

## Vocational education at the beginning of the 20th century and the American influence on Brazilian industrial education


### ARTICLE

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### Abstract

This article is based on a bibliographical survey that aims to discuss the influence of Americanism on the constitution of Industrial Education in Brazil, as the country progressed towards industrialization. In this way, we highlight some aspects that refer to the context of Professional Education at the beginning of the 20th century, as well as the relationships that were being established with industrialization and changes in the international sphere, among them, the foreign policy of the United States in Latin America and Brazil, as a way of expanding and spreading the *American Way of life* ideology and the post-war context that resulted in the educational cooperation program between Brazil and the United States in the 1940s. From the review, we understand that the Brazilian-American Commission (CBAI) acted as the main ideological mechanism of Americanism, through the dissemination of methods and practices in spite of training for work within the scope of Industrial Education in Brazil.

**Keywords:** Educação Profissional; Industrialização; Ensino Industrial; Americanismo

### O Ensino Profissional no início do século XX e a influência americana no ensino industrial brasileiro

### Resumo

Este artigo baseia-se em uma pesquisa bibliográfica com o objetivo de discutir a influência do americanismo na constituição do Ensino Industrial, ao mesmo tempo em que o país caminhava para a industrialização. Assim, destacamos alguns aspectos que remetem à conjuntura do Ensino Profissional no início do século XX, bem como as relações que se estabeleceram com a industrialização e as

mudanças em nível internacional, entre elas, a política externa dos Estados Unidos na América Latina e no Brasil, como forma de expandir e difundir a ideologia do *American Way of life* e o contexto do pós-guerra que resultou no programa de cooperação educacional entre Brasil e Estados Unidos na década de 1940. A partir da revisão de literatura, entendemos que a Comissão Brasileiro-Americana (CBAI), atuou como principal mecanismo ideológico do americanismo, através da difusão de métodos e práticas no que se refere à formação para o trabalho no âmbito do Ensino Industrial no Brasil.

**Palavras-chave:** Ensino Profissional; Industrialização; Ensino Industrial; Americanismo.

## 1 Introduction

This study aims to discuss the context of Vocational Education in Brazil at the beginning of the 20th century, and to present aspects that contribute to a better understanding of the American influence on vocational education, while the country was in the process of industrialization.

In this way, we present aspects of the economic, political and social situation at the beginning of the 20th century, as well as the relations that were being established between Brazil and the United States and their reverberations in the development of Brazilian Vocational Education.

From this perspective, industrial education was presented as a form of education that maintained a close relationship with progress and the development of the Brazilian nation, anchored in American ideology.

The Brazilian-American Commission for Industrial Education (CBAI) was the main mechanism for disseminating American ideology in the field of vocational education between the 1940s and 1950s. The CBAI had a series of materials, including bulletins and various records ranging from federal education legislation, technical culture, cultural exchanges, school administration, news from the Ministry and news from the technical schools in the federal network (CUNHA; FALCÃO, 2009).

This study is characterized as bibliographical research, which aims to discuss and understand the context of Professional Education at the beginning of the 20th century in

Brazil, highlighting the influence of American ideology on Industrial Education from the Brazilian-American Commission for Industrial Education (CBAI).

Thus, the study dialogues with authors who discuss Vocational Education, such as Cunha (2005), Falcão and Cunha (2009), Fonseca (1961), Amorim (2007), among others who significantly present several pertinent issues to understand the context of Brazilian vocational education in the period referred to and who used the bulletins of the Brazilian-American Commission for Industrial Education (CBAI) as a source of scientific research.

## 2 Historical context of vocational education at the beginning of the 20th century

In the first decades of the 20th century, Brazil underwent major political, social and economic transformations, with the end of slavery, urban population growth and the advance of industrialization caused by the expansion of the coffee economy. The innovations in industry and the expansion of urban infrastructure services increasingly required a qualified worker with instructions for carrying out functions and duties according to industrial standards.

Thus, the process of industrialization and urbanization in the first decades of the 20th century, as well as the ideals of modernization and development in the following decades, had repercussions on Brazilian education.

This new industrialization scenario was linked to a new conception of work as an element that would form the country's wealth. As a result, an education project was needed that would meet the interests of the emerging industries.

