

# School architectural standards and the expansion of Elementary School in the beginning of the twentieth century in Brazil

Padrões arquitetônicos escolares e expansão do Ensino Fundamental no início do século XX no Brasil

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## Abstract

The purpose of this article is to describe the transformation that occurred in the physical space of the elementary schools in Brazil, the initial period of expanding access to basic education that occurred between 1930 and 1940. Through the historical and descriptive approach, an attempt was made to demonstrate that the Architecture School projects materialized constituent aspects of current educational policies in the periods indicated. Is addressed, based on literature of historical contribution, the emergence of new planning guidelines in the organs of the State and the configuration of the Brazilian School of architecture in accordance with the modernization of the period. He chased up the architectural models transformation and the change of orientation of the planning agencies, which we used to have functionalist concepts of the Modern Movement of architecture for the construction of School buildings, following modular construction principles, prefabrication and stripping all ornamentation. With reference to the changes in planning guidance and the way it was setting up a school physical network, it was identified the physical network expansion followed the parameter rationalization of public spending. This factor was corroborated by mass access, led to the adoption of standardized architectural solutions and the impoverishment of the physical structure of Brazilian public schools.

**Keywords:** Architecture School. Educational policies. School physical network expansion.

## Resumo

O artigo propõe descrever a transformação ocorrida no espaço físico das escolas de ensino fundamental no Brasil, no período inicial da expansão do acesso à educação básica, ocorrida entre os anos 1930 a 1940. Procurou-se, por meio da abordagem histórico-descritiva, demonstrar que os projetos arquitetônicos escolares materializaram aspectos constitutivos das políticas educacionais vigentes nos períodos indicados. Abordou-se, com base na pesquisa bibliográfica de aporte histórico, a emergência de novas diretrizes de planejamento nos órgãos estatais e a configuração da arquitetura escolar brasileira em conformidade com o discurso modernizador do período. Perseguiu-se as transformações dos modelos arquitetônicos e a mudança de orientação dos órgãos de planejamento, os quais utilizaram-se de conceitos funcionalistas da arquitetura do movimento moderno para a construção dos prédios escolares, seguindo princípios construtivos modulares, pré-fabricação e despojamento de toda ornamentação. Tendo como referência as modificações nas diretrizes de planejamento e a forma como configurou-se a rede física escolar, identificou-se que a ex-

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pansão da rede física seguiu o parâmetro de racionalização do gasto público. Esse fator corroborou para a massificação do acesso, ocasionou a adoção de soluções arquitetônicas padronizadas, o empobrecimento e a precarização da estrutura física das escolas públicas brasileiras.

**Palavras-chave:** Arquitetura escolar. Política educacional. Expansão da rede física escolar.

## Introduction

The intention of this article is to outline the constitution of school architecture in the expansion process of the elementary education in public school. In this sense, will be addressed the beginning of universalization of access in 1930, in Brazil, until the 1940s, correlating it to the materialization of the school architectural productions. It will be analyzed the architectural models adopted in different historical moments of the country's educational policy and highlighted its representativeness and relevance in the architectural production of the period.

The historic-descriptive approach was used to demonstrate that the school architectural projects have materialized constituent aspects of existing educational policies in the periods indicated and, based on bibliographic research of historical framework, it was portrayed, the emergence of new planning guidelines in state bodies and the adequacy of Brazilian school architecture to the modernizing discourse of the period considered. It was used, also, pictures of school buildings aiming to indicate the changes suffered in architectural models, as well as to allow the comparison of school buildings in the selected period.

It is considered that the proclamation of the Republic (1889) was a milestone for the structuring of the public school history, itself, and added within it more periodization, due to the fact that this moment has brought with it the idea of primary education network that is public, free and laic, even if in the social reality of the period, the republican ideology did not fully materialize (NOSELLA, 1998). This period meant the genesis of the school system in Brazil, as well as of School Groups, which were characterized by innovation of school organization with serial models, homogeneous classes gathered in the same building, modern teaching methods and, above all, monumentality of buildings (CARVALHO, 2003).

