

## **Education and City: Public Space as Learning Space**

The case study of Setúbal City

### **EXTENDED ABSTRACT**

Mariana dos Santos Sarmento  
December 2021

Advisors: Prof. Teresa Frederica Tojal de Valsassina Heitor; Prof. Maria Alexandra de Lacerda Nave Alegre

### **ABSTRACT**

According to the principles of the Charter of Educating Cities (2020), the Educating City must commit to support and develop opportunities and tools that promote the integral education of its citizens, through collaboration between the municipality, entities/organizations and the local community. In this framework, this dissertation has as its main objective to discuss the urban public space under the theme of learning spaces, exploring it as an educational agent within the strategy of the Educating Cities movement.

The educational potential inherent to public spaces is explored by analyzing how they can reflect, in terms of their morphological and space-functional conditions, the principles of Educating Cities. The investigation focuses on Setúbal city, one of the 88 portuguese Educating Cities, and as a case study the Jardim Multissensorial das Energias, an educational initiative established by the Municipality in 2018. The methodology applied to the case study was based on the Post Occupation Evaluation that allowed to emphasize the opportunities and problems of the space, considering the perspective of the user, as well as formulating interventional strategies appropriate to reality.

Perceiving the public space as a learning space is to understand the public space as a potentiating element of the urban educational offer, both formal and informal. Considering itself as a place for meeting and sharing values between the community, the public space also can be an educational platform, both from its morphological characteristics and the learning environment it provides.

**Keywords:** Public Space, Educating Cities, Setúbal, Jardim Multissensorial das Energias, Post Occupancy Evaluation

## INTRODUCTION

The purpose of this thesis is to study the urban public space as an educational agent, within the strategies of the Educating Cities movement (1990). This dissertation is justified by the city's commitment to education and, therefore, by the need to understand the potential of urban public spaces as learning spaces, by looking for forms of interventions that transform them into alternatives or complements to educational interior spaces. Also, it aims to deepen the educational potential inherent to public spaces and explore how these can reflect, in terms of their morphological and space-functional conditions, the principles of Educating Cities. As a case study, the investigation focuses on the Educating City of Setúbal and Jardim Multissensorial das Energias, in collaboration with the City Council of Setúbal.

Currently, the work held by the group of educating cities tends to develop mostly around projects and programs that focus on promoting the literacy and quality of life of the population, using the resources existing in the institutional networks of school and cultural facilities through educational activities promoted by administrative entities. However, the potential of urban public spaces as educational agents and enhancers of the urban educational offer in terms of both formal and informal learning is not seen, by not taking advantage of their historical and territorial values and the relationship with the built environment, i.e., public spaces as meeting places and exchanges of experiences.

**But how are the public spaces that represent this mission characterized? What are their morphological, typological, environmental characteristics, etc. that enhance the educating city?**

The paper is divided in **two main chapters: (1) theoretical framework** that aims to contextualize the thesis' topic and introduce important concepts for the course of the work. It is dedicated to the presentation of concepts in the field of education, recognizing their different forms from a broader perspective and how urban spaces - places of learning beyond the formal educational facilities - can reflect them. Also, it introduces the Educating Cities movement, highlighting its principles and deepening the relationship between the city and education; **(2) research and analysis of the case study** of Setúbal, exploring its characteristics and the educational initiatives it promotes as an Educating City; and also Jardim Multissensorial das Energias, one of the city's educational initiatives, describing its context and general framing as well as its morphological and use conditions, i.e. activities, flows and modes of appropriation through the creation of maps and types of users. Using a Post Occupancy Evaluation (POE) methodology, a synthesis of the morphological and spatial-functional conditions is carried out, as well as a diagnosis from a technical point of view and a proposal for educational interventions at the study case.

## THE CITY AS A LEARNING SPACE

This work is based on the concept that education can be practiced outside the formal educational facilities. Portella (2012) presents the distinction between “teaching” and “educating”, considering that educational means extend beyond the school environment, to include the surrounding environment, i.e., the family, the neighborhood, the community, the city. To this end, it becomes evident that the city can be a learning space.

It is assumed that the notion of education embraces the various educational modes: **formal**, that is, education that takes place in the educational facilities and which is based on structured and hierarchical learning systems; **non-formal**, which considers the potential of the environment and the process of learning through participation and involvement in the community; and **informal**, a spontaneous way of learning through daily activities and the process of socialization. In this regard, education and learning spaces are assumed to be broader and more inclusive, as the individual's development is also stimulated outside the school facility and through non-standard situations. It is suggested to look at the world with a wider vision, past the conventional educational spaces.

