

Public Participation Project-based Learning in Landscape Architecture

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Abstract: - In this paper the authors present the results of a public space redesign developed under a specific public participation methodology, conducted during the course of a project-based learning as part of a landscape architecture bachelor design studio. The focus was the redevelopment of an urban square in Portugal. Methods of behavior mapping, interviews and focus group were implemented and aimed the understanding of existing pattern of occupancy and people's level of public satisfaction, needs and preferences, and educating students on the negotiation practices and on the impact of people's feedback over the design options. The students work has ended at the design program level, defining a zoning plan, as well as the general and specific objectives to be considered in the redesign project. The Project-based process was considered to be key to the learning process.

Key-Words: - Public Participation, urban square, post-occupancy evaluation, project-based learning, landscape architecture.

1 Introduction

Public participation may be generally defined as a descriptive and exploratory method, which enables the observation and analysis of specific issues and phenomena, allowing the establishment of relations among variables [45][18]. In opposition to an experiment, public participation instruments are conducted in a real-life context, and can be descriptive (using standardized questionnaires for describing a specific phenomenon) or analytical (using qualitative and quantitative methods to find relations among variables and explanations).

Like-wise, the landscape design work, also deals with an existing real-life situation, which becomes reference to a following design development. Learning landscape design, though, is recurrently the exercise of an ideal response to a given problem. It often results in unrealistic products, unlikely to be executed. Nonetheless, approaches such as project-based learning (PBL), if motivated by real life challenges, may provide practicable designs and, in addition, be motors of creativity and motivation [43][8] engaging students in the learning of a professional practice [28].

As well as in professional practice, the PBL process in landscape design teaching, usually starts from (1) a call or a contract from a given client, which sets the designer to follow (2) critical

knowledge about the site to be designed, developing research and analysis, collaborating with the client and the stakeholders, and directing his acts towards learning more about the object and primary objectives of its design – (3) the design program. Then the designer (4) develops more concrete ideas and concepts, and looks for the resolution of problems and questions throughout a creative and critic process. This is often a trial and error phase, with advances and setbacks.

Part of the critical knowledge (see 3, above), may be the assessment of the existing situation of the site, whether if considering its physical and ecological factors, or the way people occupy and behave onsite, i.e., understanding a pattern of occupation.

This paper aims to reveal the general pattern of occupation of the *Adelino Amaro da Costa Square* (AAC Square), by means of a Post-occupancy evaluation (POE) conducted by landscape architecture bachelor students, attending a landscape design course unit of the 3rd year. The POE was carried out during the academic year of 2015/2016.

2 Public Participation

The social component plays a relevant role in urban planning and management activities

[30][15][11][23]. The last decades have seen a rapid change in attitudes towards the environment, which reflects a greater environmental awareness amongst professionals as well as the general public [37].

Nevertheless, even if communities have a strong interest in the evolution of their landscapes, land redevelopment processes prevents too often an active participation and involvement [22]. In any case, it seems that, more than active citizens, in order to achieve sustainable development, cities need active involvement on the entire policy and decision-making process, which needs to be decentralized and as far as possible focused at the local level [44][10][40].

Governments look now to provide greater community input in the identification of needs and problems, and in the design and implementation of remedial and preventive solutions [13][25]. However, according to Faga [15] it is still common in Europe, *“elite professionals enter competitions and propose designs (often very exciting designs) that are selected by a panel of experts (...) a similar process is inconceivable in the United States, where community participation has become a central element in deciding what will be built”* (p.xiii).

Public participation is not a neutral concept. Therefore, both definition and degree of public participation are directly connected to the conception of democracy and citizenship, and to the role of political authorities.

2.1 What is public participation?

Public participation definitions can be wide or restrictive: for example, the World Bank's definition of public participation has little in common with other conceptions. According to their definition public participation is a process that *“enables the public to influence the quality or volume of a service through some form of articulation of preferences or demand”* [48] (p.22), a definition that is closely linked to the concept of governance. In a more direct definition Beierle and Cayford [6] defined public participation as *“any of several ‘mechanisms’ intentionally instituted to involve the lay public or their representatives in administrative decision-making”* (p.6). Fiorino [16] characterize public participation as the involvement of people outside formal governmental decision-making processes.

Nevertheless, there are still some authors [9][38] that defend that public participation is one of the components (together with public consultation) of what they consider to be ‘public involvement’. For Britton [9], for example, public consultation

includes education and information shared between decision-makers and the public in order to make better-informed decisions, while public participation is the act that brings the public directly into the decision-making process.