In Brazil, throughout the whole colonial period (1549-1822) and imperial period (1822-1889), the framework of education was fairly rudimentary, without a glimpse of prosperity, being the country an agrarian exporter. Firstly the instruction was conveyed by the Jesuits; later, it was under the responsibility of masters-school, who offered a more erudite education, directed to the wealthiest segment of the population (XAVIER; RIBEIRO; NORONHA, 1994; ROMANELLI, 2006). Therefore, with the establishment of the Republic, when were cut off definitely the ties with the Portuguese crown, occurred socioeconomic, political, cultural and educational transformations in Brazil, which resulted in the modernization of equipment and school architecture, representing a sign of progress.

### **The gradual expansion of elementary education and the implication in the configuration of architectural projects (1920-1930)**

From the 1930s occurred the industrialization and urbanization push in Brazil, causing significant changes concerning the society, among them, the claiming by several segments of society for expansion of access to public schools. Carvalho (2003) clarifies that in this period there was a renewal of the modernizing ideology in the education area since, unlike the Sampaio Dória reform in São Paulo, which referred to the ideas of nationalist leagues of 1910 with the intention of prioritizing elementary education to the population, the reform advocated by Education reformers, including Anísio Teixeira and Francisco Campos, tried to promote the school reform adjusting the men to new conditions and life values in order to promote changes in educational mentality. Carvalho (2003) points out that the focus of modernizers since the 1920s was not just literacy, but there was a belief in the civilizing power of school to reform society through a change in man and, therewith, to contain the revolutionary forces considered dangerous and resulting from the labor movement. However, the extent of school coverage happened precariously, not meeting the social demand, while the school architectural production determines simplification and the ordering of school spaces as the best solution to enable the incipient construction of school physical network.

At the beginning of the Republic, the issue of public education became the determining subject in the agenda of Republican politicians and educators who have committed to fostering the creation of a graduated elementary school, in addition to normal schools. Republicans glimpsed a national educational system since, at that moment, the discourse around education has started to be diffused, understanding it as an essential element for the resolution of countless educational mishaps arising from years of colony and empire. However, this initiative was unsuccessful, transferring the responsibility to afford the spread of primary schools to the States (SAVIANI, 2004). It is necessary to note that the establishment of the republic did not change the condition of decentralized primary instruction in charge of the provinces established since the empire (SAVIANI, 2009).

In this atmosphere, the construction of specific areas for education was prioritized because, until that time, teaching was happening in Jesuit schools, parishes, homes of teachers and trade rooms (BUFFA; PINTO, 2002). The performance of Republicans, firstly in the State of São Paulo, enriched by the cultivation of coffee, nurtured a makeover known as Reform of Public Instruction of São Paulo (1892-1896), directed to the expansion of education. Thus, as a way to modernize the country and consolidate the Republic, in 1892, the project of education was conceived, enabling the establishment of elementary schools named School Groups (REIS FILHO, 1995). Bencostta (2009) mentions that the construction of specific buildings for the implementation of school groups meant the concern of state administration in taking over a prominent setting in the urban landscapes of economically prosperous cities, so they could become visible as a sign of a republican ideal. However, public administration saved money by cutting off the spending with the rent of several houses that sheltered isolated schools, reuniting them together in a single building.

The graded schools had to be shaped asymmetrically to the urban landscape in order to emblazon the new, strong, active and responsible State, which claimed to be concerned with education. The building had to be planned so that everyone could notice it, within the city. Therefore it had to be sumptuous, spacious, airy, to outline the State relevance at that urban setting (BUFFA; PINTO, 2002).

We understand, therefore, that public schools began to be used as a political advertising vehicle, serving also to mark the power of oligarchies, whose names would always be remembered, once the sumptuous school buildings, especially those of school groups, as seen, have marked the new urban feature in a full process of change, serving therefore, to beautify the city and to give an air of modernity (PINHEIRO, 2001, p. 132).

