracted from the first part in the two areas, namely that of education and professional projects of contemporary Iranian landscape architecture. In this regard, the authors, by converting the core categories into keywords, examined the performance of these two areas and ultimately compared them with regard to Iranian landscape architecture, the results of which are presented below. It should be noted that the basis of analyses in the professional projects section are the projects selected using the Delphi technique as identified by ten experts and commentators in the field landscape architecture. Bearing in mind that the number of projects in Iran is minimal, the experts were asked to identify the most suitable landscape projects from the past four decades related to each category from their point of view. Then, for each concept, the case which had been selected by the majority of experts was chosen to be analyzed. Also, in the education section, weighting criterion is based on the course syllabus approved by the Iranian Ministry of Science, Research and Technology for Postgraduate and Doctorate degrees.

80 GLASER, STRAUSS, 1967; MORSE, 2001: 2, 5

81 GLASER, STRAUSS, 1967; STRAUSS, et al., 1998; NEUMAN, 2006

Table IV The evaluation of nature and ecology dimension based on grounded theory and reviewing the performance of these within the context of Iranian architectural education and professional architectural projects

Tabl. IV. Procjena aspekta prirode i ekologije na osnovu utemeljene teorije i ocjena njihove učinkovitosti u kontekstu arhitektonske naobrazbe i stručnih arhitektonskih projekata u Iranu

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Integration and the unity between human and nature	Nature and Landscape	Landscape has a Regenerative feature in respect to nature	Nature	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Pasban Hazrat**: Jamshidieh Park	– Painting and picturing
Designing with nature					
Naturalism					
Preservation of nature					
Natural Landscape					
Nature, Culture, Technology					
Ecology as the basis of landscape planning and designing	Ecology		Ecology	**Pasban Hazrat**: Jamshidieh Park **Hossein Mahjoubi** and **Karim Saei**: Saei Park	– Sustainability and ecology in landscape architecture
Ecologic, social, and aesthetic approaches					
Composition of species and ecological periods					
Horizontality					
Vernacular-oriented approach and contextualism	Contextualism		Contextualism	**Mehrdad Iravanian**: Chamran Park in Shiraz **Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Nader Ardalan**: Tehran Center for Celebration of Music	– Sustainability and ecology in landscape architecture
Importance of cultural and environmental issues					
Aesthetic goals of landscape	Visual Aesthetic		Visual Aspects	**Mehrdad Iravanian**: Chamran Park in Shiraz	
Harmony between infrastructures and landscape					
Environmental sustainable technology	Regenerative approach		Regenerative	**Pasban Hazrat**: Jamshidieh Park **Farhad Ahmadi:** Saba Garden in Tehran	– Sustainability and ecology in landscape architecture
Regenerative design					
Reduction of Energy Consumption					
Socio-environmental view of landscape					
Rural city					
City in landscape	Garden City		Garden City	**Mehrdad Iravanian**: Sadra City in Shiraz	– Cognition and Landscape Expression
Garden city idea					

Data Analysis

Analiza podataka

In this section, the information and theories of the aforementioned theorists are analyzed using grounded theory and their position in two areas, namely, in education and professional projects of landscape architecture of Iran is discussed with a comparative approach. According to Table I, it can be stated that in the field of Iranian landscape architecture education, attention is not given to meaning and space in landscape. Furthermore, in professional projects of Iranian contemporary landscape architecture, categories such as human and perception are less considered, while the architectural symbols and traditions of landscape architecture are well considered. Also, the appearance of art and nature in seen in both domains.

Based on Table II, it seems that in both fields of education and professional projects, the category of delight, which from the viewpoint of theorists is one of the most significant aesthetic goals of landscape architecture, as well as the sense of place and perception of the landscape, are mainly neglected. Delight alone is as valuable as the pursuit of meaning.[83] This is why the natural and artistic dimensions are taken into account in the educational process of landscape architecture students and in professional projects.