These approaches are not contradictory in their main principles, once they all comprise public activities directed at cooperation and team work, providing the authority with opinions and information about public will, needs and objectives.

Even with the changes that have been introduced in policy and attitude during the last decades, there is still a large number of obstacles to a successful transition to a more participatory decision-making process. These obstacles range from low indices of trust in government [29], to administrative, and policy driven constraints [33][34], to the choice of the appropriate and most effective methods of public engagement [21][46][20].

Design professionals themselves can be an obstacle with concerns about renouncing power in the design process, perceptions of participatory practices being unprofessional and skepticism about anesthetic outcomes [26]. If public is to be involved in the decision-making process, their role may not be one of legitimization, their contributions need to be introduced on the design process from the beginning. If this is not the objective of public involvement, participants ought to be informed, given that transparency constitutes an aspect that is increasingly considered to be indispensable in any project whit an objective to serve the public. As referred by Faga [15] transparency in a very important part of any fair process and includes among other features openness and honesty.

2.2 Methods of public participation

Public participation can take several different forms [15][13][6]: Public meetings, workshops, charettes, citizen juries, focus groups, internet, mail interviews, face to face interviews, etc. each of them legitimate a priori, and justified by the context in which the project takes place (Table 1). Although the selection of the public participation method is a relevant part of the process, Bass et al. [4] stressed that what decision-makers really need to understand is that science-based and interdisciplinary approaches are not enough to define social, environmental and economic needs; and that therefore, public participation is a people-centred approach.

Table 1 - Public participation techniques. Developed after Abreu [1]

Technique	Description	Problems
<i>Advisory Committee</i>	A group of invited experts representing interacted parts	It requires full-time dedication from members, for a long period of time. Controversy may arise if the Committee recommendations are not accepted by decision makers
<i>Focus groups</i>	Small discussion groups that help to estimate public reactions. There has to be several of them, and led by professionals	If it allows estimating emotional responses, it does not provide any indication about how long they will last. It may be regarded as part of a process of public opinion manipulation
<i>Dedicated phone line</i>	Experts (or trained operators) answering questions from callers and providing information over the phone	It requires availability of well-prepared personnel on a regular schedule base. Its success depends on public willingness to call...
<i>Interviews</i>	Interviews with people representing public agencies, NGOs, interest groups, or well-known personalities	It requires a lot of time and well prepared staff
<i>Talks</i>	Meeting where experts or politicians present formal communications or give formal speeches	It doesn't facilitate dialog; it allows exacerbation of differences of opinion. It requires plenty of time to organize
<i>Conferences</i>	Less formal meeting where people present their views, ask questions, etc.	Dialog is still limited. It may require even more time (and people) to organize
<i>Workshops</i>	Working sessions of small groups dedicated to complete the analysis of a certain topic	It is not adequate for large audiences. It is frequently necessary to organize them in several places and on several topics. It requires plenty of people and time
<i>Surveys</i>	Carefully prepared questions are asked to a sample population	It provides a still image of public opinion, but it does not provide any sense of how it may change with time, and other factors. It requires professionals, and is usually a very expensive technique
<i>Referendum or Plebiscites</i>	Counting votes within a community	It requires a usually long and expensive phase of information and debate. Public may be more susceptible to emotional assertions than to reasoned opinions

2.3 Project acceptability

The relevance of the social acceptability of a specific project should never be underestimated. In the past, scientific and technological options having a negative environmental impact appeared to be inappropriate, not in terms of technical performance but for reasons of social acceptability [39]. In recent years, due in part to a need to reduce social conflict and litigation, the planning paradigm has shifted to give the general public greater input in environmental decisions [41][14][16][24].

Public participation is a systematic attempt to involve the citizen in the design, planning decision, implementation and evaluation of planning, management and redevelopment projects. This, ensures and improves not only their social acceptability, but also certifies that public space is really being constructed according to public will. Public participation will also contribute to expanding the number of possible choices, making them more precise and enabling that the different actors involved in the process take "ownership" of the decision. Once, as Beatley [5] mentions it is through ownership, commitment and the infusion of "local knowledge" in project development, unique places, genuinely native to the culture and environment, can be sustained.

