

Exploring a Collaborative Model: Engaging Library Resources through Study Trips and Technology

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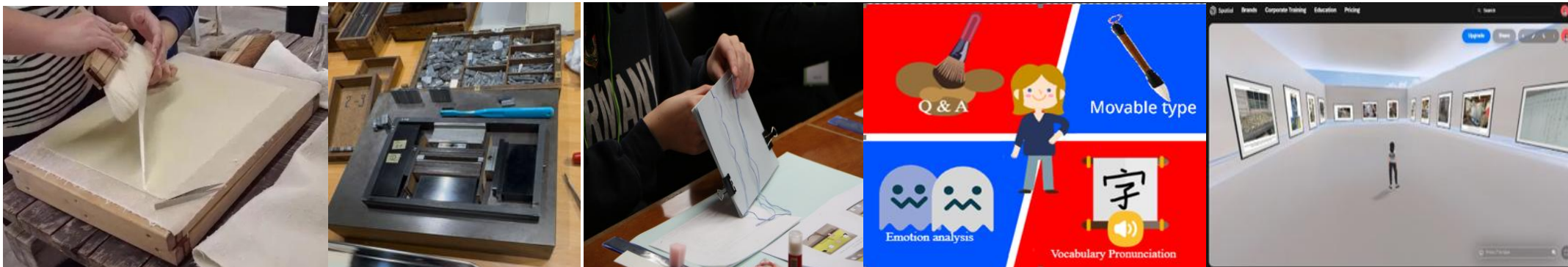
27 March 2026

Outline of the presentation

- **Project:** “From Scrolls to Gadgets: Collaborative Library Initiatives for Refreshing Learning Experiences “ by Ming Hua and Rissho University
- Scrolls: symbolize the use and promotion of library collections such as special and rare books, as well as traditional knowledge in paper and book making.
- Gadgets: refer to the development of learning materials for digital literacy and AI literacy
- **Project Framework:** Cultural heritage informatics combined with leisure-based experiential learning for library user education activities
- **Outcomes of the Project Phases – converting data from study trips**

Development of study trips related to paper making, movable typing printing and stitched bookbinding and embedding in library programs

Development of gadgets -learning materials such as 3D tools, mini-AI games, local AI research assistant and virtual exhibitions with student library assistants



Background of Ming Hua and Rissho

- Both libraries have long histories rooted in religious backgrounds
- We share common interests in the promotion and preservation of special collections, library user education through leisure learning and technology tools,
- Practical internship training for student library assistants.
- In addition, study trips and field trips are common learning methods embedded in the degree programs of each institution

