Digital Library of the Artistic Production of ECA/USP

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Abstract:

The Digital Library of Artistic Production of the School of Communications and Arts of the University of São Paulo will gather images of the artistic works created by the artists of the School presented as dissertations and theses.

The dissemination of this production is a request from the researcher users of the collection. The search for solutions for the development of the Digital Library included: choice of the software; analysis of international metadata standards for the description of works of art; study of protocols for use of images.

As results, the chosen tools and the characteristics of the developed prototype are presented: software Omeka for content management; VRA core metadata standard and Cataloging Cultural Objects for image description; adopting the International Image Interoperability Framework (IIIF). Conclusion: the creation of the Digital Library of Artistic Production will

value the institutional artistic production, democratize access and to increase the visibility of works by ECA's young artists.

1 Introduction: Artistic Production and image Collection

The School of Communications and Arts (ECA) was created in 1966 in the University of São Paulo (USP), one of the, if not the most important Brazilian university, founded in 1934, a public university and sponsored by the State. USP participates in more than 2% of researches made in Brazil (Escobar, 2019?). ECA/USP offers graduation courses in Performing Arts, Visual Art, Librarianship and Documentation, Editing, Journalism, Publicity and Advertising, Public Relations, Audiovisual Production, Media Communication and Music, and Post-graduation in Performing Arts, Visual Arts, Information Science, Communication Sciences, Audiovisual Media and Processes, and Music.

The ECA Library, officially created in 1970, reflects in its collection the School's diversity and those of the researches produced, with film, video collections, fixed images, scores, sound recordings, artists' books, comic books, etc. An important part of the collection is comprised of academic works created during graduation and post-graduation programs in Visual Arts of the School of Communications and Arts, which accept dissertations, theses, or works of course conclusion, in the form of practical works of artistic character. ECA/USP post-graduation courses, created in 1974 (master's) and 1980 (doctorate) were the first in Brazil offering its students such possibility. Zamboni (2006), in his thesis, defended in 1991, identified that ECA, until then, was the sole Brazilian educational institution owning a significant collection of theses already defended in visual languages, that is, practical works created by artists, accompanied by texts on the work.

Most of those works were created in the Visual Poetic concentration area, "privileging the forms of operating, as regards the work of art's project and process" (PRADO, 2009). This way, artists may submit engravings, drawings, sculptures, objects, photographs, films, music, artists' books, etc. to the commission's appreciation.

Besides original works of art, the artists' theses and dissertations are also presented in the form of photographic books or catalogs documenting the author's works, accompanied by texts of reflection on the work itself. Other works, although their content is an eminently academic text, stand out for the presentation and special and aesthetically relevant graphic work. For Claudio Mubarac, artist and professor in Visual Arts courses, these works "demonstrate that the visible is not limited to the legible and that visuality is a particular form of articulating our experience to the world, thus contributing for us better analyzing the different kinds of discourse, reasoning, and sensibility".[1]

All theses and dissertations defended in its post-graduation programs must be filed with the institution's libraries, according to the University's rules. Works of course conclusion, even though filing is not mandatory, are also sent to the Library, provided that they reach minimum

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[1] Extracted from text **Trabalhos de arte**, published in the ECA Library blog, available in <https://bibliotecadaeca.wordpress.com/2014/02/24/trabalhos-de-arte>, access on August 23, 2017.

quality requirements to be incorporated to the public collection. Thanks to such practice, ECA Library maintains in its collection works of the most important Brazilian visual artists, sometimes in the form of original work or sometimes as academic texts of reflection on the work itself. Until now, 43 artists have been identified in the Library's catalog, 17 of whom were or are still professors of the School. Among other names, we point out the following: Regina Silveira, Evandro Carlos Jardim, Carmela Gross, Ana Maria Tavares, Carlos Fajardo, Dora Longa Bahia, Júlio Plaza, Norma Grinberg.

Registration and promotion of the production of University's teaching and technical staff have always been a constant concern of USP's libraries, a systematic and regular activity since 1985 (Dudziak, 2015). Since then, books, articles and other productions of the teaching staff that are an integral part of the physical collection of libraries are registered with USP Bibliographic Database (Dédalus).

With the creation of the Digital Library of the Intellectual Production of the University of São Paulo (BDPI), in 2012, access to the integral text of the production available in digital media became possible, according to USP's Information Policy, which much increased visibility and facilitated broad access to those works.[2]

Both are appropriate and efficient tools for control and disclosure of text documents, such as books, articles, texts presented in events, etc. However, although production in performing arts, music, visual arts, including artistic works, is included in the intellectual production concept for the University of São Paulo, works expressing themselves fundamentally in images still do not have an online catalog or repository specifically thought for their registration and exhibition. The artists may, therefore, have articles and other texts eventually produced by them as a reflection on their own art registered with USP BDPI, but images of their own work are in the second plan. In the best of assumptions, they only appear as text illustrations.

