

The evolution of Brazilian official curriculum for secondary education: The transition of the Empire to the Republic

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Abstract

This report is part of the Research Project that aims to quantitatively analyse the composition of the Brazilian official curriculum of secondary education throughout the country's political milestones. Particularly, it focuses on the differences in the curriculum between the last large-scale education reform carried out in the Empire and the first one in the Republic. The results show that the humanist and literary tradition of the Colony and the Empire remained. The inclusion of the modern sciences in the curriculum, after the positivist Reform of Benjamin Constant, were not enough to modify the historical pattern of non-academic subjects, "Foreign Languages" and "Humanities & Social Sciences" holding the top three positions in the rankings of both number of subjects and student exposure, giving the curriculum an encyclopaedic character.

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1. Introduction

1.1 Motivation

The main objective of the Research Project (in which this report is a part of) is to quantitatively investigate the composition of the Brazilian official curriculum of secondary education throughout the country's history. The main goal of the Project is to identify if there is a historical trend with respect to the curricular approach, and how it changes over time according to the political milestones.

In this report, the time period narrows down to the transition of the Empire (1822 - 1889) to the Republic (1889 - present). In particular, it focus on what historians call the "First Republic" (1889 - 1930), which represents the first years of the republican experience in Brazil.

For that purpose, I investigate and analyse education reforms that impacted the curriculum of secondary education¹, basing myself on the laws passed by the central government, as well as on articles and books from recognized scholars in the field. I am interested in how these reforms reflect on the subjects chosen to be part of the official curriculum - that is, what has been officially planned by the State to be studied in schools². There was also an effort to quantify the prescribed exposure of the students to each field of study.

In 1633, the term *curriculum* was included in the Oxford English Dictionary to designate a structured study plan (Sacristán apud Zotti, 2004). From a pedagogical point of view, there is no unanimity when it comes to the definition of the word, that has changed throughout time. According to the UNESCO,

"Curriculum is a systematic and intended packaging of competencies (i.e. knowledge, skills and

¹See Chapter 2 for the parameters used for selecting the reforms to be analysed in this report.

²The *official* curriculum is to be contrasted with the *real* curriculum, which is the one that effectively takes place within the scope of the school educational actions (Sanfelice apud Zotti, 2004).

attitudes that are underpinned by values) that learners should acquire through organised learning experiences both in formal and non-formal settings. Good curriculum plays an important role in forging life-long learning competencies, as well as social attitudes and skills (...). At the same time, curriculum contributes to the development of thinking skills and the acquisition of relevant knowledge that learners need to apply in the context of their studies, daily life and careers.”

Curricular policies can be understood as a dimension of the education policy, whose specificity lies in the fact that they establish the way of selecting and organizing the school syllabus. Analysing the official curriculum is of extreme relevance, because it has a powerful regulatory capacity (Zotti, 2004), setting guidelines to the whole education system. The purposes which have been attributed to institutionalized education over time, such as training, socialization, acculturation and segregation, generate important reflexes in society.

Curricular policies have, to some extent, the power to intervene in the distribution of knowledge to circulate within schools, as well as directly affect educational practices. Therefore, they have a prescriptive character, whose more concrete manifestation occurs in the form of the official curriculum (Pará apud Barreto, 2014). Its analysis shows what specific knowledge authorities are expecting to be transmitted (or not) to students and also the role of schools - a decision that potentially reflects on the dynamics of the society as a whole, in a variety of social spheres, such as ideology and labour market. Thus, another objective of the Research Project is to serve as an important source of evidence to be used in further economic-related research.

It is relevant to state that the intensity of standardization of the curriculum has varied throughout time, ”ranging from the definition of study plans and the subjects to be taught until the delimitation of their contents, including didactic and methodological aspects (...)” (Zotti, 2004). There was also times in which the reforms carried out by the central government were directed to all the schools in the country³, and others in which they were meant to intervene only in the Federal District or Pedro II School, a public institution considered to be the ”school model of Brazil”, located in the nation’s capital and Federal District, Rio de Janeiro.

Furthermore, different authors argue that particular education laws were never effectively implemented, ultimately meaning that the analysis is to be carried out with respect to what has been prescribed in the particular period, rather than whether there was a practical and real-life

³Most schools were located in the southeast region.

implementation of the reforms.

1.2 Background of the policies

Since the arrival of the Portuguese until the present time, Brazil has been under three main political regimes:

1. The Colony (1500 - 1822), when the country was politically dependent on Portugal
2. The Empire (1822 - 1889), a monarchical regime established after independence
3. The Republic (1889 - present)

1.2.1 The Empire and the political transition

The Empire of Brazil was formed after the political independence, in 1822, and can be divided into three sub-periods: the First Reign, the Regency Period and the Second Reign.

When Brazil became independent, the economy was based on slavery workforce and the primary sector accounted for a large part of GDP and exports, with a predominance of agriculture. Three agricultural products, which had been important in the colonial period, continued to have great relevance in the export agenda: sugar, cotton and tobacco. However, in the early 1830s, coffee would surpass sugar as the main product exported in terms of value.

During the First Reign (1822 - 1831), under the command of Emperor Dom Pedro I, the imperial institutions were effectively formalized, being compiled in the Constitution of 1824. The first national Constitution established a Constitutional Monarchy, with a centralized government conducted by four powers: the Legislature, the Executive, the Judiciary and the Moderating Power, which gave the Emperor the authority to rule over the other three.

Historians argue that the popularity of Dom Pedro I was compromised after the defeat in the Cisplatine War, that guaranteed the independence of Uruguay and separated the region from Brazil, among other unpopular events and policies, considered to be in favour of the Portuguese. In 1891, Dom Pedro I resigns.

Figure 1.1: The Empire of Brazil and its provinces (1822)



Source: Ministry of Agriculture, Industry and Commerce, Unknown year.

Figure 1.2: The Neutral Municipality/Capital (1834)



Source: Unknown.

Due to the young age of the heir of the throne (Dom Pedro I's son), who was only 5 years old at the time, and the impossibility of claiming his position as Emperor until he reached 18 years old, the Regency Period (1831 - 1840) begins, in which the Brazilian government was under the responsibility of Regents.

In 1834, an Additional Act was passed, in which the central government made an attempt to meet some autonomist demands of the provincial oligarchies. The Neutral Municipality was the designation used for the special administrative status of the city of Rio de Janeiro, that lasted from 1834 until 1889, when the Republic was proclaimed. To the education, it also meant the division of educational responsibilities.

