

21.

ULUSLARARASI YAPI ve YAŞAM KONGRESİ

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Doğa, Kent ve Sürdürülebilirlik...

Nature, City & Sustainability...

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BİLDİRİLER

PAPERS

XXI. ULUSLARARASI YAPI VE YAŞAM KONGRESİ

Doğa, Kent ve Sürdürülebilirlik...
Nature, City & Sustainability...

TMMOB Mimarlar Odası Bursa Şubesi / UCTEA Chamber of Architects Bursa Section

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ÖNSÖZ

Sürdürülebilir kentsel gelişimin tartışılması amacıyla farklı platformlarda ve ölçeklerde pek çok farklı organizasyonlar gerçekleştirilmiştir. Mimarlar Odası Bursa Şubesi de, mimarlık, doğa ve kent ilişkilerini sürdürülebilirlik bağlamında irdelemek amacıyla 21. Uluslararası Yapı & Yaşam Kongresi'nin ana temasını **"Doğa, Kent ve Sürdürülebilirlik"** olarak belirlemiştir. Kongreye; mimarlar, şehir plancıları, peyzaj mimarları, kent ve yaşam alanındaki meslek odaları ve sivil toplum kuruluşları ile mimarlık, şehircilik ve peyzaj mimarlığı okulları, merkezi-yerel yönetimler ve kent dinamiklerinin tüm temsilcileri ilgi göstermiştir.

Kongrenin hedefi; kentlerin tarihi, kültürel ve doğal değerleri ile özdeşleşen, yaşanabilir kent niteliği kazanmalarını sağlayacak konuları ele alarak tartışmak olarak belirlenmiştir. Bu bağlamda, çok boyutlu bir kavram olan sürdürülebilir gelişmenin; çevresel, ekolojik, sosyal, kültürel, ekonomik ve politik boyutları ile irdelenmesi amaçlanmıştır. Alt başlıkları; Doğa ve Ekoloji, Kent ve İnsan, Anlam ve Kimlik, Enerji ve Teknoloji, Katılım ve Yönetim olarak belirlenen kongrede 9 çağrılı bildiri, 29 seçili bildiri ve 6 poster bildiri olmak üzere toplam 44 bildiri sunulmuştur. Bu kongre kitabı, ekte sunulan interaktif cd çalışması ile birlikte önemli bir bilimsel bilgi birikimi oluşturmuştur.

Her yıl mimar meslektaşlarımızın bir buluşma klasiği haline gelen ve bu yıl 21. si düzenlenen Yapı Yaşam Kongresi; Türkiye'de mimarlık ortamında bu denli uzun soluklu süren önemli bir organizasyondur. Gerek organizasyon kalitesi gerekse bilimsel kalitesi ile takdir edilmektedir. Kongremize bildirileri ile katılmak isteyenlerin sayısı giderek artmaktadır. Bilimsel kurulumuz sayısı giderek artan bildirilerden, titiz çalışmalar sonucunda kongreye katkı sağlayacağını inandığı çalışmaları değerlendirerek seçmektedir.

21. Uluslararası Yapı yaşam Kongresi'ne katkı koyan herkese sonsuz teşekkürlerimizi sunarız.

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IMPORTANCE OF SCHOOL GARDENS AND THEIR ENVIRONS FROM THE POINT OF VIEW OF URBAN LIFE QUALITY

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ABSTRACT
The present paper proves the importance of school garden and their environs from the point of view of urban life quality with the help of reports and papers and scientific researches published on school gardens and their environs in our country.

In this paper the planning criteria and design guidelines for the school gardens are evaluated. The universal acceptances and standards as well as values related to this subject are also brought up. For increasing urban life quality the importance and place of school gardens are also discussed.

Key words : School Gardens, Education Instituons, School Buildings, Education Facility Area, Urban Life Quality

1. INTRODUCTION
School areas are places where vehicle and pedestrian transportations intersect and where populations accumulate. These are places where a social meeting, social contact and tangency are experienced. Schoolyards, which are urban service areas, are the most important elements of urban green field system. School areas are agents of urban character and an imporant indicator of the quality of life and the importance given to people, generations.