From a historical perspective, the public space was already understood as a space for personal and community development, just like the *Agora* or the Roman *Forum*. These become educational spaces for being the ones that meet political practice, debate, reflection and discussion of ideas, thus allowing the development of citizens, their ethics and participation in social and community life. In addition, it is through playing and involvement with the city that children develop as individuals with their own identity, taking the first steps towards citizenship, participation and coexistence in the community (Gadotti, 2005). Therefore, children's social development is based on the observation of the social environment that surrounds them, and consequently, in similarity with the school community, a community can also be found in the city that exchanges ideas and experiences (Gehl, 1989; Hertzberger, 2008).

Through the 20 principles established in the Charter of Educating Cities (2020), the cities are guided to boost their educating character. Therefore, an educating city foresees a lifelong learning system that seeks to build a conscious, inclusive and participatory community, educating it to practice ethical and civic values, but also to develop their skills and knowledge as individuals. Since the Educating Territory is a community system that seeks to provide the necessary conditions for the integral development of its citizens, children and young people (Coachman, 2020), the idea that the city can be considered as an Educating Territory is reinforced with the Educating Cities movement.

Trilla Bernet (1990; 1997) proposes that the city can be considered from three distinct but complementary dimensions: (I) Learning in the city, the city as an educational context, i.e. looking at the city as an environment for education through the articulation of its educational structures, both in terms of school facilities and cultural offers; (II) Learning from the city, the city as a vehicle of education, i.e. the city as an informal educational agent, where urban spaces are elements that can generate learning on their own; and (III) Learning the city, the city as educational content, i.e. the daily relationships and activities carried out in an urban environment that are capable of informally generating knowledge.

## SETÚBAL, A LEARNING CITY

Since 2012, Setúbal city is one of the 88 Educating Cities that integrate the Portuguese Territorial Network of Educating Cities (RTPCE – Rede Territorial Portuguesa das Cidades Educadoras). Within the scope of this participation and in accordance with the principles of the Educating City, the City Council of Setúbal has taken on a strategy of building a city that can also be used as an educational resource at the service of schools, families and the entire community. Since the end of the first decade of the 21st century, the Municipality of Setúbal has been investing in integrated strategies for urban regeneration through the development of rehabilitation processes. The interventions include road restructuring, reformulation of existing public spaces and improvement of infrastructure and urban equipment, and the implementation of a set of anchor projects in which investment in cultural, sports, school and social facilities and leisure spaces stands out, thus valuing the offer and quality of public space.

Within the educational framework proposed by the municipality, are presented and studied twelve initiatives that excel due to their scope both in their areas of action and in the territory they involve. The initiatives are described with reference to the three dimensions of the Educating City proposed by Trilla Bernet:

I. LEARNING IN THE CITY: (1) Maritime Fauna of the Sado River; (2) Skate Park of Algodeia; (3) Setúbal Music Festival; (4) Jardim Multissensorial das Energias;

II. LEARNING FROM THE CITY: (5) “Nosso Bairro, Nossa Cidade” Program; (6) COLAB – Collaborative Workshops; (7) “Setúbal Mais Bonita”; (8) “Seja Jardineiro por um dia”;

III. LEARNING THE CITY: (9) Roadmap to an antiracist education; (10) Semana do Mar e do Pescador; (11) “Há Festa no Parque!”; (12) Street Art.

It can be concluded that the city becomes a canvas, an open-air art gallery or even an artistic map. In addition to requalifying urban spaces, these initiatives also have the ability to encourage the involvement of the local community in the management of the territory, increasing the sense of place and belonging, as well as stimulating thinking about the future of urban spaces and effectively executing what the community wants to achieve. This framework was essential to understand the scope of the strategy of the city as an Educating City, understood as a stage of numerous initiatives that value the city and its citizens.

Ultimately, it was created a summary table that described a typological synthesis of the themes analyzed along with the typologies of the educational framework in Setúbal: (i) Urban regeneration, facilities and green public spaces; (ii) Events and thematic festivals; (iii) Itineraries/guided tours; (iv) Conferences, debates, seminars; (v) Exhibitions and art demonstrations; (vi) Performing arts and music presentations; (vii) Courses, training and workshops; (viii) Thematic and political celebrations; (ix) Collaborative and volunteer programs.