The Regency Period was marked with a lot of instabilities and revolts and, in 1839, at the age of 14, Dom Pedro II claims the throne with the support of the liberal politicians, who wished to remove conservatives from power, in an event known as the "Adulthood Coup"⁴. This event marked the beginning of the Second Reign (1840 - 1889). Dom Pedro II was the ruler who held, for the longest time, the sovereign power in Brazil.

There were several reasons for the transition of the Empire to the Republic. According to Figueiredo (2011),

"Political and administrative centralization, the abolition of slavery⁵ and the strong reaction of the bourgeoisie at that time, the hybrid parliamentarism, the corrupt electoral regime and the personal government of the sovereign were, in short, the main causes or facts that drove the Empire to its ruin. (...) The emperor, especially Dom Pedro II, was regarded as a cultured man, affable and modern for the time. But the Monarchy as an institution, due to the reasons presented, was losing its force. All those who gave support to the regime were turning against it."

Due to its fragility, in 15th of November of 1889, the Empire was ended by a military coup.

1.2.2 Education in the Empire

As mentioned before, in 1834, an "Additional Act" established the decentralization of educational responsibilities: each province now had the right to legislate over their primary and secondary schools, whereas higher education was under the responsibility of the central government. In the Neutral Municipality, the Crown would also be responsible for legislating over primary and secondary schools.

According to Chagas (1980), one factor that explains this decision was the shortage of financial resources, that made it impossible for the central government to claim greater provincial

⁴In Portuguese, Golpe da Maioridade.

⁵The process of abolishing slavery was gradual. The law that strictly banished the practice was passed in 1888, which gave Brazil a status of the last independent country in the Americas to put an end to it.

responsibilities, which was also true in the case of the provinces themselves.

It is in this context that Pedro II School was created, in 1837, as an attempt to organize secondary education, having a strong literary and humanist tradition. The function of the "Imperial School" would be to "serve as a model for the rest of the secondary education establishments (...)" (Zotti, 2004). Since secondary schools were intended to function as a "preparatory course" to higher education, which happened to be regulated by the central government, schools needed to tailor their curriculum according to the educational guidelines of the Crown.

In short, during the Empire, primary education was relegated and secondary education, having a purely preparatory nature, served only to give access to higher education. As for the latter, there was also little development, with a small number of individuals concentrated in a few schools of Law, Medicine, Pharmacy and Engineering, which was under the command of the military.

1.2.3 The (First) Republic

The republican period marked the beginning of presidentialism as a form of government. Its history can be divided into sub-periods having, as milestones, historical facts that represented changes in the institutional order of the State.

The first sub-period is called the First Republic, that went from the Proclamation of the Republic until 1930, in which the country had its initial experience as a Republic. After that, President Getúlio Vargas initiated the Vargas Era, that lasted for one and a half decades, in which the last 8 years were under an authoritarian regime. The democratic period that followed, from 1945 to 1964, is known as the Second Republic and was soon ended by a coup that would establish the military dictatorship in Brazil, that went from 1964 to 1985. The following (and current) sub-period is now known as the New Republic, and marks the re-establishment of democracy.

For the purpose of this report, the description of the republican historical background will focus on the the First Republic, which is the context in which the reform to be analysed is inserted into.

The Republic of the United States of Brazil⁶, right after the dissolution of the Empire, was an eminently rural country, newly emerging from a long period of slavery (more than three centuries until the abolition in 1888). In the beginning of the XIX century, the illiteracy rate represented, on average, around 3/4 of the population⁷.

Figure 1.3: The Republic of the United States of Brazil and its states (1889)



Source: Ministry of Agriculture, Industry and Commerce, unknown year.

After the Proclamation of the Republic, the sub-period known as the First Republic initiated. The Brazilian oligarchies (the dominant class, mainly composed by rich coffee farmers⁸) feared the return of the monarchy, especially because they knew that the transition could be a moment of political fragility. Therefore, they entrusted the first years of the political command to the Army, to guarantee the proper establishment of the Republic. The military, similarly to the oligarchies, did not wish to return to the monarchical regime.

Due to military command, the first years were known as the Republic of the Sword (1889 -

⁶The Constitution of 1891 changed the country's name to Republic of the United States of Brazil in order to withdraw the reference to the monarchical regime. "United States" reinforced the territorial unity and federative system.

⁷See appendix.

⁸Coffee was the main product of foreign trade of the country and guaranteed great reception of foreign exchange.

Figure 1.4: The Federal District/Capital (1889)



Source: Unknown.

1894). The first leader was Marshal Deodoro da Fonseca, acting as president since the Proclamation of the Republic and elected after the approval of the Constitution of 1891. Deodoro da Fonseca resigned in that same year, when the vice president, Marshal Floriano Peixoto, assumed the presidency until 1894.

The first republican Constitution adopted not only the presidentialism, but also the federalist principles, that gave a certain political freedom to the governors of the states. This form of administrative organization of the country led a policy of alliances for the occupation of the presidency.

After some military conflicts were contained, such as the "Federalist Revolt", in the state of Rio Grande do Sul, and the "Army Revolt" in Rio de Janeiro, both in 1893, the transition to civilian power was made possible. Prudente de Moraes was the first civilian president, elected in 1894, initiating the phase known as the Republic of Oligarchies (1894 - 1930).

During this time, there was an alternation of power between representatives of the rural oligarchies of southeastern Brazil, a system that went on until 1930, known as "Coffee with Milk Politics". This political arrangement, named after the alliance in presidential nominations between the states of São Paulo and Minas Gerais, the main producers of coffee and milk, respectively, was the height of the oligarchic order - that is, the great landowners using their political and economic influence to determine the course of the nation.

From 1914, the political arrangement established until that point started to become unstable.

In the words of Pinto (2017),

”Not even the outbreak of industrialization endured the crisis of coffee production, which had its final blow with the world economic crisis of 1929. On the other hand, new social classes were strengthened, demanding political representation. Workers’ strikes were carried out and severely repressed. The industrial bourgeoisie was in conflict with the economic policy focused primarily on agriculture. Even in the middle ranks of the Armed Forces there was dissatisfaction with the political control by the rural oligarchies”.

The situation collapsed in the 1930’s presidential election, when there was a rift between the political elites of São Paulo and Minas Gerais, which had dominated the country almost since the institution of the Republic, resulting in the Revolution of 1930, that ended with Getúlio Vargas as president.