2. School Areas and User Relationship

2.1. School Area Users
According to Jersil and Arthur (1979), every child forms his/her circle first unconsciously then consciously, creates his/her own world. He/she dreams with a small piece of paper or without anything in his/her home, school, everywhere and lives in his/her own world. In fact, child tries to create his/her circle everywhere. A student annually spends approximately 178 days, that is 935 hours in the school. If we accept that, every student spends at least 1 hour in schoolyard throughout the day, he/she spends total 178 hours a year in schoolyard. Beside education and teaching functions of schools; they are also important for the shaping of students' physical and social environment and their becoming socialized.

2.1.1. School Age Children's Open and Green Field Requirements
Playing wants of children in 1-6 age range are fulfilled with nurseries, kindergartens, 0-3 and 4-6 age children's playgrounds and parks. 6-18 age range school age children's playing demands are met with the greens in schools and parks, children's playgrounds, courts and sports fields.

2.1.2. Influence of School Areas on Students
According to Corlu (1996), influence of school areas on students should be evaluated in 8 main topics:1.

1. Physical and mental development,
2. Making use of spare times,
3. Creating the activities that will satisfy the most student needs,
4. Achieving security of life and property of students,
5. Introducing the environment and getting into contact with environment,
6. Socialization of students,
7. Creating the hygienic environment for students,
8. Evaluation of schoolyards as a place for education and teaching etc.

2.2. Assessment of School Areas

2.2.1. Assessment of School Areas With Respect to Planning and Design Criteria
Until today, planning criteria, design principles are studied in depth in many literatures and the characteristics to be included in school areas are defined.

The history of giving a lesson outdoors, which is called as "Peripatetic School", dates back to old times. Plato moved the education in schools in Athens outdoors in 335 B.C (Rullmman, 1996).
According to Lendhold (1960) and Tanriverdi (1975), there should be at least two 50X35 m. size playgrounds in a school with 800 students.
According to Chiara and Callender (1990), Kupeli (1995) and Corlu (1996), parks should be as follows:

School	Park Area
Primary School	For each class + 1 Park + 3
Secondary School	For each class + 1 Park + 63
High School	For each class + 1 Park + 16 Park areas.

2.2.1. Assessment of School Areas With Respect to Outfits and Specific Usage
According to Wolf (1967), allocating areas for Ayasligil (1999) school areas are not enough and the following clauses are accepted for outfits to be included in education areas and for specific usages:

- School areas should include a natural landscape field like meadowland, a small forest part, pasture area. If there is no such natural field, a complete new field needs to be established. This new school area should have shady and sunny regions, plain and slope areas, totally open or protected areas.
- Open and green fields and facility distribution should be handled according to classes and age groups. More green field and less facility for small age groups and less green field and more facility for higher classes should be allocated.
- Gymnastics, light athleticism field and playgrounds should be allocated in the garden.
- Near sport fields and playgrounds, seats, fountains and drinking water facilities,
- Walking paths, car parks and bicycle area, service park,
- Personnel and watch box, a seat and a resting place for servicemen,
- A resting corner, pergola seat for personnel and teachers should be included in the garden.
- There should be a parent waiting point and a meeting place for parent-teacher association.
- Biology application department should have an "Application Garden" where "Terrarium, Vivarium, Aquarium, Plant Pools" can be included. These application gardens and biology classroom should be close to each other.
- There should be a plantation field (planting and growing area).
- School areas should show variety in terms of landscape features and they should be a part of the nature. In these areas, there should be samples related to animals, ground fields and geology-related geological-geomorphological demonstration areas should take place.
- A parade area and a multi-purpose activitiy field should be allocated in schoolyard and its location should be selected carefully.

2.2.2. Assessment of School Areas With Respect to Public Housing Laws

The features to be included in education facilities, size of school areas in terms of public housing laws differ in each country and person. But the common view is that; the education facilities should be planned together with the open and green fields planning of each region, settlement.

2.2.3. Place of School Areas in Laws and Legislations

In our country, basic education institutions are connected to Ministry of National Education and 1739 numbered National Education Fundamental Law is effective. In the foundation of education areas, Ministry of National Education, Metropolitan or Provincial Municipalities, Ministry of Public Works and Settlement are authorities.

