

The School of Arts and Trades in Santiago (EAO), 1849–1977

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Introduction

The trajectory of the Escuela de Artes y Oficios (EAO) [School of Arts and Trades] spanned more than one hundred years, its beginnings in the nineteenth century coinciding with the beginnings of a new republic. In the twentieth century, the school was shaped by a progressive distancing from cultural and economic models—mainly French and English—that had inspired the country in its first decades. Following the crisis of 1929, these models gave way to the era of the “inward development” model and, with greater force, to government policies of industrialization and self-reliance that emerged in the 1940s.¹ In this context, EAO graduates were able to join a wide variety of productive fields, and the student body identified not only with the popular sectors but also, significantly, with the middle class. In contrast to the nineteenth century, in which industrial activity and practical occupations aroused little interest on the part of Chilean society, students found a means of social progress in technical education. No longer were crafts and handicrafts held in contempt by the elites, who in earlier times had considered them occupations for indigenous people or people without much social standing or economic resources.

A Popular Reformation

In its early days, a central dimension of the EAO educational project was the government’s effort to “civilize” the people in the context of a new country with a large rural population, low literacy, and incipient urban life. The school thus appealed to a student body whose origin was mainly provincial, where young artisan graduates would return to install a workshop in their given trade for a period of six years—part of the agreed government commitment to their education. At the outset, the expectation was that new apprentices would then be trained in the same workshops, scattered around the country. However, three decades later, this approach had little effect, losing ground in the 1880s to alternatives that made more sense, given the direction of the establishment. For example, graduates would go to Navy ships or to the railway system, with the aim of working as mechanics in these institutions or in state-dependent services.

¹ Corporación de Fomento de la Producción, *Plan de Fomento Industrial* [Industrial Development Plan] (Santiago: Imprenta Universo, 1939).