1.2.4 Education in the First Republic

According to Lopes (2006),

”In an agro-exporting country, such as Brazil at the time, there was no real need to eradicate illiteracy nor to increase technical and scientific development, but there was the need to form the bureaucratic staff, in order to expand and diversify it, both in the public and private sectors - a necessity that intensified with the advent of the Republic. This situation has contributed to the increased demand for secondary and higher education. Primary school, however, remained, during the first decades of the Republic, with the same arrangement of the old ”School of First Letters”⁹. It was only after the 1920s that some state reforms were implemented and some changes were made¹⁰”.

Having that taken into consideration, education continued to be aimed at the dominant class. Thus, secondary and higher education were privileged in the First Republic, to the detriment of primary education.

Also, because of that fact, and due to the institutionalization of the federalism by the Constitution of 1891, the decentralization of the responsibilities regarding the education system was ratified¹¹. The responsibilities were divided as follows (Azevedo apud Zotti, 2004):

⁹Reading and Writing in Portuguese.

¹⁰The state reforms were: Reform of Sampaio Dória (São Paulo, 1920), Reform of Lourenço Filho (Ceará, 1923), Reform of Anísio Teixeira (Bahia, 1925), Reform of Francisco Campos & Mário Casassanta (Minas Gerais, 1927), Reform of Fernando Azevedo (Federal District, 1928) and Reform of Carneiro Leão (Pernambuco, 1928).

¹¹Reaffirming what had been already defined in 1824.

- Union:

Legislate over higher education in the Federal District (privately);

Create secondary schools and higher education institutions in the states (but not privately);

Provide instruction in the Federal District.

- States:

Organize its entire education system.

The Union only legislated over the curriculum of primary and secondary schools located in the Federal District. Nevertheless, the practice of using the curriculum defined by the central government (the "official" curriculum) as a model remained¹², despite the autonomy of the states.

Although mostly rural, in the subsequent decades of the First Republic, Brazil started to be in contact with an urban and industrial acceleration. According to Zotti (2004), "the socio-economic transformations, which began in the 1910s, were consolidated around 1920, when Brazil already had a reasonable industrial base, having the industrial bourgeoisie, the proletariat and the middle class emerging as social and political forces contrary to the coffee oligarchies (...)."

Thus, the demand for qualification in the urban area, as well as the definition of how the work in the rural area, hitherto associated with the African slaves, would be structured were the main issues that justified the proposals for reform and investment in education at that time.

In this context, the curricular reforms were influenced by two main philosophical frameworks: the Positivism¹³ and the Liberalism. In the words of Marçal Ribeiro (1993),

"There is alternation in the philosophical school that influenced these reforms. Positivism, with a scientific and pragmatic orientation, had gathered supporters in Brazil and was present in the reforms of Benjamin Constant and Rivadavia Correa, while liberal thinking, based on equality of

¹²This practice also existed during the Empire.

¹³Positivism was a philosophical school that emerged in France in the nineteenth century and gained strength in Brazil at the end of this century. Military, liberal professionals and intellectuals defended positivist ideals, which were favourable to the republican regime and, therefore, contrary to the Monarchy. The inscription "Order and Progress" on the Brazilian flag, created after the Proclamation of the Republic, reflects its importance in the republican process.

rights and opportunities, destruction of hereditary privileges, respect for individual capacities and universal education influenced the reforms of Epitácio Pessoa, Carlos Maximiliano and João Luís Alves.”

1.3 Literature review

Researchers of the History of Brazilian Education are unanimous when affirming that, at least until the advent of the Republic, the curriculum had privileged the literary and humanist studies. Thus, interpreting this fact is extremely important to understand the guidelines of the Brazilian education system as whole. According to Souza (2009),

”Primary and secondary education were for general education. Until the nineteenth century, (...) the classical secondary school had been triumphant throughout the West, aimed at the formation of a social class and destined to provide the necessary base for the formation of clergymen and scholars, based on the teaching of Poetics, Rhetoric, Latin and Greek.”

Over three centuries after the arrival of the Portuguese, education continued to be aimed at the elite and, for that reason, the curriculum did not have as its main objective an instrumental utility, but the formation of educated men, who were expected to assume political and bureaucratic positions in the future.

The strong presence of the Catholic Church in the institutions of the country had also contributed to this curricular approach. Souza (2009) continues saying that

”The syncretism between humanism and Catholic values went far beyond the use of the Latin language. (...) after the sixteenth century, the ancient civilization was assimilated by a certain Christian tradition. That way, classical humanism was inextricably linked to Catholicism. Consequently, the question of the educational value of antiquity was involved with a way of conceiving the social order. The adherence of the elites to the classical culture and the rejection of modern culture, especially technical, came from an understanding of secondary education as a symbol of social differentiation. The ideal of polished, civilized, Christian, and educated men embodied the whole representation of a classical education.”

Thus, the Church reacted against the advance of secularism, science, technology and specialization, that they feared would result in the profound transformation of values and mentality and the shaking of Catholic hegemony. That was true during the context of the Enlightenment, that would pose a threat to Christian medieval values, and also in the context of the Industrial

Revolution, that started to place an even greater value to scientific studies.

As to the Republic, the literature is also unanimous when affirming that the strictly humanist intellectual formation, that had been present between the sixteenth and nineteenth centuries, started to show some changes from the republican period, when, according to Lima (apud Souza, 2009), there was

”A clear abandonment of the humanist sense of the formation of the Brazilian men, by a gradual substitution for the professional sense (...). The Benthamian and Spencerian utilitarianism was gradually gaining strength among leaders and modifying the humanistic orientation of the Brazilian formation.”

During the beginning of the twentieth century, there was a lot of debate regarding the curricular approach. While some would continue to reaffirm that the classical curriculum, that would emphasize subjects such as Latin, had an extremely important cultural and historical value, others, such as Azevedo (apud Souza, 2009) would state that

”To recognize, then, the position which sciences have conquered and the role which they have in modern culture, is not to renounce the idea of humanism but to revive it; it is not to weaken tradition, but to preserve it and to magnify it; it is not to throw out of the window the treasure of mankind represented by Greek and Latin thought, but to realize that this patrimony has been greatly enriched by the high contributions of science; it is not losing the love for the ancients, but regaining confidence in ourselves and in our own civilization, science-based and industrial.”

Looking back, however, to the actual curricular modifications made during the First Republic, Zotti (2004) affirms that

”The curriculum, in this sense, privileged the humanities, despite introducing, during some moments, scientific subjects with the objective of modernizing the formation of the elite, reinforcing the encyclopaedic and preparatory character of education. Accordingly, this organization met economic needs as, in an agro-exporting society, instruction was not necessary for those who produced material goods.”