As seen in Table III, the professional projects of landscape architecture place great importance on the consideration of tradition, culture and society. However, there has been little effort in the usage of collective sub-consciousness, as well as people's participation in landscape architecture, in both the education and professional projects sections, which can be considered further and in fact requires more research and work. The concept of an ecosystem makes sense in terms of the social participation of living beings in abiotic environments since humans are one of those living beings.[84] The performance of the education section is also acceptable in terms of tradition, culture and society.

Table IV shows that in general, issues such as ecology and contextualism have been thoroughly addressed in professional landscape architectural projects in Iran, but the dimen-

82 Strauss, et al., 1998: 123
83 Treib, 1995
84 Lyle, 1985

TABLE V THE EVALUATION OF GEOMETRY, FORM AND FUNCTION BASED ON GROUNDED THEORY AND REVIEWING THE PERFORMANCE OF THESE WITHIN THE CONTEXT OF IRANIAN ARCHITECTURAL EDUCATION AND PROFESSIONAL ARCHITECTURAL PROJECTS

TABL. V. PROCJENA GEOMETRIJE, FORME I FUNKCIJE NA OSNOVU UTEMELJENE TEORIJE I OCJENA NJIHOVE UĆINKOVITOSTI U KONTEKSTU ARHITEKTONSKE NAOBRAZBE I STRUĆNIH ARHITEKTONSKIH PROJEKATA U IRANU

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Integration of architecture and landscape	Attachment of architecture and landscape	**Landscape presents itself by geometric patterns and spatial discipline**	Attachment with architecture		– Landscape Design 3
Space and volume					
Complexity and diversity of species in designing	Spatial discipline		Discipline	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Iraj Etesam:** Mellat Park **Hadi Mirmiran**: Iranian Consulate Building in Germany, The Building of Iranian Embassy in Thailand **Bahram Shirdel**: The building of Iranian Embassy in Brazil **Nader Ardalan**: Tehran Center for Celebration of Music	– Landscape Design 1,2,3 – Technical Design
Creativity					
Anti-formality					
Spatial discipline					
Fractal geometry			Geometry	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Kamran Diba**: Shafagh Park **Hadi Mirmiran:** Shiraz Library **Nader Ardalan**: Tehran Center for Celebration of Music **Gabriel Guevrekian:** Water and Light garden	– Landscape Design 1,2,3
Artistic view and use of artificial plants	Artistic view in designing		Art	**Mehrdad Iravanian**: Green Land project in Shiraz, Chamran Park in Shiraz, and Sadra Park in Shiraz	– Perspective – Garden History and World Landscape – Landscape Design 1,2,3
Art and sculpture					
Function of visual art					
Functionalism	Functionalism		Function	**Kamran Diba**: Shafagh Park Ab-o-Atash Park (Water & Fire)	– Landscape Design 1,2,3

sion of the garden city is less considered, which is one of the most significant concerns of theorists and landscape designers. On the other hand, on the whole, natural and ecological issues in the landscape architectural education are not adequately addressed. Following this, the lack of ecological approaches in landscape architectural planning and design has impacted the sustainability of ecological networks and thus, its structure and functions have encountered drawbacks. Therefore, it is imperative to use and extend the ecological design framework in landscape architectural planning and design, and should to be further emphasized in landscape architectural education in universities.

The results of Table V indicate that in the context of connectivity and integrity of landscape with architecture, both areas of education and professional architectural projects are somewhat neglected, even though the connection between landscape and architecture is significant, and these two can be integrated as a whole.[85] But the discipline and geometry that are considered to be the main characteristics of the Persian Garden are well addressed. Moreover, in terms of artistic and functional dimensions, these are both well addressed in the fields of education and professional projects.

Primarily, planning and designing activities are not independent and different from theoretical foundations, and there is a reciprocal relationship between them. Since landscape architectural planning does not begin with an unspecified mindset and design, it is significant because of the complexity of the various aspects of the landscape architecture. The results of this study also show that both in the field of education and in Iran's professional projects, models and patterns have been dealt with in the design. But the categories of flexibility and processes are not sufficiently highlighted in planning and designing, particularly in the field of professional projects (Table VI).