2.2.4. Location and Education Relationship of School Areas

In the positioning of a facility project in physiography, orientation and slope etc. aspects, there is no "typical solution" that can be applied everywhere and there can be no "typical project" to be used everywhere. Existing landscape features of all project areas in planning and designs are important natural thresholds. Consequently, in the application of typical school projects; various problems are encountered depending on the size, shape of land plot and its immediate surrounding features, the topography and geography of the land. Geographical conditions, climatic, regional and traditional location features produced by regional differences and life styles show a big variety in our country. With changing ecological and sociological structure caused by this variety, uniform locations cannot correspond to one another. Architectural places and open and green landscape sites that are not designed by taking into consideration the environmental factor changing with typical projects, are not education institutions anymore. Places established by typical projects negatively affect the quality of life and education.

2.2.5. School-Environmental Health Relationship of School Areas

"School environmental health studies" make an important part of school health studies. School environmental health applications includes matters like school site and settlement, construction features of school building, infrastructure facilities, installation security, quality of indoor air, water security, toilets, playgrounds, heating and lighting level, service hygiene.

School health conditions are under inspection of Ministry of Health according to Public Health Law in Turkey. Besides, according to Municipal Law, municipalities are in charge for taking necessary steps for school health.

2.3 Assessment of the Polls Conducted On the Basis of Pilot Areas

Our "Garden-Open and Green Field Necessity Determination in Public Primary Schools under Ministry of National Education in Istanbul" titled study is still being carried out. The poll prepared within this scope are sent via internet to total 15 Public Nutrition and Study Primary Schools under Ministry of National Education Anatolian and European Side of Istanbul. The forms are especially requested to be filled in by Principals/ School Managers. Throughout Istanbul, user group-oriented polls are carried out on basis of students in Public Nutrition and Study Primary Schools.

Within the scope of this study which is still being carried out, polls related to principals are over. Findings obtained through poll assesment, which came out as an intermediate output of the study, are aimed to be presented briefly in the announcement.

3. DETERMINATIONS AND SUGGESTIONS

There are some points to be paid attention to during the establishment of school "education facilities" related to planning, landscape design, interior design and environmental health. But the importance of these are not specified in education or public housing legislations.

1. In Terms of City Planning in School Area Establishments:

- Education facilities, other service sectors, outfit areas,
- Natural resources,
- Existence and current state of landscape elements, their size, accesibility, and the relationships between them should be determined.

Its position in urban green fields system and its settlement placement should be taken care of with an integral attitude.

2. In Terms of School Areas' Landscape Design:

- Definition of school entrance and exit, location and crossings,
- Children/garden/location scale, establishment of areas proper to children ergonomics,
- Provision of usage and security conditions,
- Service area, personnel and parents car park
- Vehicle and pedestrian traffic safety
- Notice and bulletin boards, signal and director designs
- Acoustic and lighting,
- Privacy, screening,
- Climatic and ergonomical comfort,
- Insulation, heating, sound, noise, dust and emission control,
- Garbage collection and hygiene in other places,
- Urban furniture,
- Stairs, doors, windows, door mats, grids, drainage, manholes, walls, terraces, wet floors, emergency and fire exits,
- Disables platforms and elevators and proper usage and safety conditions should be established.

3. In Terms of Increasing the Quality of City-Citizen-Education-User:

School managers, teachers and students should adopt the importance of school open and green fields';

- Urban quality of life,
- Citizen life quality,
- Education quality,
- User quality, on school age children's physical and mental health.

4. In Terms of Increasing Education and Location Quality:

Increasing "Location Quality in Education", determining the problems and improvements and changes in education system should be done and an INSTITUTE quality unit should be established under Ministry of National Education or on the basis of cities that will;

- test "Adequacy of Open and Green Fields in Education Facilities",
- question "Location Quality and Relationship" in education,
- create plans and programs, and
- "Analyze and Improve Location Effect in Education".

5. In Terms of Sustainability of Location Quality:

- "Education Facility" green fields' maintenance, applications and repairs are still caried out by Municipalities. But this service is not enough. Consequently, Education Facilities Landcape Works Directorate should be formed under Ministry of National Education.
- Landscape Architects in Education Facilities Landscape Works Directorate under Ministry of National Education should be appointed for planning, landscape design and application of education facilities.