None of these works, however, have their images available for visualization in a platform appropriate for image registration, and an official USP instrument, such as Dédalus and the Digital Library of Intellectual Production. Although more reputed artists have their work documented usually in sources available on the Internet, the information that the work has been presented as dissertation or theses in the University is not always given. Two important sources of information on Regina Silveira's work, the artist's personal website and Itaú Cultural Encyclopedia, for example, show reproductions of **Anamorfas** series' engravings, but without connection with the academic work and without images of the book where it was presented as her master's dissertation. [3] The same occurs with Norma Grinberg's sculpture-thesis, the aggravating factor being that in Itaú Cultural Encyclopedia the image found is not the work's, but its scale model's.[4] These data demonstrate the existence of a serious gap in the promotion

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[2]Information published in the website of the Integrated System of Libraries of USP - SIBI. Available in: <http://www.sibi.usp.br/bibliotecas/digitais-sistemicas/producao-usp/>. Access on Apr. 9, 2018.

[3]Enciclopédia Itaú Cultural, entry on Regina Silveira, available in <http://enciclopedia.itaucultural.org.br/pessoa8084/regina-silveira>, access on Apr. 9, 2018. Personal website of the artist, available in <http://reginasilveira.com/ANAMORFAS>, access on Apr. 9, 2018.

[4]Enciclopédia Itaú Cultural, entry on Norma Grinberg, available in <http://enciclopedia.itaucultural.org.br/pessoa9419/norma-grinberg>, access on Apr. 9, 2018. Personal website of the artist, available in <http://normagrimberg.com.br/pt>, access on Apr. 9, 2018

of academic artistic production.

In his master's research, Ferreira (2014) studied how images were used among teachers and students of ECA/USP visual arts course, identifying this group's demand for the creation of a collection of images comprised, above all, of works of artists connected to the institution, whether from the teaching staff or works resulting from master's, doctorate, and graduation conclusion works. Based on the data obtained in this research, a search for technical solutions that could enable the construction of a digital library for registration and disclosure of images of ECA/USP academic artistic production, visual arts area started.

Following it is described the process covered to answer basic questions in connection with the creation of such digital library of art images, herein understood as reproductions of original works, as substitutes of the works reproduced by them (Mcrae & White, 1998), and the prototype developed is presented.

2 Project Development

The Digital Library of Artistic Production (BDPA) actually started in August 2018, with three professors of the Librarianship course getting involved in the project, submitting to the University proposals for contracting scholarship students who started developing activities in three fronts: search, analysis, and identification of works in the collection; adaptation of Omeka's [5]template to improve graphic aspect and users' usability; digitalization and cataloging of selected works.

The search for identification of artists and works to take part in BDPA has already been concluded and included the following phases: search in the Bibliographical Database of USP (Dédalus), USP's library catalogs, to identify artists who were students or professors in ECA/USP; analysis of theses and dissertations of said artists, in order to evaluate whether they are original artworks or academic reflections on their own work; analysis of the quality of images contained in materials on such artists located in the collection (exposition catalog, books, etc.), with the purpose of identifying images that might be digitalized.

In February 2019, a professor of the Visual Arts course joined the Project that defined certain priorities in the Arts' point of view, such as: inserting the ECA's "first generation" artists in the BDPA: Regina Silveira, Evandro Carlos Jardim, Júlio Plaza, Carmela Gross, Carlos Fajardo; investing in a high visual quality graphic interface, an indispensable condition to arouse artists' interest; prioritizing image collection of artists themselves, to whom donations of images of their works selected by the project will be requested, curated by Visual Arts' professors.

In Ferreira's research (2014), the collection's potential users pointed out certain characteristics desirable from a digital image library in the Visual Arts area: database accessible by Internet; high technical quality images, good resolution and different options of visualization; possibility of image visualization in details; quick loading version; appropriate version for printing. The search for inspiration and knowledge on materials and techniques for the creation of their own artistic works was one of the motivations pointed out by the artists researched by the author.

The instruments necessary to the development of a digital image library are the following: metadata standard for description; software for the construction of the database; protocols for image visualization; indexing language. The challenge would be "building 'knowledge bridges', that is, filling the gaps among the user, the image, and text data used to describe the image", as Sundt states (2002, pg. 68, our translation).

An image description operation, defined in the area literature as image indexing, traditionally indicates that three questions must be answered: WHAT does the image show (content information); HOW does the image show (expressive dimension), and WHERE does the image show (photography description as a physical object). Concerning the digital library of artistic production, it must be pointed out that, as well stated by Layne (2002), an image cannot be generically described, it is necessary to specify it since an image is always "of something".