DISCUSSION

DISKUSIJA

In the first part of the research (Tables I-VI), theories were categorized and analyzed using grounded theory. Results illustrate that there are some major concepts and cores which have been clearly mentioned as the main features of the Persian Garden whereas such concepts have been neglected in both areas of professional projects and education in Iran. For instance, in the aesthetic part, the category of delight was emphasized which had a significant meaning for Iranians, and many gardens were also constructed for this purpose.[86] Regarding natural and regenerative approaches, the conservation of resources such as water has always been one of the main goals of the Persian Garden.[87] Thus, it seems that Persian Garden should be consid-

85 DOWNING, 1841
86 WILBER, 2004
87 HOB, 2006
88 ASLA, 2004

Table VI The evaluation of designing and planning dimension based on grounded theory and reviewing the performance of these within the context of Iranian architectural education and professional architectural projects

Tabl. VI. Procjena aspekta planiranja i projektiranja na osnovu utemeljene teorije i ocjena njihove učinkovitosti u kontekstu arhitektonske naobrazbe stručnih arhitektonskih projekata u Iranu

Grounded Theory Analysis			**The evaluation of the performance of landscape architecture in the field of education and professional projects**		
List of Conceptual Characteristics	**Major Category**	**Core Category**	**Key Words**	**Professional Projects**	**Education Courses**
Using patterns in designing	Design Models	**Using Planning and proper processes, landscape design reaches a desirable result**	Patterns	**Seyed Amir Mansouri:** Deh Vanak Neighbourhood **Nader Ardalan:** Iran Center for Management Studies (Imam Sadegh University) **Hossein Mahjoubi** and **Karim Saei:** Saei Park **Nader Ardalan:** Tehran Center for Celebration of Music	– Landscape Design 1,2,3
Modeling as a basic concept					
Theoretic and scientific approach					
Flexibility	Flexibility		Flexibility		
Freedom in designing					
Process-oriented and Holistic Methodology	Landscape Planning		Landscape Planning		– Landscape Design 1,2,3 – Landscape Planning
Process-oriented landscape design					
Problem definition, development of ideas, implementation					
Equilibrium of social and ecological dimensions					
Creative process	Scoring process				
Evaluation process					
Layering information					

ered as the basis and theoretical model in the field of landscape architecture, and also as the means for improvement of this field in Iran. According to this finding, the next part attempts to compare the performance of Iranian landscape architecture in the areas of education and professional architectural projects and to assess to what extent landscape architects have been successful in order to consider these concepts in both areas.

Figure 1 examines the quality of the field of education and professional projects with regard to landscape architectural theories. Findings show that the performance of landscape architectural education in Iran was very good in 14% of the categories and good in 21% of the categories, while 45% of theories in the field of education were not covered at an acceptable level. Also, statistics were not significantly different in professional projects, and their performance was evaluated weak in 40% of the extracted categories. Therefore, it is very important to address the weaknesses in the development of this field in Iran, as detailed in Figures 2 and 3.

Figure 2 shows weaknesses in the categories of participation, environment, delight, and landscape architecture dimensions in both domains. In fact, participation can play a significant role in the design and planning of landscape architecture, and affects the perceptual and subjective characteristics of space and landscape architecture. In addition, the components of delight and landscape dimensions that belong to the aesthetic debate also greatly contribute to the success and function of a landscape architecture. Therefore, regarding the above issues, its inclusion in the educational system should be proposed. It is also recommended to consider these issues in landscape architectural projects. Furthermore, in professional pro-