Overview of Ming Hua

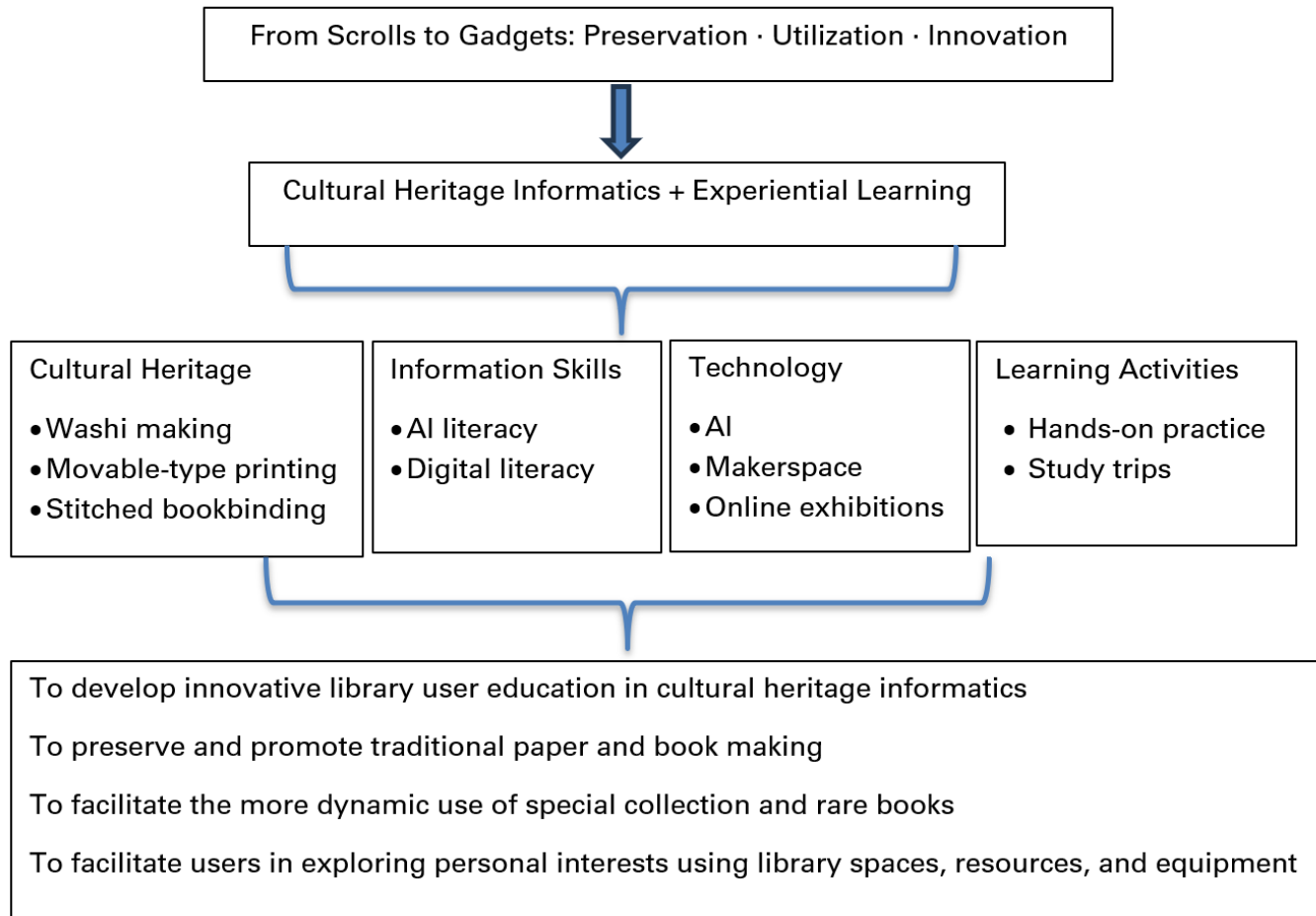
- HKSKH Ming Hua Theological College (Ming Hua) offers degree programs in theology and the humanities, as well as joint programs with institutions in Japan, Australia, and the United States.
- Ming Hua is a tertiary college that belongs to the Hong Kong Sheng Kung Hui (HKSKH), also known as the Hong Kong Anglican Church, which has provided social services and education for over 180 years.
- To date, SKH operates more than 100 schools, including kindergartens, primary schools, and secondary schools and 50 churches in Hong Kong and Macau.
- Ming Hua Library has joint library projects and library interns with libraries and universities locally and overseas.



The team of the project

- The team consists of librarians from Ming Hua and Rissho, together with student library assistants from both libraries. Team members come from diverse academic backgrounds, including library and information science, engineering, computer science, sociology, economics, history, digital humanities, and education.
- The team uses international partnerships and technology to engage library resources such as special collections and technology equipment.
- Our Student library assistants: Mr. Alex Chan, Mr. James Ng, Ms. Jessica Tam, Mr. Anthony Kwan, Mr. Karson Chu, Mr. Thomas Chan, Ms. Haidee Chow, Ms. Maki Hori, Ms. Kiko Okaze, Ms. Hinata Shimamura, Ms. Hinata Higashi, Ms. Nanami Kii, Mr. Kota Kimoto, Ms. Yuna Nakamura, and Ms. Rio Yonezawa.

Project Design and Conceptual Framework



- Cultural Heritage Informatics (CHI) is an interdisciplinary field that integrates cultural heritage studies, information science, and technology.
- Based on CHI, this project integrates study trips, information skills, technology, and library collections into the user education program.
- Student library assistants: Another core component of the project is the development of a library user education program that helps students build their knowledge of cultural heritage, library collections, AI skills, and digital literacy.

