



Versión en INGLÉS



Japanese paper conservation techniques: their diffusion in the West and adaptation in the Taller de Documentos Gráficos of the CNCPC-INAH¹

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Abstract

This text seeks to provide an overview of three aspects that we consider important in the construction of what is now the Taller de Documentos Gráficos (TDG) of the Coordinación Nacional de Conservación del Patrimonio Cultural (CNCPC) del Instituto Nacional de Antropología e Historia (INAH). First, a historical overview is developed on the implementation of traditional Japanese techniques for the conservation of works on paper in the West, and the way in which a growing dissemination was generated through training courses formed from the mutual interest of Japanese and international agencies. Based on the above, the second part describes the circumstances in which the TDG gradually approached the knowledge of Japanese techniques and handling of materials, in the voice of the restorer Marie Vander Meeren, who was part of this long process and who, for the first time, leaves a written testimony of her experiences. To close, we expose the process of consolidation of institutional ties and the work of an international team that promoted the dissemination. The TDG has been the bridge between these two, Japanese conservation techniques and their adaptation, to contribute to the training of conservators in this region for more than three decades for their study, application, adaptation and teaching.

Keywords

Conservation; restoration; Japanese techniques; paper; CNCPC; INAH; TNRICP; ICCROM.

Nowadays, the conservation of works on paper, such as manuscripts, prints, graphics or photography, is hardly conceivable without reference to materials, tools and techniques of Japanese tradition. To mention one example, *washi* or Japanese paper, in its different varieties, is one of the most commonly used materials for laminating, reinforcing and infillings, since its qualities of innocuousness, stability, durability and compatibility are suitable for the conservation of paper supports. Moreover, it is so versatile that it has been applied successfully for conservation of cultural heritage made of different materials.

¹ Documentary Heritage Conservation Studio of the National Agency for Cultural Heritage Conservation (CNCPC)-National Institute of Anthropology and History (INAH) (note from the translator).



In this context, many conservation centers, museums and archives in the Western world have shown increasing interest in acquiring knowledge and experience in the field of Japanese materials and techniques. The aim is having a wider range of possibilities to choose the most appropriate one in each case, as well as to improve the quality of the processes and the result of the interventions they carry out.

Thus, the learning and dissemination of Japanese conservation techniques and materials in the West has traced a history of mutual rapprochement between Eastern and Western conservators, which over time has built and strengthened ties of cooperation that continue to this day, from Japan to other regions of the world.

In this article, we will offer an overview of the conditions that motivated such dynamics and that have transcended cultural borders, under the common perspective of heritage conservation of the complex world of paper. The text seeks to recover those data, experiences and conditions that took place in the course of several years in the international context and later, in an institutional space in Mexico, to offer the reader elements that explain various aspects of conservation practice of works on paper within the current activities.

The first part of the text provides a historical overview of the implementation of traditional Japanese techniques for the conservation of works on paper in the West, from Eastern or European manufacture. It also discusses the process of learning, adaptation and diffusion of Japanese techniques in the West. This is based on the mutual interest between Japanese and international instances, which resulted in the adaptation and appropriation of practices that influenced the conservation of works on paper in the last decades.

In order to refer to some events that will help to understand how this history has been and the relevance it has had in the development of the conservation of works on paper at the TDG, data from archival documents are intertwined with more than 30 years of activity of the studio. It is through the testimony of the restorer Marie Vander Meeren who since 1984 to date, has a constant interest in promoting the integration and adaptation of Japanese materials, tools and techniques of paper conservation to the conservation-restoration of Western documentary heritage.

Another essential part corresponds to the process of consolidation of institutional and professional ties at the international level, since this has promoted the dissemination of Japanese conservation techniques and their adaptation to the context of Latin American countries.

Japanese restoration techniques and their origin in the traditional mounting of Oriental works of art

It is important to point out that Japanese restoration processes derive from the very technique of manufacturing of the Japanese roll and their traditional mounting; both aspects maintain a close and constant relationship, so that one cannot be understood without the other. Mounting is a form of conservation, and the conservation of works finds solutions in the different types of mounting. This idea will be explained more fully below.

Paper production techniques of calligraphy and painting work as well as mounting systems that were born in China and Korea were adopted by the Japanese (Masuda, 2017: 1); over time, the Japanese applied changes and adaptations according to the cultural context and local resources, resulting in the development of their techniques and traditions around such activities.



The traditional painting and calligraphy works of Oriental cultures have been practiced since ancient times predominantly on paper or silk cloth. Since these materials tend to be soft and flexible, additional supports and reinforcements were often required to form the support for the work of art to facilitate its handling, display, and storage. Thus, over time, mounting systems were developed with a specific formal structure that, in many cases, enriched the functional, decorative and symbolic character of the artistic work.