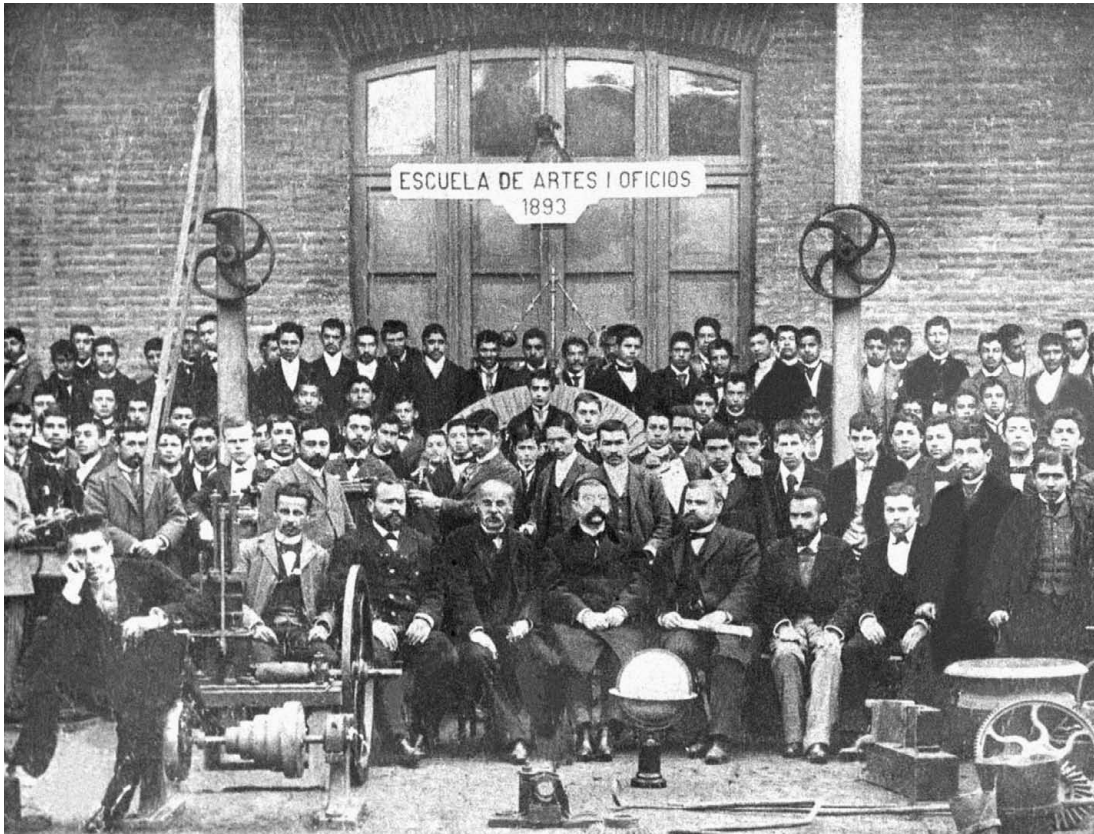


Figure 1
 Teachers and students of EAO, 1893.
 Courtesy of Archivo de Documentación
 Gráfica y Audiovisual de la Universidad
 de Santiago de Chile.

Moreover, the educational challenges of EAO in its first decades were significant: The poor education that had been provided to young arrivals, coupled with habits or customs of a rural lifestyle and the rebelliousness of many students, made the school function as a reformatory of sorts, resorting to martial discipline and severe punishments.² This system lasted until the mid-1920s, when increased enrollment, the existence of different curricula—including internships and part-time and night school for workers—and a wider social makeup of students changed the character of the institution to that of a secondary school and, in the 1930s and 1940s, to that of a university establishment. These developments contrasted significantly to the school's early days, when it was directed toward the sons of artisans or farmers in consequence of the domain of liberal education in the nineteenth century by the influence of Enlightenment thinking among educators who helped fund national public education.³ (See Figure 1.)

Educate or Produce

Another principle that influenced the EAO was the government interest in obtaining a return on investment through production, which would in turn benefit the staff and, eventually, the students. Setting up a full-functioning school was challenging, however,

2 Pedro Elías Sarmiento, *La Escuela de Artes y Oficios de Santiago, tal como la vi y la conocí desde 1891 a 1901*. Homenaje a su Centenario [The School of Arts and Trades Santiago as I lived and knew it, 1891–1901. Centenary Tribute] (Valparaíso: Imprenta Victoria, 1949), 15–17.

3 Among these educators, we can cite Fray Camilo Henríquez, Juan Egaña, Andrés Bello, and José Victorino Lastarria.

because of the scarcity of financial resources, improper implementation, and the need for skilled labor. Against this background, the campus operated in its early years as a school building and later as a workshop dedicated to the repair of machinery.

Not until 1860–70 did the institution consistently undertake the production of steam engines, furniture, tools, and other materials that found an outlet in the industrial fairs of the time. Such fairs included the Arts and Trades Exhibition of 1875, held at the Quinta Normal in Santiago;⁴ modelled on the great European exhibitions of the mid-nineteenth century, these fairs gave the school a showcase to exhibit its progress. Other notable examples of fairs in which EAO participated were the Paris Universal Exposition of 1889, the Pan-American Exposition in Buffalo in 1901, and the Ibero-American Exposition in Seville in 1929.⁵

The development of manufactured goods thus had roots in the very origins of the EAO, where, in the words of its first director, French engineer Jules Jariez, the objective was to provide the general groundwork for the development of national industry through machine construction, rather than dedication to a particular productive category or activity.⁶ Furthermore, the school was the testing ground in the local context for the ideas of the Industrial Revolution, incorporating steam power in the nineteenth century, as well as electricity and diesel engines as the twentieth century began.

At this point, the educational dimension of the EAO eclipsed the idea of obtaining profits from its resulting work. The institution was able to expand its functions after a change in venue to its final location, in the Chuchunco neighborhood (in the current municipality of Estación Central), a popular sector of Santiago. Moreover, the school began to expand its services, by incorporating its graduates into domestic industry and into product development and direct sales to the public through its stores—a venture that never achieved significant public visibility, despite the efforts of several of its directors.⁷ Perhaps the most salient policy of the period was sending graduates to pursue further studies abroad—a clear example of the cultural expansion that the EAO provided for many graduates, who then had the option of working in industrial establishments in the United States and Europe.⁸ Some took advantage of the opportunity to study further in engineering, which expanded their work opportunities when they returned to the country and offered prospects for social and even political advancement.⁹