Timeline of the project

Up to now, the project has developed into three phases

- June–December 2024: Preparation and Exploration
- January–June 2025: Pilot study
- June 2025 – February 2026: Expansion and Enhancement

June–December 2024: Preparation and Exploration

Project Preparation & Collaboration: Librarians of Ming Hua and Rissho

- Conducted literature reviews
- Refined project objectives
- Assessed available technological tools and resources
- Considered academic backgrounds of student library assistants

Site Visits & Knowledge Exchange

- Rissho librarians visited Ming Hua Library and other libraries in Hong Kong and Macau
- Gained deeper understanding of local resources, equipment, and user education practices
- MH librarian learned traditional Japanese stitched bookbinding from Rissho librarians

Selected Project Topics & Tools

- Washi papermaking, Movable-type printing, Stitched bookbinding
- Library special collections and rare books
- Use of AI, technology tools and makerspace to develop learning materials with students

January–June 2025: pilot study

- To collect the data and information related to cultural heritage topics of the project, the librarians from Ming Hua and Rissho had a study trip to Ogawa and Tokyo, Japan, in May 2025.

The aims of the trip were

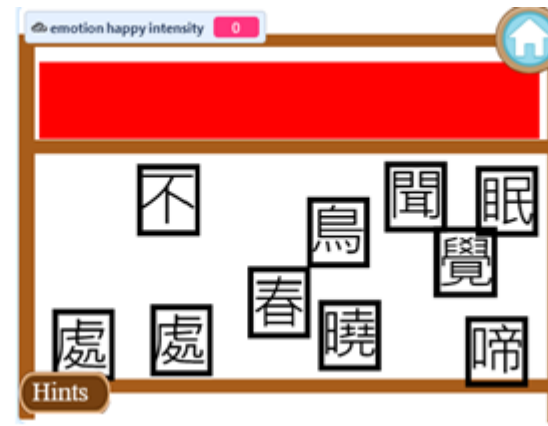
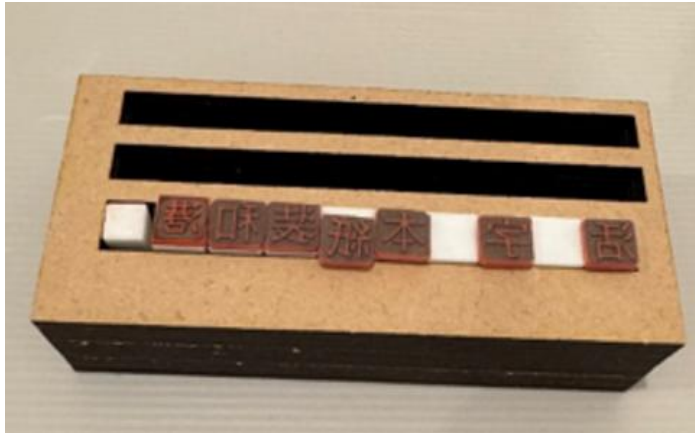
- to gain firsthand experience of these cultural heritage practices
- To learn washi paper making and movable-type printing from experts in Japan (Ogawa Washi technique -UNESCO Intangible Cultural Heritage)
- To collect data and information through photography and video recording during the study trip and then share this with the student library assistants.

January–June 2025: pilot study

Development of prototype of gadgets

Using the materials from the study trips, we worked with our student library assistants to develop prototypes of learning gadgets, including a 3D movable-type tool and mini-AI games.

Demo: <https://library.minghua.edu.hk/video20260306>



Outcomes of the Pilot Study

- Learning activities produced positive outcomes for participating students
- Enhanced skills in:
 - AI
 - Digital literacy
 - Cultural heritage
 - International learning
- Strong potential was identified for:
 - Expanding the content of the learning gadgets (materials)
 - Integrating additional cultural heritage topics

June 2025 – February 2026: Expansion and Enhancement

Follow-up Initiative (November 2025 Study Trip)

- Organized by Rissho and Ming Hua; supported by Ogawa Town
- Conducted as a follow-up to the pilot study
- Expanded cultural heritage topics to include:
 - Taishō-goto (大正琴, a traditional musical instrument)
 - Historical sites and buildings
 - Traditional food culture

Additional initiative for other librarians and archivists:

This study trip was also open to a small group of librarians from various types of libraries and archivists from Hong Kong, who participated solely as learners to experience cultural heritage. The student library assistants involved in the project also participated in the trip.