In general terms, it can be said that the mounting process involves lining the work of art with one or more layers of paper and assembling them with other elements of paper, fabric, or wood to form the final object. Examples of Japanese assemblage (*hyōgu*) include the following: wall rolls (*kakejiku*), table rolls (*makimono*), screens (*byōbu*), and sliding doors (*fusuma*). Each of their variants presents specific manufacturing processes and different typologies, depending on the time and region of production.

Although the mounting, from both an aesthetic and functional point of view, can be considered an element that complements the work. Traditionally in Japan, the artwork itself constituted the primordial part of the ensemble and its conservation should prevail over the other elements; therefore, a new mounting could replace the older one, as long as it contributed to extending the life of the artwork. Such replacement could even involve changing from one format to another: for example, making a fan into a wall scroll, or changing the painting originally on sliding doors to a folding screen (McClintok *et al.*, 2017: 170).

The damage that appeared over time, inherent to the constituent materials and processing techniques, as well as due to extrinsic factors, raised the need to intervene in the works of art under the premise that the assemblage, inevitably, would have to be replaced from time to time, ideally every 100 years (Masuda, 2016: 24). Therefore, the skill that the mounters (*hyōgushi*) performed was not only focused on newly manufactured works of art but also to intervene the ones already assembled in the past, so they could be considered not only mounters but also conservator-restorers. Assuming the need for the re-treatment of works of art led to an increasingly refined selection of materials and techniques, according to criteria of reversibility, innocuousness, and stability, in a similar way to contemporary conservator-restorers (McClintok *et al.*, 2017: 171). Likewise, that logic contributed to the standardization of mounting techniques. It also guaranteed a predictable result of the work in the long term, made it possible for the mounters of new generations to apply a consistent methodology, and had continuity with that of their predecessors, knowing in advance the techniques and materials used by them.

From Asia to the West

Japanese commercial and cultural opening in 1853 motivated a great curiosity to know and study a world that had been closed to the West since 1637; there was an intense export of various Japanese articles to Europe and America, in addition to the visit of travelers to the Japanese islands. The fascination for Oriental culture during the second half of the 19th century led to a flourishing collection of various types of articles from Japan and other regions of Asia; in time, some of these collections were incorporated into the collections of various museums where they remain to this day.

Even then, Japanese paper was object of interest abroad; in the last quarter of the 19th century, it was imported in large quantities to Europe, especially small-format thick paper for printing. They also were used for conservation in institutions such as the Victoria and Albert Museum in London;



where works of art were identified with a lining with this type of paper by European conservator-restorers (Webber, 2006: 47). Even if the techniques used at that time show some deficiencies, it is clear that since then, the possibility of using Japanese paper for the conservation of Western works was recognized.

In addition, at the end of the 19th century and the beginning of the 20th century, collectors and museums in Europe and America faced the need to conserve and intervene aged or deteriorated Oriental works; however, they did not have specialists for this task. For such reason, they resorted directly to Asian mounter-conservators (Masuda, 2017: 1) who, in addition to the intervention of works of art, contributed to the establishment of traditional Oriental conservation studios or workshops; the oldest workshop is the Asian Conservation Studio, at the Museum of Fine Arts in Boston, United States, founded in 1907 (MFA, 2022). A few years later, in 1916, collector Charles Lang Freer commissioned Japanese mounters Miura and Eisuke Hisajiro to establish the East Asian Painting Conservation Studio, whose purpose was to intervene works to be exhibited at the Freer Gallery of Art, one of the museums of the Smithsonian Institution in Washington, D.C. (Smithsonian, 2022). The activities of that workshop continued in the following years under the direction of Japanese and Chinese specialists. In London, the British Museum received, temporarily, a group of Japanese mounters in 1910, but one of them was persuaded to stay until 1918, to carry out work intervention and training activities for some of the museum's curator-restorers.

For their part, some conservators from the United States and Europe went to Japan for formal training in Japanese mounting techniques, for periods ranging from one month to 10 years (Webber, 2006: 44). However, until the 1970s such training was generally difficult to access and there was great difficulty in finding Oriental materials and tools in Western countries.

The international courses in Japanese assembly and restoration techniques

As described above, the learning of traditional Japanese mounting techniques in the West represented a valuable practice for learning about and conserving the Oriental works of art in their collections and, consequently, these techniques were applied to the treatment of Western artworks.