In the context of these debates, narrowing down the time period, the curriculum will be quantitatively analysed in order to produce further evidence of how the transition from one political system to the other have immediately impacted the curriculum.

2. Data analysis

In this chapter, the last large-scale education reform in the Empire and the first one carried out after the Proclamation of the Republic will be more closely analysed in order to investigate if the composition of the curriculum was substantially modified (or not) due to the transition of one political system to the other.

Besides the examination of the original laws passed by the government, the data used in the following analyses was gathered from books of three main authors, who are recognized scholars when it comes to the analysis of the Brazilian official school curriculum over time: Zotti, Chagas and Moacyr. The books were:

1. ZOTTI, Solange. *Sociedade, educação e currículo no Brasil: dos jesuítas aos anos de 1980*. Editora Plano, 2004.

English title: *Society, education and the curriculum in Brazil: from the Jesuits until the 1980s*.

2. CHAGAS, Valnir. *Educação brasileira: o ensino de 1º e 2º graus - antes, agora e depois*. Editora Saraiva, 1980.

English title: *Brazilian education: primary and secondary education - before, now and after*.

3. MOACYR, Primitivo. *A instrução e a República, Volume I*. Companhia Editora Nacional, 1941.

English title: *The instruction and the Republic*.

4. MOACYR, Primitivo. *A instrução e o Império, Volume III*. Companhia Editora Nacional, 1936.

English title: *The instruction and the Empire.*

As previously stated, some education reforms were limited to the Federal District or to the Imperial School. Nevertheless, despite the formal geographic scope of the reforms, they can be used as proxies for the curricula in all schools due to the fact that those proposed by the central government were consistently used as a model nationwide.

Schematically, during the Empire and the First Republic, there were several curricular reforms (policies) proposed by the central government:

Table 2.1: Curricular reforms carried out in the Empire and in the First Republic - Primary and secondary education

	Primary education	Secondary education
Empire (1822 - 1889)	Empirical decree of 1827* Reform of Couto Ferraz (1854) Reform of Leôncio de Carvalho (1879)	Pedro II School Reform I (1838) Pedro II School Reform II (1841) Pedro II School Reform III / Reform of Couto Ferraz (1854) Pedro II School Reform IV (1857) Pedro II School Reform V (1862) Pedro II School Reform VI (1870) Pedro II School Reform VII (1876) Pedro II School Reform VIII / Reform of Leôncio de Carvalho (1879) Pedro II School Reform IX (1881)
First Republic (1889 - 1930)	Reform of Benjamin Constant (1890)	Reform of Benjamin Constant (1890) Reform of Eptácio Pessoa (1901) Reform of Rivadávia Correa (1911) Reform of Carlos Maximiliano (1915) Reform of João Luís Alves (1925)

* This reform was addressed to all schools in the country.
Source: Zotti, 2004.

To achieve the goal of the analysis, the first education reform that impacted the curriculum in the Republic, known as the Reform of Benjamin Constant (1890), is to be contrasted with the last one carried out in the Empire. Officially, the last curricular reform proposed by the government - that, in this case, only affected Pedro II School - was made in 1881.

However, this reform will not be addressed due to some specific reasons. First, the data regarding the weekly hours per field of study is not stated in the original decree nor this information was found in the consulted literature. Second, and most importantly, opposed to the Reform of Benjamin Constant, that encompassed not only the curriculum, but the education system as a whole, the scope of Pedro II School Reform of 1881 was restricted to some minor changes in the curriculum of the Imperial School. According to Zotti (2004), "[the reform] does not make significant changes, keeping the most critical situations in action (...)".

For those reasons, not only due to bigger availability of data, but also for the sake of the

comparison between the two policies, the last curricular reform to be analysed in the Empire is the Reform of Leôncio de Carvalho (1879), which is the last large-scale education reform implemented by law under the monarchical regime.

Table 2.2: Curricular reforms to be addressed - Secondary education

Empire (1822 - 1889)	Reform of Leôncio de Carvalho (1879)
First Republic (1889 - 1930)	Reform of Benjamin Constant (1890)

Source: Zotti, 2004.

After the selection of the reforms to be addressed, the criteria to be used in the analysis was defined.

Table 2.3: Criteria for the analysis - Fields of study and their subgroups

Field of study	Subgroups
Humanities & Social Sciences	-
Language Studies	Portuguese & Related Studies
	Foreign Languages
Mathematics & Sciences	Mathematics
	Sciences
Others	-

Source: Author.

In the Humanities & Social Sciences field, there were subjects such as Philosophy, History, Geography and related classes. The Language Studies comprehend the study of Portuguese grammar (all levels) and Literature, as well as the study of Foreign Languages, among them Latin, French, Greek, etc. The third big group represents the subjects related to Mathematics, such as Geometry and Algebra, and also all Sciences, such as Physics, Chemistry and Biology. The "Others" field refers to the subjects that do not fit in any of the previous categories, in this case, Drawing, Music, Physical Education or Religious Instruction.

2.1 Quantitative analysis of the curricular composition

In this section, the analysis will be the simple curricular composition, separated in grades, and the percentage of total number of subjects per field of study included in each of them. The figures point out how frequently the subjects would appear in the curriculum.

2.1.1 Empire

The education reform proposed by Leôncio de Carvalho, at the time Minister and Secretary of State for Business of the Empire and a member of the Liberal Party, was known as the "Free Education Reform". The context was one of the most troubled and difficult periods of the regime: the decades of 1870 to 1890, when the gradual transition from slavery to free labour was taking place. According to Basso (2005),

"It is also in this context that the need to establish, if not a system, at least one model of public education that could collaborate to support the Brazilian exporting model, preparing the population for the coexistence with free labour and all the changes that it imposes, without, however, occurring great shocks in the political organization and economic practice. (...) [The reforms based themselves on] the inspirations and theoretical models, the flagships of the world economy and the liberal ideas and ideals found in Europe and the United States. Its authors and actors would inspire Brazilian intellectuals, politicians and administrators to develop measures that could fulfil the purposes of a free society and guarantee the country's role in the international market. This is the background of the Education Reform of Counselor Leôncio de Carvalho (...)."

In short, the law established that education was free, meaning that, under certain restrictions, private schools were allowed. It also established that slaves could attend classes and the abolishment of frequency controls.