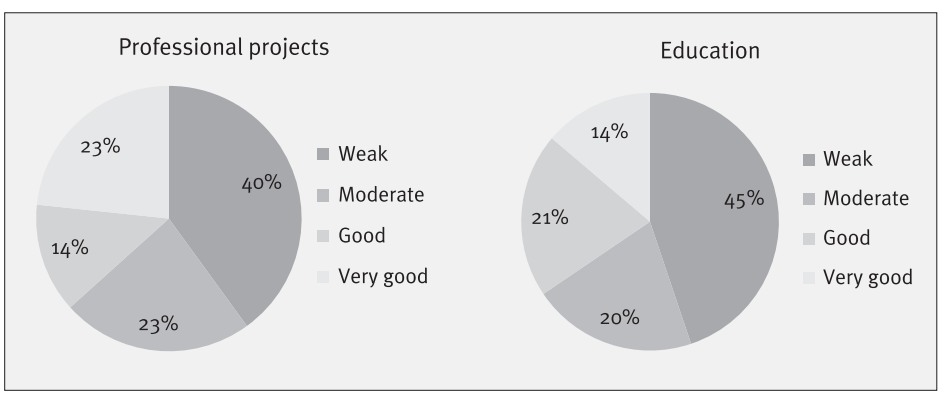
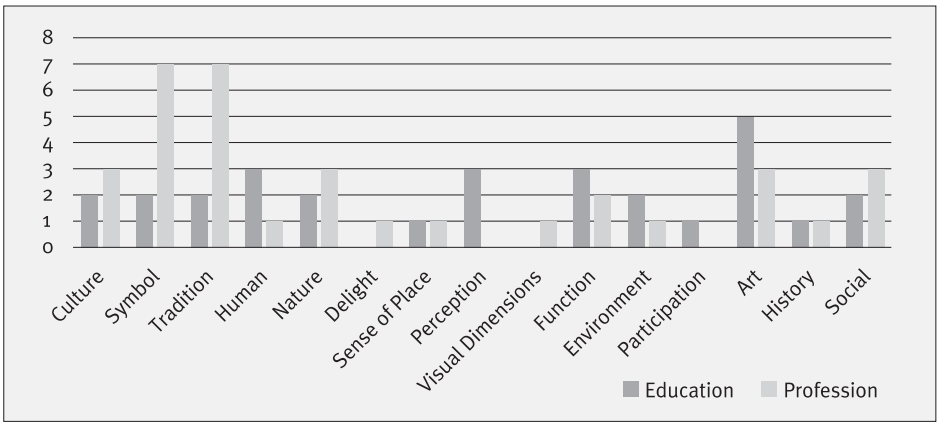


Fig. 1 The comparison of the performance and scope of the field of education and professional projects to landscape architecture theories

Sl. 1. Usporedba učinkovitosti i obujma područja obrazovanja i stručnih projekata u odnosu na teorije parkovne arhitekture



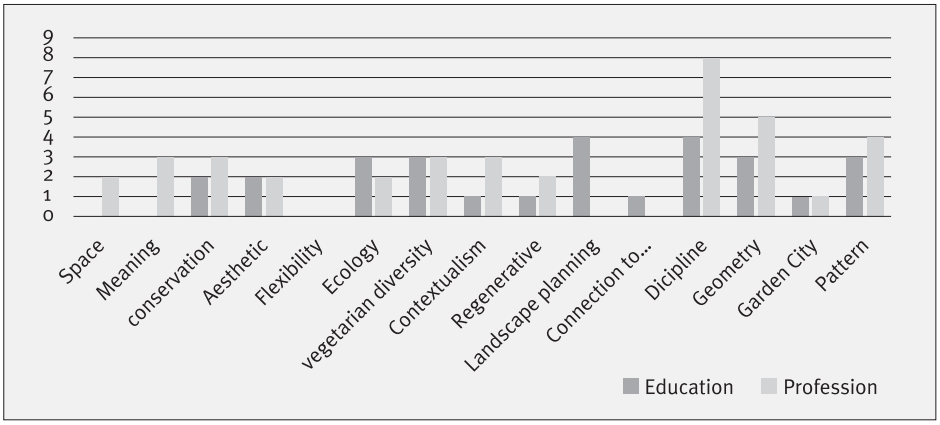


FIG. 2 COMPARING THE PERFORMANCE OF PROFESSIONAL PROJECTS AND EDUCATION ACCORDING TO THE LANDSCAPE ARCHITECTURAL THEORIES OF THE WORLD

