

## **THE DEMOCRATIC CONCEPTION IN EDUCATION(AL SPACES)**

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The title of the paper is inspired by “The Democratic Conception in Education” chapter in John Dewey’s “Democracy and Education” and aims at expressing the architectural concerns in the design of democratic educational spaces. The concept of Democracy related to educational purposes raises distinctive interpretations and can be analyzed in different perspectives. Dewey underlines the importance of a full and free interaction between individuals with different interests, and their experience exchange benefits, while breaking down class, race or gender barriers. In a democratic society, the success of the educational process depends on the opportunities given to all members of a group, as well as their capacity to participate and to assimilate other interests.

The paper focuses on the contribution of architecture as a driver for the democratization (or not) of educational spaces. Thus addressing the following research questions: How was Dewey’s concept of democracy interpreted in terms of school building and educational space design by architects during the 20<sup>th</sup> century? In what other ways did educational spaces raise different meanings of democracy during the 20<sup>th</sup> and 21<sup>st</sup> century? What is their current significance?

The presentation is divided in two parts: The first part provides an overview over the production of Portuguese secondary school buildings in the 20th century, focusing the architectural premises and strategies behind the design of democratic (or non-democratic) educational spaces. The design and construction process of school buildings express political and social concerns according to the different political regimes that ruled Portugal over the century. The second part deals with the scope of the Atlas of School Architecture in Portugal – Education, Heritage and Challenges (ASAP – EHC) research project.

### **PART I - HISTORIC CONTEXTUALIZATION OF THE SECONDARY SCHOOL BUILDINGS IN THE 20TH CENTURY IN PORTUGAL**

#### Constitutional Monarchy (1820-1910) and The first Republic (1910-1926)

A governmental program, launched in the 1880’s, predicted the construction of a set of

secondary school buildings, which were slowly completed throughout the two first decades of the 20<sup>th</sup> century. These schools were produced according to a class system design around the traditional classroom and promoting what was considered as active learning methods in spaces like the library, museum or labs. Besides, gyms and spaces for outdoor activities were designed to host physical education.

Health and hygienic concerns guided design solutions like the open galleries of the courtyards (Liceu Camões) assuring natural ventilation and lighting to the classrooms, or the use of new industrial materials and finishing products compliant with health and safety standards.

The republican movement had had political influences in the Portuguese society since the 19<sup>th</sup> century. The movement intended to assure equal access to education and aimed at the alphabetization of the population of Portugal.

In the 1930s a new set of schools were built following an architectural language marked by the adhesion to the principles disclosed by the Modern Movement.

This new design approach aimed the improvement of physical conditions and hygienic requirements of the buildings, but without questioning or proposing a new educational program.

#### The second Republic: “*Estado Novo* Regime” (New State Regime 1933-1974)

The nationalist and authoritarian dictatorial regime established in Portugal in 1933 - *Estado Novo* (“New State”) – was an interventionist, arbitrary, protective and disciplinarian state, which lasted until the 1974 Revolution.

In the 1930s Portuguese society had one of the highest European illiteracy rates, which was around 60% among the population over seven years of age, and even higher among women and girls. Less than 30% of children over the age of seven attended school and thus had access to education, and, among these, most belonged to the upper classes.

Also the high mortality and morbidity rates caused the State to become concerned with educational spaces, in order to guarantee the dissemination of hygienic practices among children’s environments. These spaces were considered a privileged mean for health improvement and educating the new generation of ‘healthy citizens’, not only physically, but also in intellectual and moral terms. The aim of the State’s intervention was to improve the hygienic habits of families through the dissemination of the practices acquired by children at school. The school, and hence the State, was seen as the educator of a healthy, athletic and disciplined man – “*mens sana in corpore sano*”. As Dewey (1916) foreseen the rulers’ interest in the welfare of its own nation, instead of what is best for humanity, may mislead the educational transformation in a restricted, constrained and corrupted process, for the State instilled not only health and hygienic principles, but also its propaganda in the mandatory curriculum.

The schools were designed according to the following principles: (1) rejection of the

principles and language associated with the Modern Movement; (2) unified design principles associated to strong nationalistic design premises, monumentality and tradition reflecting the political and pedagogical ideals of the *Estado Novo*; (3) unified design principles associated with the city integration in the new growth urban areas, ensuring the required monumental feature of the set.

Another fact that characterized this educational period as undemocratic was the prohibition of co-education in June 1926 shortly after the fall of the First Republic and the establishment of the military dictatorship. Gender inequality materialized in separate schools with distinct curricula, that the State defined as suitable for each gender.

“The educational process, conducted by a national state will be restricted, constrained and corrupted, for such states use the instruction to make the exploration of one class by another easier” (Dewey 1916:55)

In 1947, there was a change in educational policies that aimed at training qualified human resources, in particular the training of technical basis, with the reform of professional, industrial and commercial education. The aim was to provide further education to a larger number of children. The urge to develop a network of technical schools required new conception and construction processes, supported by the systematization of architectural solutions, increasing standardization, facilitating both its implementation and the monitoring of the conception and construction process.