Japan was also very interested in contributing to the preservation of the artworks that made up its cultural heritage stored abroad; such reciprocity generated a growing interaction over time. The consolidation of national and international heritage protection institutions in the second half of the 20th century was a determining factor in the collaboration between different regions of the world. In 1959, the Association for the Conservation of National Treasures was established in Japan (Masuda, 2006: 7). In 1961, Iwataro Oka II, who was president of the Association of Mounters of National Treasures and Important Cultural Properties in Kyoto, traveled to the West to observe the practice of conservation in other countries, while giving demonstrations on traditional Japanese techniques (Masuda, 2017: 1-2).

In 1966, as is well known, the unfortunate Florence flood occurred; many artworks, including books and documents, were damaged by the water and mud that flooded the storage areas. This event represented a milestone in the history of the conservation of works on paper. It motivated intense work to rescue the affected assets and laid the foundations to enlarge a new perspective on the criteria and processes of restoration that had existed up to that time. This event also led to the use of Japanese materials and techniques applied to Western works on a large scale. Derived



from the disaster, the Association of Conservation Studios of Japanese Painting and Documents donated a significant amount of Japanese paper to contribute to the conservation and restoration (Masuda, 2017: 3). This condition made it possible for conservators in Europe to become familiar with that material and appreciate the qualities it offered for the intervention of paper based objects (Masuda, 2016: 26), according to the criteria in force at that time; that period propitiated more knowledge and better handling of thin Japanese papers to place reinforcements and linings (Webber, 2006: 47).

However, even before the Florence disaster, collaborative ties were already being consolidated at the international level around Japanese mounting and conservation techniques. The United Nations Educational, Scientific and Cultural Organization (UNESCO), at the request of the International Council of Museums (ICOM), organized a Meeting of Experts for the Conservation and Restoration of Oriental Painting. This meeting was held from November 27 to December 13, 1967, in Japan, where relevant conservators for the history of conservation in the Latin American region, participated, such as Paul Philippot from ICCROM and Paolo Mora, from the Istituto Centrale del Restauro in Rome (Masuda, 2017: 2).

The late 1970s and early 1980s were significant for diffusion of Japanese mounting techniques. On the one hand, English-language publications aimed at Western conservator-restorers emerged. The two most relevant are: *Conservation Science in 'Hyōgu', Report of Special Study, Scientific Study on the Conservation and Restoration of Painting and Calligraphy Scrolls in Japan* by TNRICP in 1977, and *Japanese Scroll Paintings: A Handbook of Mounting Techniques* by Masako Koyano, published by the American Institute for Conservation of Historic and Artistic Works Foundation in 1979 (Masuda, 2017: 4-5). In addition, at that time, Japanese papers and tools began to be formally marketed in Europe and the United States (Webber, 2017: 13) which met the demand of paper conservators.

The Tokyo National Research Institute for Cultural Properties (TNRICP) has been one of the most proactive institutions in the field of teaching and disseminating traditional Japanese mounting techniques abroad. In 1979, it held the International Symposium on the Conservation and Restoration of Cultural Property Conservation of Far Eastern Art Objects (Masuda, 2017: 5) and, later, promoted courses among which the renowned Japanese Paper Conservation (JPC) course organized since 1992, by TNRICP under the auspices of ICCROM, stands out.

Katsuhiko Masuda, head of the Textile Department of TNRICP at that time, taught several courses on Japanese paper conservation in different countries since 1976, including some sponsored by ICCROM. The manufacturing techniques, conservation methodology, and decision-making in the intervention of Japanese works (Webber, 2006: 44) were the aim of the course contents. There was also an emphasis on adapting Japanese techniques to the conservation of Western work (Masuda, 2017: 5). Those courses were very well received and contributed significantly to make knowledge accessible to a broader spectrum of conservator-restorers from different countries.

The conservator Keiko Mizushima Keyes was another relevant figure in the dissemination and practice of Japanese mounting techniques. She was a resident of the United States, received training in Japan after the Florence flood and, upon her return to that country, published several articles and gave lectures on the subject (Masuda, 2017: 3). Another relevant contribution of his work was the fact of combining Eastern and Western methods in a novel way to provide a solution to conservation problems of the Western works of art (Webber, 2006: 44).



From Japan to the CNCPC TDG

To provide continuity to the history of Japanese techniques and materials in Mexico and specifically in CNCPC, from now on information is intertwined with data from documents of the Historical Archive of the CNCPC (AHCNCPC), as well as events and reflections referred to in first person. Over 30 years to the present time, Marie Vander Meeren, restorer at the TDG of the CNCPC has facilitated the integration and diffusion of that knowledge.

Although in other parts of the world, especially in Europe and the United States, the approach to Japanese paper conservation techniques began in the 1970s, the TDG had its path in the incorporation and adaptation of Japanese materials, tools, and techniques for the conservation of paper-based collections.