## CASE STUDY OF JARDIM MULTISSENSORIAL DAS ENERGIAS

### METHODOLOGY

The case study of Jardim Multissensorial das Energias followed a Post Occupancy Evaluation methodology proposed by Preiser et al. (1988), which aims to obtain an understanding of the space from the user's perception, identifying the realities of the use of public space as well as its problems and opportunities. Also, it is intended to develop a critical analysis of these spaces from the perspective of the architect/specialist, who can consider the users' opinions and confront their own interpretation to generate project guidelines in accordance with them. Therefore, the investigation followed three sequential steps:

#### STEP 1: Characterization of the case study

Based on investigation and archival information, the case study was characterized according to its urban context, area strategies and the surrounding physical-spatial and social conditions. It describes the project and its history, the temporal context in which it took place, the different stakeholders involved, as well as the goals, expectations and social and functional pressures placed on it. The analysis also followed a qualitative assessment considering nine parameters, namely:

- |                              |                               |
|------------------------------|-------------------------------|
| A. Identity                  | F. Legibility                 |
| B. Continuity/permeability   | G. Diversity and adaptability |
| C. Safety/comfort/pleasure   | H. Resistance/durability      |
| D. Mobility/accessibility    | I. Sustainability             |
| E. Inclusion/social cohesion |                               |

These criteria are based on the approach proposed by Brandão (2002) in *O Chão da Cidade: Guia para Avaliação do Design do Espaço Público* and *Critérios de Avaliação de Projectos de Desenho de Espaço Público* (CCRLVT, 2001). The parameters proposed by the authors were adapted considering the principles of the Charter of Educating Cities and the case of public spaces in the post-occupation phase. In addition, a walkthrough was conducted in order to identify problems within the space.

#### STEP 2: Survey of uses and types of users

A survey of the uses and types of users was developed through on-site observations, where it was listed the activities carried out by the users as well as the way in which they related to the built urban space. These observations took place between the months of April and August, spaced by large intervals. Nine observations were carried out on different days of the week and hours of the day, divided into three observation times – morning (8am – 1pm), afternoon (1am – 6pm) and night (6pm – 8pm). It was also applied an online public survey to collect data on the community – with a sample of 35 users questioned - and following evaluation of the spatial-functional conditions of the case study. As a result, standard user profiles and behavioral maps were created, reflecting in a synthetic way the predominant uses, stays and flows observed.

### STEP 3: Diagnosis of uses and interventional strategies

Considering the analysis previously made, it was conducted a synthesis of the performance of JME as well as recommendations and interventional strategies within the scope of the public space as an educational space. The parameters of the qualitative assessment are presented, aiming to gather and synthesize the opportunities and problems detected. Based on the conclusions drawn from the applied POE tools – walkthrough, on-site observations, public survey – a matrix of discoveries and recommendations were carried out, as well as a map of interventions aiming to transform user requirements into project guidelines in the context of educational spaces.

### CHARACTERIZATION OF THE CASE STUDY

Jardim Multissensorial das Energias is a scientific-pedagogical project developed between 2016 and 2018 with the purpose of requalification and revitalization of the former Jardim Camilo Castelo Branco. The intervention aimed a significantly improvement of its spaces and pedestrian pathways, along with the promotion of a learning opportunity about renewable energies and energy efficiency by defining an interpretative circuit of different stations which represent the renewable energies - biomass, geothermal, oceanic, solar, water and wind - through the installation of equipment throughout the territory.

The agents involved in the project are: the Energy and Environment Agency of Arrábida (ENA - Agência de Energia e Ambiente da Arrábida), managing and promoting the space; the Polytechnic Institute of Setúbal (IPS – Instituto Politécnico de Setúbal), which contributed to the design of equipment; the Municipality for Disabilities Group, which contributed with its knowledge, at the project design stage, to adapt the space to the specific needs of people with disabilities; and, also, architect Sérgio Dias and team of technicians from the City Council of Setúbal.

JME is a space designed to meet the needs of people with disabilities and alterations in the sensory process, motor, visual or hearing impairments, mental illnesses and developmental/learning disorders or even autism spectrum disorders. The pathways are suitable for people with reduced mobility, as well its physical elements are able to stimulate the senses, providing relaxation and stimulation through contact with the environment and sensory experiences (aromas, textures and sounds), namely, aromatic plants, water elements - channels, lake, fountain -, sound effects, and visually attractive and colorful equipment.

As part of the many educational initiatives in Setúbal city, JME promotes the principle of the Educating Cities of Sustainability, based on the construction of a space that encourages learning about the environment both through its spaces and the way it is built and operated. In addition, it provides an opportunity for all people to learn and use the space, advocating inclusion and education for all individuals. In this way, JME constitutes a representative example of the Educating City, and it is from the morphological characteristics and ideals supported by the urban space that education and awareness of the population that interacts with it is made possible.

