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National Pedagogical Museum – Pedagogium, a comercial showcase (Rio de Janeiro, Brasil / 1890-1919) [1]

Museu Pedagógico Nacional – Pedagogium, uma vitrine comercial (Rio de Janeiro, Brasil / 1890-1919)

Museo Pedagógico Nacional – Pedagogium, escaparate comercial (Rio de Janeiro, Brasil / 1890-1919)

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Abstract

The National Pedagogical Museum - *Pedagogium* was founded in 1890 and operated until 1919, in the city of Rio de Janeiro. Established by Decree nº 981, the role of the institution was to offer the public and teachers the means of professional instruction, the exhibition of the best methods and innovative teaching material, providing different types of training. We know a part of its history as a teacher training center, however, in addition, the history of pedagogical museums is closely linked to the World's Fairs, since they would be centers for the diffusion of educational technologies; frequently, pedagogical museums could be formed from what was presented in exhibitions. This publication aims to present various facets between the *Pedagogium* and its relations with world's fairs, commercials and museums, as well as to understand and analyze the constitution of the *Pedagogium* collection, taking into account its affinities with commerce and industry.

Keywords: Pedagogium. Museums. Universal exhibitions. School supplies culture.

[1] This article results from a PhD thesis entitled: *História do Museu Pedagógico Nacional: Pedagogium – um museu de grandes novidades (1890-1919)*, in the *Programa de Estudos Pós-graduados Educação: História, Política, Sociedade* at *PUC-SP* (Brazil). English version by Viviane Ramos. E-mail: vivianeramos@gmail.com

Resumo

O Museu Pedagógico Nacional – *Pedagogium* foi fundado em 1890 e funcionou até 1919, na cidade do Rio de Janeiro. Estabelecido pelo Decreto nº 981, era função da instituição oferecer ao público e aos professores os meios de instrução profissional, a exposição dos melhores métodos e material de ensino inovador, disponibilizando formações de diferentes tipos. Sabe-se de uma parcela da história dessa instituição como centro de formação de professores, porém, além disso, a história dos museus pedagógicos está intimamente ligada às Exposições Universais, já que eles seriam centros difusores de tecnologias educacionais; não raro, museus pedagógicos poderiam ser formados a partir do que era apresentado em exposições. Esta publicação tem por objetivo apresentar variadas facetas entre o *Pedagogium* e suas relações com feiras universais, comerciais e museus, bem como compreender e analisar a constituição do acervo do *Pedagogium*, levando em conta as suas afinidades com o comércio e a indústria.

Palavras-chave: Pedagogium. Museus. Exposições universais. Cultura material escolar.

Resumen

El Museo Pedagógico Nacional - Pedagogium fue fundado en 1890 y funcionó hasta 1919, en la ciudad de Río de Janeiro. Establecida por Decreto nº 981, era función de la institución ofrecer al público y docentes los medios de formación profesional, la exhibición de los mejores métodos y material didáctico innovador, brindando diferentes tipos de formación. Una parte de la historia de esta institución se conoce como centro de formación docente, sin embargo, además, la historia de los museos pedagógicos está estrechamente ligada a las Exposiciones Universales, ya que serían centros de difusión de tecnologías educativas; no pocas veces, los museos pedagógicos pueden formarse a partir de lo que se presenta en las exposiciones. Esta publicación tiene como objetivo presentar diversas facetas entre la Pedagogium y sus relaciones con ferias universales, comerciales y museos, así como comprender y analizar la constitución de la colección Pedagogium, teniendo en cuenta sus afinidades con el comercio y la industria.

Palabras-clave: Pedagogium. Museos. Exposiciones universales. Cultura de utiles escolares.

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The National Pedagogical Museum – *Pedagogium* was founded in 1890, in the city of Rio de Janeiro, by the law nº 667 and worked until 1919. According to the decree, the institution aimed to:

> Establish itself as a center to propel reforms and improvements needed to national education, offering teachers from public and private institutions the means for necessary professional training, the exhibition of the best methods and more advanced teaching material. (BRASIL, ART. 1º, 1890)

The decree established that the Museum should have: a good organization and a Pedagogical Museum permanent exhibition; conferences and scientific courses suitable to the ends of the institution; cabinets and laboratories of physical and natural sciences; contests; annual school exhibitions; guidance of a model primary school; establishment of a drawing class and manual labor workshops; organization of collections/models to a concrete scientific teaching in public schools; publication of a Pedagogical Magazine.

In 1890, the decree nº 981 from November 8, 1890, known as the Benjamin Constant Reform, approved the regulation of Primary and Secondary Instruction of the Federal Capital that, among other decision, ratified the creation of a body in charge of teacher training. This would be the National Pedagogical Museum, known as *Pedagogium.*

Studies on the institution reaffirmed the teachers' professional training character, highlighted in founding laws of the Pedagogical Museum. Kuhlman Jr. (2013, p. 32) states that the Pedagogical Museum, as an exhibition space of didactic materials to be used in the intuitive teaching, could be understood as a teacher training institution. Bastos (2013, p. 103) point out that these types of museum should be used by educators to provide information on teaching methods. According to Alves (2013, p. 51), teacher training in *Pedagogium* was important to enact the educational models in vogue.

According to the Dictionary of Pedagogy, organized by Buisson (1888, p.683), pedagogical or educational museums should include: a library with educational books, school legislation and administration, classic books, didactic material, and school furniture (Dictionnaire de Pédagogie et D'Instruction Primaire, 1ª parte, Tome Second, Paris, 1888). Pedagogical museums were created worldwide from the middle of the 19th century with a similar objective: gather objects and documents on pedagogical materials that circulated in big commercial fairs.