These were buildings with eclectic features, with the abusive presence of classical architecture elements, as pediments, columns, cornices, among other components, benefiting from the refinement of ornamentation and finish, thanks to the wide import of materials such as glass (Figure 1). It can be observed numerous mechanisms and artifices that ensured the magnificence in local landscape.

These institutions reflected in their architecture the superiority of the ruling elites, valuing visual elements that gave a character of refinement and stateliness to the building, identifying the school as a culture of elites (AZEVEDO, 2009, p. 1).

The solutions adopted had as a premise the use of symmetry, evidenced by severe separation by gender, at a modest program composed by classrooms and some administrative spaces (DELIBERADOR, 2010). Carvalho (2003) indicates that the architectural projects of public schools reflected the pedagogical projects that separated boys and girls. Figure 1 expresses such architectural feature, predominant in the few educational institutions of the period.

**Figure 1:** Model School of the “Luz” Neighborhood, 1893



Source: [crmariocovas.sp.gov](http://crmariocovas.sp.gov), 2014.

The educational demand of the First Republic was outlined by a society of low level of urbanization and industrialization, keeping up an elitist and academic education, not reaching the population as a whole, due to the own structure and social

organization, marked by the dualism between social classes (NOSELLA, 1998). Freitas (2009) indicates that, despite the renovator speech, which defended the State's role in building a national identity and the tutelage on childhood, youth and illiterate, the republican actions contributed little to social mobility, and among public policy, the public school was frequently cited as a State fragility, not being able to constitute itself as Republican. Only after the First World War that such structure has presented the early symptoms of rupture, leveraged by the more frenetic pace of urbanization process, driving school demand (ROMANELLI, 2006).

Romanelli (2006) and Nosella (1998) address that at the time, the stage of economic development of the country did not claim the training of human resources and cultural heritage to the school institution, since it was gestated based on the European model, insisting in the restriction of school and allowing only the idle aristocratic class. Therefore, such systems ended up “[...] excluding broad popular layers from school” (NOSELLA, 1998, p. 171). Even when it reached the urban middle strata, access to education was still a way to acquire and maintain the status quo, and school's main function was to constitute itself as a way to get a political, administrative or public career, forming the layer considered as erudite in the country. Indeed, “[...] a socio-economic-political-cultural complex made possible for education offered to Brazilian population of corresponding to the real demands of existing society” (ROMANELLI, 2006, p. 45).

**Table 1:** Demographic indicators and literacy rate between 1900 and 1920

Specification	1900	1920
Total population	17,438,434	30,635,605
% of illiterates aged 15 years or more	65.3	69.9

Source: Romanelli (2006, p. 62).

In accordance with Cunha (2009), the highlight of the Brazilian educational system in this period was the direct legacy of a slave-owning society and, contribution of the Empire's action at the country. Through the data shown in table 1, between the decades of 1900 and 1920, it is still possible to observe a high illiteracy rate in relation to the total population.

The qualification and instruction in this scenario were linked basically to issues of economic nature, considering that the economy of subsistence and of coffee exports did not fit in the molds of capitalist production. The agricultural holding was pertinent only to marketing, subduing the forms of modern production, while the workforce was too big and cheap. The formal education did not meet pragmatically the society of the period. Romanelli (2006) emphasizes that:

The predominance of the agricultural sector in our economy, allied to archaic forms of production and low demographic density and urbanization, answered therefore, by the scarce social demand for education. This was also one of the aspects assumed by our underdevelopment (ROMANELLI, 2006, p. 60).

The architectural production as a whole, in the 1920s, was extremely articulated with the nationalist movement that was generated gradually “[...] since the years that followed the First World War” (BRUAND, 2012, p. 25). The origin of neo-co-

lonial style had beacon the search of a typically Brazilian identity and a form of opposition to European pastiche eclectic style, widely deployed at the beginning of the century.

