

Preservation Programmes at the National Library Board, Singapore

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Abstract

This paper attempts to describe the preservation activities undertaken by NLB thus far in order to fulfill its obligation” to take appropriate measures to maintain and preserve library materials.” It will also discuss challenges & issues faced and the learning points .It will also briefly touches on the efforts carried out with regards to digital preservation.

Introduction

Under the National Library Board Act of 1995, NLB is required to provide a repository of library materials published or produced in Singapore. The Acts also states that the Board should also acquire and maintain a comprehensive collection of library materials relating to Singapore and its people. NLB has the statutory responsibility to take appropriate measures to maintain and preserve library materials deposited with the Board.

Background

Preservation programme in NLB did not really take off until the year 2004. Prior to that, conservation work was already being undertaken in NLB but on an ad hoc basis. Fumigation, microfilming and conservation repair was done as and when there were funds, or when necessary. With the opening of NLB’s new building in November 2005, there was a need to re-organize the heritage collections, as part of a long-term plan to maintain heritage collections for future generations.

The impetus for this came from the need to establish NLB as a premium and one-stop reference and knowledge centre for Singapore heritage materials within the region and globally. Another driving force was the urgent need to improve and facilitate access to rare and valuable heritage materials for researchers, historians and other library customers. Thirdly, and most importantly we wanted to conserve and preserve our rare and heritage materials to delay or at least minimize their deterioration and prolong their shelf-life.

Preservation Projects

So far, NLB has carried out three preservation programmes, two of which deal with paper-based materials, while our other department, the Digital Resources Services, has an on-going programme to archive and preserve online resources.

Paper Preservation Part 1

Year 2004 saw the birth of the Conservation and Access Project (PCA Project, in short). It was completed in March 07. The project involved the fumigation, conservation and selective microfilming and digitization of our rare and heritage materials, including major donations from several prominent people of Singapore.

It was a huge undertaking, due to the collection size, the fragility of the collections, the various formats involved requiring different types of conservation treatments and the logistics of tracking such a huge collection. It was a big challenge to us, as we had to pick up new skills, in the area of preservation and conservation. The project also emphasized the need for inter-departmental co-operation as well as strategic partnerships with relevant external institutions to which we outsourced the works.

We outsourced most of the conservation work to the National Archives of Singapore since they have the expertise and resources to carry out such work.

At the end of the project we managed to preserve, restore and make accessible more than 100,000 rare and heritage materials.

Paper Preservation Part 2

Sometime in late 2004, the government approved an additional funding to preserve, conserve and make available more heritage materials, including building an infrastructure to conserve, preserve and make available heritage materials in digital format. Under this Project, which is called the Singapore Pages Project, more than 200,000 rare and heritage materials will be conserved, preserved, selectively microfilmed and digitized. The Project is scheduled to end in early 2008.

This time around, more vendors were engaged, as Archives alone will not be able to cope with the huge number of materials to be conserved or restored. We also engaged a separate vendor to handle the digitization work.

Preservation of Audio-visual Materials

NLB has not really embarked on a full-scale preservation programme for its' audio-visual materials but has started consultation with external experts, such as the National Archives of Singapore.

Overall Preservation Strategy

The Preservation and Conservation Policy and Strategy Paper that we have put up in late 2006, guide our overall preservation programme. It is still an "internal" document but we hope to share it with other libraries when it has been officially adopted.

The paper covers general preservation strategy that includes acquisition of materials, appropriate physical environment, pest management, handling, disaster planning, users education and awareness programme and others. It also stipulated specific preservation strategy by format of materials, excluding digital resources.

The Digital Resources Services has their own policy and strategy paper related to preservation of digital resources.

Digital Archiving and Preservation

NLB makes a clear distinction between digital archiving and digital preservation. The act of harvesting or downloading an online publication and storing them in a repository is just an archival activity, which is short-term in nature. Since 2006, NLB has an on-going programme to harvest Singapore-related web contents from the Internet for archiving. NLB will be doing whole domain archiving of all .sg websites in 2007, which is an estimated 70,000-registered domain as at Dec 2006.