Many of those establishments were created from objects from the World Fairs. This means that these museums were formed by a technological collection, becoming great centers of pedagogical novelties (Gaspar da Silva and Souza, 2018).

The World Fairs were grand commercial fairs in which companies from different areas showed their most innovative products. According to Pesavento (1997, p. 13), these big novelty fairs were a stage for an universal exchange and exhibition of technologies.

Pesavento (1997, p. 191) highlights that these fairs organized goods to seduce the public, focusing on its characteristics of fetish, mystery, and magic. Thus, appearance was very important. In these fairs, the exhition aimed to enchant people, seduce them, and create a need to purchase.

According to Borges (2011, p. 151, 154), the general commissioner of the International Exposition of Paris in 1867, Frédérci Le Play, proposed turning the objects of the exhibition into Commercial Museums. In practice that meant that all the goods would continue to be exhibited in specific museums. In this sense, commercial museums were associated to greater exhibitions aiming to attract the public through publicity activities. The idea was to stimulate the public's interest to novelties, aiming to sell them,

broadening the circulation of interests among the maker, the exhibitor- thought as an intermediate- and the buyer.

Pedagogium, similarly to other pedagogical museums around the world, inherited the collection of the National School Museum, which, on its turn, was formed from the collection of the Pedagogical Exhibition of Rio de Janeiro in 1883.

During its working period, the National Pedagogical Museum increased its collection of pedagogical material, as well as organized and disseminated the exhibition of objects acquired by companies that produced and commercialized didactic materials.

The 1892 Annual Report written by Menezes Vieira, then the director of *Pedagogium* is extremely relevant as it gives us information on the type of objects in the collection of the institution, but, above all, indicated the commercial relation with the pedagogical industry behind the composition of this collection. The Education Yearbook of Rio de Janeiro 1895, which replicated Menezes Vieira's 1892 Annual Report, also shows pictures from the *Pedagogium*, allowing us to compare the written documents with the photos and know the type of visual organization used by the Museum. Catalogues from companies selling didactic material and commercial yearbooks tell us the trajectory and specialties of companies present in the Museum. All these documents are important for us to perceive which didactic material companies circulated at the time, the materials chosen to be part of the collection, and the relation between the *Pedagogium* and the pedagogical industry.

We will see that this commercial association of *Pedagogium* started when the collection began by receiving the objects from the Pedagogical Exhibition of Rio de Janeiro in 1883. Following a tendency at the time, the visualilty of the *Pedagogium* was close to the one of the great fairs, which can also be referred as a pedagogical commercial showcase.

This article aims to show a facet of the *Pedagogium* which, besides a center of teacher training, was a space closely associated with the commercial dissemination of didactic materials.

Pedagogical Exhibition of Rio de Janeiro in 1883, National School Museum, Foundation of *Pedagogium*

The Pedagogical Exhibition of Rio de Janeiro in 1883 resulted in the foundation of the National School Museum. According to the Maintaining Association of the School Museum registered in the Library Catalogue of the National School Museum, the Directing Commission of the Exhibition decided it was necessary to establish a National School Museum, as such event brought valuable assets from other countries (Marchi da Silva, 2015, p. 84).

The Library Catalogue of the National School Museum (1885), organized by Junior Lima Franco, ends the introduction text with a long description of the spaces in the institution:

> In the first grand hall, focused on reading, besides the many geographical maps and types of maps of Brazil, there are two valuable map cases from Belgium and many models of desks for teacher assistants, and desks used in the Imperial Quinta da Boa Vista School. In the second grand room, where the library was established (…) there are models of English, German, Belgian, and French furniture for elementary and high schools, collections of architectural drawings of schools and writing and drawing methods, from different authors. In the third room (…) a variety of Earth and celestial globes, from different authors and origins, planispheres, devices to study physics, chemistry, drawing, metric system, and the intuitive method, two important topographic maps, one

> representing Belgian and the other France, arithmometers from different authors, minerals, photos and prints, reproducing some of the main Brazilian and foreign schools, history facts, an extremely rich cartographic collection, maybe the most complete amongst us, blackboards, fixed and mobile ones, some furniture items […] In a room there is a Hachette-system furniture for kindergarten, compendium boxes of the English system, maps of anatomy, physiology, physics, natural history, applied mechanics, reading, geography, music, arithmetic counters, small museums for the lessons of things, complete collections for kindergarten, among which little boxes with the well-known Froebel gifts, devices for taxidermy needles done by the normal school of Namur. (Franco, 1885, p.11 and 12)

In this description, we can see a great variety of objects from different countries. The intention was for visitors to get in contact with the greatest number of materials from several origins in order to compare them. Besides this, this organization allows knowing a bit on the production and specialization of foreign didactic material companies.

Many documents report that *Pedagogium* was composed by the transfer of assets from the Exhibition and from the dismantlement of the National School Museum. The *Revista Pedagógica* (Pedagogical Magazine) nº 3, December15, 1890, shows in its section *Crônicas do Interior* (Chronicles from the Inside) that the intention of *Pedagogium* is to keep the objectives of the Funding Association of the School Museum, which already had the assets to do so.