Cunha (2000) points out that, at the beginning of the 20th century, the prevailing economic orientation was industrialism, evidenced by the industrial surge that the country was going through, resulting in numerous and articulate workers' strikes, led by anarcho-syndicalist currents. "In this context, vocational education was seen by the ruling classes as an antidote to the 'inoculation of exotic ideas' in the Brazilian proletariat by foreign immigrants, who made up a large part of the workforce" (CUNHA, 2000, p. 94).

According to Fonseca (1961), the ruling classes believed that the immigrants arriving in Brazil could contribute anarchist ideas and thus influence Brazilian workers to fight against the exploitation of employees by their bosses. Thus, "professional education was seen by industrialists as a powerful instrument for solving the social question" (CUNHA, 2000, p. 94).

In this context of social, political and economic transformations, President Nilo Peçanha, through Decree No. 7566 of December 23, 1909, established the first Artisan Apprenticeship Schools in various states of the country, aimed at free primary vocational education.

The creation of these schools met the desires of conservative educational ideologies with regard to maintaining order and training citizens who would be useful to the nation. As such, according to Cunha (2000, p. 94), "it was necessary to provide the underprivileged with technical and intellectual training, and to make them acquire habits of useful work, keeping them away from idleness, the school of vice and crime".

In this way, the ideology of industrialism was contemplated, which was associated with the development of productive forces, the stabilization of the economy and the function of elevating Brazil to the level of civilized nations, such as the countries of Europe and the United States. It was also linked to the values of "progress, economic emancipation, political independence, democracy and civilization" (CUNHA, 2005, p. 94).

In this context, education and work were seen as the main mechanisms for increasing the productive capacity of citizens, as well as raising the country to the level of developed and civilized nations. At the heart of the Apprenticeship Schools was the construction of a society for work, in which the children of the underprivileged classes received instruction through strict discipline. Thus, the elites believed that educating for work would not only improve the conditions of the disadvantaged classes, but would also promote progress and increase the qualifications of the workforce (CUNHA, 2005).

Regarding the functioning of these schools, Fonseca (1961) states that they were not very efficient, due to the inadequacy of the buildings and the lack of tools and appropriate training for teachers and masters in vocational education. These factors were decisive for

the high number of dropouts from the courses in all the country's states. However, even with the problems of low efficiency, the Artisan Apprentice Schools were the start of a new apprenticeship, which would later result in the modern industrial and technical schools of the Ministry of Education.

The 1930s brought important changes to the national economic scenario, combined with production processes and measures to restrict new immigrants. These factors contributed to the state and industrialists looking for alternatives aimed at expanding skilled labor for the industrial sector.

The advance and growth of industrialization, as well as changes in the structure of the Brazilian state, had their reverberations in the country's Professional Education, which resulted in a field of measures and actions outlined by a nationalist political ideology that served the interests of the industrial bourgeoisie.

Previously, the Vocational Education offered by the Apprenticeship Schools was also made available "to the destitute, orphans and delinquents, as a way of combating idleness" (CUNHA, 2000, p. 94). With the economic growth brought about by the ideals of industrialism, this educational model is now aimed at training new workers with specialized knowledge and skills to meet the needs of industry.

With the growth of industrialization projects in the country and the imminence of the Second World War, at the beginning of Getúlio Vargas' government, industrialists were concerned about preparing technicians to work in the industries, since there was no qualified workforce, while new restrictive measures on immigrants were in force. On this issue, Romanelli (2006) states:

[...] the time demanded a redefinition of the policy of importing qualified technical personnel, as had been the case until then. The war was working as a mechanism to contain the export of labor from European countries to Brazil. Until then, there hadn't been an adequate policy for training human resources for industry, because it had been providing itself with specialized labour by importing technicians. The war period was making this difficult, as was the import of industrialized products. This posed a double problem for the state: on the one hand, having to satisfy the population's consumption needs with domestically manufactured products [...] which meant having to expand the Brazilian industrial sector and thus absorb more skilled labor - and, on the other hand, no longer being able to count on imports, at least at the same rate as they were being imported (ROMANELLI, 2006, p. 155)..

Thus, the problems related to discontent with foreign workers and the economic situation resulting from the war created favorable conditions for the structuring of industrial education, given the need for skilled labor to meet the demands of the industrial sector. In this way, it was essential to have an educational project that would make it possible to train "docile, healthy and productive workers, as well as a new elite, capable of commanding society within the new principles of the bourgeois order" (PICHELLI, 1997, p. 6).