Regarding the curriculum, the school syllabus was divided as follows:

Table 2.4: Curriculum under the Reform of Leônicio de Carvalho - Secondary education

Grade	Subjects
First	Latin, French, Geography, Arithmetics, Religious Instruction*, Music, Drawing
Second	Latin, French, Geography, Arithmetics, Religious Instruction*, Music, Drawing
Third	Latin, English, Italian, Algebra, Religious Instruction*, Music, Drawing
Fourth	German, English, History, Geometry & Trigonometry, Religious Instruction*, Music, Drawing
Fifth	German, History, Physics, Chemistry, Cosmography, Religious Instruction*, Music, Drawing
Sixth	Greek, Philosophy, Rhetoric, National Literature, Natural History, Religious Instruction*, Music, Drawing
Seventh	Greek, Philosophy, History & Geography, Portuguese, Literature, Religious Instruction*, Music, Drawing

* Optional - Regardless, it will be included in the quantitative analysis, since the majority of the students (part of the elite) were Catholic.

Since the law only stated the subjects but did not group them in years, the curriculum was based on the one used in Pedro II School at the time.

Source: Decree number 7247 (April 19, 1879) & Moacyr, 1936.

The number of subjects studied per grade was 7, from the first to the fourth grade, and it would increase to 8 in the final years.

Table 2.5: Distribution of total number of subjects prescribed under the Reform of Leônicio de Carvalho - Secondary education

	Distribution per field of study	Distribution per subgroup
Humanities & Social Sciences	15%	15%
Portuguese & Related Studies	30%	8%
Foreign Languages		23%
Mathematics	15%	8%
Sciences		8%
Others	40%	40%

Source: Decree number 7247 (April 19, 1879) & Moacyr, 1936.

The data shows that the "Others" category, which, in this case, represents Religious Instruction, Music and Drawing, was the most repeated subgroup (40%), being present in all grades. In second place came "Foreign Languages" (23%), followed by Humanities & Social Sciences (15%). Portuguese & Related Studies, Mathematics and Sciences were the least repeated subgroups (8%).

2.1.2 First Republic

The curriculum proposed by Benjamin Constant, at the time Minister of Public Instruction, Mail and Telegraphs, was influenced by the French philosopher Auguste Comte and his philosophical doctrine, the Positivism¹, which had an important role in the movement for the Independence of Brazil.

This philosophical framework seeks to explain the laws that rule society through the "hard" sciences, claiming that only the scientific knowledge is true, not asserting as truths the statements connected with the supernatural, the divinity (Ferrari, 2008). As such, an objective of the reform was to base education on science, to the detriment of the classical tradition, trying to conciliate the inheritance of the literary predominance with the scientific one. According to Zotti (2004), "its objective represented nothing more than the need to modernize the development of the elite, making use of the modern sciences for the sake of erudition and verbalism, reinforcing the encyclopedic (...) character of education."

Table 2.6: Curriculum under the Reform of Benjamin Constant - Secondary education

Grade	Subjects
First	Arithmetics & Algebra, Portuguese, French, Latin, Geography, Drawing, Physical Education, Music
Second	Geometry & Trigonometry, Portuguese, French, Latin, Geography, Drawing, Physical Education, Music
Third	General Geometry & Algebra & Calculus, Descriptive Geometry, French, Latin, English or German, Drawing, Physical Education, Music Revision: Portuguese, Geography
Fourth	Mechanics & Astronomy, English or German, Greek, Drawing, Physical Education, Music Revision: Geometry & Calculus, Portuguese, French, Latin, Geography
Fifth	Physics & Chemistry, English or German, Greek, Drawing, Physical Education, Music Revision: Geometry & Calculus, Mechanics & Astronomy, Geography, Portuguese, French, Latin
Sixth	Biology, Meteorology & Mineralogy & Geology, History, Drawing, Physical Education Revision: Geometry & Calculus, Mechanics & Astronomy, Physics & Chemistry, French, Latin, English or German, Greek, Geography
Seventh	Sociology & Law & Political Economy, History, History of National Literature, Physical Education Revision: Geometry & Calculus, Mechanics & Astronomy, Physics & Chemistry, Biology, Latin, Meteorology & Mineralogy & Geology, History, Geography, French, English or German, Greek

Source: Decree number 981 (November 8, 1890) & Moacyr, 1941.

Regarding the number of subjects studied, it would increase as the person would advance

¹It is argued that Benjamin Constant's curricular reform had some inconsistencies with what had been originally proposed by Auguste Comte, such as the chronology of the subjects included in the curriculum.

in their studies. It would start as 8 subjects in the first and second grades, increasing to 10, 11, 12, 13 and 15 in the following years.

Table 2.7: Distribution of total number of subjects prescribed under the Reform of Benjamin Constant - Secondary education

	Distribution per field of study	Distribution per subgroup
Humanities & Social Sciences	17%	17%
Portuguese & Related Studies	38%	8%
Foreign Languages		30%
Mathematics	22%	10%
Sciences		12%
Others	23%	23%

Source: Decree number 981 (November 8, 1890) & Moacyr, 1941.

When it comes to the analysis of curricular composition, it is possible to notice that the study of Foreign Languages (Latin, Greek, French and English or German) was the most repeated subgroup (30%), followed by the "Others" category, which, in this case, accounted for Drawing, Music and Physical Education (23%). It is specially interesting to observe that the study of the national language, in contrast, was the least repeated one (8%).

2.2 Quantitative analysis of the prescribed exposure per field of study

In this section, the curricular analysis will be refined: the prescribed amount of hours per field of study per week will also be taken into consideration, which ultimately points out the relevance, to the education policy makers at the time, of each field of study.