In August 1973, Sara Catalina Pavón F., a chemist by profession, was entrusted with the creation of a workshop at the then Dirección de Restauración del Patrimonio Cultural,² now CNCPC, dedicated to the conservation-restoration of works with paper support, which corresponds to the beginning of the TDG³ (figures 1 and 2). From this time until today, Japanese paper –whether or not linked to Japanese paper conservation techniques– has been used continuously in various conservation processes carried out in the studio. I cite two examples: in the TDG archive, we have the first invoice dated August 23, 1973 (figure 3), which refers to the purchase of 14 reams of 500 sheets of different types of paper from the Japanese company Holbein. Likewise, in the AHCNCPC there are some reports between 1973 and 1978⁴ where the use of Japanese paper is mentioned. Based on these documents and other similar from the 1980s and 1990s, it is evident that, by that time, Japanese paper was common in various conservation processes at the TDG.

In 1981, Ignacio Delfín Márquez, at that time, professor of the paper workshop of the Escuela Nacional de Conservación, Restauración y Museografía “Manuel del Castillo Negrete” (ENCRyM),⁵ wrote a Guide for the Restoration of Graphic Documents. In this Guide, he describes conservation processes and mentions, with some details, the use of Japanese paper for the elaboration of infilling, and lining. It is interesting to see that each of the processes specifies the characteristics of the Japanese paper to take into account: its thickness and the content of short or long fibers (Delfín, 1981: 73-74). It is to be noted, that these elements are still essential in the selection and decision-making during the intervention of works with paper support.

In 1984, I joined the TDG, using the materials, tools, and techniques that, at that time, were in practice for the conservation and restoration of paper-based documents. The materials used were mainly wheat flour paste, carboxymethyl cellulose (CMC), or a mixture of both, grenetin and Japanese paper. During my daily work, and as I became aware of the diversity of historic paper goods, some of them very old or deteriorated, I became curious to know what they do in other parts of the world. Do they use the same materials as others? Are there different techniques or more recent research that we can apply as conservation treatments for documents that arrive at the workshop?

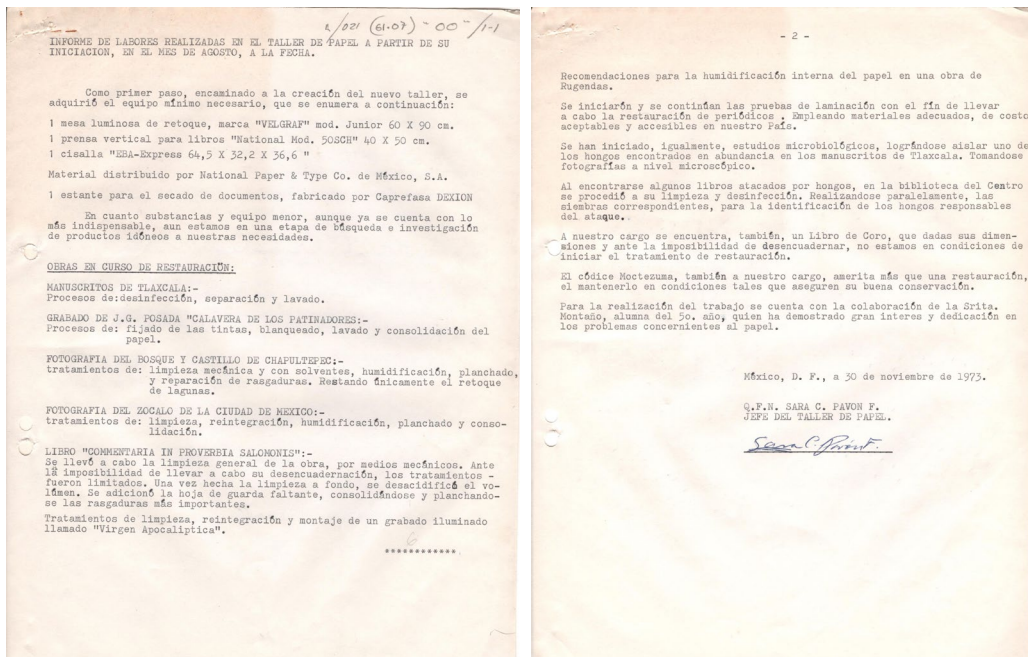
² Restauración Department of Cultural Heritage (note from the translator).

³ AHCNCPC, Expediente Informe de trabajo del taller de papel, 1973-1983.

⁴ *Idem.*

⁵ National School of Conservation, Restoration and Museography (note from the translator).