SL. 2. USPOREDBA UČINKOVITOSTI STRUČNIH PROJEKATA I OBRAZOVANJA PREMA SVJETSKIM TEORIJAMA PARKOVNE ARHITEKTURE

FIG. 3 COMPARING THE PERFORMANCE OF PROFESSIONAL PROJECTS AND EDUCATION ACCORDING TO THE LANDSCAPE ARCHITECTURAL THEORIES OF THE WORLD

SL. 3. USPOREDBA UČINKOVITOSTI STRUČNIH PROJEKATA I OBRAZOVANJA PREMA SVJETSKIM TEORIJAMA PARKOVNE ARHITEKTURE

jects, dealing with issues such as history, humans, and sense of place is less common, whereas history and cultural systems were emphasized as significant categories in the professional projects in landscape architecture.[88] But in the traditional discussions and symbols, the performance is very well evaluated. In addition, history and cultural systems were emphasized as a significant category in professional projects.

Based on Figure 3, in landscape architectural education, items such as space, meaning, ecology, vegetation diversity, regenerative, and connection to architecture were somehow overlooked. However, there is still no explicit meaningful field in landscape architecture that can reveal meaning in the environment, but this should not be the reason for ignoring it. Efforts have also been made in environmental, ecological, and regenerative research in the last decade, but there are still many shortcomings. Therefore, it is recommended to consider the above topics in the course syllabus approved by the Ministry of Science. Also, as issues such as garden city, connection to architecture, landscape planning and flexibility are some of the weaknesses in the field of professional projects, it is suggested that these factors should be further emphasized in future projects.

CONCLUSION

ZAKLJUČAK

Since the landscape is a connecting definition of the phenomenon of human, city and architecture, questions arise as to whether or not this connection has been appropriately established. Many theorists believe that landscape is a text that, if it is known, can be read. In fact, it is a macro approach that can put all the sciences in its subcategory. This article has also tried to open and analyze these connection strings (theories) of related sciences to landscape architecture. Landscape architecture in Iran has always been considered as a phenomenon consistent with nature, and which has been presented with impressive geometry. Today, in contemporary Iranian projects, these symbols and values are expressed like a chain with repeatable functions, but represented in a modern way. But it does not seem to have paid enough attention to all aspects of the landscape architecture. The results in the first part (based on Grounded Theory) indicate that the Persian Garden can be considered as a theoretical and practical basis for the improvement of landscape architecture in Iran, because it contains much of the contemporary world theories. Therefore, it is necessary to translate patterns into today's language, which should be reflected in the course syllabus as well as in professional projects.

The results of the second part show that there are still many shortcomings in the area of education and professional projects in the field of landscape architecture. The results indicate that Iran's landscape architects and theorists tend to focus on traditional, cultural and symbolic aspects of the landscape architecture. It seems that issues such as participation, environment, perception, delight, and visual dimensions in both areas require more attention and revision. In addition, history, human and sense of place are the weak points of the landscape architectural profession. In the education section, there are also issues such as space, meaning, ecology, plant diversity, regenerative, geometry and connection to architecture which are recommended to be included in the curriculum of this field.

As a result, the most important step towards improving the qualitative and functional level of this discipline in Iran is to revise the curriculum approved by the Ministry of Science with regard to the weaknesses and strengths presented in the analysis, because it can now be shown with greater certainty that landscape architectural education and professional projects have largely not been successful and need to be refined and revised.