Still, designers have to be aware that different people have different ideas, perspectives, needs, and concerns, reason why the participation process as to be as inclusive as possible, considering the opinion of each and every single group related directly or indirectly with the project.

The social acceptability of results in a decision-making process is linked to the way the different parts involved in the process perceive it: if they feel it is adequate and equal, they find it legitimate. For this reason, improving the social acceptability of specific design options during the process often results in higher legitimacy of the whole process, which in this way depends largely on how much people affected by the plan have been involved in it [42]

Considering redevelopment projects, as they are often located in highly visible and accessible areas, public perception and support is essential to the long-term success of the project [36] and to enhance the social, economic and environmental benefits that they provide.

3 Notes on post-occupancy evaluation

Whether related with the social use of an urban place, or to a broader ecological process, a

pattern is the “visual manifestation of the processes at work in a landscape” [3] p.204. Its understanding is rather valuable because it “describes a problem which occurs over and over again in our environment and then describes the core of the solution to that problem”, as Christopher Alexandre [1] puts it. So, patterns of occupation can be seen as a way through the understanding of user’s needs and preferences over a site.

Very recently the Gehl Institute [4] has published the “Mayor’s Guide to Public Life” in which the apology of measuring what people do and want of their open space is seen as the way to start vibrant public life. Yet, already back in 1974 the American Society of Landscape Architects already had raised the need to further develop the evaluation of urban open spaces, which would be of good source to greatly improve both professional practice and teaching in landscape architecture. William H. Whyte [14], back in the 70’s and 80’s, was a pioneer of the systematic outdoor spaces observations and proper measuring of people’s needs and preferences and generating evaluation reports. His POE led to the requalification of many urban squares.

A POE may be the means through which a pattern of occupation can be synthesized. It is a multi-method approach to the evaluation of any built environment, traditionally making use of observation, behavior mapping, surveys and interviews, along with others [12]. It provides valuable data on “Who is using the site? Where do they tend to gravitate? What are they primarily doing? (...) Who is doing what, where, and with whom?” [6] p.347, but also on people’s future expectations, needs and preferences, that are useful for “the ramifications of design decisions and generate insights for use on future projects” [2] p. 257.

4 Case-study: AAC Square

The AAC Square is located in the city of Vila Real, in the Douro Region, Portugal. The square is part of the Francisco Sá Carneiro District of the city (Fig. 1), known as Araucaria Neighborhood. This was built during the 1980’s for social housing purposes. The total district area counts 52 housing buildings, summing 451 apartments and 1118 residents organized in 434 families, according to the Census [8]. There are also two commercial buildings and some public equipment and services, such as the Primary School campus.



Fig. 1 – FAC square (red), with the commercial building in the center (yellow) and close to the primary school campus (green).

A technical study [7] promoted by the Municipality of Vila Real considers the neighborhood in need of priority intervention, so it has been listed as part of the Urban Rehabilitation Program (URP). The URP follows a strategy of systematic rehabilitation of the buildings, structures, public equipment, green spaces and other urban spaces of public use, with an umbrella goal of requalifying and revitalizing the urban fabric.

A 2010 assessment survey [7] points to a generalized satisfaction of the residents towards their neighborhood, especially indicating appreciation of the own apartment as well as the convenient location of the district. However, the same report calls attention to the need of improving the quality of the open space in an organized way, justified by the fact that many past interventions were “casuistic and isolated” p.9. There is also a lack of overall planning of uses along the district, which is proved by the self-allocation habits such as the clothes lines, some sorts of urban gardening, and the invasive parking lots. The lack of children playgrounds was also noted.

In terms of building morphology, the neighborhood is rather homogeneous, as the housing buildings are four floors and two entrances, summing eight single family apartments in each. These are organized in twenty formal clusters, usually grouped around a square, a piece of public equipment or a main path/road. The open space is relatively occupied, and it provides close and basic needs of access to goods, transports, recreation, stay and other services.

The URP clearly states three specific objectives of its intervention at the *Araucaria* Neighborhood, addressing three targets: (1) the buildings, (2) the economic activities, and (3) the public open space. The first (1) aims to improve quality and dignity of the existing buildings, envisioning the adaptation to new patterns of comfort living; the second (2) is focused in cheering

up and energizing the neighborhood; and the third (3) in making it a place full of life to live well and socialize. The AAC Square is one of the focus of this program, aiming the site restructuration in order to follow up with that last premise (3). Also under the third auspice, the URP report proposes that a new design should be developed, paying attention to the renewal of the infrastructures and pavements, incorporating new equipment targeting different age groups, the provision of street furniture and a proper tree cover.