NLB also required publishers to deposit 2 copies of publications that are distributed electronically and/or online with the Board, even though the publications may already been archived together with the websites harvested by NLB. To facilitate the deposit of such contents, NLB will have an ingest system to be ready by 2007 to allow publishers to deposit digital publications via an online gateway. The ingest system will have the following essential ingest functions:

- Identify and validate file formats of deposited publications;
- Protect the publications from unauthorized changes through fixity tools,
- Preserve the integrity and authenticity of the deposited publications through checksums and various metadata capture and harvesting.

For the purposes of preserving these materials, NLB is putting in place a digital preservation framework and infrastructure to ensure that they are adequately preserved for a long-term access and usage. The system should enable NLB to preserve the integrity of the digital contents through generations of transformation that are needed because of technological obsolescence.

The infrastructure will comply with 2 core digital preservation standards, namely the ISO standard for Open Archival Information System (OAIS) and the Trusted Digital Repository (TDR) requirements. The digital preservation infrastructure is targeted to be ready by end 2008.

Challenges Faced

Knowledge and Expertise

One of the biggest challenges we faced was the fact that none of us has the necessary and adequate knowledge and expertise in the field of preservation and conservation, especially on how to handle special materials like framed photographs, large maps and artifacts, that came to us as part of a donation.

Even though we outsourced all our conservation repair works, we still need to have the basic knowledge and skills to enable us to interact and communicate with the vendors effectively.

Identifying the Collections

As in the case of most national libraries, materials for preservation were selected based on their heritage, historical and literary values, including those that are unique and irreplaceable. Based on these criteria, we identified our Rare, Legal Deposit, Closed Stacks and the Donor collections and other Singapore-related materials as important collections that would be preserved.

The challenge was how to determine which, among these collections, are more important than the others; a choice that we have to continue to grapple with as, unfortunately, we do not have infinite resources to preserve all. In May 2003, we engaged a consultant to conduct a condition study on our collection and the findings and recommendations have been used as the basis for our preservation policy and strategy.

Sorting and Preparing the Collections

Sorting the collections for the various treatments such as fumigation, conservation, microfilming and digitization was a tedious and time-consuming task. As we had no specialized experience in this area, we had to seek the help of the conservator at the National Archives of Singapore. The conservator was asked to do a condition study of the collections and recommend appropriate treatments.

As it was too time-consuming to identify each book that needed fumigation, we decided to fumigate all. We also decided to microfilm and digitize rare materials first as the physical copies are not for public access. In identifying titles for digitization, we had to select those, which were in the public domain.

Selection of Vendor

Due to the collection size and for better control of the materials, we felt it was not feasible to get an overseas vendor. A local vendor will enable us to supervise the project more closely.

In order to minimize handling and thus any possible damage to the book, we decided to get one vendor who could do conservation repair as well as microfilm and another who could handle digitization. We had to split up the project into two and award the digitization job to a commercial vendor because we wanted to digitize in colour and Archives was only able to scan in black & white.

Another factor that influenced our choice of vendor was the quantity of the collections. Initially we had projected a figure of 2,600 items but this later grew to more than 300,000 items for the 2 projects. We found it necessary to find a vendor with adequate resources, capacity and capability to handle such a huge number of materials.

Issues & Decisions

There were several issues and challenges that we faced when we first began the projects. Despite the many hours of planning, discussions and negotiations with the various parties involved, there were always issues and areas of contention that cropped up later and there arose also a few factors beyond our control.

Convincing the Management

Firstly, convincing management on the benefits of the project in order to get funds was not easy. Especially, when we had to go to the drawing board to re-do and re-look at our proposals. Management had to be “educated” on the merits of spending money on preserving and conserving “old” books, which the library readers cannot even handle physically. We also had to advise them on the advantages of continuing to microfilm heritage titles as a preferred preservation method compared to digitization.

Once the first preservation project got on the way in 2004, it was relatively easier to source for funding as the management has by now, seen the benefit of such project.

Setting Up a Conservation Unit or Outsource

Another decision we had to make was whether we should set up our own conservation unit or outsource. NLB does not have a conservation unit of its own. We did look into the pros and cons of setting up our own conservation unit but decided against it due to the specialized expertise and skills required, and since our timeline is short. We decided to outsource.