Development of Gadgets Using Data from Study Trips

- During the November 2025 follow-up study trip, the Ming Hua and Rissho teams collected a second round of data, which was used to develop additional learning gadgets using emerging technologies.
- Data collected from two study trips (May & Nov 2025) enhance development of gadgets (learning materials)
- Enabled the Ming Hua and Rissho teams to:
 - ✓ Develop more comprehensive content such as enhancement of the content of mini-AI games
 - ✓ Create additional learning tools e.g local AI research assistant with Ollama, Docker and Open WebUI; n8n
 - ✓ Create virtual exhibitions e.g. with Spatial and Omeka
 - ✓ Embed and use tools in makerspace for the project

Technological Tools for Developing Learning Gadgets

AI Tools	Makerspace	Virtual exhibitions
<ul style="list-style-type: none"><li>● Mini-AI games (mBlock)<li>● LLMs (Large Language Models)<li>● Ollama, Docker, Open WebUI<li>● n8n	<ul style="list-style-type: none"><li>● 3D printer<li>● Laser cutter<li>● Mini-drones	<ul style="list-style-type: none"><li>● Spatial<li>● Omeka

Enhancement of the mini-AI games

Demo: <https://library.minghua.edu.hk/video20260302/>

- Mini-AI games have been enhanced with more content and features, such as additional recommendations about cultural heritage activities. Users can also use the arrow keys on the keyboard to control the virtual mini-drones, which correspond to the real ones that can be operated in the Rissho Library.
- Another new game is a book preservation game uses API data. API stands for Application Programming Interface, which allows users to access data from other computer programs. We added a Google Sheet that fetches data from the Hong Kong Observatory Weather Forecast API. This information is then integrated into a mini-AI game built using mBlock.



Book preservation game: using API



Day	Weather Description	Min Temp (°C)	Max Temp (°C)	Min RH (%)	Max RH (%)
Monday	Mostly cloudy. Dry with sunny intervals during the day.	22	27	55	85
Tuesday	Mostly cloudy. Dry with sunny periods during the day.	23	28	52	82
Wednesday	Mostly cloudy. Bright periods during the day. One or two rain patches later.	23	27	65	85
Thursday	Mostly cloudy. One or two rain patches at first. Bright periods in the afternoon.	23	27	65	85
Friday	Sunny intervals.	24	28	68	88
Saturday	Sunny intervals.	24	28	68	88
Sunday	Sunny periods.	25	29	68	88
Monday	Mostly cloudy. Dry with sunny periods during the day.	24	28	55	85
Tuesday	Mostly cloudy. Dry with sunny periods during the day.	23	27	55	85

This Google Sheet fetches data from Hong Kong Observatory Weather Forecast API. The information will then be linked to Mblock mini-game

A Local personal AI LLM Assistant

Demo: <https://library.minghua.edu.hk/video20260304/>

- A Local personal AI LLM Assistant has been built with Open WebUI, Ollama and Docker.
- Using documents, images, and other data collected during the cultural heritage study trips, the team created a localized and personalized AI LLM research assistant. Its features include a study-trip-themed AI chatbot, report summarization and drafting, and image analysis.
- In the learning activities for building the local AI research assistant, students learned concepts such as selecting and using models, designing prompts, adding knowledge bases, understanding hallucinations, and evaluating AI-generated results.