[Written in English by author; proof-read by ALISON C. BOWIE, BSc, 52 Denhill Park, Newcastle upon Tyne, NE15 6QH, UK]

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Summary

Sažetak

Komparativna analiza profesionalne naobrazbe i projekata krajobrazne arhitekture u Iranu

Danas, u ranim godinama 21. stoljeća, parkovni su arhitekti počeli usvajati nove perspektive i prihvatili da tehnički, funkcionalni, ekološki, ekonomski i estetski aspekti omogućavaju različite utjecaje na dizajn materijala i različite dimenzije koncepta. Očigledno, nije moguće postići određene ciljeve a da se prethodno ne prouči i analizira područje parkovne arhitekture. Sukladno tome, proučavanje ovih područja može na razne načine biti veoma učinkovito za razvoj parkovne arhitekture u svim vidovima, uključujući obrazovanje i stručne projekte. Znanje o parkovnoj arhitekturi ima brojne dimenzije koje obuhvaćaju: povijest vrtne i parkovne arhitekture, ljudske odnose, okoliš i kulturni krajolik, valorizaciju krajolika na osnovi kriterija održivosti, ekologiju i ekološko planiranje, teorijske osnove dizajna, istraživanje i metodologiju poduke, urbani krajolik, urbanu infrastrukturu, izgradnju i metode implementacije, planiranje krajolika, inženjerstvo na terenu, poznavanje biljnih vrsta i načina sadnje, stručna pravila i dokumentiranje, vrijednosti i etiku te komunikacijske tehnologije [Deming, Swaffield, 2011: 25].

Iako parkovna arhitektura u svijetu u svom profesionalnom i akademskom kontekstu ima tradiciju dužu od stotinu godina, njezina povijest u akademskom smislu u Iranu ne seže dalje u prošlost od nekih 20-ak godina (od 1998.) i još uvijek nije zadobila svoj pravi status unutar stručne zajednice. To je posljedica nedostatka jedne sveobuhvatne definicije parkovne arhitekture, nedostatka jasnoće u pogledu područja njezina djelovanja, kao i utjecaja povezanih područja. U ovome trenutku nastava u području parkovne arhitekture u Iranu odvija se samo na diplomskom (master) studiju i u sklopu doktorskog studija, a odsjeci na kojima se poučava postoje na fakultetima umjetnosti, arhitekture i urbanizma.

Usto, ono što se prezentira u akademskom kontekstu nije kvalitetno usklađeno s profesionalnim aspektima parkovne arhitekture. Stoga se osjeca snažna potreba povezivanja praktične djelatnosti i obrazovanja. Pritom treba ponajprije voditi brigu o različitim interesima i ciljevima na koje utječu teorije povezane s tim područjem, počevši od socijalne dimenzije, kulturnog identiteta, estetske i umjetničke dimenzije – sve do funkcionalnih ili provedbenih aspekata. Uzimajući u obzir teorije suvremenih znanstvenika i teoretičara, potrebno je prepoznati najznačajnije kategorije kao preduvjete za poboljšanje i promociju parkovne arhitekture u Iranu. U ovome radu nastojimo usporediti i valorizirati učinkovitost suvremene iranske parkovne arhitekture u dvama područjima – obrazovanju i stručnim projektima na temelju kategorija i teorija izvedenih iz analize.

Materijal i metode – Ovo je istraživanje provedeno u dva dijela: u prvome je dijelu korištena utemeljena teorija za analizu podataka kojom se objedinjuju svi koraci koji pridonose teorijskoj strukturi problematike. U tom su procesu prikupljeni podatci pretvoreni u koncepte i kodirani u tzv. *processor-coupled continuum* [Glaser, Strauss, 1967; Morse, 2001: 2, 5]. Na taj način podatci su kodirani u 3 etape (otvorena, aksijalna i selektivna). Kodiranje je analitički proces u kojem su podatci segmentirani, konceptualizirani i integrirani tako da se može formulirati konačna teorija. U postupku kodiranja, jedinica analize jest koncept [Glaser, Strauss, 1967; Strauss, i sur., 1998; Neuman, 2006].