## USES AND TYPES OF USERS

According to the people surveyed, it was found that the most popular activities are walking, looking at the view to the city, Arrábida and Sado estuary, and staying/relaxing/resting. Still, the most observed activities were dog walking, walking in the garden and talking/hanging out with family and friends. It was also observed activities such as taking pictures, looking at the view, staying/resting, dating and doing sports; as well as several people who used the JME as a place to stop and rest on their journey through the city. During the observations, it was not found that the active use of energy stations was the main activity performed. Nevertheless, it was observed that they awaken the curiosity of many users of various ages, including families, children, elderly and young people. In order to understand in which spaces these activities take place, it was made a map of the users' preferred areas of stay.

The JME is essentially a space of passage and walking. To this end, the predominant flow and movement of JME users was also studied. Two main flows were observed: the stairs, for those looking for a faster passage through space; and ramp paths, for those who walk through the garden or have carts, shopping bags, bicycles, etc. Still, the passageway adjacent to the JME's enclosure is also used for those who do not intend to go through its interior, as a faster passage without meeting other people.

As a result of observations and field visits to the JME and surveys, a summary table of the space users' profiles, their expectations and spatial requirements was elaborated. Based on the observations made, it was found that the JME is mostly used by local residents who practice jogging / sport walking, dog walkers, students, couples, families, adults, young people and teenagers who carry out different activities there. Enthusiastic users of picnics, practitioners of meditation, tourists, photographers, naturalists and groups of students who carry out guided tours of the interpretative circuit were also highlighted.

## DIAGNOSE OF USES AND STRATEGIES

Jardim Multissensorial das Energias stands out for its value as an initiative of Educating Cities within the scope of the principle of sustainability - promoting it by its construction and composition of the physical elements as well as the learning environment encouraged by them. Its didactic spaces are also oriented to all ages and learning levels. The accessibility and suitability of the space for reduced mobility and people with disabilities should be highlighted, both from the adapted educational experience provided and from the ease of enjoyment of its spaces. Although it has not been explored much yet, the adaptability of the space to other functions and uses is verified. It can be considered that the JME contributes to the reinforcement of the urban identity and image through the promotion of the characteristic elements of the city of Setúbal – material and immaterial heritage – and its reminiscence state verified in the users. It is characterized by being a natural refuge, a niche in the urban fabric, for its comfort, relaxation, involvement with nature and consequent microclimate. Its arboreal elements are essential as a sound barrier for the surrounding streets, especially the port area and adjacent streets; or even elements for shelter from sun and wind exposure. The JME significantly improved the physical interconnection of adjacent urban areas and there is still a desire to improve their connection with the surroundings – eliminating barriers and developing urban spaces.

The main problems identified were related to maintenance and cleaning its green areas and educational equipment – necessary due to the existence of animals and regular use of the space (people with food, tobacco, misuse of equipment, etc.). The scarcity of support elements such as tables, more comfortable benches as well as elements to protect the natural elements also stood out. The sanitary facilities and the café (nowadays being used as a technical area) – are not in operation and the need for them is verified by the users. Regarding the promotion of JME, there is a failure in promoting the space at an urban level and in hosting events. Although suitable for walking or light vehicle travel, there is also a lack of public transport and attractive services in the surrounding area of JME.

## RECOMMENDATIONS / INTERVENTIONAL STRATEGIES

The recommendations are related to the themes of signage and legibility of the space, namely, the investment in the advertising of the space at an urban level as in the reinforcement of the identification of natural elements and equipment in order to become a more intuitive and educational space in itself.

Regarding the energy stations - it is recommended that there is greater maintenance of equipment, namely regular cleaning of the pavement and water spaces. It should also be ensured that they are fully functioning, especially by certifying that the water system is turned on during the hours of operation of JME.

It is advisable to invest in urban furniture, namely WiFi hotspots and integrated sockets (using, for example, a renewable energy system for their power), the introduction of more comfortable support tables and benches with back support, stimulating and adaptable, as well as the reinforcement of light points and drinking fountains.

In the topic of comfort, it is suggested to reinforce the feeling of security, invest in cleaning and maintenance of interior spaces and pathways, as well as in points of shelter from natural elements. Also, the importance of providing sanitary facilities is highlighted.