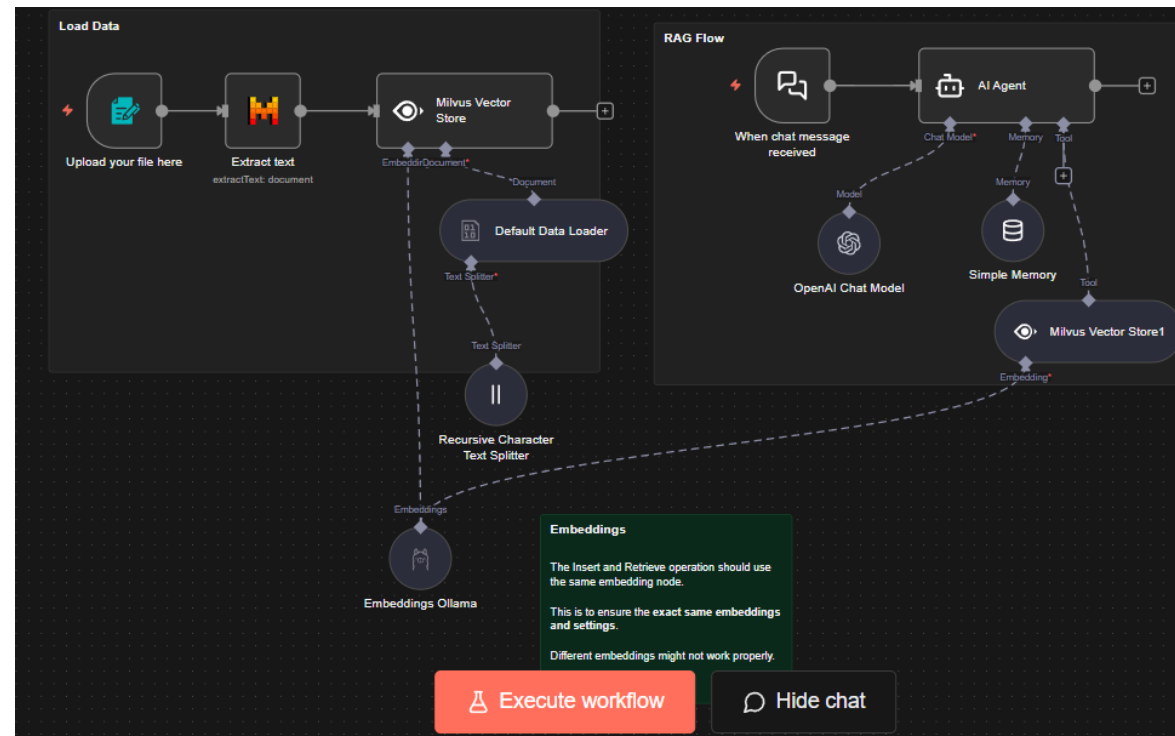


<https://drive.google.com/file/d/1yVYUeaOW4wbPxeP1j4MoNr-DS0hjcncv/view?usp=sharing>

Exploring the use of n8n

Demo: <https://library.minghua.edu.hk/video20260301/>

- To further demonstrate and visualize how AI works, the team has deployed an additional local AI agent using n8n. In this example, students can practice AI workflows, select models, obtain API keys, develop a vector database, implement RAG (Retrieval-Augmented Generation), design prompts, and evaluate AI-generated results.



Extending the physical study trips to virtual experiences: Spatial & Omeka

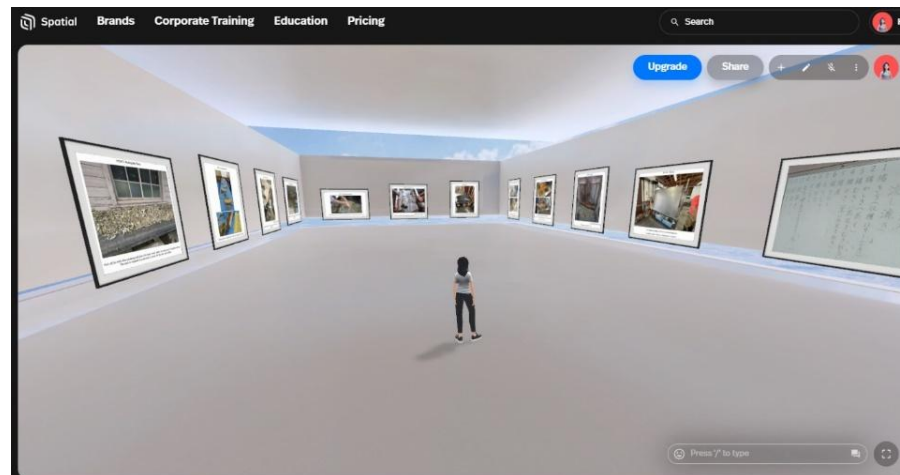
To extend the physical study trips to library users who may not be able to visit the sites in person, the team has used study trip themes, along with images and videos collected during the trips,

- to create immersive experiences on the Spatial online platform.
- We have also developed online exhibitions and databases using Omeka.