Fig. 2 – Existing situation: (top-left) north entrance; (top-right) view to the commercial 1 floor building; (bottom-left) clotheslines; (bottom-right) southwest entrance.

5 Methodology

The teaching process starts from a proposition under the terms of the URP Report and supported by the Municipality Executive Office. The first part of the process took the students to learn more about the site but also about methods of research and design to specifically address the AAC square case. It is an approach that mixes teaching, research and field practice.



Fig. 3 – Workshop on public participation case-studies.

Firstly students were familiarized with particularities and concepts such as the public participation concept applied to landscape design projects: several lectures and a six hour intensive workshop were settled. The teacher's lectures orchestrated a perspective about the public participation, followed by the workshop on which the students searched, self-selected and developed factsheets about landscape design implemented projects (Fig. 3).

A second intensive six hours workshop was settled in order to select the methods to be integrated in the design procedure. A list of constrains to the selection of methods was analyzed. It included the current state of the site, the research and preliminary design objectives, the time and resources available, the target population, the typology of data to collect and the dependent methods of data analysis.

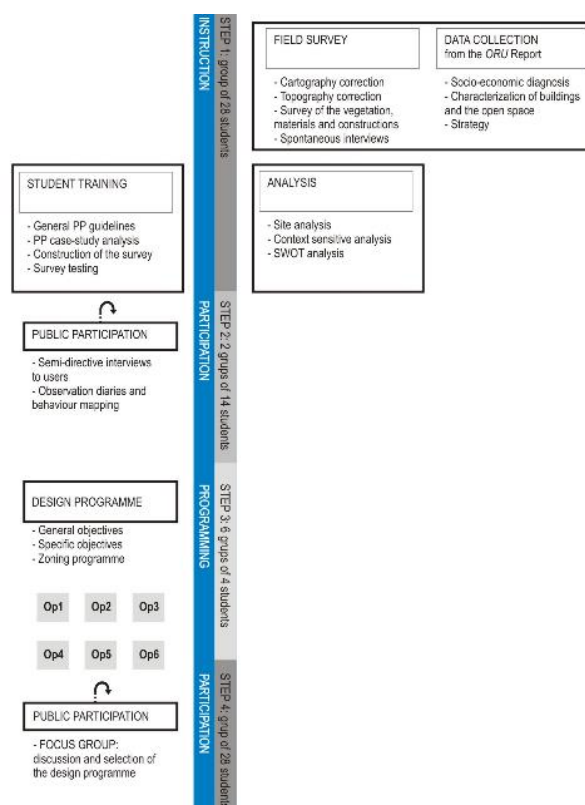


Fig. 4 – Methodology used.

Figure 4 illustrates the comprehensive methodological design to which students and teaches came out after the workshop sessions.

A POE based on several site surveys and analysis, documentary analysis, behavior observation and mapping, as well as onsite interviews to users was considered to be the best starting point to create a well-supported landscape design program. Followed by a scrutinizing focus group session, with the local community and ending with the final presentation of a variety of Master Plans.

5.1 Observation and Behavior Mapping

The observation of the site use and behavior mapping were conducted during September and October 2015. The fieldwork was organized by sets of three observation sessions per four periods of the

day (morning, noon, afternoon and evening). This has resulted in 12 sessions and one round of 18 to 25 minutes per session of observation carried out on-site by a group of students.

The data recording system, originally developed by Meireles Rodrigues [10], using a multi-touch PC Asus T91MTM in order to operate the geographic information generated in QuantumGIS 1.7 software, was adapted to an analogic field record of data with the use of a clipboard and a key code for the gender and age variants, spatial day period distribution, levels of activity, observed behavior and social interaction.

Data was then transcript and analyzed making use of the geo-statistical tools of QuantumGIS 2.0 and the IGB SPSS statistics. The collection of data was realized by the students after a workshop on how to perform on-site behavioral observation and mapping.

5.2 Onsite Interviews

Following the behavior mapping, the on-site interviews were conducted in October 2015, during four periods of the day (morning, noon, afternoon and evening). Information on climate conditions, period of the day, demographics of the interviewee, frequency of visit and distance to home was collected using a closed questions. Three open ended questions were also asked to comprehend reasons to visit the site, preferred aspects, weaknesses and proposed changes. Interviews were conducted by the students after an intensive course on face-to-face enquiring method.