The morphological language of school withstand to neo-colonial inspiration, being widely reproduced in the 1920s and lasting until the 1940s, with a view to the resumption of classical elements from the Luso-Brazilian architecture. Thereby, it culminated in a true hodgepodge of elements from religious and civil architecture of the colonial past. Deliberador (2010) states that school physical network in the 1920s was still configured as a building-symbol of monumental composition. Its architectural program remained simplistic, structured by classrooms and few administrative areas. The highlighted style was characterized by the presence of flat roofs and eaves, roof tiles, curvilinear pediments, spiers and Tuscan columns, covered galleries with arcades, structures worked into mortar, latticework and mashrabiya (AZEVEDO, 2009), as outlined in figures 02, 03, 04 e 05.

**Figure 2:** School Group Dom Pedro II, Belo Horizonte, 1920-1930



Source: Public Archive of Minas Gerais, 2014.

**Figure 3:** School Group Dom Pedro II, Belo Horizonte, 1920-1930



Source: Public Archive of Minas Gerais, 2014.

**Figure 4:** Municipal School Estados Unidos, Rio Comprido, RJ,1929



Source: Tavares Filho, 2005.

**Figure 5:** Municipal School Estados Unidos, Rio Comprido, RJ,1929



Source: Tavares Filho, 2005.

However, it was from 1930 that the school projects have experienced the first signs of significant changes, in the face of the spread of rationalist precepts, aimed at “[...] functionality, efficiency and economy” (ENGE, 2007, p. 80), which denoted deeper care with the architectural program and the construction techniques, in addition to financial issues and related to project execution. The school spaces have gone through this remodeling due to the new political, socioeconomic and cultural panorama that converged to the restructuring of pedagogic-educational proposals established by the reformative ideology.

The emergence of the New School movement was responsible for messing in the foundations of traditional pedagogical theories with fierce critiques to its conservative, authoritarian, disciplinarian and intellectualist methods, aiming repetition and content accumulation. Carvalho (2003) indicates the rupture of the reformers’ ideology identified by the New School movement in relation to those reformers whose thoughts turned toward the literacy of people as a condition for the progress of the nation, such as the so-called “enthusiasm for education”. The New School has bet on the social transformation power of mass schooling and brought the incorporation in the methods and pedagogical processes to life, expanding the conception of childish activity. Although the speech of Republic’s instauration by intellectuals and Education’s reformers was not homogeneous considering that coexisted different projects of republic’s instauration, as explained by Freitas (2009), the 1930

revolution meant a time when the state action should organize the nation, being the school liable for civilizing the citizens in new institutions. Therefore, the New Education Pioneers' Manifest defended a universal public school, compulsory, free and laic, propagating up widely this ideology (ARANHA, 2008), especially in the spaces of teacher training. According to Gadotti (2002), the New School partisans sought the educational integrality, that is, the intellectual as well as emotional, physical and social development of the child, in addition to propose the adaptation of schools according with regional culture.

Oliveira (2007) emphasizes that the Manifest has guided the 1934 Constitution, given that, the federal sphere decreed a National Plan for Education, covering all teaching levels and requiring the obligatory and free of primary school. Even the Constitution having poor durability since, in 1937, Vargas installed the New State, it has portrayed partly the conceptions considered progressive in the educational scenario of the period.

This scenario provoked the first changes related to school physical space. After 1930, with the emergence of the urbanization process, coupled with the cooling of the field production forms and introduction of industrialization, it was flared up the incipient educational provision, particularly if considered the demand for schools by a portion of the growing urban population. The progressive expansion of demand for access to education occurred, despite the modern productive system still be embryonic and labor activity be characterized by the use of physical force (NOSELLA, 1998). It should be noted that the social demand for education was driven in particular by the increasing number of individuals belonging to the middle class and by some fronts of the working class interested in obtaining certain levels of instruction and college degree. Such classes started to pressure the school system to become dilated.