Spatial

Demo : <https://library.minghua.edu.hk/video20260303/>

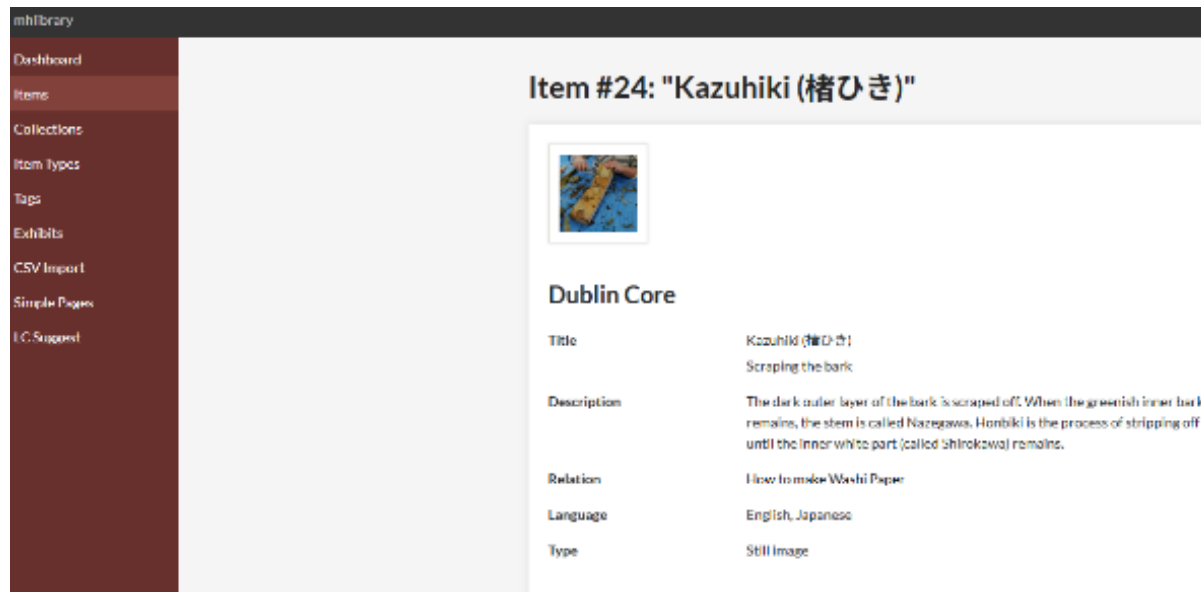
- On Spatial, the team has created virtual study tour experiences using images and videos that cover topics such as the Rissho Rare Books Library's special collections, washi paper making, stitched bookbinding, movable-type printing, Taishō-goto (大正琴) performances, historic buildings, and traditional foods.
- Users can access the virtual tour directly through the Spatial online platform. If they use VR headsets, they can enjoy a more immersive experience.



Omeka

Demo: <https://library.minghua.edu.hk/video20260305/>

- Student library assistants have created online exhibitions and databases using Omeka.
- Students have developed practical skills in digital collection development, materials cataloguing, Dublin Core metadata application, digital image organization, descriptive writing, and online exhibition curation.



The screenshot shows the Omeka interface for an online exhibition. On the left is a dark red navigation menu with the following items: mhlbrary, Dashboard, Items, Collections, Item Types, Tags, Exhibits, CSV Import, Simple Pages, and I.C. Suggest. The main content area is titled "Item #24: 'Kazuhiki (楮ひき)'" and features a small image of a piece of yellowish-brown bark. Below the image is a "Dublin Core" metadata section with the following details:

Title	Kazuhiki (楮ひき) Scraping the bark
Description	The dark outer layer of the bark is scraped off. When the greenish inner bark remains, the stem is called Nazegawa. Honbiki is the process of stripping off until the inner white part (called shirokawa) remains.
Relation	How to make Washi Paper
Language	English, Japanese
Type	Still Image

Embodying “From Scrolls to Gadgets”: Practices at Rissho University Library

Rissho University Library serves as a key partner in this collaborative initiative, translating the shared framework of “Scrolls and Gadgets” into concrete educational practices.

Through its Rare Book Library, learning commons, and student-led activities, Rissho integrates cultural heritage resources with experiential and technology-enhanced learning.

This section presents how these practices contribute to the joint project between Ming Hua and Rissho.

Overview of Rissho University

- Rissho University traces its origins to 1580, when it was founded as a school for priests of the Nichiren Sect of Buddhism. The modern university was established in 1872 and is now operated by Rissho Daigaku Gakuen.
- Today, Rissho University comprises nine undergraduate faculties, sixteen departments, and seven graduate schools, offering programmes across the humanities, social sciences, and natural sciences.
- The university maintains international partnerships, including collaboration between Ming Hua Theological College and Rissho University.



Rissho Library as a Collaborative Partner

- Shinagawa Library : Rare Book Library and Kana Workshops



- Kumagaya Library : Student Collaboration, Makerspace and Community Engagement



The Rare Book Library as a Cultural and Pedagogical Hub (Shinagawa Library)

The many initiatives undertaken thus far have contributed to the Scrolls and Gadgets framework by transforming historical collections into interactive learning environments.