U prvoj su etapi teorije povezane s konceptualnim dijelom (podrijetlo suvremenih teorija parkovne arhitekture) kategorizirane. U etapi otvorenoga kodiranja izlučeni su inicijalni koncepti (razina 2), u etapi aksijalnoga kodiranja glavne kategorije, a u etapi selektivnoga kodiranja jezgra. Ona bi trebala imati analitičku snagu i objediniti ostale kategorije. Na taj način inicijalna informacija iz šest dijelova uključuje koncept i značenje, estetiku, sociokulturološki aspekt, prirodu i ekologiju, projektiranje, formu, funkciju i planiranje kako bi se dovršio proces utemeljene teorije. Na kraju se izvodi jezgrena ili konačna teorija. U drugome dijelu korištena je komparativna metoda kako bi se izmjerile i valorizirale kategorije izvedene iz prvoga dijela u dvama područjima – obrazovanju i profesionalnim projektima suvremene iranske parkovne arhitekture. U tom smislu, autori su ispitali učinkovitost ovih dvaju područja prenoseći jezgrene kategorije u ključne riječi te ih na kraju usporedili s obzirom na iransku parkovnu arhitekturu, a rezultati su prezentirani u ovome radu. Treba naglasiti da su analize u dijelu o stručnim projektima utemeljene u projektima odabranima korištenjem Delphi tehnike prema tome kako ih je identificiralo deset stručnjaka i komentatora u području parkovne arhitekture.

Rezultati – Budući da krajolik definira povezivanje fenomena čovjeka, grada i arhitekture, javljaju se pitanja oko toga je li ta veza uspostavljena na primjeren način. Brojni teoretičari vjeruju da je krajolik tekst koji se može čitati ako je poznat. Zapravo, to je makropristup koji može sve znanosti povezati u potkategoriju. Ovaj rad također pokušava analizirati veze srodnih područja s parkovnom arhitekturom. U Iranu se parkovna arhitektura smatra fenomenom povezanim s prirodom koji se prezentira impresivnom geometrijom. Danas su u suvremenim iranskim projektima ovi simboli i vrijednosti izraženi u vidu lanca s ponavljajućim funkcijama, no predstavljeni su na moderan način. No, takav pristup ne vodi dovoljno računa o svim aspektima parkovne arhitekture. Rezultati u prvome dijelu (na temelju Utemeljene teorije) pokazuju da se perzijski vrt može smatrati teorijskom i praktičnom osnovom poboljšanja parkovne arhitekture u Iranu zbog činjenice da u sebi sadrži mnoge aspekte svjetskih suvremenih teorija.

Rezultati drugog dijela pokazuju da još uvijek ima dosta nedostataka u području obrazovanja i stručnih projekata parkovne arhitekture. Rezultati pokazuju da parkovni arhitekti i teoretičari u Iranu teže tradicionalnim, kulturnim i simboličkim aspektima parkovne arhitekture. Čini se da problemi, kao što su participacija, okoliš, percepcija, ugoda i vizualna dimenzija, u tim područjima traže više pozornosti i reviziju. Usto, povijest, čovjek i doživljaj mjesta predstavljaju glavne slabosti parkovne arhitekture kao profesije. U dijelu obrazovanja također postoje problemi, kao što su prostor, značenje, ekologija, biljna raznolikost, geometrija i povezanost s arhitekturom, koje bi trebalo uključiti u nastavni plan u tom području.

Stoga je najvažniji korak prema poboljšanju kvalitativne i funkcionalne razine ove discipline u Iranu – revizija nastavnoga plana koji je odobrilo Ministarstvo znanosti, s obzirom na prednosti i nedostatke koji su ovdje izneseni u analizi. Pokazuje se s većom sigurnošću da obrazovanje u parkovnoj arhitekturi i stručni projekti u velikoj mjeri nisu bili uspješni, što podrazumijeva nužnost njihova poboljšanja i revizije.

Biographies

Biografije

Mehdi Khakzand is assistant professor in Landscape Architecture at Iran University of Science and Technology, Tehran. He developed his interests in landscape theory and landscape design process.

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