Braghini (2011, p. 27), when analyzing the catalogue of the Exhibition, identifies the type of material presented in the event and some of the exhibiting companies. These objectives were possibly transported to *Pedagogium*:

> Some international attendees also showed their scientific material in different sections, as was the case of the United States (room nº 7 – section nº 1); Germany (section nº 7) with the presentation of the manufacturer Paulsen Steft with anatomic models of all sorts and teaching tools for Physics- Chemistry. England was present with the following companies (room nº 11 – section nº 1): James Reynolds & Sons, producers of scientific material; S. Hensen, with Mineralogy items; Newton & Comp. with optic devices, telescopes, microscopes, optic cameras, and "glasses and slides for them"; A. N. Myers Comp., with fossil cabinets, British fossils, boxes with different minerals, etc. (Braghini, 2011, p. 27)

Therefore, we see a list of didactic materials makers, in this case, scientific materials, showing the diversity of countries, sections, and objects exhibited for showcase, circulation, appreciation of the public, as well as for purchase; many of these materials became part of *Pedagogium'*s collection. We can see that, as in other pedagogic museum, the *Pedagogium* had, in its initial collection, objects that were part of a local exhibition focused on new teaching objects. Throughout the years, the initial commercial character deepened, especially by the similarities of this type of exhibitions with those used in great commercial fairs and acquisition of objects, which were often sent by the didactic material companies.

The organization of the *Pedagogium* collection: a commercial showcase

The edition n. 18 of August 15, 1892 of *Revista Pedagógica*[2] published a thorough report on the Museum written by Menezes Vieira, the then director of the Institution. In the report, he informs the activities of the institution between May 15, 1891, to April 30, 1892. Menezes Vieira starts the report explaining how he organized the space:

> On the ground floor, I organized a permanent exhibition of foreign and national school material: models of benches, desks, desks for teacher, teacher assistants, and students; platforms, blackboards, counters, arithmometers, hangers, washbasins, compendiums of the decimal metric system, pictures with images and blueprints of schools. A superficial inspection reveals the importance that Europeans and American countries had with part of the school organization. Each of the objects shown proves and explains the progress that we much admire in the United States, in Argentina, in France, in Belgium, in Germany, and in Italy. In the many models of furniture, we can simultaneously see the strict respect to key precepts of hygiene and the wish for an intelligent adaptation. The photos, the blueprints of school buildings showing the area, the number of students, and value of buildings eloquently prove that school buildings are, nowadays, the real monuments of the civilization of a people. If Brazilian visitors focus on these pictures, they will recognize that all the reforms should start by constructing these buildings (Revista Pedagógica n.18, Tomo 3, 1892, p.324-5)

In this excerpt of the report, the director starts by narrating some exhibition spaces, allowing the reader to make a mental pathway of a tour in the museum. When entering the *Pedagogium,* visitors would first see an exhibition of national and foreign school furniture, allowing then a comparison between the objects from different places. Besides the furniture, the visitor could appreciate photos and blueprints of various school buildings. After, the report makes a long description of the Natural History section of the Museum:

> The Natural History section is located in the front room and a cabinet in the first floor. The meticulously classified collections are kept in glass cabinets, encompassing what seems to be necessary for the education of an elementary-school teacher. There are: an articulated human skeleton, a complete clastic man (*l'écorché*), with the entrails in rubber; an adult heart, a human larynx, a human eye (a clastic piece), three pictures of human ovology (17 augmented pieces), three human pelvises with reproduction organs (made in wax and rubber), the trunk of a man (natural size, dissected to show mainly the pneumogastric organs), thirteen brains of the main vertebrate groups (facsimile in wax), thirteen types of nervous systems of the main subdivisions of the animal kingdom, six pieces of the circulatory system, 35 types of stuffed mammals or skeletons, 54 types of birds, 17 reptiles and batrachians, 36 fishes, 434 insects, crustaceous, mollusks, and worms, three pictures: metamorphosis of fishes, birds, and batrachians; three clastic pieces: anatomy of the silk worms, of the snail, and the bee; three

[2] According to Gondra (1997 p. 35), *Revista Pedagógica* was the first periodical edited by the government during the Republic, specialized in educational issues with a broad national and international circulation. It lasted six years, the first edition was on November 15, 1890 and the last on June 15, 1896.

> complete herbariums, 13 anatomic pieces of flowers, 10 models of fruit-trees grafts; 100 samples of Brazilian wood, rocks, fossils, minerals, and crystalized forms in wood. Attached to the cabinet of the Natural History, there is a small complete laboratory of micrographia. All this material was provided to the *Pedagogium* by the well-known naturalist Mr. Emile Deyrolle, highlighting the collection on the types of fauna and flora in Brazil. I believe that the teacher-student will continue to seize learning by visiting this section and consulting its catalogue, aiming to reach the end expected by the *Pedagogium*. (Revista Pedagógica n.18, Tomo 3, 1892, p.325-6).

All the immense collection of Natural History objects occupies two spaces of the Museum, a room on the ground floor and on the first floor, it was provided by the commercial company from the naturalist Emile Deyrolle, as pointed out by the report. The document also informs that, in the end of the tour, the teacher could consult the pieces in their respective catalogues. This means that the donation of the naturalist to *Pedagogium* was an efficient way to promote the selling of his school products to teachers and other interested people, and thus a great display of the French company Deyrolle[3].

The Education Yearbook of Rio de Janeiro in 1895 published a photo with part of the section of the Natural History of *Pedagogium*:

Figure 1: Natural History Cabinet of *Pedagogium*

Source: Education Yearbook of Rio de Janeiro, 1895.

[3] *Deyrolle Nature Art Education*, is a company that still exists. It was created in 1831 by Jean-Baptiste Deyrolle and later run by his son Achille; it was initially focused on the selling of insects and hunting equipment for natural history collections, they also developed taxidermy activities. In 1866, Émile Deyrolle becomes the director of the company created by his grandfather; he continues the taxidermy activities and developed the selling of equipment for hunting and to collect insects, plus the selling of specialized works in flora and fauna. Since 1871, the company started to invest in the educational area, also commercializing all types of didactic material for class, school furniture, anatomic models, physics tools, photographic glass plates, biology items, and parietal pictures. In 1888, Émile Deyrolle set his office and stores at 46 rue du Bac, from then the company expands to the educational area by selling scientific material. Deyrolle reached more than 120 countries. In 2001, the company was bought by Louis Albert de Broglie who reinforced the educational character by re-editing and selling old plates and reconstructing collections. Taxidermy animals are still sold, however they are no longer from hunting, but brought by zoos after the animals dies for old age or a disease. All information about the company was retrieved from its site: https://www.deyrolle.com/histoire/historique-de-la-maison-deyrolle/naissance-la-famille-deyrolle.