5.3 Focus-group

The focus-group was hosted in the design studio at the University. 10 members of the local community where invited and have participated: three of them were representing their businesses, another three were representing either the Primary School, the cultural, or the sports associations (two of those are also living at this neighborhood), the other four inhabitants live close by the square.

The session was divided in four parts. The first part consisted in a (1) short ten minutes presentation, led by the professors, of the objectives, area of study and methodology of the landscape architecture studio. The urban context of the square as well as the urban regeneration strategy were explained. The results of the observation and interviewing processes were also presented to the participants. The second part was conducted by the students and comprised the (2) presentation of the

design programs developed by each of the six groups, taking five minutes per group. Every spokesman of the group was asked to present their general objectives, specific objectives and zoning program. The third part, moderated by the professors, was the (3) discussion round, opened to the focus-group participants, who were able to reply to each of the groups. The fourth part was the (4) exhibition and assessment of the design programs. Exhibition of six posters was made available to the participants who were asked to pin six post-it to the most preferred program, as well as to place comments and suggestions by the poster.

6 Results and Discussion

The behavior mapping has returned 438 individuals mapped, 55,0% of which are male (n=241). Concerning the age group distribution, the most observed group was the Adults (55,7%, n=244) followed by the Elders (17,4%, n=76) and the Children (16,0%, n=70). The Teenagers was the least frequent observed individuals (4,3%, n=19).

In what relates to the social status, most of the mapped individuals were with another person (38,4%, n=168), or in a group of three or more people (26,5, n=116). Nevertheless, 148 users (33,8%) were alone, and six were mapped using the mobile phone. Being engaged in some sort of social interaction represents a total of 72,2% of the total observed.

Regarding the level of activity, Walking was by far the most recorded situation. More than half of the users were walking along the square (55,7%, n=244), followed by the Standing (15,5%, n=68) and the Sitting (15,5%, n=68). The individuals mapped do not seem to engage in very intensive activities at square (table 2).

Table 2 - Frequencies of the level of activity mapped at the Square

	Freq.	Percent.
<i>Laydown</i>	1	0,2%
<i>Sitting</i>	68	15,5%
<i>Standing</i>	68	15,5%
<i>Walking</i>	244	55,7%
<i>Running</i>	8	1,8%
<i>Biking</i>	7	1,6%
<i>Playing</i>	8	1,8%
<i>Playing with ball</i>	15	3,4%
<i>None of the above</i>	19	4,3%
<i>Total</i>	438	100,0%

Considering the total number of cases for the Type of Behavior mapped (table 3), the most observed was Talking (41,3%, n=180), apart from None of the above (42,8%, n=194). This are individuals who are engaged in some sort of activity shown in Table 3, with no other secondary behavior observed. Playing (8,2%, n=37) and Watching (4,4%, n=20) are also quite relevant, above twenty users mapped.

Table 3 – Frequencies of the type of behavior mapped at the Square

	Freq.	Percent.	Percent. of cases
<i>Watching</i>	20	4,4%	4,6%
<i>Talking</i>	180	39,7%	41,3%
<i>Playing</i>	37	8,2%	8,5%
<i>Listening/Playing to music</i>	2	0,4%	0,5%
<i>Eating</i>	11	2,4%	2,5%
<i>Kissing/Dating</i>	2	0,4%	0,5%
<i>Reading/Studying</i>	1	0,2%	0,2%
<i>Walking the dog</i>	6	1,3%	1,4%
<i>None of the above</i>	194	42,8%	44,5%
<i>Total</i>	453	100,0%	103,9%

The overall pattern of occupation shows a higher frequency of use: (1) close to the entrance of the coffee shop, (2) on the way to the school and (3) by the building's entrances. The most used routes are the southwest-northeast crossings, although there is also a very significant use of the northwest-southeast way through the commercial esplanade.

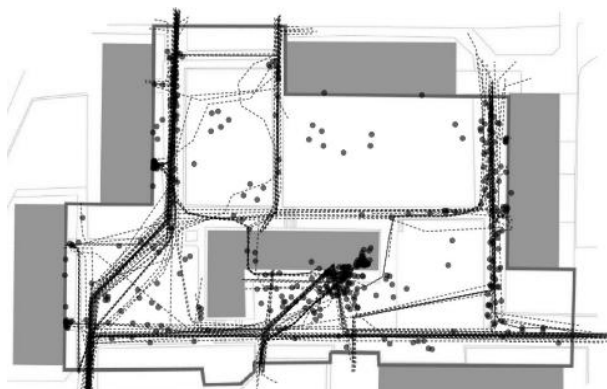


Fig. 5 – General Map of Behavior, revealing the overall distribution of people and the tracking of passersby.