Romanelli (2006) believes that, to the extent that the emerging urban-industrial model takes on larger scale, there was the necessity of seeking human resources to undertake roles in the secondary and tertiary sectors of the economy, cooling the structural balance of another time. The ascending economic system itself started to request the school. In this sense, the germ of imbalance basically portrayed by few educational opportunities came into conflict with the increased demand.

Thereby, in the 1930s, the intensification of rural exodus has become a determining factor for the strengthening of the urban proletariat, which, insofar as expanded, began to have constant contact with the European workers who encouraged them to gestate the first strikes (XAVIER; RIBEIRO; NORONHA, 1994). In this context, was of the utmost importance to start the readjustment process of the State apparatus to the new reality, replacing the traditional configuration for a modern one.

The development of capitalism, technical expansion and the new configuration of labor division have demanded the need for universalization of knowing how to read, write and count. Consequently, education began to be seen as a factory of usable and adaptable men. Thus, the heart of education comprises “[...] to train individuals increasingly adapted to their workplace, capacitated however, to modify their behavior depending on social changes” (TRAGTENBERG, 1976, p. 15). The school increments the reproduction of labor force quality, transmits elementary knowl-



edge (reading, writing and counting) and rules of conduct, whose purpose is the productive employment and thereby corroborates with the longings of countries in process of industrial development.

The implementation of industrial capitalism depends for Nosella (1998), of intelligence, creativity and, therefore, good schools, that is, a totally dissonant situation from the extractive and archaic productive forms that prevailed in Brazil until the Revolution of 1930, which required only the workforce unskilled, gross, manual and slave. In this sense, the modern industrial productive ways boosted gradually the increase in demand for education given that agrarian economy remained expressive in the country. This, in turn reverberated in the increasing and differentiation of supply, such as the division of labor among social classes.

[...]The school system, counting from then, began to suffer, on one hand, the social pressure of education, increasingly growing and increasingly demanding in terms of educational democratization, and on the other hand, the control of elites maintained in power, who sought, by all means available, to contain the popular pressure, by limited distribution of schools, and through educational legislation, to keep its “elitist character” (ROMANELLI, 2006, p. 61).

Thereby, despite providing a greater extension of school coverage to population, the universal and free elementary school plan, in that period, had not yet been implemented in its entirety, because the aristocratic pressure became predominant in directing the educational policies.

To address the longings and expectations of the population regarding the teaching, the first Vargas government has committed to create the Ministry of Education and Health (SANTOS, 2010; SAVIANI, 2004), under the responsibility of Francisco Campos. This, in turn, made amendments concerning the higher and secondary education; however, the reform did not reach the primary education.

**Table 2:** Evolution of population enrollment between 05-19 years of 1920-1940

Years	Population from 05 to 19 years	Enrollment in primary education	Enrollment in secondary education	Enrollment rate
1920	12,703,077	1,033,421	109,281	8.99
1940	15,530,819	3,068,269	260,202	21.43

Source: Romanelli (2006, p. 64).

**Table 3:** Demographic indicators and enrollment rate between 1900 and 1940

Specification	1900	1920	1940
Total Population	17,38,434	30,636,605	41,236,315
% of urban population	10	16	31
% illiterates	65.3	69.9	56.2

Source: Romanelli (2006, p. 62).

According to the quantitative data, it is noticed, by observing the tables 2 and 3, that there was an increase in primary education enrollment comparing to total population as well as a relative reduction of the illiteracy percentage. Still, based on these data, it can be observed that the increase in urban population rate was

concomitant to population demographic growth, leading to the search for education and thereby reducing the number of illiterates. It is worth adding that regarding other decades analyzed, it is notorious the decrease in illiteracy rate, however, the percentage still remained quite high, since little more than a half (56%) of the population lacked access to school.