Logistic and Operations

The logistics of preparing and storing the collections, and managing their flow was a huge challenge. How do we identify and sort a collection size of 200,000 heritage materials for fumigation, conservation, microfilming and digitization within a limited time period? Secondly how are these to be transported to our vendor and ensure that they are not damaged in the process? Thirdly, how do we track the collections that were going back and forth?

Planning the logistics for such a huge collection was indeed challenging and eye-opening as well. We had to ensure proper handling of the fragile collections as well as security. We also improvised by using existing resources, which helped us facilitate the movement of the collections.

Transportation

As the vendor had to transport fragile materials, we had to provide strict requirements for handling & transporting.

Due to the fairly short distance and the costs constraints, we settled for a non-air conditioned but covered truck. We also scheduled the despatch for early mornings before 10 am when the weather is cooler.

Ideally we would have liked to transport the rare items in archival boxes. Due to the costs involved and the collection size, we improvised by placing them in clean envelopes and then in newly purchased boxes for transportation to Archives.

The Extent of Preservation and Conservation

How and to what extent should we preserve and conserve our heritage materials was an important decision for us. Do we preserve the content of the book or do we treat the book as an artifact and preserve its original look as much as possible.

In the past, a few of the rare materials sent for conservation repair came out looking totally new, like a new book. These books were unbound and tissue-mounted. They came out thicker than their original size and had to be re-bound using a new cover.

For this current project, we had to decide whether to conserve the book totally in order to prolong its shelf life or maintain the original integrity of the book by avoiding full restoration. After many discussions and negotiations, we agreed on minimal conservation repair and retaining the original look as much as possible. And to further protect the book from environmental damage, we decided to place all in archival boxes.

We also advised vendor that books should not be unbound so as to retain the original binding. This did pose a problem especially when the spine was too tight for microfilming or the book was too brittle. In such cases, one of the project team members will visit Archives to re-look at the book and discuss further on the alternatives available.

In cases where the book is the only copy available or it was published in Singapore and is out of print or stock, and also if the binding is unique and Archives are not able to replicate the same binding, then we decided not to microfilm or digitize them.

Workflows

Specific workflows were implemented to manage the huge collections that were going out and coming back, and to prevent any bottleneck and to ensure that the project runs smoothly.

Within the National Library, we had to come up with workflows, which included information on what is to be done before a title is sent to Archives, what to do when they are returned, the processing requirements, etc. These workflows were also communicated to other departments concerned.

We used the workflows to phase and better manage the project. All rare titles were sent for treatment first, followed by the next special heritage collection. Such workflows with clear guidelines helped the staff to do their work with minimal supervision.

Within the National Archives, another set of workflows was implemented. Books that are most brittle and take longer time to be treated are given priority over others. Moreover the brittle books need to be repaired first before microfilming and digitization for easier handling, unlike the less brittle ones.

Storage

A lot of space was needed to work on the collections that were going through the Project. We needed space to identify the treatment for each book and then sort them into various categories. We also needed space to store the fumigated books separately from the unfumigated ones, such as a quarantined area.

In Feb 07, we shifted to a bigger location within our office at Changi equipped with proper environmental conditions such as controlled temperature and humidity.

Tracking

Tracking the various collections undergoing various types of treatments was indeed a challenging task. We needed to track the boxes of collections that were going for weekly fumigation; also those that were going for conservation repair; besides these, we needed to track the maps and posters that were going for encapsulation.

We also needed to track the boxes that were transferred from storage to our work area so that we could sort them and list them. We needed to track the collections that were returned from the vendors after treatment.

At the same time, we needed to track the titles that were going for digitization to another external vendor.

To track all the books, we used Microsoft Excel to create lists of the books in each box. A master list was created to track the boxes that included the date the box was sent out and returned.

And when we wanted to track a particular book, we used its barcode (which we can obtain from our catalogue) and did a search on the file directory listing, using Windows Explorer. This helped us locate the box in which the book is in and then we used the masterlist to track the box.