Figures 1 and 2. AHCNPC, Paper workshop report file 1973-1983. Images: Archivo Histórico ©CNCPC-INAH, 1973.

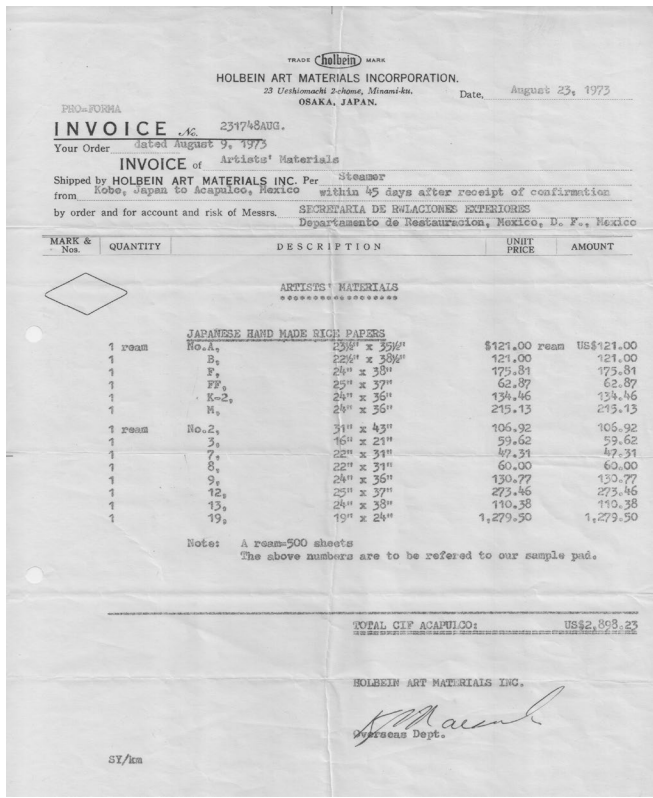


Figure 3. Graphic documents workshop file, original invoice. Image: Marie Vander Meeren, ©CNCPC-INAH, 1973.

Thus, in the search for a bibliography available at the Dirección de Restauración del Patrimonio Cultural on specific conservation topics, some articles caught my attention. In some of them, I found important data about the stability and compatibility of Japanese techniques and the use of wheat starch⁶ as an adhesive for lining and infilling in specific conservation processes for works with paper support.

In 1993 I was assigned an important and, at the same time, challenging task: the restoration of the *Yanhuitlán Codex*, elaborated in the 16th century, on European-made rag paper, kept in the Biblioteca Lafragua of the Benemérita Universidad Autónoma de Puebla.⁷ Important, because it was one of the few colonial-era pictographic documents still preserved, and challenging given the fragile state of conservation of the codex: it was necessary to guarantee its stability, respect and preserve the characteristics of its manufacture, while at the same time favoring, as far as possible, the reading of the pictographs.

The greatest challenge was to find the ideal materials for the lining process or secondary support since it was especially required to meet the characteristics of adhesiveness, transparency, texture, and flexibility. Previous starting the intervention, I focused on making tests to choose the materials that could fulfill this commitment. To achieve this purpose, I made test samples with a paper similar to the codex. My colleague, Rolando Araujo, painted a copy of an image, to get as close as possible to the tones of the original pictographs.

To carry out the lining process, I made 20 test tubes to apply five adhesives and four different materials. The selected adhesives were three that we usually used in the workshop for lining processes (mixtures of CMC-grenetin, CMC-methyl cellulose (MC), and wheat paste-MC). I also included two new proposals: rice starch and wheat starch paste, each with a small proportion of methyl cellulose.

For the lining process, I chose the two thinnest Japanese papers available in the workshop, a paper called “silk paper” provided by the workshop of the Ministry of Foreign Affairs, which I learned after going to Japan was *gampi* paper, and finally, very thin silk. Based on the results and the evaluation of the materials, the greatest transparency was achieved with silk and the adhesive that provided the best adhesion between the silk and the paper, and at the same time did not alter the tones of the pictographs, was wheat starch with methyl cellulose. This was the first time in the history of TDG that wheat starch paste was used as an adhesive in a lining process (figure 4).

In 2016, more than 20 years after its restoration, I had the opportunity to see the *Yanhuitlán Codex* again, and with satisfaction, I appreciated that the treatments and materials used fulfilled their purpose: the silk was still perfectly adhered to the paper; no difference in the appearance of the lined and unlined sheets was noted. Now, with more experience and knowledge, I consider that the materials and processes used were adequate, however, since the learning of Japanese techniques and materials had just begun, there was still much to understand and practice: for example, the wheat starch paste should have been more diluted to preserve the original flexibility of the codex paper.