The photo was published in a document from 1892, when the museum was still in its first address on Visconde do Rio Branco Street. Therefore, the photo is from the same time of Menezes Vieira's report. Comparing it with the description on the report, we can see that the photo shows only a part of the collection.

Paying closer attention, we can identify three glass display cabinets and shelves in the right corner. The class cabinet, in the left corner, has a parietal image with an illustration of a turtle on its superior central part. There are three shelves, full of objects. On the first, from top to bottom, there are stuffed birds; on the next, we can identify a large number of objects, amongst which stuffed birds; on the last shelf of this cabinet, there are objects set on wooden bases that can be hung on the wall. Between the two displays, there is life-size human skeleton hanging by a wire from the ceiling.

In the other cabinet, beside the skeleton, on the top part of the cabinet, we can see two assembled skeletons of animals. It also displays a parietal picture on its superior central part portraying a bird. We can also see three shelves. On the top one, there are assembled skeletons and different types of stuffed monkeys, on the right corner, we see a small parietal picture representing a bird; in the shelf bellow we see other unidentifiable stuffed animals; finally, there are stuffed pieces and animal skulls.

On the right side of this cabinet, there is another display cabinet, with the piece described in the documents as "complete clastic man with entrails". We can see that this piece takes the whole cabinet and, similar to the skeleton, is in life-size.

Finally, on the right corner, we see shelves on the wall in which we can identify three objects mentioned in the documents, two clastic pieces: the bee in the first shelf from top to bottom; a silk worm, a piece in a wooden base that could be hung on a wall, and a snail.

Besides the typology of the objects, the visual organization used to compose the space is highlighted. The objects follow a certain order of category and animals from the same classification are grouped in the shelves. According to Barbuy (1999), this type of visual was known as exhibition-instruction. This visual composition was common in the 19th century and was connected to a way to organize the objects, as a way to teach through the visual aspect, called "teaching strategies through vision" (Barbuy, 1999, p. 58).

Here we must also highlight the visual influence of the World Fairs in the organization of Pedagogium's Natural History Cabinet. This format of cabinets completely filled with objects, to the point that it is difficult to identify them at first, is a characteristic of the great fairs, whose supports and displays were fully occupied by objects, transforming the assemble into a great object of exhibition (Barbuy, 1999, p. 62). Menezes Viera's report continues by describing the Physics cabinet:

> The physics cabinet occupies a room and an alcove in the first floor and has the necessary pieces for an experimental course. In eight glass cabinets, there are instruments and devices, classified and meticulously kept, to teach notions of mechanics, gravitation, hydrostatics, heat, electricity, magnetism, acoustic, and optics. These objects were made by Mr. Ch. Noé and Mr. A. Picart, suppliers for normal schools and high schools in France. The pneumatic machine, the Carré machine, the Rhumkorff coil, the

> models of locomotive and a steamboat, the precision scales, the thermometers, the barometers, hygrometers, a phonograph, a microphone, etc., show the undeniable superiority of French industry. When acquiring physics instruments one should prefer more conscientious makers, because it is not rare to be fooled by appearance and seduced by the low prices. Fortunately, the opinion of an expert, respectful and respected by science and practice, can be reassuring. I am talking about Dr. Martins Teixeira, who, honoring *Pedagogium* with his visit, was kind enough to congratulate me for the organization of the physics cabinet. In this section, I think it would be convenient to include the material necessary for the works on electroplating, as knowing it nowadays is very relevant due to its various industrial uses. (Revista Pedagógica n.18, Tomo 3, 1892, p. 326-7)

According to the report, the Physics Cabinet was no less important than the Natural Sciences one. On the contrary, as shown by Menezes Vieira, it was composed by materials he considered to be of the highest quality and produced by French companies, which he actually names, that is, he publicizes which were the best companies from which teachers and others could purchase the same objects exhibited in the Museum. We also see that this space had the necessary objects to give an experimental course. This meant that the objects gathered could not only be exhibited, but also used in demonstrations.

According to the Laboratorium Begara[4], the house Ch. Noé was founded by Charles-François Noé, in 1862, as a company to produce scientific instruments. It remained open until 1930. It received a gold medal in the Universal Exposition in Paris 1889 and, since then, increased the production of scientific material for teaching and experiences, specializing in scientific electrostatic and electromagnetic tools, and devices to produce X-ray.

According to the *Annuiare-almanach du commerce, de l'industrie, de la magistrature et de l'administration* of 1901, the company A. Picart[5] produced instruments for science, optics, polarization, illumination, projection, solar and electric microscopes, oxydric light, different types of spectroscopes. It received a silver medal in the Melbourne Centennial Exhibition in 1888 in Australia, another gold and two silvers in the Universal Exposition in Paris 1889, and two awards in the Brussels International Exposition in 1897. The Education Yearbook of Rio de Janeiro also published a photo of the Physics Cabinet:

[4] In the late 1870s, the company grew and was divided into two branches, one at 8 rue Amyot and a workshop at 9 rue Laromiguière establishing itself as a produce of precision instruments. Acc: https://www.laboratorium.eus/es/ekoizle/ch-noe-constructeur-dinstruments-de-precision. Accessed on July 17, 2020.