Others

Keeping the work area clean and free from pests was of paramount importance. Staff were told not to consume food and drinks within the project work area.

As the project dealt with rare books, we had to ensure proper security during handling, transportation and storage. Access to the rare collections was restricted to a few staff only. And they were handled only with gloves.

Manpower

Instead of depending on existing permanent staff, we decided to hire casual staff to handle the operations work of listing and tracking the collections. One reason was that we required staff that could focus on the project, as it was very time-consuming and routine-based.

As for permanent staff, there were many other distractions unlike a casual staff. However, one disadvantage was that the casual staff might not stay very long which meant we had to re-hire and re-train regularly. We assigned a permanent staff to supervise the casual staff so as to ensure standardization.

Need For An Open Communication

Keeping an open mind and having an open communication channel between the vendors were very important.

There were several face-to-face, email and phone discussions to ensure that our needs and requirements are communicated properly and to ensure that we understand the constraints of the vendors too.

The project team visited the National Archives often and worked closely with the conservation unit there in order to ensure standards were maintained and variations for conservation work were approved. Not only did this improve our rapport with the Archives staff, it was also useful in helping us to better communicate our needs and requirements. At the same time, we learned more about conservation including the various types of treatment, the tools and the methods used.

Time Management

One issue that we had to deal with somewhat regularly was the requests from other sections in the National Library to fumigate or repair their books. In order to ensure that our timeline is not affected, we took in those collections that were critical.

As mentioned earlier, workflows were implemented and fine-tuned, and the transportation of boxes was fixed on a certain day every week. This will ensure that the resources are maximized as well as better management of the timeline.

Learning Points From the Projects

Dedicated Staff

Having dedicated staff to focus on a project of such magnitude is essential. Although there are disadvantages in hiring casual staff, hiring and retaining reliable casual staff is very crucial. We included the casual staff in most of the staff welfare activities so as to inculcate a sense of belonging to the department. By retaining them for the duration of the project, we could ensure continuity.

Good Supervision and Management Skills

Besides good staff supervision and management skills, one needs good negotiation skills and an open and adaptable mind; a keen sense of learning is also important. Although we were not well versed in the area of preservation and conservation, this project helped us pick up new knowledge and new skills.

Good Tracking Mechanism

A good tracking mechanism is indispensable to large projects such as this. Without a proper tracking mechanism, we would have been lost in the sea of collections that were moving in and out.

Strategic Partnership

This project also emphasized the need for inter-departmental co-operation as well as strategic partnerships with relevant external institutions to which we outsourced the works.

Overall Preservation Strategy

The projects made us aware of the urgent need for a proper preservation strategy that should be incorporated into all our workflows.

We came up with guidelines on identifying rare/heritage titles and how these should be handled and processed. With the knowledge that proper and stable environmental conditions play an important part in maintaining rare/heritage titles, we drew up standard guidelines for storing such items.

As such, all rare items are to be placed in archival boxes and kept in climate-controlled rooms with restricted access, and microfilms/digital copies used for access. Maps, posters and manuscripts will be encased in Mylar sheets. All labels will be placed externally onto the boxes.

The policy and strategy paper is still being debated and refined as we gather new knowledge on how best we should move forward.

Conclusion

Preservation and conservation work must be carried out continuously and not only to salvage the existing collection but also to proactively implement a preventive programme that would ensure newly acquired heritage materials are adequately preserved.

As such, preservation should be undertaken at the point of acquisition that is certain processes should already be in place on how to handle and maintain a heritage title for posterity.

The projects taught us that a preservation strategy is necessary and that everyone in the library including the staff who process the books to the customer, need to be educated on the finer points of preservation and the proper handling of library materials. This will ensure that our literary heritage is preserved for the future generations and minimize the need for us to undertake corrective action later.

The Project has provided staff with the opportunity to learn new skills, derived some useful learning points and most importantly prepares staff for greater challenges in the field of preservation and conservation.

In the field of digital archiving and preservation, NLB is making systematic progress in establishing a digital preservation infrastructure to preserve online resources. It is a relatively new and challenging area. Nonetheless, we have to keep up with time and be prepared to face all challenges.

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