In 1931, in the city of Rio de Janeiro, former Federal District, Anísio Teixeira partisan of the New School took over the Public Instruction Directorate and promoted a general director plan for the school physical network, as well as enabled a unique educational system that contemplated since the elementary education to university. Teixeira highlighted the rational functionality conditions of school environment and spread the concept of functional schools (FARIA FILHO; VIDAL, 2000) because, earlier in the decade, still perpetuated the rental of properties adapted for school use (CAMPOS, 2008).

Teixeira requested a detailed study of existing buildings, referring to maintenance values, expansion and reforms, in addition to make an inventory of requisites regarding environmental comfort, lighting, ventilation and relation with the surroundings. The study was also attentive to architectural solutions that would be adopted and about the planning of new school buildings. And to meet the requirement of access' democratization, the plan introduced five different architectural programs, "[...] adopting maximum efficiency and minimal expenditure" (AZEVEDO; BASTOS; BLOWER, 2007, p. 08).

Thus, to overcome the existing barriers of topographic order, implementation, resources and the educational program, Teixeira has developed innovative proposals: the nuclear schools (also known as schools - class) and the parks-school (or schools-park). In this system, "[...] every child should regularly attend both facilities in altered shifts" (DÓREA, 2004, p. 02), considering that nuclear schools were buildings suitable for formal instruction and also, very economic. On the other hand the school-park was an environment connected to conviviality in general, of students and over there would be developed social education, physical, musical, health education and, food assistance. The main goal was that both buildings could complement each other, allowing the student of having full education.

Of the five inventoried models, two schools were of the minimum type (two classrooms and one workshop), aimed to regions with low school population and the nuclear type (12 classrooms and administrative offices) had to aggregate social activities. The other three were conceived according to the Platoon system, "[...] constituted by common classrooms and special rooms for auditorium, music, recreation and games, reading and literature, science, drawing and industrial arts" (DÓREA, 2004, p. 02), subdivided into: Platoon of 12 classes (06 common rooms and 06 special rooms) Platoon of 16 classes (12 common and 04 special), Platoon of 25 classes (12 common, 12 special and a large gym).

The Platoon system was widely used in the United States and when Anísio Teixeira met it personally, he was amazed at the degree of efficiency and organization. Its functioning had also the differential of students' transfer act in " platoons", hence the title Platoon, due to the organization of the rooms, which optimize the study spaces to be "[...] captives of disciplines according with the pre-established timetable" (DÓREA, 2004, p. 02).

Dórea (2004) points out that the specialized literature that addresses the year of 1935 demonstrates that it was not implemented the park-school building as an appendix to the others, evidencing that the extended period of child's stay at school (two shifts), as originally thought in the plan, was relegated. The school physical network of the entire Rio de Janeiro state was awarded with 28 new school buildings built between 1934-1935, highlighting the nuclear program (12 schools) and the Platoon type of 12 classes (05 schools).

In fact, if the plan had been implemented, the problem of school buildings would be much aggravated by the lack of resources. Buffa and Pinto (2002) argue that the best way to verify the effectiveness would be “[...] build four or five schools of this kind, for demonstration purposes” or, later, “[...] adapt them to the platoons’ regime” (BUFFA; PINTO, 2002, p. 73). Later, Teixeira, when heading the Secretariat of Education and Health (1947-1950), implemented in Salvador, the Carneiro Ribeiro Educational Center, evidenced in Figures 6 and 7, which followed all the schemes studied in previous years.

**Figure 6:** Carneiro Ribeiro Educational Center, BA, 1940



Source: Public Archive of Minas Gerais, 2014.

**Figure 7:** Carneiro Ribeiro Educational Center, BA, 1940



Source: Public Archive of Minas Gerais, 2014.