By the analysis carried out and the low exploration of the educational potential of the Jardim Multissensorial das Energias, it is recommended the investment in hosting sports activities and/or the introduction of sports equipment, the use of the building as a potentiating element, for example, as a café, but also a space for conferences, workshops or neighborhood meetings. In addition to this, it is suggested the establishment of two outdoor study areas that intend to restructure the space and respond to the users' needs, as well as the use of some of the interior spaces for educational initiatives, including observation and painting classes at the viewpoint or lectures and classes at the central benches core and staircase. The central garden area can also be a space for potential recreational events, conferences or lectures taking advantage of its incline pavement as an amphitheater. Also, its pedestrian pathways may be open-air exhibition circuits.



## CONCLUSION

The POE methods proved to be an adequate approach to the evaluation of educational public spaces. It confirms the effectiveness of surveys and on-site observations for the evaluation of users' opinions, uses and requirements; and the walkthrough in identifying physical and functional space problems and opportunities. However, there was a lack of proximity with the community, which would certainly produce more coherent and meaningful strategies, thus is appealed the importance of this aspect in future applications of this method and investigations related to this topic. The methodology also proved to be an effective tool that can be applied to future research and adapted according to the specificities of public learning spaces.

Planning public spaces from an educational perspective is to transform and activate spaces for people – it is to improve the urban image of the city; facilitate the appropriation of spaces; and attract the community, involved in activities and spaces designed to their needs. To this end, the involvement and commitment of public administrations becomes essential in carrying out projects and initiatives, as well as the involvement of the community and partnerships with institutions, companies and organizations.

The creation of destinations and meeting points in urban spaces that motivate people to visit places in the city contributes to the reaffirmation of the urban public space as an educating, dynamic and stimulating pole. It should be noted that the various educational modalities – formal, non-formal and informal education – can occur in public spaces in an interconnected way and, in the context of Educating Cities, all of them must be encouraged. However, the physical characteristics necessary to carry them out must also be considered. Bear in mind that if people attract people, the use of space is consequently optimized (Gehl, 1989). In this way the educational action of cities and their public spaces is also enhanced, not only by the built environment but also by the use of space.

It is concluded that public spaces as learning spaces are essentially based on five premises: (1) assuring their availability to all individuals, as well as the basic features of safety and accessibility; (2) respond successfully to the needs of the community at a programmatic and morphological level, which implies regular improvement and evaluation taking into account the users of the space; (3) promote the values and knowledge that the space itself conveys; (4) value the impact that public space has on people and the city; (5) encourage opportunities for formal, non-formal and informal learning.

## REFERENCES

- AICE. (2020). *Carta das Cidades Educadoras*. [https://www.edcities.org/wp-content/uploads/2020/11/PT\\_Carta.pdf](https://www.edcities.org/wp-content/uploads/2020/11/PT_Carta.pdf)
- Brandão, P. (2002). *O Chão da Cidade – Guia de Avaliação do Design do Espaço Público*. Centro Português do Design.
- CCDR-LVT. (2001). *Critérios de Avaliação de Projetos de Desenho de Espaço Público*. <http://www.ccdr-lvt.pt/files/54ef121756e234aaec998d8782bcd05b.pdf>.
- Coachman, N. I. V. (2020). *Planning Child-Friendly, Educating, and Learning Cities: An Urban Framework for Sao Paulo*. [Dissertação de Mestrado em Planeamento Urbano, Massachusetts Institute of Technology]. <http://dspace.mit.edu/handle/1721.1/7582>
- Gadotti, M. (2005). *A QUESTÃO DA EDUCAÇÃO FORMAL / NÃO-FORMAL*. Institut International Des Droits De L'enfant (IDE), 1–11.
- Gehl, J. (1989). *Life Between Buildings: Using Public Space* (Vol. 8). ISLAND PRESS. <https://doi.org/10.3368/lj.8.1.54>.
- Hertzberger, H. (2008). *Space and Learning: Lessons in Architecture 3*. 010 Publishers.
- Portella, J. C. (2012). *Cidade Educadora (Território Educador): Valores para o DEL*. 10ª Expo Brasil. <https://www.yumpu.com/pt/document/read/12709089/territorio-educador-expo-brasil-desenvolvimento-local>
- Preiser, W. F. E., Rabinowitz, H. Z., & White, E. T. (1988) *Post-Occupancy Evaluation*. Van Nostrand Reinhold.
- Trilla Bernet, J. (1990). *Introdução. E. A. Educadores. La Ciudad Educadora = La Ville Éducatrice Barcelona*, 6-21. Ajuntament de Barcelona.
- Trilla Bernet, J. (1997). La educación y la ciudad. *Revista Educación Y Ciudad*, (2), 6-19. <https://doi.org/10.36737/01230425.n2.256>