4 The events of this exhibition were recorded by the official newspaper of the event *El Correo de la Exposición*, [The Exhibition Courier], published between September 1875 and February 1876. The newspaper is available at: <http://www.memoriachilena.cl/archivos2/pdfs/mc0007494.pdf> (accessed on May 25, 2015)

5 J. Tadeo Laso, *La Exhibición Chilena en la Exposición Pan-Americana de Buffalo, E.U. 1901* [The Chilean Exhibit at the Pan-American Exposition in Buffalo, USA 1901] (Santiago: Imprenta Barcelona, 1902); and Sylvia Dümmer, *Sin tropicalismos ni exageraciones. La construcción de la imagen de Chile para la Exposición Iberoamericana de Sevilla en 1929* [Without Tropicalisms or Exaggeration. The Construction of the Image of Chile for the Ibero-American Exposition in Seville in 1929] (Santiago: RIL Editores, 2012).

6 Jariez had previously served as a teacher in French schools in Angers and Chalons. Regarding this era of industrial education, see John R. Pannabecker, "School for Industry. L'Ecole d'Arts et Métiers of Châlons-sur-Marne under Napoléon and the Restoration," *Technology and Culture* 43 (2002): 254–90.

7 This path was taken by Joseph Zegers and Adolfo Bruna, who were the school's directors from 1863 to 1877 and from 1878 to 1884, respectively.

8 Pedro Elías Sarmiento, *Escuela de Artes y Oficios Chile. Alumnos de la Escuela de Artes al extranjero. Recopilación i datos de los alumnos del 4.º año* [School of Arts and Trades Chile. Students of the School of Arts abroad. Investigation and data of the fourth year] (Santiago: Imprenta de El Correo, 1899).

9 Sarmiento, *La Escuela de Artes y Oficios de Santiago, tal como la vi y la conocí desde 1891 a 1901* [The School of Arts and Trades Santiago as I lived and knew it, 1891–1901], 52–59.



Figure 2
A group of students and teachers on the 'Aguila' locomotive, completely restored in the EAO, 1897. Courtesy of Archivo de Documentación Gráfica y Audiovisual de la Universidad de Santiago de Chile.

Craftsmen, Technicians, and Engineers

From its early days under the guidance of French teachers, and based on the art et métiers model, the EAO outlined a formative ideal for education that included three grades: that of trades, to form artisans; that of technicians, to form workshop workers; and that of a third grade, to train mechanical engineers. Although this third track was a great aspiration for many years, training at this level was resisted by the political and economic elite, who had promoted the establishment of the EAO mainly as a way to “civilize the people” and to form a workforce with greater technical capacity.¹⁰ Despite the resistance, some nineteenth-century graduates transitioned into engineering through their work in the national navy, where they were in charge of vessel machinery. These skills took on greater importance in the armed conflicts, first with Spain (1865), then with Perú and Bolivia (1879),¹¹ and finally with Argentina (1895). As suggested, the State railways also provided opportunities for employment, and several graduates came to occupy senior management positions at a time when the railway was of great economic and productive importance for the country.¹² (See Figure 2.)

- 10 Sol Serrano, Macarena Ponce de León, and Francisca Rengifo (eds.), *Historia de la Educación en Chile (1810–2010), tomo II La educación nacional (1880–1930)* [History of Education in Chile 1810–2010, Volume II, National Education 1880–1930] (Santiago: Editorial Taurus, 2012), 428–29.
- 11 Juan Guillermo Muñoz and Carmen Norambuena, *La Escuela de Artes y Oficios. Su participación en la Guerra del Pacífico* [The School of Arts and Trades. Its Role in the War of the Pacific] (Santiago: Círculo de la Amistad Escuela de Artes y Oficios, 1999).
- 12 Sarmiento, *La Escuela de Artes y Oficios de Santiago, tal como la vi y la conocí desde 1891 a 1901* [The School of Arts and Trades Santiago as I lived and knew it, 1891–1901], 53.

