



Versión en **INGLÉS**



Application and adaptation of Japanese materials, tools, and techniques in Argentina, Colombia, and Paraguay

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Abstract

Argentina, Colombia, and Paraguay have particular realities and conditions that extend to their institutions in charge of safeguarding cultural heritage. When returning to our institutions after participating in the International Course on Paper Conservation in Latin America: Meeting the East, in its 2016 and 2019 editions, respectively, we applied the knowledge and techniques learned—starting with the training of our work teams, the adjustment of the spaces (workshops and laboratories), the purchase of specific materials and supplies, among others. Below we will present some results we have obtained with applying this knowledge and experiences with traditional Japanese and Latin American restoration techniques and how to approach the work from the criteria and ethics of the discipline of restoration.

Keywords

Materials; tools; suppliers; adaptation; application; restoration; Japanese techniques.

In this paper, the authors would like to show our participation in the 2016 and 2019 editions of the International Course on Paper Conservation in Latin America: Meeting East, held in Mexico City and organized by the Coordinación Nacional de Conservación del Patrimonio Cultural (CNCPC)¹ of the Instituto Nacional de Antropología e Historia (INAH),² the National Research Institute for Cultural Properties, Tokyo (NRIPT), and ICCROM, has contributed to strengthen the field of conservation and restoration of cultural property on paper, to broaden knowledge, to demonstrate the possibilities of adapting materials and techniques to the realities of our institutions and worksites in the different countries, as well as to share with our work teams and other colleagues in the region what we have learned.

¹ National Agency for Cultural Heritage Conservation (note from the translator).

² National Institute of Anthropology and History (note from the translator).



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Figure 1. Detail of the workshop. Image: Helena Malatesta, ©BACCN, 2019.

From our realities and countries, we share some aspects such as low budget in entities and institutions for the conservation of the cultural property, lack of suppliers of specialized materials and equipment, and, in some cases, insufficient training and updating in specific topics of the discipline. As mentioned earlier, although it can be seen as a limitation, it has shown us the capacity we have to innovate and adapt techniques, materials, tools, and equipment based on the knowledge and experiences learned. We reflected on this due to work presented in the online seminar: Experiences and reflections of the International Course on Paper Conservation in Latin America: Meeting East 2012-2019, which took place in December 2020, where the authors participated in table 1, under the theme: application and adaptation of Japanese materials, tools, and techniques.

Suppliers

One of the challenges we faced after the course was the acquisition of Japanese materials and tools, mainly due to the lack of local suppliers and the high cost that this represented for each institution. Although there have been difficulties regarding their provision, the option of adapting similar materials found in the national context has always been kept open.

³ Center for Conservation, Cataloguing and Research of Archives and Special Bibliographic Collections of Tarea-Institute for Research on Cultural Heritage of the National University of San Martín (note from the translator).

⁴ Library and Central Archive of the National Congress (note from the translator).

⁵ General Archive of the Nation (note from the translator).



The knowledge acquired in the course under the guidance of the Japanese and Iberoamerican masters made it possible for us to learn in detail the Japanese paper tradition, its tools and ancestral techniques, its materials, as well as their possible Western adaptations, which makes their correct acquisition in the national market feasible. It should be clarified that at no time have we opted to stop any process due to the lack of Japanese material or equipment since it is considered that the richness of the knowledge built in the course has its foundations in the understanding of the processes and work systems, in addition to those implements that cover the exact needs and with which excellent results are obtained.

A distinctive feature of Latin American professionals is the ability and creativity to overcome the shortcomings that historically have had to be overcome, such as the adaptation and substitution of tools and materials from abroad for local products.

So much so that each of the members explored the possibility of adapting Japanese materials and tools. For example, one of the participants contacted the Civil Association De Buena Madera,⁶ located in the city of La Plata, Argentina, for the construction and adaptation of brushes and paintbrushes with local materials; the study of vegetable and animal fibers and local woods for the manufacture of brush handles are in the research stage. As for the forging of knives as substitutes for Japanese tools, research on steel has begun, and designs for the knives manufacture are currently being prepared.