2.2.1 Empire

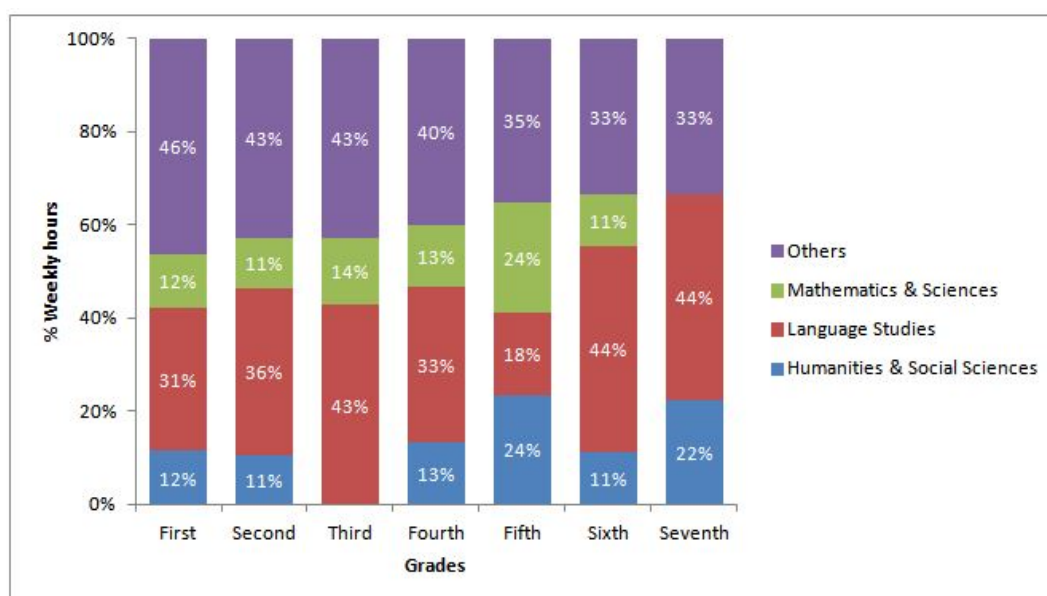
Table 2.8: Distribution of total weekly hours prescribed under the Reform of Leôncio de Carvalho - Secondary education

	Distribution per field of study	Distribution per subgroup
Humanities & Social Sciences	14%	14%
Portuguese & Related Studies	36%	11%
Foreign Languages		25%
Mathematics	12%	6%
Sciences		6%
Others	39%	39%

Source: Moacyr, 1936.

Considering the prescribed exposure, the data shows that the "Others" category (39%) followed by Foreign Languages (25%) were the most emphasized subgroups under this reform. However, differently than the previous analysis of simple curricular composition, it shows that Mathematics and Sciences were the two least focused on (only 6%).

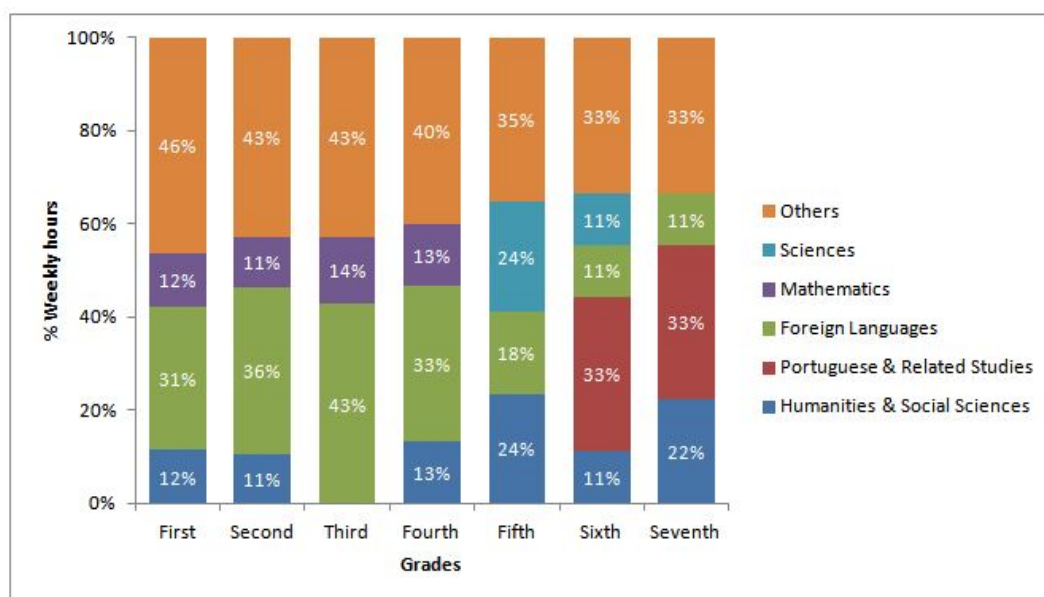
Figure 2.1: Distribution of total weekly hours by field of study per grade under the Reform of Leôncio de Carvalho - Secondary education



Source: Moacyr, 1936.

By analysing the curriculum per grade, it is possible to notice that this scenario is also homogeneous throughout the years.

Figure 2.2: Distribution of total weekly hours by subgroups per grade under the Reform of Leôncio de Carvalho - Secondary education



Source: Moacyr, 1936.

However, what stands out once it is divided again, this time by subgroups, is that, not only were Portuguese & Related Studies and Sciences under-represented, but they were also not equally distributed throughout the years, being concentrated in two final grades.

2.2.2 First Republic

Table 2.9: Distribution of total weekly hours prescribed under the Reform of Benjamin Constant - Secondary education

	Distribution per field of study	Distribution per subgroup
Humanities & Social Sciences	16%	16%
Portuguese & Related Studies	34%	7%
Foreign Languages		26%
Mathematics	30%	15%
Sciences		15%
Others	20%	20%

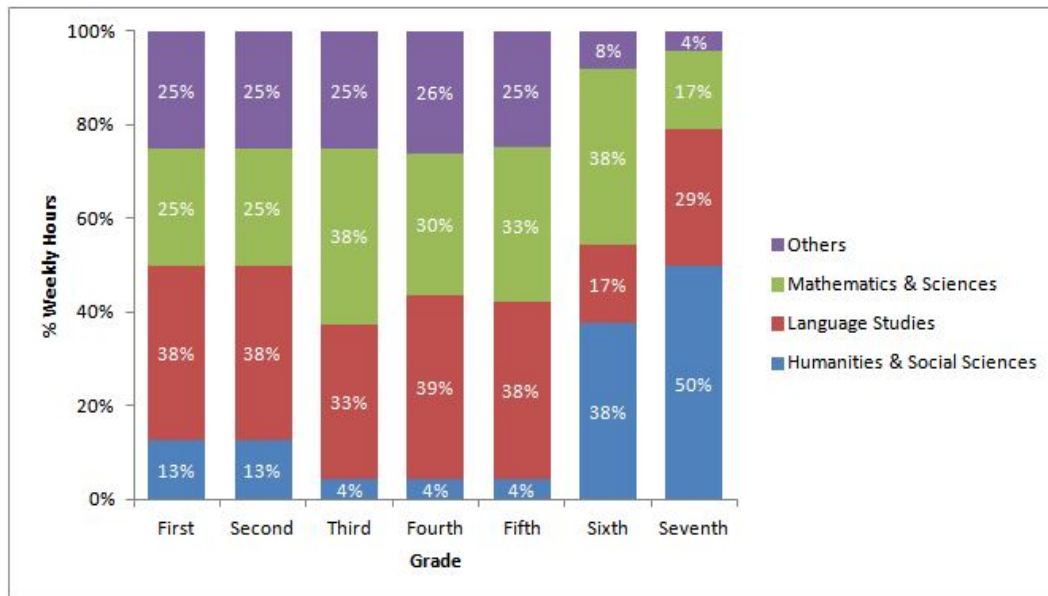
Source: Moacyr, 1941.