Thus, in the 1940s, vocational education took on the characteristics of industry, through the creation of proposals for this branch of education. In this context, the Organic Education Laws were created, based on various decree-laws for industrial, agricultural, commercial and secondary education.

With regard to industrial education, the Organic Law on Industrial Education was created, which aimed to create a new organization for vocational training schools, followed by Decree-Law no. 4. 048, of January 22, which created the National Apprenticeship Service (SENAI), which functioned as a complement to industrial schools and consisted of faster and lighter training, aiming to meet the interests "of the Ministry of Labor, Industry and Commerce and "of industrialists who, faced with the prospect of assuming the costs of professional education, also demanded its control" (MEDEIROS NETA, 2020, p. 18).

The reform in industrial education reflects the demands of this field and the Vargas government's interests in developing an educational project that would contribute to the training of skilled labor to meet the needs of the industrial sector. With the accelerated expansion of Brazilian industrial education, vocational schools underwent a reorganization. However, Brazil was still inexperienced in this type of education on a large scale. In order

to optimize industry and train workers, the Ministry of Education sought international references from already developed and experienced nations.

It is important to note that the organization of Industrial Education in Brazil was based on pedagogical and ideological concepts imported from European countries and the United States. However, in a context in which the world was experiencing a war scenario, with the United States consolidating its position as a power and spreading its economic presence in Latin American countries, Brazil's rapprochement with the United States resulted in the import of advanced forms of production and, concomitantly, educational models and teachers to work in Brazilian industrial education.

Thus, the consolidation of American references in Brazilian industrial education was the result of several factors: while Europe was experiencing economic, cultural and educational discrediting due to the self-destructive scenario of the war, the United States was "expanding economically, consolidating itself as an industrial civilization, expanding its capacity for dissemination and appearing to the world as a successful model of a nation" (PEDROSA; SANTOS, 2014, p. 332).

In this scenario of changes marked by hegemonic disputes, Brazil's closer ties with the United States in 1943, with the realignment towards a pro-Allied position, had repercussions on the vocational education that was being reformed in the country. Falcão and Cunha (2009) point out that

[...] after the unsuccessful attempt to obtain German teachers in 1936 and the hiring of Swiss teachers for the industrial schools in 1941/42, the Ministry of Education turned to the United States as a source of technical assistance for this important branch of education that was strategic for the Estado Novo's industrialist policy. (FALCÃO; CUNHA, 2009, p. 151)

However, it is important to point out that the US presence in Brazilian industrial education was already evident in the 1930s, in a context of industrial expansion and the Americans' concern to establish the "Good Neighbour Policy", which was a mechanism for disseminating the Americanization project, the aim of which would be to adopt the "Good Neighbour Policy". "*American way of life*" in America, and specifically in Brazil, by spreading its values in political, economic, cultural and social terms.

In this sense, in order to implement *American Way of life* In Latin America, it was essential to spread the benefits of the ideals of Americanism, namely:

The ideology of progressivism, since the US representative defends the need to produce manufactured goods for Brazil's economic progress, which would make it a stronger partner in the fight against the spread of socialism on the continent. In this case, the traditionalist ideology of defending Western values is also present. Finally, the value of democracy, here as an expression of the sovereignty that Brazil would acquire through the development of the industrial sector, which would affect everyone without exception (AMORIM, 2007, p. 67)..

As such, Brazilian Industrial Education presented itself as a means of spreading the ideals of Americanism and a form of education that was closely linked to progress and social development as necessary conditions for overcoming a backward country.

During the Second World War, the United States' initiatives on Latin America, and specifically on Brazil, expanded. As Amorim (2007) shows, exchanges were set up in the United States for young people from Latin American countries, including in the area of industry and at the first Conference of Ministers and Directors of Education of the American Republics, at which Recommendation XV, entitled Industrial and Technical Schools, was approved. In this context, the importance of "training specialized labor for the activities of directing and executing the production process" was stressed (AMORIM, 2007, p. 157), thus requiring the expansion of technical schools, focusing on practical activities, without detracting from cultural training.

In order for technical schools to grow, investments were needed, both in the training of workers and financially, so that they could be invested in this branch of education. However, in 1946, it became clear that Brazil did not have the financial resources to fund industrial education. It was in this context that, according to Bordignon (2018), the Brazilian government and interested sectors consented to US interference in educational policies, through agreements, cooperation, loans, covenants and the most diverse types of amendments.