Another important aspect was the search for local suppliers to purchase materials, which led to testing the quality and behavior of wheat starch, Klucel[®] G, gelatin B, and methyl cellulose. In the case of Japanese papers, one of the members made a sample of those available in Argentina to carry out tests on the fibers and check their quality and performance. The paper tests will be carried out with the return of the post-pandemic activities, which is why we will not go deeper into these issues.

Application

Regarding the preparation of adhesives, use of tools, application of techniques, procedures, and materials, we will share what we have used according to the needs and adaptations achieved through answers obtained in the course and the deepening and subsequent training developed by each of the authors.

The preparation of adhesives in the course, such as starch or *shin nori*⁷ in the Eastern and Latin way, type B gelatin and cellulose ethers such as methyl cellulose, Klucel[®] G, was fundamental to know and learn about their application, since they differ in their consistency and proportions according to the type of treatment to be practiced and the works of art to be treated such as infills, tear repairs, linings, flattening and tear repairs with pre-coated Japanese tissue, among others.

We acquired Japanese brushes such as *noribake*, *nadebake* and *mizubake*, among others, in different sizes, and we also adapted local brushes according to their versatility, emulating the Japanese ones. Another important aspect was the acquisition of containers to knead and sieve the wheat starch (*norikoshi*) and to hold the paste (*noribon*). In addition, we have manufactured and used bamboo spatulas, which have gained ground over metal spatulas and Teflon spatulas, which were considered indispensable for daily work.

⁶ This association promotes the recovery of handcrafted techniques linked to traditional crafts (lost through industrialization) and the appreciation of "craftsmanship" to generate lasting cultural values.

⁷ Wheat starch paste is obtained by adding water and cooking it for a specific time.





Figure 2. Cooking of wheat starch.
Image: Martha Cárdenas ©AGN, 2017.



Figure 3. Bamboo spatulas. Image: Helena Malatesta, ©BACCN, 2020.

We understood that, for the selection, use, and acquisition of Japanese papers in our institutions, there are other more profound and more elementary aspects to consider beyond color, texture, and grammage, such as their origin, fibers, and manufacture among others.

The capillarity or slant washing technique using Sontara® and Reemay® is almost unanimous. The use of this material has made it possible to carry out various treatments with excellent results and to undertake very safe treatment on documents with a high degree of deterioration, whose supports are weakened or brittle. In this way, much less aggressive, less invasive, and more efficient processes have been achieved, reducing costs and the efficient use of resources in the long term.

We learned to know and observe our surroundings and recognize the environmental conditions in workspaces, which are considered fundamental to infer, for example, the behavior of water and its dilutions when humidifying a paper or preparing an adhesive. When some particular condition of the adhesive is required, such as flexibility, hardness, and resistance, combinations of different dilutions of wheat starch paste or different percentages of methyl cellulose are applied according to the procedure to be performed are applied.

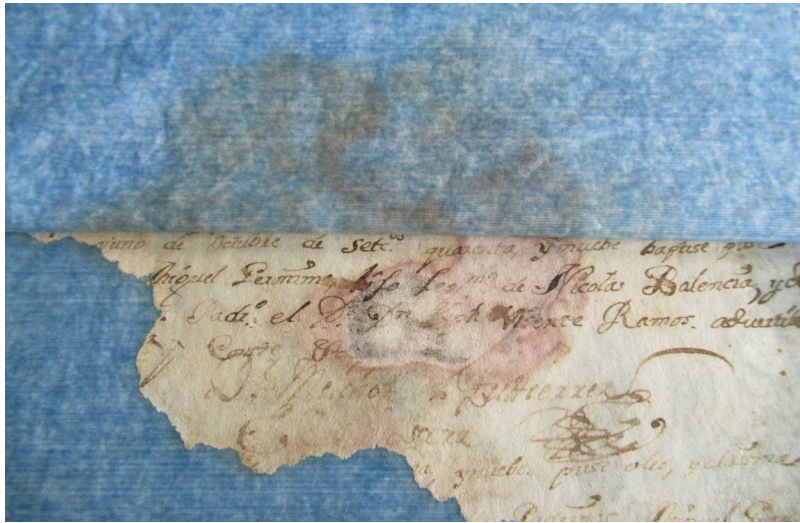


Figure 4. Capillary cleaning with the use of Sontara®. Image: Marta Cárdenas, ©AGN, 2019.