Describing works of art's images for an audience of specialists implies providing complete and accurate information on the original work. The quality of the description is particularly important because we will be dealing with original works generated in the institution itself, of which ECA Library will be the sole depositary institution and privileged data source. Images of such works will play the role of substitutes of the original ones to which a remote user not always will have access to. In addition, image data need to be described, so that it is not confounded with a layer of information related to the work of art, reminding that it is usual to have more than one image associated to each work, registering different angles and details, diverse states and phases of work creation (sketches, scale models, interventions, etc.).

Therefore, the description must be made in levels, being characterized as more generic or more specific, and within an interval of terms obtained from the domain's terminology, in this case, Arts, in order to allow recovery of information in the Art represented therein.

By means of a study of specialized literature, two tools have been identified and developed by *Visual Resources Association*, which satisfy both the needs of description of works and images and database structuring, as well as users' demands: *VRA Core*[6] metadata standard, to be used in association with *Cataloguing Cultural Objects*: *a guide to describing cultural works and their images (CCO)*[7], a set of rules for description of works of art, including in its scope visual arts and architecture, and their photographic reproductions. In these systems, two types of related registries are provided for, to wit: work and image. Both may, this way, be described in separate, without data of one and the other being confounded. Relationships established in metadata standard allow all images of work to be clearly associated with it. Also, relationships between two distinct works may be described, for example, versions, studies, precursor works, etc. As a terminology control instrument, the Controlled Vocabulary of the Integrated Systems of Libraries of the University of São Paulo is used.

The open source software elected was Omeka's, developed to exhibit digital collections and virtual expositions of libraries, files, and museums (Alcaraz Martínez, 2014). This software is already used by the Technical Department of the Integrated System of Libraries of USP, and it has a plugin for utilization of *VRA Core* metadata, factors that have decisively weighted in its choice.

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[6]VRA Core is available in <https://www.loc.gov/standards/vracore/schemas.html>. Access on Apr. 18, 2018.

[7]CCO is available in <http://cco.vrafoundation.org/>. Access on Apr. 18, 2018.

Besides cataloging rules, metadata standard and software, it is necessary to think of a semantic model of image presentation that will satisfy users' demands. The solution found was adhering to visualization protocols of the *International Image Interoperability Framework* (IIIF), created in 2011 by an international library consortium to nominate, classify and use files in a standardized way, enabling the integration of contents among different institutions, thus improving the usability of digital images stored in files available on the Internet. The IIIF is composed basically of two applications (APIs): image API, which refers to the identification of an image and its specifications through an URI connected to HTTP or HTTPS protocols, enabling an user to "point" to an image available on web, at the same time that he/she provides to the server formal parameters of how he/she wants to view the image expressed in formulation of the same URI; presentation API, allowing provision of metadata associated with the image (title, description, copyrights, etc.), and relationships with other images (International Image Interoperability Frameword [IIIF], 2017). Omeka already has plugins for the two APIs mentioned, but it is necessary to implement an image server (*IIPImage Server*) to use it.

The IIIF structure is a technology to interconnect images with each other aggregating semantic, cultural and cognitive values, its highlight being the interoperability. It has several important functionalities for image users, among which: the facility to cut out and compare images; insert annotations, create and recreate images; a relevant quantity of open-source software already integrated; delivery of images with deep zoom visualization; share images without necessarily delivering them; URL standard structure to access images.

It is expected that IIIF's implementation will result in a platform of image recovery flexible, dynamic, interoperable and without restrictions of size and cutting of images.

3 First Results

The prototype of the Digital Library of Artistic Production of ECA/USP is installed in SIBiUSP's server, and the Technical Department of SIBiUSP is responsible for the maintenance thereof. The system's behavior and the functionalities chosen have already been verified during the test period. Adjustments in the program interface to improve navigation, visualization of information, besides specifying the relations proposed by VRA Core and CCO have already been implemented. The result may be visualized in the following address: http://colecoes.sibi.usp.br/bdpa/. It is not the definitive interface yet as it shall be elaborated by an artist specialized in web design.

In order to test cataloging and IIIF functionalities, metadata was inserted, and approximately 50 images have been uploaded among those already available in the collection, most of them experimentally digitalized by the project team itself. In total, 2,700 images have already been identified and should compose the BDPA. Subsequently, in case images with a better quality shall be obtained from the artists, a substitution will be made, without prejudice to cataloging metadata already inserted.

As Omeka enables the organization of contents in collections, collections of artists who are or have been teachers in ECA/USP were initially defined and identified with the name of the author. A collection shall gather images of artist books that are academic works. Other collections will be defined subsequently.