[5] The company was found by Alexandre August Picart and worked from 1875 eto 1907, initially known as A.Picart Optic Instruments, it was located at 20 rue Mayet, the documents on it can also be found under the name Picart et Fils. Cf. http://microscopist.net/PicartA.html. Accessed on July 17, 2020.

Figure 2: *Pedagogium*'s Physics Cabinet

Source: Education Yearbook of Rio de Janeiro, 1895.

Similar to the photo of the Natural History Cabinet, the image of the Physics Cabinet presents only part of the space. We can see two parietal pictures hanging from the wall representing physics objects and the photo of an undefined man. Under those pictures, we see some objects on the wall, it is possible to identify a violin and its bow. In the space portrayed, we do not see the glass cabinets mentioned in the documents, but some tables with many objects. On the floor, we can see bigger objects, among them, in the center, the Carré machine and, on the right corner, a model of a pneumatic machine.

The presentation of the cabinet matches what was announced by Barbuy (1999), when saying that technology was highly valued in the world fairs, and that technological demonstrations worked as pedagogical resources focused on visual aspects (Barbuy, 1999, p. 71). We understand that the visual organization used to compose the Physics Cabinet follows the visual aspect of the big fairs, especially when highlighting pieces considered to be important acquisitions, i.e., that add value to the collection, in this case, the Carré machine in the center of the photo.

Menezes Vieira's report also informs the material he acquired, as he considered these objects represented the modernity of teaching:

> Aware of the usefulness of teaching through light projections, so fruitfully used in courses and popular conferences in London, Paris, Havre, Madrid, S. Petersburg, I have purchased the most modern and complete material available by A. Picart House. Thus, *Pedagogium* will be able to hold very important sessions, similar to those held by an association in this capital, the frustrated *Clube Politécnico*. The teaching through projects, used in 1883 in the schools of Havre, has been rapidly disseminated, not only amidst the French departments, but also in Belgium, Switzerland, Austria, Russia, England, Spain, and United States of America. The magic lantern is no longer a toy, a useless pastime; it has become a true instrument of education, reaching undeniable results in the teaching of world history, geography, astronomy, geology, natural sciences, and even chemistry. (Revista Pedagógica n.18, Tomo 3, 1892 p. 327)

Once more, the acquisition of materials made by the director was done based on teaching abroad, mainly Europe. The collection on light projection was, once more, produced by a French company, the well-known A. Picart. The description of the museum can almost be seen as an advertisement for didactic companies. The following space described by the Menezes Vieira's report was the Chemistry laboratory:

> The Chemistry laboratory is located in the back of the ground floor and has not only a complete set of materials for experimental lessons, but also a series of laboratories for individual manipulations, according to the plan of Mr. Boudreaux, teacher of the Polytechnic and Normal School in Fontenay aux Roses. I believe I have done some service to scholars, making known the excellent laboratories of this notable teacher. The idea that presided the establishment of these laboratories, according to him, was to make the art of the chemist accessible to all purses, solving, at the same time, to teachers and school youth, the problem of disseminating a science that opens doors to several professions. In fact, the small laboratories of Mr. Boudreaux allow the memorization of the statements in the compendium through the individual experience. With a small amount of matter, some test tubes, small bulbs, a Bulsen burner, and a lamp, we avoid a great cluttering and expensive set of ovens and retorts, reaching the ideal scenario: - that each student can have a laboratory as one has a library (Revista Pedagógica n.18, Tomo 3, 1892, p. 328)

Pedagogium's Chemistry laboratory, according to the description was exclusively assembled for practical use. Besides this, the material that composed the space was also imported from France. Organized by Mr. Boudréaux, the Chemistry laboratory acquired by the museum was divided into eight sets of objects from different areas of chemistry education: material for elementary school; chemical products; products and glassware for simple experiments; material for experiences on metalloids and metals; materials for experiments in organic chemistry; materials for courses in special mathematics; materials for experiences with lighting gas.

Pedagogium had six Boudreaux laboratories, with a series of eight objects each, ready to be used. The people interested in using this material had to send a declaration to the museum direction to have free access to the laboratory (Revista Pedagógica n.28, 29 e 30, Tomo 5, 1893, p. 212). After, the repost describes the reading room:

> The reading room, well-lit and airy, is on the first floor. Visitors can find a good writing desk, comfortable chairs, paper, quill, ink, and a selected array of foreign and national journals on pedagogical themes, as well as a big Larousse encyclopedic dictionary, the great French encyclopedia, the universal geography of Réclus, a library on contemporary sciences, school documents, illustrated albums, workbooks of students from French, Belgian, and Italian schools, etc.. These materials have been used by some teachers during the school year of 1891 and this last vacation period. (Revista Pedagógica n.18, Tomo 3, 1892, p. 328-9)

In the excerpt of the report, it is interesting to notice that Menezes Viera highlights what visitors could consult in this space: several foreign an national journals, French dictionaries, a contemporary library with documents from different countries. In this sense, the museum reinforces the encyclopedic type of knowledge and the comparison of objects, similarly to the great fairs.

In the report, there is also a long description the so-called Froebel section. In this room, the conditions were not the best, contrary to the previous ones:

> The Froebel section was poorly organized; it is in an alcove on the first floor and receives little light. The material created by the great educator and the several aiding tools created by his followers are disposed in three shelves and on the walls. By studying this section, the visitor will see the influence of the Froebelian system, based on the great principles of guiding human education. The gifts, the toys exhibited there, represent for the educator a gradual, rational and harmonic series of instruments to perfect humanity. In this little alcove, one can feel the spirit that enlivens modern education: each object reveals the caring and loving soul of Froebel. In an adjoining room, there are the technological collections of school museums of Saffray, Emile Deyrolle, Paravia, to be used as models for the museums that our teachers might intend to create with their students in their respective school. They work as models because the great merit of these collections is that they were made by the students and teachers, showing the initiative, the care, and the interest of their organization. We understand that this requires a lot of good will, love to the profession; however, it is not an unfeasible work. We have the proof of this in France; where in 1889 there were 13 thousand school museums, stressing that, since1878 around one thousand two hundred were created annually. (Revista Pedagógica n.18, Tomo 3, 1892, p.329-30).