Figure 5. Type B gelatin *orefuses*.
Image: Helena Malatesta, ©BACCN, 2021.

In our laboratories and workshops, we also carry out false lining and flattening of the works of art with lateral bands, in addition to the flattening system and drying with clamps. For tear repairs and infills, Japanese papers of different weights and water-cut strips (*orefuse*)⁸ strips are used on the front and back of the work of art.⁹ When the repairs are finished, depending on the work of art, a lining can be carried out, considering the side of the paper on which the adhesive will be applied.

⁸ Strips of Japanese paper with different widths are cut with a knife or cutter for a straight cut or with water for a feather cut or finish.

⁹ It is common to refer to this faces as *tsuru-tsuru* or *tsara-tsara*.





Figure 6. Laminating with an adapted brush. *Image: Gabriela Arias, ©BACCN, 2019.*

As for flattening and drying of works of art, rayon, wool felts, Hollytex®, and screen printing meshes with pressure or controlled weight are used, depending on the type of paper and format.

We should mention that the incorporation of different types of vertical and horizontal work surfaces has been indispensable, as in the case of the adaptation of treated wooden boards (waterproofed with microcrystalline wax and darkened with bitumen of Judea) to carry out almost all the procedures in which wheat starch paste adhesives (shin nori) and water are used.



Figure 7. Tension of a paper work of art on a wooden panel. *Image: Martha Cárdenas, ©AGN, 2020.*

Reflections

The authors have found similarities and some differences in applying Japanese techniques in the Latin American context.

In terms of space and work management, it represented a personal and professional challenge, firstly because of the training of the personnel involved in the work. Secondly, it was because of the sensitization of the managers and those responsible for approving the budgets. Achieving an understanding of the techniques required patience and demonstrations, which several of us had to experience on several occasions. Training and courses have been offered not only for the institutions' personnel but also for external professionals, which demonstrates the need and interest in disseminating knowledge in other areas. The readjustment of existing spaces was critical for the treatments to be viable.

In all cases, it was not easy to obtain materials and tools in our countries that would make the techniques learned in the course viable. The major challenge consisted of manufacturing or obtaining the tools or adapting similar tools to their original Eastern uses, which was successful in most cases but sometimes required a new approach.

As for suppliers of local materials such as adhesives and papers, it has been necessary to experiment with what was available and, in some cases, acquire them from foreign suppliers since they are difficult to buy in those countries where the foreign currency and the conditions of entry of products from abroad are controlled, and the institutions do not have the legal means to acquire them.

As for treatments, it was clear that they were very varied and versatile with excellent results in all cases, whether cleaning, lining, drying with tension and tear repairs, among others. Execution times were optimized, and respect for the work of art was maintained. As for wheat starch, learning about its origins, ways of preparation, and application has facilitated in-depth knowledge of the product.

Beyond the countless obstacles in the day-to-day work, the excellent attitude and dedication held up in these times of lack of hope around the pandemic.

The experiences shared from different editions of the course have led us to meet colleagues from other latitudes, other landscapes, accents, and languages, most of them affected by the economic, political, and cultural reality of our countries and institutions, in which the lack of essential resources at work is part of everyday life.

However, this reality has not paralyzed us. We have put the commitment into the work we love to do. The shared feeling is that we have established lifelong friendships and that assisting our peers is part of learning.

The interaction with the teachers was highly enriching and fostered a return to an understanding of organized, neat, delicate, and strong work at the same time; incalculable treasures that we will carry forged within ourselves and replicated in our workplaces.

Inhaling and exhaling to the rhythmic beat of hand movements, observing the master, and learning in silence, the best teachings.

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