6. In Terms of "IDEAL" Education Facilities:

- "Education Facilities" should be "IDEAL" and a model because of its corporate identity.
- Landscape, architecture and interior design, green fields and landscape planning, natural disaster

management, engineering (lighting, sounds, heating, insulation) etc. project designing of disciplines and applications should be scientifically and technically proper and adequate and "IDEAL".

7. In Terms of Forming Urban Landscape and Urban Image:

- "Education Facilities" are an important part of urban green fields and it should be handled within the context of green fields planning.
- Its place in urban ecology in landscape planning works to be done for urban improvement,
- Its place for urban landscape and image establishment should be determined and its importance should be specified.
- Schoolyards are filled in line with the requirements in progress of time.
- Garden area is diminishing and vanishing because of new buildings and additions to the existing ones.
- Open and green fields are used as car park as time goes by and they become service areas, this should be prevented.

8. In Terms of Security of Life and Property:

- Teachers, personnel and students should be insured against all sorts of risks.

9. In Terms of Increasing the Value of Garden in Education:

- As long as there are houses that have lands in cities, villas, luxurious houses; schoolyards are the sole and most important means for children to get to know nature and learning by living the nature.
- Application gardens and experiment sites, small greenhouse areas should be built especially in big urban school areas.

REFERENCES

- Adıyaman, S. (1953): Okul Uygulama Bahçeleri ve İş Eğitimi Yönünden Önemi. Milli Eğitim Basımevi, Öğretmen Kitapları: 19. İstanbul. S.1-13.
- Akdoğan, G. (1972): Beş Büyük Şehirde Çocuk Oyun Alanları, Okul Bahçeleri ve Spor Alanlarının Yeterlilikleri ve Planlama Prensipleri Üzerine Bir Araştırma. AÜ Ziraat Fakültesi Yayınları Yayın No: 522. Bilimsel Araştırma ve İncelemeler: 304. Ankara S.22-42.
- Ayaşlıgil, T. (1999-2008): YTÜ FBE MF Yüksek Lisans Programı, Peyzaj Mimarlığı Anabilim Dalı. Yeşil Alan Planlaması ve Rekreasyon Planlaması Dersi Basılmamış Notları. İstanbul.
- Chıara, J. And Callender, J. (1990): Time-Saver Standarts for Building Types, McGraw Hill Book Company, Printed and Bound by Arcata Graphisc / Halliday 3 nd Edition copyright, New York, S.213.
- Çorlu, Ş. (1996): İstanbul Kenti Örnek Okul Bahçelerinin Peyzaj Mimarlığı Açısından İrdelenemsi. İÜ FBE OF Peyzaj Mimarlığı Anabilim Dalı. Yüksek Lisans Tezi. İstanbul.
- Galzer, G. (1979): Landschaftsplanung als Beitrag zur Stadtentwicklungs-und Bauleitplanung.-In : Buchwald, K. & Engelhardt W. (Hrsg.): Handbuch für Planung, Gestaltung und Schutz der Umwelt, bd. 3 : BLV München.
- Hough, M. and Associates (1969): Principles of Site Development for Elemantary Schools" Landscape Architecture. Volume 60. Number 1, New York , S. 40.
- Jersil, D. And Arthur, T. (1979): Çocuk Psikolojisi (Çeviri) AÜ Ankara.
- Küpeli, N. (1995): Ankara Kenti Okul Bahçelerinin Peyzaj Mimarlığı Açısından İrdelenmesi, AÜZF Yüksek Lisans Tezi. Ankara.
- Richter, G. (1982): Formen und Funktionen des Stadgrün - Landschaftsarchitektur im staedtischen Freiraum BLV München.
- Rullmman, M. (1996): Kadın Filozoflar Kabalcı Kitabevi, I. Baskı. ISBN: 975-7942-50-2, İstanbul, S.31.
- Schulz, H. (1978): Naherholungsgebiete- Grundlagen der Planung und Entwicklung. - Paul Parey, Berlin, Hamburg.
- Simonds, O. J. (1983): Landscape Architecture. A Manual of Site Planning and Design. ISBN 0-07-057448-0 New York. Pp 331.
- Wolf , O. (1967): Schulgelaende und Schulgrün - Garten und Landschaft, Juli, S.224-226.