The IIIF Toolkit, plugin of Omeka adopted in the Digital Library of Artistic Production of ECA/USP is a set of tools comprising the Mirador with Annotation (integrated annotator), the Manifesto IIIF generator, and an exposition constructor. Together, such tools enable a rich experience of image presentation. Repositories making use of IIIF resources may utilize the Project Mirador platform to visualize images in multiple windows as Project Mirador is an open-source environment for comparison of multiple repositories for IIIF resources ranging from artworks with deep zoom to complex handwritten objects. The platform enables visualization of images in multiple windows, with the capacity of enlarging, exhibiting, comparing and annotating images of the whole world. Any image can be transferred to such platform, visualized and compared online with images of other institutions, without requiring download.

Some questions of technical and managerial nature must still be resolved: selection criteria of works and images; contact with artists; capture and processing of digital images; copyrights (both of the work and the photographer); workflow; fundraising customization of Omeka's main menu and construction of the research interface with appropriate usability.

4 Final Considerations

The Digital Library of Artistic Production of ECA/USP meets a demand of the community itself that wishes to have access to images of works created by the artists from the school itself and the institutional need of creating a tool appropriate for registration and promotion of artistic production that it is fundamentally expressed by images. Valuing the artistic production, democratizing the access, and increasing visibility of young artists graduated by ECA are among the results expected.

Utilization of international metadata standards such as *VRA Core*, to be used in association with *Cataloguing Cultural Objects*: *a guide to describing cultural works and their images (CCO)*, both meeting the needs of work and image description and database structuring as well as users' demands, summed up to visualization protocols of the *International Image Interoperability Framework* (IIIF) in an open-source software as Omeka, will allow BDPA of ECA/USP to become a platform of recovery of images flexible, dynamic, and interoperable with other similar platforms, national and international, as regards Visual Arts.

Besides the creation of the Digital Library of Artistic Production, the main objective of this project, we have as an additional result the commencement of studies, pioneering in Brazil[8], of the art image cataloging practice using VRA Core metadata and CCO cataloging rules. The two students of the Librarianship course of ECA/USP that participate in the Project have received training, have made practical cataloging exercises, and are already beginning to catalog the first group of works selected by BDPA by authors of the so-called first generation of ECA/USP artists. During the training process and discussion of cataloguing exercises, the librarians started to elaborate the handbook of local decisions regarding cataloguing, where particularities not provided for in CCO will be described, as well as questions regarding content analysis requiring research and establishment of specific policies, such as the distinct process of work analysis and work images. In addition, another important product of the Digital Library of Artistic Production of ECA/USP project is its contribution for the development of a new

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[8] We have not located in the Brazilian literature reports of practical experiences in such sense.

research front as regards art image treatment that considers the image, the work in the image, the information on the image, and the information on the work in the image, both from the descriptive and the semantic points of view.

References

Alcaraz Martinez, R. (2014). *Omeka 2: Manual de usuário*. Retrieved from

http://www.rubenalcaraz.es/manual-omeka/index.html

Dudziak, E. A. (2015). *Registro da produção científica na USP: Uma história que*

completa 30 anos. Retrieved from http://www.sibi.usp.br/noticias/registro-producao-

cientifica-usp-historia-30-anos/

Escobar, H. (2019, April 5). Fábricas de conhecimento: O que são, como funcionam

e para que servem as universidade públicas de pesquisa. *Jornal da USP*.

Retrieved from https://jornal.usp.br/ciencias/fabricas-de-conhecimento/

Ferreira, S. L. (2014). *Acervo de fotografias de obras de arte em ambiente eletrônico:*

Um estudo exploratório sobre os desafios para sua criação e manutenção.(Master's

thesis, Escola de Comunicações e Artes, Universidade de São Paulo, São Paulo,

Brasil). Retrieved from http://www.teses.usp.br/teses/disponiveis/27/27151/tde-

17122014-155850/pt-br.php

International Image Interoperability Framework. (2017, April 27). Retrieved from

http://iiif.io

Mcrae, L., & White, L. S. (Eds.). (1998). *Artmarc sourcebook: Cataloging art,*

architecture and their visual images. Chicago, IL: American Library Association.

Prado, G. (2009). Breve relato da pós-graduação em Artes Visuais da ECA-USP. *ARS*

(São Paulo), *7*(13), 88-101. Retrieved from

http://www.revistas.usp.br/ars/article/view/3063

Layne, S. S. (2002). Subject access to art images. In Baca, Murtha (Ed.), *Introduction*

to artimage access: Issues, tools, standards, strategies (pp. 1-19). Los Angeles:

Getty Research Institute.

Sundt, C. L. (2002). The image user and the search for images. In Baca, Murtha (Ed.),

Introduction to art images access: Issues, tools, standards, strategies (pp. 67-85). Los Angeles, CA: Getty Research Institute.

Zamboni, S. (2006). *A pesquisa em arte* (3rd ed.). Campinas, SP: Autores Associados