The first cooperation agreements for technical education were established in 1946, which according to Amorim (2007), were signed between the "Ministry of Education and Health and the Ministry of Education and Health". *Inter-American Educational Foundation*



*Inc., body subordinate to The Office of the Coordinator of Inter-American Affairs (OCIAA), clause IV of which established the creation of a special commission whose function would be to implement the educational cooperation program between the United States and Brazil" (AMORIM, 2007. p. 167). In this context, the Brazilian-American Commission for Industrial Education (CBAI) was created, headed by a Brazilian superintendent and a US representative.*

### **3 The Brazilian-American Commission for Industrial Education (CBAI) and the ideology of Americanism**

The CBAI was a cooperation program signed between the governments of Brazil and the United States, whose objectives included training teachers to work in Industrial Education and "bringing the two countries closer together through exchanges of educators, application of pedagogical methods and educational guidance" (FONSECA, 1961, p. 563).

To develop activities and strengthen relations between industrial education teachers in the two countries. Fonseca (1961, p. 564) points out that the United States:

[...] it would provide a small body of specialists who would collaborate with the Brazilian authorities in studying and researching the needs of industrial education, as well as the best way to grant Brazilian administrators, educators and technicians the means to go to the United States in order to study, lecture, teach and exchange ideas with their American colleagues, as well as how to carry out the training of teachers, the acquisition of equipment, the preparation of teaching materials and auxiliary resources for teaching, as well as the provision of services for school libraries..

According to the author, the actions undertaken by the CBAI were divided into twelve points:

- 1) Development of a training and improvement program for teachers, instructors and administrators;
- 2) Study and revision of the industrial teaching program;
- 3) Preparing and acquiring teaching materials;
- 4) Expanding library services; checking existing technical literature in Spanish and Portuguese; examining existing technical literature in English and arranging for the acquisition and translation of works of interest to our industrial education;
- 5) Determining the needs of industrial education;
- 6) Improving the organization and management of workshops;
- 7) Developing an accident prevention education program;

- 8) Improving the processes of administration and supervision of the central school administration services;
- 9) Improving school administration and supervision methods;
- 10) Studying the criteria for registering administrators and teachers;
- 11) Selection and professional and educational guidance for students in industrial education;
- 12) Study of the possibilities of integrating the activities of other industrial education bodies that are not administered by the Ministry of Education, as well as the possibility of establishing other training programs, such as adult education, etc. (FONSECA, 1961, p. 565)

In order to implement the actions set out in the educational cooperation agreement, the United States committed itself to sending specialists to Brazilian industrial education, as well as holding courses in the United States for teachers and technicians. It also undertook to prepare teaching materials and provide teacher training.

In terms of where the CBAI worked, it is worth noting that the commission's headquarters were located in the south and southeast of the country: the headquarters were in Rio de Janeiro, at the Ministry of Education; the sub-headquarters were in Curitiba, at the Federal Technical School of Paraná; and the other sub-headquarters were in São Paulo, at the State Department of Labor, a center for the dissemination of the TWI method (Training Within Industry) (FALCÃO; CUNHA, 2009).

With regard to the CBAI's main activities, Falcão and Cunha (2009) identify that the commission's actions were grouped into four items, namely: coordination and dissemination; courses; publications; pedagogy and ideology.

The first item, coordination and dissemination, was related to meetings of heads of schools in the federal industrial education network and lectures, which included pedagogical and administrative issues on their agendas.

With regard to courses, Falcão and Cunha (2009) point out that this item was related to the training that teachers and principals received in the United States. After this process, the knowledge was passed on through training with Brazilians and Americans who had taken part in the courses. After some time, this training began to be given in Brazil, through vacation courses that had artisanal and industrial characteristics, both concentrated at the

headquarters. On the other hand, itinerant courses were offered in other locations to train workshop teachers in teaching techniques.

The bulletins began to be published monthly in 1947 and were characterized as a means of disseminating content related to the CBAI's ideology and industrial education in the country. The bulletins were documents organized into periodicals that were produced and distributed to employees, especially teachers and directors of industrial schools, and also sent to widely circulated newspapers (CAMPOS; MEDEIROS NETA, 2020). The editorials had the participation of associated national and international elites, who published content on technical culture, teaching administration and industrial education pedagogy.