Besides the Fröebel collection, the excerpt also points out the existence of models of school museums from the French companies Deyrolle and Saffray, and the Italian Paravia. In the excerpt, Menezes Vieira emphasizes the importance of teachers and students to create school museums in their respective schools, using as a model France, where, according to him 13,000 school museums were created.

Saffray school museums were organized by Dr. Charles Saffray (1833-1890), physician, botanist, and professor of physiology[6]. The professor organized models of school museums that could be purchased in stores selling didactic material.

Mirella D'Ascenzo (2018, p. 944) identified that a collection signed by French professor, the "Saffray Collection Natural Sciences Industries" was composed of 10 boxes within an oak cabinet that could be bought complete or sold separately by theme: animal kingdom, with 203 objects organized into two boxes; vegetable kingdom, with 439 objects divided into 4 boxes; and sensorial gymnastics, with 144 objects in a box; a manual followed the material.

The Italian company Paravia[7] was a big publishing company with branches in Milan, Florence, and Rome. It specialized in schoolbooks on grammar, anthologies, arithmetic, geometry, scientific texts, and drawing manuals (Bianchini, 2008, p. 2)

[6] Acc. https://data.bnf.fr/15287949/charles_saffray/. Accessed July 17, 2020.

[7] According to the information of Museo Torino, the company was created in 1802 when Giovanni Batista Paravia (1765-1826) assumed the typography Avondo, focusing on religious and scholastic texts. According to Bianchini (2008,

According to Bianchini (2008, p. 2), after the unification of Italia, the Paravia House controlled the national market in the elementary and secondary schools, broadening the diversity of materials by producing alphabets, abacuses, natural history mural and, mainly, geography maps and globes. Besides the physics, chemistry, and natural history collections, *Pedagogium* had a space for geographical material:

> The geographical material is placed in the cabinet close to the conference hall. It has a precious collection of Earth and celestial globes from Ch. Smith, Jouvet, Baker & Pratt, Ch. Vetter, Dieu, Delagrave, Paravia, etc., and the cosmographer Mouret, Newton's planetary, and a great number of atlas and maps, amongst which a series on the old Brazilian provinces, a work from the students of the cartography course in the school Menezes Vieira, several map cases from Belgium and France. This section offers useful methodological indications. The works of Sluys, Dufief, Genoneeaux, Vidal Lablache, Levasseur, Schrader, Nioux, Monteith, Swinton, Guyot, etc., will help us to abandon the somniferous litany-compendiums, which are unfortunately, used in our schools. (Revista Pedagógica, Tomo 3, p.331-2).

The different types of specialized suppliers indicate the size of the didactic market producing such objects. By the end of the description, Menezes highlights the importance of the collection, affirming that this is better than what he consider to be "litany-compendiums", that is, the geographic collection of the Museum would be, in his opinion, more modern for schools.

Among the suppliers of geographical material, there is the Londoner company Ch. Smith & Son[8]. Charles Smith was a producer and seller of maps and globes in London around 1800. Between 1827 and 1852, the selling of this type of material was done through the company Charles Smith & Son, from 1853 on, managed by William Smith, the company was named Smith & Sons. From that moment, they started to produce a great number of maps, globes, atlas, all characterized by clear, refined, and colorful pictures.

The American Baker Pratt & Comp. also provided part of the Museum's geographical material. Headquartered in New York, the company sold tables, chairs, globes, erasers, book cabinets, stationary material, pens, pencils, book covers, bells, clocks, gymnastic material, ink, among others. (Catálogo Ilustrado Baker Pratt & Comp., 1879)

The description on the Earth globes produced by the house tells us that they were sold in many styles, including library goals and globes for geometry teaching. All of them had the following advantages: portrayed the last political changes and the main topographic characteristics; natural contours and political division; ocean currents; they were made on papier-mâché and covered by a product that could not easily break; they were waterproof and could be cleaned with a damp cloth or sponge (Catálogo ilustrado Baker Pratt & Comp., 1879, p. 48)

p.2), the activities of the company continued with the management of the founder's son, Giorgio Paravia, when the company increased its space in the school market. From 1850 on, after Giordio's death and under the management of Innocenzo Vigliardi, who was until then an assistant typographer specialist at the store, the company becomes G.B.Paravia. acc. http://www.museotorino.it/view/s/ 711631f47c004a09b5d48afdb2459324. Accessed on July 16, 2020.

[8] Acc. https://www.abebooks.com/SMITH%C2%92S-TERRESTRIAL-GLOBE-Containing-Recent-Discoveries/4857542387/bd. Accessed on July 16, 2020.