⁶ Do not confuse starch adhesive with paste: wheat starch is an adhesive that is obtained from wheat flour, once the gluten has been removed. In this way, the starch has better aging properties than the paste, since the latter tends to stiffen and turn yellow.

⁷ Lafragua Library of the Autonomous University of Puebla (note from the translator).





Figure 4. Tests of adhesives and lining materials for the restoration of the *Yanhuitlán Codex*.
Image: TDG, ©CNCPC-INAH, 1993.

Around 1995, I heard about the JPC to be held in Japan, organized by TNRICP and ICCROM and imparted by Japanese specialists. It was not until 1997 that I participated in this course held in Kyoto; it was significant in several professional and personal aspects. Professionally, a world of possibilities opened up to me: a new vision and approach to works with paper support, other criteria, and procedures for their conservation. The notion of time to allow the work to stabilize, tools and materials, among many other topics that, from that course, I assimilated little by little, and I did my best to transmit it to my colleagues (figures 5 and 6).

In that course, we saw basic conservation processes of Japanese artworks, preparation of materials, different types of Japanese papers, and a diversity of tools, including brushes. Here are some relevant experiences and learnings: in terms of materials, the preparation, cooking, and then dilution of the wheat starch paste was, for me, the central topic of the course. I was able to understand better the process and the importance of dilution of the wheat starch paste for the various conservation processes, according to the specific needs of the artworks (Figure 7).

Regarding tools, the brushes were the ones that fascinated me the most: their complex manufacture, the different types of hair to be used depending on the purpose, among other aspects, they enclose by themselves a whole aesthetic inherent in the simplicity of their appearance and the everyday nature of their function. A necessary experience to understand the specific role of each brush was the opportunity to accompany a colleague of the course to the workshop of Mr. Nishimura, a well-known master in the manufacture of brushes, who showed us a variety of them, all beautiful and functional. It was then that my mind went from that moment of admiration to the understanding of their correct use for each process (figure 8).





Figure 5. Group of participants and teachers in the JPC course, November-December.
Image: ©TNRICP-Japan staff, 1997.



Figure 6. Professor Katsuhiko Masuda and Marie Vander Meer, silk lining process for a kakejiku, JPC.
Image: ©TNRICP-Japan staff, 1997.



Figure 7. Professor Kazunori Oryu, dilution process of wheat starch paste, JPC.
 Image: ©Marie Vander Meeren, Kyoto National Museum Japan, 1997.



Figure 8. Japanese tools presented in the JPC course.
 Image: ©Marie Vander Meeren, Kyoto National Museum Japan, 1997.



Another aspect that I also found interesting was learning certain Japanese techniques that could be applied to Western paper heritage, for example, the use of strips on the perimeter of the artwork for the tension drying process on the *karibari*.⁸

One more discovery from that course was how to obtain wheat starch manually,⁹ since in 1997 it was not available in Mexico and, in the case of Japan, starch was an industrialized product. Therefore, I was curious enough to ask my teacher Masuda,¹⁰ who, in response to my request, summoned me 15 minutes before the afternoon sessions began and taught me how to extract starch from wheat flour, just as his grandmother did. The procedure I learned has been worked out at TDG and various filtrations have been added to increase the purity of the starch. Today, this method for obtaining starch paste from wheat flour represents a viable alternative we taught at the CNCPC during the International Course on Paper Conservation in Latin America: Meeting the East. Given that, in several countries of the region, until now, it is not possible or is difficult to acquire starch because it is an imported product and at the same time expensive.

I also took advantage of my stay in Japan to acquire brushes, pans, sieves and starch, which at that time were not available in Mexico, and thus, provide tools and basic equipment to prepare the starch and apply some Japanese techniques in the three conservation studios that at that time were the core of my work: ENCRyM –as the head of the Paper Workshop Seminar–, the Biblioteca Nacional de Antropología e Historia (BNAH)¹¹ –as coordinator of the Project for the Stabilization of the Mexican Codex Collection kept in the security vault–, and the TDG at the CNCPC.

Thus, the course in Japan marked a before and after to reflect on what was being done in the conservation studios in which I participated at that time. Upon my return to Mexico, my first reaction was to want to apply everything as I had learned it, but with time I realized that it was necessary to evaluate what was feasible or not, according to the characteristics of our paper-based heritage. Gradually I understood the need to adapt them and, during the daily work, through tests, I went from the euphoria of the first moment to a stage of reflection, evaluation, and questioning. Questions then arose: Is it necessary to apply it the same way? Is it correct to adapt it? What other national tools can replace the Japanese ones, especially the brushes that are very expensive? Although I was clear that it was not a matter of establishing categories or comparing materials and techniques of different origins and contexts, at that time I realized that it was important to know and incorporate them, together with other non-Japanese possibilities, such as the use of synthetic adhesives like methyl cellulose and, later, hydroxypropyl cellulose (HPC).