The on-site survey has delivered 60 interviewees, who are either residents in the neighborhood, or frequent users. In fact, 83,3% of the respondents (n=50) are daily users of the square and only one has claimed to rarely use it. When asked how far, on foot, is their resident to the AAC square, 68,3% (n=41) of the users have responded that they live by the site, and only 6 live more than ten minutes away on foot.

The interviewing process was implemented after the observations and behavior mapping, in order that the gender and the age-group balances could be used to determine the quota samplings of the interviews. 60% of the respondents are Male (n=36) and regarding the age group balance, 53,3% are Adult (n=32) and the following most interviewed group is the Elders (16,7%, n=10) and the Children (16,7%, n=10).

Looking at the number of cases, the most preeminent reasons to visit the site is the fact the respondent live by the place (31,7%, n=19) and the use of the place as passer-by, usually heading to the school (30,0%, n=18). Also significant is the look for social interaction (25%, n=15) and the use of the commercial zone (23,3%, n=14). This results also reveal that recreation is not a very frequent answer to the reason to get outdoors (n=7).

In what concerns what people like the most about the AAC square (table 4), 36,7% of the cases has mentioned the fact that it is a green space (n=22). Also rather frequent are the answers regarding the commercial zone (2,0%, n=12) and the opportunities for social interaction (13,3%, n=8). In 15,0% (n=9) of the cases the interviewees have denoted that they dislike the place.

Table 4 – Results of the question “What is that you like the most about the Square?”

	Freq.	Percent.	Percent. of cases
<i>The green space</i>	22	30,6%	36,7%
<i>The commercial zone</i>	12	16,7%	20,0%
<i>I don't like this place</i>	9	12,5%	15,0%
<i>Social interaction</i>	8	11,1%	13,3%
<i>It's quiet</i>	3	4,2%	5,0%
<i>It has a clothes-line</i>	3	4,2%	5,0%
<i>The ease of access</i>	2	2,8%	3,3%
<i>The recreation opportunities</i>	2	2,8%	3,3%
<i>Other</i>	5	6,9%	8,3%
<i>I don't know</i>	6	8,3%	10,0%
<i>Total</i>	72	100,0%	120,0%

When asked about what would they change about the place (Table 5), respondents were quite specific pointing the need to do playground for children (46,6%, n=27) and to create new places for staying and for leisure (20,7%, n=12). One of the top answers reveals the concert with the design of the space, suggesting the overall improvement of the quality of the site (46,6%, n=27).

Table 5 – Results of the question “What would you suggest to be changed at the Square?”

	Freq.	Percent.	Percent. of cases
<i>Make a playground</i>	27	30,7%	46,6%
<i>Improving the quality of the space</i>	27	30,7%	46,6%
<i>Create stay and leisure opportunities</i>	12	13,6%	20,7%
<i>Diversify the commerce</i>	5	5,7%	8,6%
<i>More tree shade</i>	2	2,3%	3,4%
<i>More recreation places</i>	2	2,3%	3,4%
<i>More car-parking lots</i>	2	2,3%	3,4%
<i>Other</i>	7	8,0%	12,1%
<i>I don't know</i>	4	4,5%	6,9%
<i>Total</i>	88	100,0%	151,7%

Regarding the focus-group results, as mentioned in sub-chapter 3.3, six design programs were orally presented by the students to the focus-group, providing the general objectives and the specific objectives considered by the group. A zoning drawing, placing all the amenities and facilities, along with the specification of the objectives, was also shown to the participants, who were then able to analyze each group work by looking at the poster exhibition. The groups design proposals is synthetized in table 6, below.

The design programme belonging to group 1 was elected by the focus-group participants and 11 comment/suggestion papers were collected to add to the previous session of discussion. A similar exercise, to the one that led to the assessment of the design programmes by the focus-group, was conducted with the six groups of students. Each of the groups had to agree on assessing their colleagues' design programme by attributing 1 to 5

points and providing a short explanation for their higher score. The division of scores was quite balanced, yet group 2 was elected as the best for its aesthetic quality and overall organization of spaces.