As to the First Republic, regarding the prescribed exposure per subgroup, the figures also provide similar conclusions when compared to the previous analysis of the simple curriculum composition of the Reform of Benjamin Constant: it shows that the subgroup which students were more exposed to was Foreign Languages (26%), followed by Others (20%), while it

proves that the study of the national language was the one with the least dedicated hours (7%).

Perhaps the most relevant discrepancy is that, in this analysis, the gap between Humanities & Social Sciences and Mathematics & Sciences increases: the latter comprehends 30% of exposure, while the former represents only 16%.

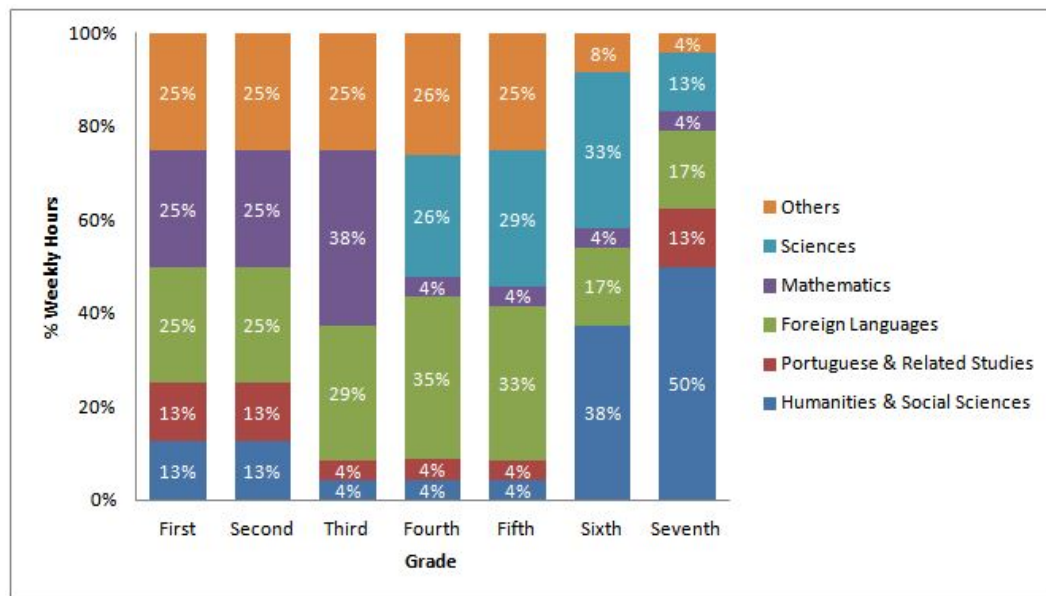
Figure 2.3: Distribution of total weekly hours by field of study per grade under the Reform of Benjamin Constant - Secondary education



Source: Moacyr, 1941.

When analysing the curriculum by field of study per grade, the observation of the disruption becomes clear.

Figure 2.4: Distribution of total weekly hours by subgroups per grade under the Reform of Benjamin Constant - Secondary education



Source: Moacyr, 1941.

Breaking down the analysis by subgroups per grade, it is possible to notice that Mathematics and Others held a bigger exposure in the first grades and lost representativeness dramatically in the final years. In contrast, Humanities & Social Sciences had a rapid increase in exposure in the final grades. Sciences were only included from the fourth grade on.

3. Conclusion

In this research report¹, the Proclamation of the Republic (1889), which transformed the previous monarchical regime into a presidential system, was used in order to analyse how this political transition impacted the official curriculum of secondary education in Brazil, that is, what had been officially prescribed by the central government as the "ideal curriculum" to be put in practice in the country, immediately after event took place.

For that purpose, the reforms of Leôncio de Carvalho (1879) and Benjamin Constant (1890) were chosen to be addressed, while three indicators were used for the comparative analysis:

1. Number of subjects studied;
2. How frequently the subject would show;
3. The amount of weekly hours spent in each field of study and their respective subgroups.

Regarding the first indicator, the data shows that there was an increase in the number of subjects included in the curriculum. If the comparison is between the seventh grade, which is the final year of secondary school, it shows an increase of almost 100%.

The second indicator shows that the "Others" category and the "Foreign Languages" were the ones which would have their subjects included more frequently in the curriculum.

And as to the third variable analysed, which indicated the amount of weekly hours, the biggest difference concerns the relative small importance given to Mathematics and Sciences in the Reform of Leôncio de Carvalho, while they go to the subgroups with the highest increase in terms of student exposure in the Reform of Benjamin Constant (150%), under the influence of Positivism.

¹The report is part of the Research Project that aims to quantitatively investigate the composition of the curriculum of secondary education in Brazil throughout the country's history, according to the political milestones.

All the indicators pointed out that, contrary to what might have been expected, the teaching of the national language, Portuguese, and its Related Studies were never prioritized in both reforms, in contrast with the big relevance attributed to the study of Foreign Languages.