Along with these questions, I had in mind, as a personal commitment, to promote the dissemination of learning, first in the Paper Conservation Studio of the ENCRyM and with some fellow restorers. Although this was only at a national level, by that time my interest was also growing to take this knowledge beyond Mexican borders to other countries in the region,

⁸ The *karibari* is a structure made up of a reticulated wooden frame, covered with several layers of different types of Japanese paper on which, at the end, a layer of persimmon juice is applied that acts as a waterproofing agent. This structure is used as a drying support for works with a paper support.

⁹ Starch is obtained in the following way: a dough is made with wheat flour and water, then the dough is washed to separate the gluten from the starch. The latter is rinsed and filtered several times to remove gluten residues.

¹⁰ In 1997, Masuda Katsuhiko was Director of the Department of Restoration Techniques at the TNRICP (JPC, 1997: 8).

¹¹ National Library of Anthropology and History (note from the translator).



considering it important to disseminate it in Spanish –since the JPC course was only taught in English– and to contribute to the access of paper conservators in other latitudes to this information, since we share similarities, challenges, and common cultural references regarding the conservation of paper-based heritage.

From TDG to Ibero-America and the Caribbean

From 2010 to date has been another stage of great progress in the incorporation and adaptation of Japanese materials, tools, and techniques in the TDG. In that year an agreement was signed between ICCROM and INAH. That juncture gave me the opportunity to propose a project that would become the International Course on Paper Conservation in Latin America: Meeting East, to be held at the CNCPC in Mexico.

However, it was necessary to lay the foundations, structure it, establish a starting point and make arrangements to strengthen ties between colleagues from Mexico, Japan, and other countries. The first step was to hold a seminar in 2011, with the participation of colleagues from Ibero-America who had attended the JPC in Japan, in order to have a space for mutual feedback and to share experiences after the course in their respective countries and work environments. The participation and interest of Dr. Masato Kato, coordinator of the JPC in Japan, as well as the presence of Katriina Simila, representative of ICCROM, at the seminar, encouraged and facilitated the construction of the course, the foundations of which began to take shape from that moment on (figure 9).



Figure 9. Evaluation seminar: Japanese techniques applied in the conservation-restoration of works of Western paper. *Image: TDG, ©CNCPC-INAH, 2011.*

A team of teachers was then formed with the participation of colleagues Florencia Gear (Argentina), Luis Crespo (Spain), and the coordination of the course in my charge, in order to dedicate a little less than a year to structure and elaborate the contents of the course. This was very enriching and it was clear to us that the purpose was for the participants to learn the basic concepts of Japanese materials, tools and techniques while sharing experiences regarding their adaptation.



The adaptation of some Japanese techniques to the Latin American context was an original and fundamental contribution in the design of the course, which would give restorers the possibility of having alternatives and options, instead of encountering the limitations that we participants had encountered when returning to our countries of origin and that took time to overcome (figure 10).



Figure 10. Florencia Gear and Luis Crespo, guest lecturers for the International Course on Paper Conservation in Latin America: Meeting East. *Image: TDG, ©CNCPC-INAH, 2018.*

In addition to this planning work, prior to the start of the course, Masato Kato invited me to participate in the 2012 JPC, which allowed me to clarify doubts and raise new strategies for the incorporation and adaptation of Japanese materials, tools, and techniques to the characteristics and conservation problems of our heritage.

Since 2010, more restorer colleagues joined the TDG, which led to the integration of different visions, experiences, and concerns that contributed to a better understanding and improvement of the content and aims of the course in Mexico.

The changes in the teaching methodologies of the Japanese specialists that I observed between the 1997 and the 2012 JPC, for example, the modifications in their wheat starch preparation, show their constant concern and experimentation to improve the conservation of their patrimonial goods.

Thus, in 2012, the first International Course on Paper Conservation in Latin America: Meeting East was held. Which became the beginning of the seven editions that to date have been possible to celebrate under the same inter-institutional management, between INAH, TNRICP, and ICCROM. Below, I will refer to some of the most notable aspects throughout these years: the opportunity to continue learning, provide feedback, improve course content and strengthen daily practice in the TDG (figure 11).



Figure 11. Participants and teachers of the first International Paper Conservation Course in Latin America: Meeting East. Image: TDG, ©CNCPC-INAH, 2012.