The results of the POE and of the focus-group, as well as the group-works' cross-evaluation were then used to develop the final design programme: The general objectives considered were the overall qualification of buildings; the improvement of outdoor space and the enhancement of green presence; the creation of a new energy centre in the neighbourhood; the improvement of accessibility. Specific objectives are described in Figure 6.



Fig. 6 – Final Design Program specific objectives: (1) requalification of the clotheslines area, creating a green open meadows for multifunctional recreation, along with the clotheslines; (2) improving the green presence in the paved area and improve microclimate comfort; (3) requalification of the esplanade, adjusting the design to people's stay and business needs; (4) Design of a playground, improving access for all; and (5) Improving access and accommodate informal sports use.

Table 6 - Synthesis of the design programs

Group	General objective	Specific objectives/Zoning
<i>Group 1</i>	Recreation and leisure and enhancement of green presence.	Large multifunctional recreation open space; Playgrounds; Stray area and esplanade; Small allotment garden; Greening of the walking routes; improvement of accessibility by increasing the quality of paving.
<i>Group 2</i>	Qualification of buildings, living together in better green spaces and energizing the neighborhood.	Eliminating the architectural barriers, improving accessibility; Playgrounds; Greening the sloppy edges to lower maintenance costs; Esplanade; Enhance green presence to increase stay comfort; Standardize the flower beds along the entrances.
<i>Group 3</i>	Energizing the square and better integrate it the whole neighborhood. Care for people's needs and preferences.	Playground with seating spots and vegetation hedges; Paved multifunctional open space for recreation; Esplanade; Large passive recreation and leisure wood with seating opportunities; Reduction of the clothes-line zone; Establishing an clear hierarchy of pathways.
<i>Group 4</i>	Requalification of the collective space and improvement of the ecologic, social and aesthetic values.	Standardize the flower beds along the entrances; Appealing stay area, close to the entrance of the square; Paved multifunctional open space for recreation and pedagogical actions; Esplanade; Playground with seating spots and vegetation; Urban allotment garden.
<i>Group 5</i>	Energizing the square and make it accessible to all.	Overall greening; Requalification of the walkways and the stay areas; Redesign of the square to increase its use; Improving accessibility to all; New recreation sites, such as the playground and the multifunctional plaza; Urban allotment garden.
<i>Group 6</i>	Overall requalification of the public and green spaces; Improving the ecologic and the aesthetic values; Energizing and improving quality of life; Better environmental quality and energy efficiency.	Making the place comfortable along all seasons, by better maintaining it; Targeting different age groups' active and passive recreation needs; Adequate the equipment and street furniture; Improving paving and making the space accessible to all; Leisure places to get together; Considering the clothes-line zone, an allotment garden, a pic-nic area and proper reception plazas.

7 Conclusion

This study is an example on how interests from teaching, learning, executive decision-making, and local people can be brought together to a landscape design studio and be performed by students as a professional practice contract. This process brings students in contact with the open space and its users, connecting with the actual occupation of the site. The awareness of the design solutions and implications is thus integrated in the teaching process and results on an important value in teaching.

The actual results of the POE are seen as a secondary target of these conclusions, given the greater outcomes for learning methods and teaching methodology applied to landscape design. Nevertheless, the results from behavior mapping, the interviews and the focus-group session, as well as the other methods used to search, analyze, and synthesize information were considered to be robust and allowed a very comprehensive and feasible Design Program Proposal.

Also from the student's perspective, the POE becomes a research product, which appears to be fundamental to the design product itself. Research was seen to be very valuable as means to collect and analyze empiric data on how a place works and is foreseen by its users. The involvement of students in this process results on a comprehensive post-occupancy evaluation (POE) which delivers a significant body of knowledge able, whether to validate the need to the intervention, or to inform the design programming.

In landscape architecture, the design process is a persistent circular effort, which relies on availability of data and intelligence about a given site and on the designer's decisions, in the sense that, as [12] puts it, designing uses creativity to respond to conditions, in order to concentrate meaning. Understanding the relationship process-product is therefore an important attainment.

Moreover, from a teaching point of view, the fact that students and tutors are involved in the design of the research, is able to return new project-based teaching methodology, which overcomes standard academic studio approaches. The innovative character of the teaching studio is also regarded on the fact that the academy joins with public and decision-makers' needs, which reminds the landscape architectural professional practice approach.

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