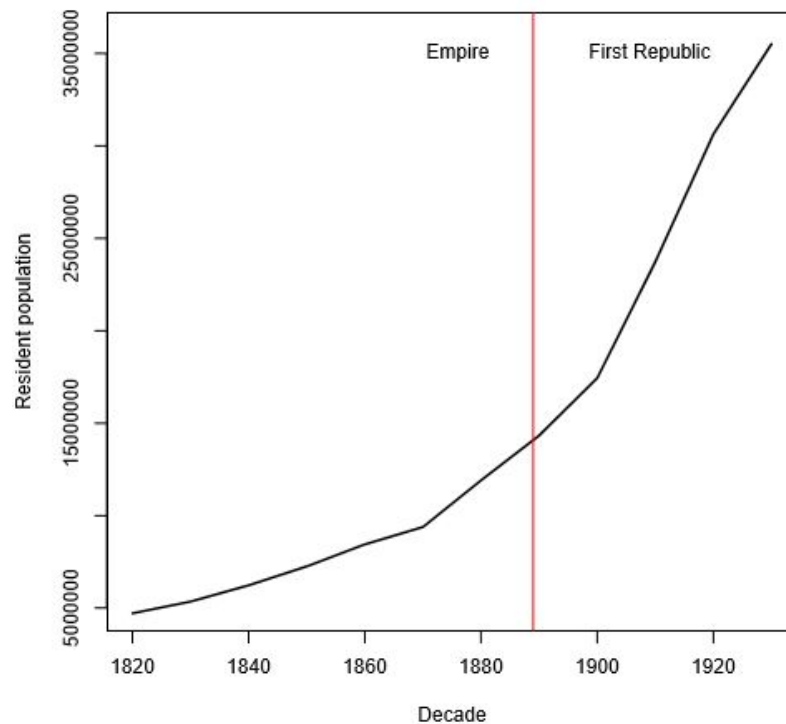
To conclude, what this report indicates is that, in line with the literature that argues that the transition from one political period to the other did not represent a rupture in the social and economic structure of the Brazilian society, to the education, at least to the curricular point of view, that was also true. Although there was a drop in weekly hours of the "Others" subgroup (that went from 39% to 20%) and an expressive increase of "Mathematics" and "Sciences" (that went from 6% to 15% in both subgroups), the humanist and literary tradition of the Colony and the Empire remained. These changes, after the Reform of Benjamin Constant, were not enough to modify the historical pattern of non-academic subjects, "Foreign Languages" and "Humanities & Social Sciences" holding the top three positions in the rankings of both number of subjects and student exposure, giving the curriculum an encyclopaedic character.

Appendices

The first census in Brazil was made in 1872 (end of the Empire), which means that all figures prior to this year are a less robust estimation. The censuses that followed were in the years of 1890 (first one in the Republic), 1900, 1920, 1940, 1950, 1960, 1970, 1980, 1991, 2000 and 2010.

.1 Population

Figure 1: Resident population in Brazil (1820 - 1930)



Source: From 1820 to 1870, Mortara (1941); from 1880 - 1930, Ipeadata (2012).

.2 Illiteracy rate

Table 1: Illiteracy rate in the census of 1872 and 1920 - Ascending order (%)

1872		1920	
Provinces	5 years +	States	5 years +
SE	60,4	RJ*	53,4
PR	71,1	RS	53,8
PA	73,2	SP	64,7
RJ*	74,2	SC	64,7
RS	74,6	AC	65,5
MA	77,4	MT	65,7
MT	79,5	PA	66,1
BA	79,7	PR	66,7
PI	79,7	AM	68,8
PE	80,4	Brazil	71,2
RN	80,9	ES	71,8
SP	81,2	MG	75,4
Brazil	82,3	CE	78,3
SC	83,5	BA	78,5
GO	83,8	RN	78,9
MG	85,6	PE	79,2
AL	85,7	SE	80,7
AM	85,9	MA	81,7
ES	86,9	GO	81,9
CE	87,0	AL	82,8
PB	87,1	PB	84,3
		PI	85,9

* RJ: Capital of the Empire (1872) and the Capital of the Republic (1920).

Source: Ferraro & Kreidlow, 2004.

Bibliography

- [1] BARRETO, Edna. *Demandas em disputa na construção dos textos curriculares: ambivalências discursivas na política do estado do Pará (2007/2010)*. Comunicações, year 21, number 3, special edition, 2014.
- [2] BASSO, Silvia. *O debate sobre a educação no Segundo Reinado e a reforma de Leônicio de Carvalho, de 1829*. Master's thesis, 2005.
- [3] BRAZIL. *Decree number 981 from November 8, 1890*. Available at: <http://www2.camara.leg.br/legin/fed/decret/1824-1899/decreto-981-8-novembro-1890-515376-publicacaooriginal-1-pe.html>. Access in March 2, 2017.
- [4] ----- . *Decree number 7247 from April 19, 1879*. Available at: <http://www2.camara.leg.br/legin/fed/decret/1824-1899/decreto-7247-19-abril-1879-547933-publicacaooriginal-62862-pe.html>. Access in March 2, 2017.
- [5] CHAGAS, Valnir. *Educação brasileira: o ensino de 1º e 2º graus - antes, agora e depois*. Editora Saraiva, 1980.
- [6] FERRARI, Márcio. *Auguste Comte, o homem que quis dar ordem ao mundo*. Available at: <https://novaescola.org.br/conteudo/186/auguste-comte-pensador-frances-pai-positivismo>. Access in March 31, 2017.
- [7] FERRARO, Alceu & KREIDLOW, Daniel. *Analfabetismo no Brasil: configuração e gênese das desigualdades regionais*. Educação e Realidade, 2004.
- [8] FIGUEIREDO, Marcelo. *Transição do Império à República Velha*. Revista Iberoamericana de Filosofía, Política y Humanidades, year 13, number 26, 2011.

- [9] IPEADATA. Database of Instituto de Pesquisas Aplicadas. Available at <http://www.ipeadata.gov.br>. Access in March 2, 2017.
- [10] LOPES, Silvana. *A educação escolar na Primeira República: A perspectiva de Lima Barreto*. Universidade Estadual Paulista (UNESP), 2006.
- [11] MARÇAL RIBEIRO, Paulo. *História da Educação Escolar no Brasil: Notas para reflexão*. Universidade de São Paulo (USP), 1993.
- [12] MOACYR, Primitivo. *A instrução e a República, Volume I*. Companhia Editora Nacional, 1941.
- [13] ----- . *A instrução e o Império, Volume III*. Companhia Editora Nacional, 1936.
- [14] MORTARA, Giorgio. *Sobre a utilização do Censo Demográfico para a Reconstrução das Estatísticas do Movimento da População do Brasil*. Revista Brasileira de Estatística, 1941.
- [15] PINTO, Tales dos Santos. *Primeira República no Brasil*. Brasil Escola. Available at <http://brasilecola.uol.com.br/historiab/primeira-republica.htm>. Access in April 2, 2017.
- [16] SOUZA, Rosa. *A renovação do currículo do ensino secundário no Brasil: as últimas batalhas pelo humanismo (1920-1960)*. Currículo sem Fronteiras, volume 9, number 1, 2009.
- [17] UNESCO. Available at: <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/quality-framework/core-resources/curriculum/>. Access in April 2, 2017.
- [18] ZOTTI, Solange. *Sociedade, educação e currículo no Brasil: dos jesuítas aos anos de 1980*. Editora Plano, 2004.