In observing the changes of the period, that the initial designation for first-grade craftsmen, “artisans,” gave way early on to other concepts is worth noting. For example, students as “operators” was introduced in the late 1870s, when the school was required to increase production in the midst of the “war economy.” And later, in reference to the trade plan, the preparation of “practicals,” a term much in vogue during the early years of the “inward development” model, dominated in the transition of 1930–40.¹³

These changes in terminology—strictly administrative in appearance—illustrates the dissonance between the EAO project and the dawn of material culture in the country. The term artisan—extending beyond essentially manual work, traditional knowledge, and links to the geographical areas of the territory where these activities were undertaken—did not resonate with the discourse of “progress,” as understood by the political elite of the nineteenth century, or to “development” in the governments of different political stripes that shaped the Chilean state between the late 1920s and the military coup of 1973. The exception was the period of President Pedro Aguirre Cerda, during which he tried to address the problem by creating the National School of Craftsmen in 1938; the school became a national network modeled on the EAO, but the move by Cerda did not resolve the underlying issue: It understood craft as a synonym of trade, always under the French paradigm of *arts et métiers*. Meanwhile, the English Arts and Crafts contemplated a revaluation of crafts in response to industrialization, as well as distinguishing them from trades. For Chilean society, this deeper discussion is a challenge and an area of development that can only bolster the legacy of the EAO toward greater understanding of the relationship between cultural, social, and productive practices, to which the field of design studies can make a significant contribution.

During the first half of the twentieth century, the greater specialization offered by degrees in electricity and chemistry, as well as metallurgy (as the second technical grade corresponding to foundry) and mechanics, which had always been important, enabled the advance of decision-oriented people whose origin differed from the more affluent sectors of Chilean society. Finally, the long debate on the validation of tertiary studies led to the creation of the School of Industrial Engineering, which was formed in 1940 by a number of engineers initially educated in the EAO.¹⁴ Later, in 1947, the Universidad Técnica del Estado (UTE) [State Technical University] was founded as an institution that sought to project the teaching begun in the EAO to university research and extension functions, providing technical and professional-level

13 During this period, Chile adopted Keynesian capitalism as a way to address the crisis. This stage of “inward development” lasted until 1974, when the military dictatorship that overthrew President Salvador Allende launched a new model of neoliberal character, inspired by the ideas of Milton Friedman and the Chicago School that is still in place today.

14 Since the nineteenth century, outstanding graduates were given the option of validating their engineering degree at the University of Chile. This situation continued until the early twentieth century and was exemplified by writer Fernando Santiván in his novel, *Robles, Blume, and Cia.* (Second part of the *Crucible*, a previous work inspired by the EAO). The novel shows the protagonist, Bernabé Robles, a graduate of the School of Arts and Trades, owning a foundry shop upon completion of his engineering studies.

Figure 3
Allegorical car which won first place in
'The Spring Party,' 1937. Courtesy of Archivo
de Documentación Gráfica y Audiovisual de
la Universidad de Santiago de Chile.



studies. The first level in industrial education (trades) continued to be taught by the EAO until the late 1970s, when the military dictatorship of Augusto Pinochet led to the closure of the campus. The school gave the country its last graduates during this period.¹⁵ (See Figure 3.)

Crafts vs. Trades

In the historical process we have reviewed, an important point is that, despite the school's name, the relationship between art and trade in it was characterized by dissent between the majority faction, inclined to technique, and the faction that sought to instill a more humanistic approach in its teaching—key for the advancement of the EAO in higher education. These differences became more pronounced in the second half of the twentieth century, when the EAO specialties that aligned with the new project of the UTE quickly found their place there (i.e., electricity, chemistry, mechanics, and metallurgy), while courses or workshops whose work involved art in one form or another (blacksmithing, furniture making, artistic foundry, model-making) faced greater difficulties

15 Luis de la Torre Aravena (ed.), *Homenajes y Testimonios* [Tributes and Testimonials] EAO-UTE-USACH. 160º Aniversario. 1849–2009 (Santiago: Círculo de la Amistad Escuela de Artes y Oficios, 2009), 18.



Figure 4
The Furniture Workshop of EAO, circa 1950.
Courtesy of Archivo de Documentación
Gráfica y Audiovisual de la Universidad
de Santiago de Chile.

in relation to the new institutional structure. The distinctions in the trades' acceptance reinforced the character of "bastion" that the school took on for some of these latter sectors in their later years, as in the case of the artistic foundry workshop. Significantly, the growth of the EAO throughout the twentieth century allowed for a less technical contingent closer to the arts, and in this context, the final stage of debate took place: integration of science-oriented and technological-level specialties into the UTE, vs. the progressive decrease in courses that leaned toward arts and trades (See Figure 4).