Regarding the fabric of the articles published in the Bulletins, Bordignon (2018) states that some texts were taken from other publications, such as books and monthly magazines maintained by other entities and institutions linked to the world of work and worker training. Thus, "the articles selected were from the field of health, by doctors, hygienists, psychologists, Brazilian and American university professors, technicians, entrepreneurs and organizations for the world of work" (BORDIGNON, 2018, p. 59).

Given the above, we can see that the Bulletins were delineated by purposes and presented an intentionality, in view of the dissemination of content and the performance of agencies and bodies in the constitution of the ideology of industrial education and the links established with the Brazilian State.

Regarding the last item (pedagogy and ideology), Falcão and Cunha (2009) recognize some elements of the ideology disseminated by the CBAI, in its most explicit dimension: industrialism, Americanism and developmentalism. With regard to the teaching model, the commission promoted the principles of the New School, based on the dissemination of the *TWI method, Training Within Industry*, according to the principles of Taylorism.

*The TWI method, or Training Within Industry*, began in the United States in 1940, in the context of the Second World War, with the aim of increasing production capacity. This method, according to Fonseca (1961, p. 572), was

[...] designed to enable masters, industrial supervisors or, in general, all those who exercise a command function, to replace erroneous notions about work with more methodical and rational attitudes, and also to achieve a more perfect harmony in the human relationships that arise from the working conditions themselves, in order to obtain greater efficiency from the men, machines and tools used in the services under their orders..

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As a result, due to its efficiency and increased productivity at work, this method was adopted in vocational schools in the USA and later in some European countries and all the nations of the American continent. In Brazil, the method was implemented by CBAI in 1952, in view of large-scale industrial growth and the need to increase productivity in the country (FONSECA, 1961).

For Falcão and Cunha (2009, p. 171), "the inauguration in 1952 of the operations center in São Paulo, precisely where this new wave of industrialism was radiating, in conjunction with the Secretariat of Labor, Industry and Commerce" was an important strategy for spreading the TWI method. The training of supervisors took place in the workplace itself, in which the workers incorporated into the factory were taught Taylorist principles, with the National Industrial Apprenticeship Service (SENAI) as the main vector of the method. *Training Within Industry*, "since it couldn't cope with preparing the workforce for the industrial growth of the 1950s and even the 1960s" (FALCÃO; CUNHA, 2009, p. 171).

From this perspective, the CBAI played a fundamental role in spreading the training of the workforce and increasing productivity to meet the needs of industry. Despite the humanist discourse regarding technical and professional education, the commission emphasized the need to train manpower for industries in order to increase productivity and as a driving force for the development and wealth of the nation (CIAVATTA, 2013).

With regard to this training model within the scope of Vocational Education in Brazil, Ciavatta (2013) states that the commission provided a favorable environment for the assimilation of Americanism, incorporating Brazilian teachers and industrialists into its project, as well as favoring the implementation of technical-educational measures linked to the interests of local industry which, at that time, was moving towards a progressive association with international capital.

It is worth noting that the CBAI operated between 1947 and 1962, when it was abolished and its powers transferred to the Industrial Education Expansion Working Group (GEII). During its period of operation, the CBAI was a body that disseminated the ideology of Americanism, as well as being responsible for the ideological training imposed on technical schools, based on productivity and the dissemination of methods and procedures based on scientific rationalization, aimed at the development of industrial capitalism.

## 4 Final considerations

The aim of this text is to highlight the socio-historical context of industrial education in Brazil, based on a discourse aligned with the demands of the industrial sector. Thus, the preparation and qualification of technicians was urgent and necessary as the country moved towards increasing industrialization. It should be emphasized that these factors were paramount to raising the nation's level of development.

From this perspective, Vocational Education became a device responsible for preparing the workforce to meet the needs of the expanding industry. To this end, Brazil sought technical and financial assistance from the United States, which would help with the operation and organization of industrial education.

Thus, the CBAI emerged with a specific purpose, the implementation of a new project for industrial education in Brazil, linked to the interests of Brazilian and international leaders, in this case the United States. The commission corroborated the dissemination of a model of society that should be followed, which extended to education and work in industries. In these latter respects, its main function, according to Amorim (2007, p. 169), was "to disseminate methods and procedures based on scientific rationalization as the path to be followed in training teachers for this branch of education, who would later use these processes in their teaching work".

In this way, the CBAI behaved as an ideological mechanism of the industrial elites, which propagated the ideals of Americanism and industrialism, with a view to training the

workforce, increasing productivity and, consequently, the country's wealth and development.

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