The French company Delagrave was founded in 1865 by Charles Delagrave[9]. The house specialized in the selling of scientific and educational material, mainly, schoolbooks. According to the report of the Louisiana Purchase Exposition in 1904, Delagrave bookstore expanded the scope of its publications, so that its catalogue had more than 5, 000 volumes signed by famous people in education, published an average of 150 volumes, and had more than a million copies circulating. Their books were in almost all French schools. The document also stated that the Delagrave House had a department of school materials, produced in large scale by the company, making since small objects p to school tables and desks (Ministère du Commerce, de l'industrie, des postes et des telégraphes. Exposition internationale de Saint-Louis (USA), 1904, p. 61)

According to the 1886 sales catalogue, Delagrave sold 11 types of Earth and celestial globes: *levasseur; perigot et moureux; larochette et bonnefont; parquet; celeste Simon; terrestre scolaire perigot; elementaire larochette et bonnefont; miniature globes ardoises; montes cosmographique Hernard*. (Catalogue special, Mobilier, Materiel Scolaires et acessoires de classes, Librairie Delagrave, 1886)

The following description regards the Manual Works room that, according to the report, represented a miniature of a carpenter's workshop:

> The Manual Works room represents a miniature of a carpenter's workshop, as those attached to French schools. The material was demanded to the establishment of Aux Forges de Vulcain, supplier of French schools. A series of models of Nass school and another from the Tournefort Street show the guidelines of the pedagogical and economical systems, applied to the teaching of manual works. Besides these items, there is a splendorous collection of works in wood and iron, created by the students of Rodrigues Sampaio School, attached to the Pedagogical Museum of Lisbon, and offered to this Pedagogium, through the demand of Professor Luiz Augusto dos Reis. (Revista Pedagógica, n.18, Tomo 3, p. 332-3)

We can see that the objective of this space was to provide a standard model for schools to follow, offering manual works room in their spaces. The collection of carpentry objects in *Pedagogium'*s manual works room was acquired from the French company Aux Forges de Vulcain.

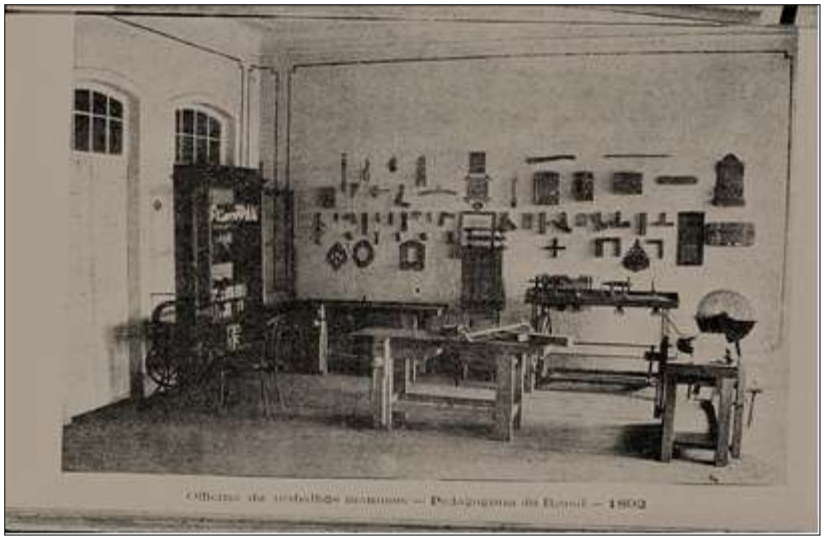
According to the French Commercial Yearbook, the company, founded in 1807, specialized in the selling of: hardware, steel, files, copper, iron, steel, and brass wires, whetstones, and different types of scissors, tools for arts and factories, towers and accessories for professional and amateur workshops, production of carpentry tools, and mechanical saws (Annuiare-almanach du commerce, de l'industrie, de la magistrature et de l'administration de 1901, p. 2408)

Analyzing the company's catalogue, we can see that Emile Chouanard was the manager-engineer and Henry Bres-Chouanard was the general director of Aux Forges de Vulcain, also known as a French corporation, the company's products could be purchased in magazines in four French cities: Paris, Lyon, Bordeaux, and Lille. (Catálogo Aux Forges de Vulcain, 1923)

The Education Yearbook of Rio de Janeiro published a photo of the space described by the director of the Museum:

[9] The company was sold in 1995 Flammarion and latter to Abin Michel in 2010. Information on this company can be found under the following names: Delagrave, Ch Delagrave et Cie, Delagrave & Cie, Charles Delagrave, Editions Delagrave, Librairie Delagrave. Acc. https://www.britishmuseum.org/collection/term/BIOG199625. Accessed July 15, 2020).

Figure 3: *Pedagogium*'s Manual Works room



Source: Education Yearbook of Rio de Janeiro, 1895.

We can see by the image that, indeed, the space looks like a workshop by the objects hanging on the wall, which could be easily found in the case of need and the many tools throughout the space.

We can also see, in the left side of the photo, a cabinet with several objects, which may be the collection of wood and iron objects produced by the students by the Rodrigues Sampaio School, attached to the Pedagogical Museum of Lisbon. (Annuário do Ensino 1895, p. 470).

This type of exhibition mainly offers a model of school organization; thus, visitors can have an idea on how to reproduce this space in their own schools, even the same objects.

The third floor of the building hosted a permanent school exhibition, according to Menezes Vieira:

> On the third floor, there is the permanent school exhibition of national and foreign authors and publishers. Nowadays, there are objects sent to *Pedagogium* by the *Syndicat français du materiel d'enseignement* (Paris), and the American Book Company (New York). Analyzing the geographical atlases, the schoolbooks, and, mainly, the American readers, visitors can notice how late we are in this subject (Revista Pedagógica n.18, Tomo 3, p. 334)

The social headquarter of *Syndicat français du materiel d'enseignement* was on Saint-Benois Street in Paris, and was represented in Rio de Janeiro by Charles Vautelet and Etienne Collet. (Alcântara, 2014, p. 155)

According to Almanak Laemmert Administrative, Mercantille and Industrial of Rio de Janeiro (1893, p. 1893), among the companies represented by *Syndicat Français du materiel d'enseignement* were Deyrolle, Delagrave, Noé, and Picart. We can see that most of them are mentioned in Menezes Vieira's report. On that, we should highlight a part of the report. The director of the museum mentions that the objects were sent by foreign representatives; that means that the teacher, when visiting *Pedagogium*, could get in contact with the sales representatives of the objects exhibited in the Museum.