It is worth pointing out, regarding the legacy of Anísio Teixeira's plan, which significantly contributed to “[...] the consolidation of effective standards for the construction of public school buildings” (AZEVEDO, 2009, p.04). Andrade Junior

(2011) adds the important contribution of Anísio Teixeira to the history of educational institutions:

[...] reference to similar projects all over Brazil, as the works of the School Agreement, held in São Paulo under the direction of Hélio Duarte (1949-1953) and the School-Park of 307-308 South in Brasília (1960), designed by José de Souza Reis on the invitation of Anísio Teixeira; and continued and continues to serve as reference for initiatives such as the Integrated Centers for Public Education (CIEP), designed by Oscar Niemeyer at the request of Darcy Ribeiro - disciple of Anísio - for Rio de Janeiro between 1983 and 1987 or, more recently, the Unified Education Center (CEU), built by the Municipal Secretariat of Education of São Paulo at the city periphery (ANDRADE JUNIOR, 2011, p. 35).

In addition, to express the State strengthening, the recent economic and political flowering the government decided to leverage the construction of public buildings to spread modernization and to leave its mark on the buildings of State apparatus. Hence, the precepts of modern architecture came to meet the yearnings of the Vargas state, which prioritized the rational organization in multiple segments of social life.

In the country's modernization process started to coexist, simultaneously, several architectural trends that represented variants of the modern attitude. The search for modern spirit has made coexist, side by side, similar architectural styles, with small differences between the adopted standards, in which were materialized peculiar speeches.

The first renovation phase was still tied to the Art Deco style, which was simultaneous to gestation period, birth and diffusion of the architecture of Modern Movement. The proto-modernist style alluded to machines' aesthetics, modern equipment, elevators, ships, trains, cars, planes, eulogy to electricity and speed. On the other hand, its formal repertoire adopted cylindrical elements and rounded volumes, maintaining a close relation to avant-garde artistic movements, as for example, cubism, constructivism, futurism, expressionism and abstractionism, that is, everything which referred to new forms and optimism regarding the modern world (CORREIA, 2010).

At that time, Minister Capanema invited the architect and urban planner Lúcio Costa, who had developed a project of a contest for building the Ministry of Education and Health (MES) in 1935 to start a new study of that building. He, in turn, called a group of architects to assist him and were included in the list, his trainee, Oscar Niemeyer, and the Franco-Swiss architect, Le Corbusier (SEGAWA, 2010; BRUAND, 2010; MENDLIN, 1999). Regarding the contest for the Ministry, Mendlin (1999, p. 27) states that Capanema, “[...] inspired by a mixture of vision, audacity and good judgement that characterized him, took the personal decision that most contributed for the development of modern architecture in the country”, and changed the course of Brazilian architecture history. The project developed by the team was presented in May 1936.

The goal of modern architecture solution was supplying the demand of the emerging urban-industrial society through potentiation of spaces, by making use of a simplified aesthetic, new construction techniques, reinforced concrete, glass and iron, in an oneiric search to remedy the social misfortunes resulting from industrialization (LE CORBUSIER, 1977). Le Corbusier (1977) defended the conception of func-

tionalism down into the architectural field, highlighting that “[...] the industry [...] brings to us the new instruments adapted to this exciting new era of new spirit. The law of economy imperatively manages our acts and thoughts” (LE CORBUSIER, 1977, p.32). It was a universal solution for architecture, to intensify the construction of public buildings to promote a progressive access of popular classes to such spaces. For this reason, popular schools and homes received special attention, considering the deficit size of buildings in that period.

After the notoriety achieved by the construction of the Ministry of Education building, started the increment era of public equipment, withstanding the modern language. Among the typologies worked in such government buildings there were the educational institutions that followed the same configuration of the building-symbol of the Ministry of Education. Rapidly proliferated exemplars of institutional buildings that followed the most relevant European trends of the post-war avant-garde, leaving behind the architectural molds linked to the past.

The modern architectural trend was adjusted to educational policy conceived by Anísio Teixeira (New School), with a formal repertoire based on rationalization, cost containment, use of reinforced concrete, disinterestedness of ornamentation, with articulated compositions of geometric pure prisms, modulated, appropriate guidance, airy, adapted to Brazilian climate, with shading through insertion of brise-soleil and marquee (BRUAND, 2012).