The development of a standardized project for the construction of industrial and commercial schools allowed the development of standard projects in the late 1960s and to their extensive adoption throughout the following decades. The evolution of the guidelines that marked the education policies from 1950s on, resulting from Portugal external openness, ended the isolation that characterized the education system of the 1930s and the 1940s. Also, the increased influence of industrialization supporters in different national sectors enabled the influence of external experiences in school construction. The English post-war experiences and the technical support provided by the OCDE influenced the conception of high schools design and the contact established with international working groups radically altered the project philosophy. The conception of schools relied on the work of multidisciplinary teams, integrating, for the first time, experts in the field of education, control and cost planning methodologies, standardization and prefabrication of building elements, resulting in the adoption of a new type of spatial organization – the pavilion. This typology allowed the reduction of the total area (by the elimination of corridors and the design of multifunctional spaces) and simultaneously the increase of learning area per student, corresponding to a cost economy. At the same time, the pavilion was easily adaptable to different plot configurations and site slopes, allowing its placement at different levels.

In the late 1960s citizen upheaval begun, mainly led by students and opposition parties. Often these protests took place in tertiary education facilities and emphasized on the “democratization of education”.

### The third Republic (Democratic Period since 1974)

“A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience.” Dewey 1916: 50

In 1974, the second Republic ended with a military coup and the third republic begun. At the end of the 1970s, another standard design plan was developed, known as 3x3 plan, establishing types of school according to education level and number of students, using industrialised building methods to respond to the lack of schools. This standard design was extensively applied along the 1980s and 1990s following the 1980's the Education System Act which established nine years of basic and compulsory education, resulting in a rapid increase in enrolments and demand for educational spaces. It also created a conceptual educational shift, focusing on the instruction of each student, regardless of his or her motivation or classification. This legislation had practical implications on the students' and teachers' commitment in the development of future citizens and led to the massive construction of schools.

However, the need of a mass production of schools together with the required reduction of costs lead to the loss of quality of the architectural and constructions solutions when compared with the normalized design solutions from the end of the 1960.

#### Present Day - Secondary School Modernization Programme

In 2007, the Portuguese government launched the Secondary School Modernization Programme aiming at the rehabilitation of secondary education school facilities. The main goal is the renovation and the modernization of the school building, the improvement of a culture of learning, active promotion and acquisition of knowledge and skills, while re-integrating schools in the urban fabric of which they are an integral part.

The interventions focused on the correction of constructive problems and the improvement of the conditions of use considering environmental comfort, safety and accessibility. Attention was given to suitability conditions, by rethinking and adapting

School spaces were rethought and adapted to suit contemporary learning modes, requirements and community. The main goals of these interventions were the increase of the teaching and non-teaching spaces and the reduction of the future investments. Flexible and adaptable solutions of learning and non-learning spaces were developed. Over recent years, the role of the school building in the educational process has been played a key role. It is seen as an important part in the learning process, changing from a passive to an active component of the educational process. The classroom, traditionally understood as the exclusive formal learning space in the school building, is no longer understood as the sole space that can host learning. Other school spaces have growing importance in the learning process - the third spaces. Meeting, social and circulation spaces are designed as informal learning spaces, where small student groups or individual work can take place. The main idea is to create flexible, multifunctional, inclusive and safe spaces that enable different learning modes. These spaces

characteristically have visibility and transparency features in order to promote active interaction among its users.

Another goal of this programme was the after hours opening up to the community for lifelong education and training, cultural and social events, and sport and recreation activities. Such initiatives were supported by the implementation of a full time school model for work/family compatibility, mandatory school attendance until the age of 18 and the creation of professional courses, which reflected upon enrolment and graduation rates.

## **PART II - ASAP\_EHC RESEARCH PROJECT**

The ‘ASAP\_EHC’ (ATLAS of School Architecture in Portugal \_ Education, Heritage and Challenges) research project aims at providing a deeper understanding of school architecture in Portugal. The study proposes two development phases with distinctive scales of analysis and complementary results:

1) Mapping of Portuguese school buildings under study in a public online platform, enabling comparative and complementary readings regarding the available information in different dimensions: mapping trends, continuities and ruptures.

Further, the purpose of this platform is to make all the archivist information easily accessed and online – in a sense, democratising access to information/knowledge;

2) From this broader analysis, a deeper and detailed study will be carried out over a set of case studies, with distinctive approaches (architecture, education and construction) and analysed at different scales of observation (urban context, school building and classroom). The aim is the characterisation of their production and evolution, and to undertake a diagnosis of school space adaptation to the current demands that cross educational aspects of school organization and learning methodologies, virtual space, use of spaces by the community and requests about safety (structural, seismic, fire risks), comfort, accessibility and the integration of all members within the school community.

The research focus is placed on rehabilitated/existing buildings rather than new buildings. Thus, through this analysis it is intended to grasp how architectural strategies and solutions:

- Can improve the equity and the reduction of inequalities in school;
- Can promote the quality in the learning process;
- Deal with matters of student integration strategies;
- Imply on the image of the school and its identity: informal vs institutional;
- Can contribute to the design of the city;

- Can improve the relationship with the urban surroundings;
- Can promote the sharing of school facilities within the community;
- Can promote better access to school facilities by the “laicization” of traditional school spaces as labs or museums;
- Deal with needs and aspirations of the school community by a participatory process within school members (contributing to the definition of the design brief);
- Include the users’ (both students and community) needs in its design;
- Can influence students and community in both quantitative, qualitative outcomes;
- Influence violence, indiscipline, dropout or child labour.