Despite the rise of liberal education on the EAO campus between 1920 and 1940—which ultimately made possible the emergence of the "Industrial University,"¹⁶ mainly through the action of EAO students¹⁷—the separation of worlds between art and technology hampered the national influence of the new professions associated with this relationship, as in the case of design. Although the school responded to the industrial challenge in terms of workforce training from a productive point of view, the emphasis on the development of capital goods (machinery) over durable consumer goods (products) weakened its public visibility and stronger presence in everyday life. Moreover, the "inward development" model introduced during the 1930s gave way to state-building policies

16 Tancredo Pinochet, director of the school between 1913 and 1915, started this discussion by referring to the campus as a "Work University." See Tancredo Pinochet Le Brun, *Un año empleado público en Chile* [A Year as a Public Employee in Chile] (Santiago: Imprenta Universitaria, 1915), 21.

17 Centro de Alumnos de la Escuela de Técnicos Industriales y de la Escuela de Artes y Oficios, *Memoria 1945* [Yearbook 1945] (Santiago: Imprenta El Imparcial, 1945).

that, in appearance, promised a favorable environment for national manufacturing through industrialization, self-sufficiency, and domestic consumption; but these policies involved a high technological dependence on large industrial centers, which limited the development of national products and tended to overlook the creative use of imported technology.¹⁸

Notwithstanding these circumstances, which in fact correspond to the economic and productive reality of Chile throughout the nineteenth and twentieth centuries, the EAO offers a case study that can provide significant background in terms of material culture, given that its production and the work of its graduates addressed such a wide range of human needs. As a result, school management contemplated education, agriculture, dwelling, and transport among its main fields of action. In addition to the specific projects unique to specialties that emerged from the EAO—for example, its technical interest in furniture, which evolved into product engineering and gave birth to the Department of Design during the University Reform in the late 1960s¹⁹—a broader perspective is provided by the wider recognition of the work of the faculty and students.

Conclusion

In summary, the EAO represents the nineteenth century government response to the challenge of both popular education and the need to produce material goods. Although initially under an essentially artisanal direction, the response took on an industrial character in the twentieth century, helping to contribute to the development of the country—mainly in the formation of a large workforce that entered the productive sphere at various levels. This educational project in its early phase met with the prejudices of nineteenth-century elites, who looked down upon technical education geared toward practical purposes. However, in the early decades of the twentieth century, these difficulties began to subside, and the school became valued as an administrative platform for progress at the public and private level through second—and third—grade teaching (technicians and engineers, respectively). A number of former students arrived to various state enterprises at a high position, and others moved in entrepreneurial directions, following the technical-professional character that the institution embraced in the 1940s. Meanwhile, the popular direction that characterized the campus since its inception continued rooted in the first grade of trades. Also worth noting is the national character of the project that, in the words of its graduates, the “Mother School” represented, given that it was the reference institution for industrial education and related facilities throughout the country.²⁰

18 Pedro Álvarez Caselli (ed.), *Historia gráfica de la Propiedad Industrial en Chile* [Graphic History of Industrial Property in Chile] (Santiago: INAPI, 2010), 89–103.

19 Eduardo Castillo Espinoza, *La Escuela de Artes y Oficios EAO* [The School of Arts and Trades EAO] (Santiago: Ocho Libros Editores, 2014), 273.

20 Octavio Azócar Gauthier, “*La enseñanza industrial en relación con la economía nacional*” [Industrial Education in Relation to the National Economy] (Santiago: Editorial Jurídica de Chile, 1951).

The EAO, arising initially as an educational alternative for the “sons of honest and industrious artisans, saw the presence of the middle class in its ranks increase, and the background of its students diversified as a result. The institution saw a gradual increase in civic awareness among students and graduates, combined with a growing demand for social recognition of their work, which was seen in the aspirations of a professional basis for teaching. The development of this civic sense in successive generations of EAO graduates thus cemented the conviction that they were a community designed not only to “move the country” or to form a workforce, but also to play a role in the country’s construction and its future.