- Rare Book Library
10th Anniversary (2024)



Experiential Learning through Cultural Heritage Resources



Commemorative Video as a Learning Resource

<https://www.youtube.com/watch?v=a0VXr1c-TfA>

Fostering Interdisciplinary Collaboration (Kumagaya Library)

- Next Generation Learning Commons
- The geography collection



Student Library Assistants as Co-creators

- Shinagawa Library

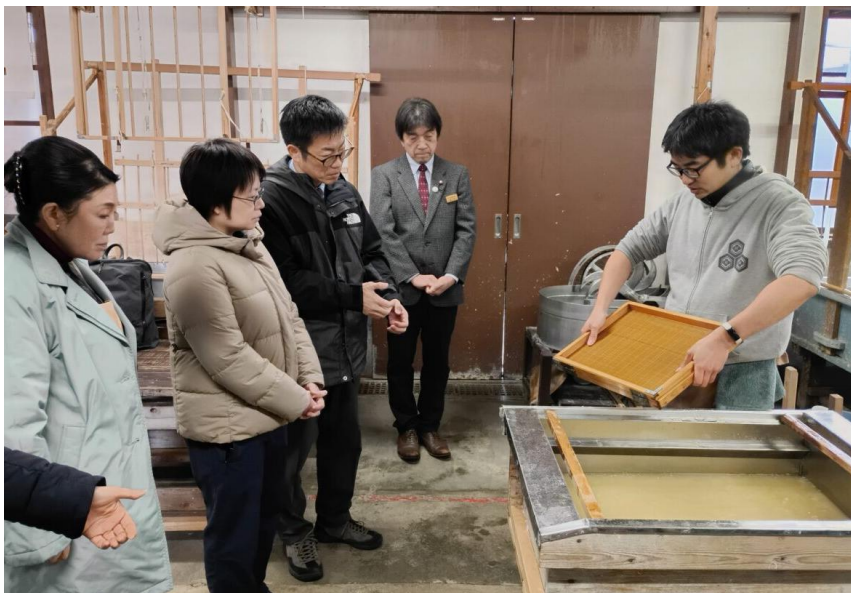


- Kumagaya Library



Cultural Heritage and the History of Books

- Ogawa Town Washi Paper



- History of Printing (Ichigaya Letterpress Factory)



- Japanese-style bookbinding experience



Ogawa Washi: UNESCO Intangible Cultural Heritage

- From Washi Production Techniques to Craft Traditions: Connecting Preservation with Contemporary Cultural Practices"



OGAWA TOWN:

<https://www.town.ogawa.saitama.jp/gyosei/sosiki/11/15/1/65.html>

Printing History and Museum Collections

- What impact has the evolution of book production had on modern publishing practices?



Ichigaya Letterpress Factory : <https://ichigaya-letterpress.jp/>

From Workshop to Shared Learning Resources

- Hands-On Workshops for Assembling Books with Historical Techniques



From Physical Experience to Digital Extension



- Digital Exhibition of the Rare Book Library

<https://www.ris.ac.jp/library/learn/20241113digitaltennji.html>

Japanese-Style Bookbinding: A Multilingual Learning Video

<https://www.youtube.com/watch?v=GyUV-5i1usY>

Rissho's Contribution within the Scrolls and Gadgets Framework

- Rissho University Library demonstrates how rare collections and experiential learning can enrich collaborative, technology-enhanced educational initiatives.
- Through close partnership with Ming Hua, traditional book culture is not only preserved, but reinterpreted within digital and multicultural contexts.
- Together, our institutions illustrate a model in which physical heritage and technological innovation complement one another in shaping the future role of libraries.

Conclusion & Thank you

Key Outcomes of the Project

- Integrates cultural heritage, technology, AI, and experiential learning into a sustainable user education framework
- Transforms special collections from preserved artefacts into active pedagogical resources
- Enhances the visibility and usability of libraries and their collections
- Cross-cultural partnership expands intellectual and cultural dimensions of library learning
- Student library assistants as co-creators. Participatory and experiential model fostering AI literacy, digital literacy, and global perspectives
- Future research could further explore cultural heritage themes and the applications of AI integration in this context.
- By connecting scrolls to gadgets—from preservation to innovation—this project demonstrates how libraries can evolve into dynamic knowledge laboratories in the digital age.

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