The American Book Company[10] (ABC) was an educational publishing house that published schoolbooks for elementary and high school. The company was founded in 1890, from the merge of the companies Van Antwerp, Bragg and Co, As Barnes and Co, D. Appleton and Co, Iveson, Blakeman and Co. It worked for over 70 years in partnership with the United States public school system and other educational institutions, publishing books on accounting, agriculture, art, and civic education. In the 1960s and 1970s, the brand was purchased by Litton Industries and later by the International Thomson Organization, in 1981 it was bought by DC Heath and Company. Finally, Menezes Vieira talks about the transition spaces, the Museum hallways:

> All the internal walls of the building, staircases, rooms, and hallways are covered by pictures for the education of the eyes. Prints from Emilie Deyrolle, Paravia, Armengaud, Reynold, Appleton, Pape Carpantier, Callawert, Johnson etc., are here to show that in France, Italy, Belgium, England, etc., this type of dissemination is widely employed. Geography, universal and national history, the industrial processes, natural history taught in this way become engrained in children's spirits, the words of the teacher are, in a way, stereotyped by the memory of the sight. (Revista Pedagógica, n.18 Tomo 3, p. 334)

Armengaud's parietal pictures were authored by the engineer and former student of the school of arts and manufacture of France and were edited and commercialized by the company Delagrave. Armengaud produced a collection called "Pictures of school education and decorative paintings". The collection was composed by: a collection of housing with 7 big pictures and 11 simple pictures, a collection on agriculture and industry, and on natural history and on the lesson of things (Catálago de Venda Delagrave, 1898, p.55)

The Delagrave House also edited and commercialized parietal pictures of the French teacher Marie Pape Carpantier. According to D'Ascenzo and Vignoli (2008, p. 16), Carpantier was one of the people responsible for disseminating the intuitive method in Europe, sharing her working practices in kindergarten classes, showing how education could be more productive when starting from the concrete reality.

Final remarks

The 1892 report on the *Pedagogium* de 1892, published at *Revista Pedagógica* and the 1895 Education Yearbook written by Menezes Vieira, allowed us to know better the spaces of the Museum. We can see that the building should be quite large to receive the objects and visitors; we also identified the collections of the museums through the detailed explanation: we can identify the types of objects, amounts, and visual organization; finally, it is possible to identify the companies that supplied didactic material to the Museum, including sales representatives, shedding light to a partnership between the Museum and the didactic market of the time.

Through a careful analysis of the document written by Menezes Vieira, it is possible to confirm *Pedagogium'*s role as a space to disseminate the objects and the commercial houses that produced didactic materials.

The director's report emphasizes how the spaces were thought to fulfill the role of teacher training. This is clear on the visual aspect of the museum, organized by the

[10] Acc. https://library.syr.edu/digital/guides/a/amer_book_co.htm. Accessed July 21, 2020.

classifications and typologies of teaching, through which visitors could learn through the careful observation of the exhibition.

Besides this, the teacher could use these spaces for teaching practices, as is the case of the Chemistry and Physics laboratories, and the manual works room. This means teachers could give their classes in *Pedagogium*'s laboratories, in case these spaces were not available in their schools.

Finally, all the collection and organization of the exhibitions and laboratories had the key aim to serve as a model to be followed by schools, i.e., the museum was a space to disseminate school models and practices.

As *Pedagogium* was a space of training, circulation, and dissemination of educational technology, Menezes Vieira's report presents us a different facet of the Museum, connected to its role as commercial advertisement, that is, a space where teachers were trained, but also could get into contact with companies and didactic materials from different parts of the world.

We saw that the "commercial visualilty" inherited from the great fairs was present mainly in the Natural History cabinet, where objects were all displayed in glass cabinets, in the Physics Cabinet, that gave central stage to value-adding objects acquired from renowned commercial houses.

We also highlight that the 1892 Annual Report released not only the activities and collection of the museum, but also the companies of didactic material. It is clear the promotion, the incentive, and the interest of the Museum's director when referring to the companies. All the reported spaces are presented by pointing out the origin of the objects, where they were acquired. Here we can highlight another point; the museum did not always purchase the objects, as was the case of the Natural History collection, the report indicates that all objects were sent by the French company Deyrolle. This means that the companies of didactic material understood pedagogical museums as a potential pedagogical showcase.

The use of pedagogical museums as commercial showcase, as is the case of *Pedagogium*, is reinforced by the fact that one of the rooms of the museum was reserved for sales representatives. We do not know if teachers could purchase the objects there, but, by the end of the tour, visiting teachers would get into contact with the companies, catalogues, and sales representatives in Brazil. Thus, visiting teachers would visit the spaces, have the information of the market origin of those objects, could be used the material in their practice within *Pedagogium* and, in the end of the tour, if interested, they could contact the sales representatives from the Houses.

We can see that teacher training in *Pedagogium* was directly associated to the commercial dissemination of didactic material, what makes us understand that teaching practices and didactic industry walked hand in hand at this time.

Didactic companies, which were previously presented in the 1883 Pedagogical Exposition of Rio de Janeiro, could permanently exhibit their educational technologies after the creation of *Pedagogium*. In this sense, the National Pedagogical Museum replicated the actions of the great fairs, becoming a space that gathered people, knowledge, and objects from around the world.

Therefore, the National Pedagogical Museum– *Pedagogium* was a transnational space of circulation of people, knowledge, school practices, and didactic material. A museum of progress, modernity, and pedagogical innovation. A museum of great novelties.

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