The school projects started taking more dynamic dimensions, flexible, loose and sprayed into the batch, with solutions in prisms elevated by pilotis, allowing installing, on the ground floor, an area for the development of recreational activities as well as the bilateral symmetry ceased to exist, since, at that time, the separation by gender was abandoned. May be quoted as a typical example of this period, the Municipal School Argentina, of the 25 classes Platoon type (DÓREA, 2004), located in Rio de Janeiro, as shown in Figures 08 and 09. It was created during the management of Anísio Teixeira, materializing the architectonic-pedagogical innovative proposal as “[...] one of the most expressive works of the first phase of architectural modernism” (TAVARES FILHO, 2005, p. 114).

Role model of the Deco architecture, proto-modernist. The hatch windows, the stair's volume such as a naval navigating bridge, and the deck's guardrails are typical styles of the years 30. On the other hand, the asymmetrical composition of the plant, the horizontal sun breaks and the lack of an access marked and emphatic are already modern features (CZAJKOWSKI, 2000, p. 102).

**Figure 8:** Municipal School Argentina, Rio de Janeiro, 1935



Source: Tavares Filho, 2005.

**Figure 9:** Municipal School Argentina, Rio de Janeiro, 1935

Source: Tavares Filho, 2005.

The issues concerning school physical spaces entered into a sharp process of transformation, as well as the school culture. In the following decades, it was consolidated the spread of morphological language of modern architecture in the public educational institutions. In the educational field, however, the modernist architecture recommended rationalization, despoliation of ornamentation, simplicity of volumes and modulation, becoming less costly and assimilating the idea of modernizing the country. This modern architectural language has met the need for expansion of school physical network, which lacked expansion, considering the significant increase in school demand.

It can be considered that the early years of the twentieth century depict the transition process from the school architectural structure that was classical, sumptuous, ornamental, not extending to the entire national territory and inaccessible to the working class to constitute itself, gradually, in the bulge of the modernization process that was beginning in the country, of modern features, standardized, simplified, having as target and concern the rationalization of costs. Such transition period explains the mix of architectural models with features from the past, concomitants to modern models, configuring, thus, certain stylistic miscellany in the configuration of school buildings.

### Final considerations

It is evident that school architecture is an inherent part of the transformations arising from the historical process covered by the Brazilian education throughout the 1920s and 1930s. For this reason, each historical period addressed and the respective current educational policy is correlated with the amendments suffered in architectural models.

Previously, during the first republican stage, amid a speech in favor of public and free education, the State was engaged in extolling education. Such predilection was embodied in school architecture, since they were buildings-symbol, with exquisite styles, monumental and, references dominant in the urban landscape, although in reality, schools at that moment were focused on the elite.

In the later decades, government policies, especially in the educational field, have turned to rationalization and downsizing of expenses. The adoption of such financial rationality converged into the unenforceability of the most significant and notorious architectural projects, as well as led to standardized school architectural production.

From 1930 according to the conduction of federal policy, the public education, under the impetus of industrialization and urbanization, turned to the progressive expansion of access to education. In order for this to be achieved, it was necessary the expansion of public school physical network to meet the growing demand and the new professional demands. The school architecture, materializing the new guidelines, gives alteration signs of architectural models and, under the pretext of modernization, the planning organs have focused on functionalist concepts of architecture from the Modern Movement, making use of modular constructive principles, prefabrication and despoliation of all ornamentation. The concepts developed by modernist architecture suited perfectly for the purposes of State rationalization. Such constructive rationality obeyed the economic assumptions.

It could be perceived that the proposals were planned, according to the criteria of spatial quality, aesthetics, taking into account the needs of its users, such as the schools-park of Anísio Teixeira, followed an educational policy that aimed the universalization of access. This project shows a unique solution in the school architectural production, nonetheless, it was made impossible due to the reduction of public expenditures.

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