As for the Japanese colleagues, their integration into the course has been very nurturing since different teachers have participated, which has given us the opportunity to observe and learn year after year, as they are the direct source; although they maintain very consistent teaching, they also make very subtle and personal adaptations that they developed from the traditional techniques they learned in practice.

With respect to the materials, starch is the adhesive of Japanese tradition with which we have worked the most, with which we have achieved a greater understanding of its characteristics before, during, and after firing, and also under the incorporation of different heat sources, such as the gas stove and the induction grill. In addition, it was important to systematize the starch cooking process in the TDG by recording information in a logbook that we initially took from our Japanese colleagues and adapted to our particular needs (figure 12).



Figure 12. Wheat starch paste preparation. Image: TDG, ©CNCPC-INAH, 2013.



As part of the adaptations, and by way of example, the incorporation of starch into a technique developed in the West, such as pre-coated Japanese paper with adhesive, has given us very satisfactory results. Japanese paper previously coated with starch allows the application of grafts and reinforcements using a minimum of humidity and avoiding the shine produced by other adhesives such as cellulose ethers.

The issue of Japanese paper has been difficult to address given the diversity in quality, thickness, and grammage, coupled with little information from suppliers, which makes the choice for specific purposes complex. Through continuous observation and testing, it is clear that not always the paper considered of “better quality” by the type of fiber or its manufacture is the most suitable to be incorporated into works with paper support, but it is necessary to understand the characteristics of each one to take advantage of it according to the intended use.

Japanese tools such as the brushes, the paste strainer, and paste try, are indispensable to obtain a good wheat starch paste, it is important to note that they are very expensive and difficult to acquire in Mexico and other countries of the region. Therefore it was necessary to search for viable and accessible alternatives that would give good results. Knowledge of the function and characteristics of each object allows the use of tools that effectively meet the objective for which they are needed or, alternatively, to make the necessary adaptations for this purpose (figure 13).



Figure 13. Japanese and alternative tools.
Image: TDG, ©CNCPC-INAH, 2022.

Another Japanese technique that has been incorporated and adapted is drying and flattening by tension on a wooden board, preferably plywood. Which, some time later, we elaborated ourselves a *karibari*, adapting the materials, in order to achieve a similar result. This Mexican *karibari* is made with red cedar wood, as it is a species used in Mexico for its conservation qualities; we also used the Japanese papers we had available in the workshop and adapted the dimensions of the *karibari* to a format more compatible with large format works such as maps (figure 14).



Figure 14. Karibari elaboration process, 2014. Image: TDG, ©CNCPC-INAH, 2014.

For the restorers who are or were part of the TDG, it has been noticeable, little by little, that clear and adequate knowledge of the constituent materials, the mechanisms of deterioration, and the environments of the artworks with paper support to be intervened, are essential before trying to incorporate or adapt the materials and tools. Likewise, it is fundamental that the application of Japanese techniques is done with a previous understanding, accompanied by constant experimentation and adaptation. In addition, it is also important to share certain Japanese techniques and materials with fellow INAH restorers who are dedicated to the conservation of other patrimonial goods, since they could apply or adapt them in certain restoration processes.

Final reflections

Many generations of conservator-restorers in Mexico and professionals from other countries have been trained for restoration of artworks with paper support, including, directly or indirectly, notions of the Japanese tradition, without necessarily explaining the reasons for this in the classroom or in the courses. However, it is very valuable to have a broader vision of the historical context in which the use of Japanese techniques and materials arose, as well as their evolution and application in Latin American documentary heritage, which contributes to understanding how and why they are applied to everyday practice.



For the TDG team, it is important to convey how Japanese materials, tools, and techniques were disseminated and adopted in the Western world. It is also relevant to describe the experience at the TDG since 1993, about its learning, application, and adaptation, which led to an evolution in the current way of working that coexists with other materials and techniques of paper-based heritage conservation used in the world.

During the course's different editions, the members of the TDG have implemented different activities for its organization and preparation, such as revision, tests, reflection, questioning, and feedback, which has contributed to consolidating the knowledge acquired, optimizing the ways to apply it to our context and constantly rethink our performance as conservator-restorers specialized in works with paper support. In addition, in this history, the interaction between colleagues from different countries in the East and West has been very significant, as well as the enrichment of the ways of working, criteria, and common language in relation to conservation.

Traditional Japanese conservation techniques and materials have been a source of knowledge of great value for the West, which have transcended time and distance, and have been integrated into the professional practice of conservator-restorers of works on paper. The valuable information we have obtained from the former mounters of works has allowed us to reflect and adapt treatments, as well as to identify the topics to be transmitted to future generations of professionals and, thus, to contribute to the conservation of the vast and diverse documentary heritage.

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