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Safeguarding Filipiniana Materials: Recognizing and Prioritizing Risks in Transporting, Moving or Relocating Library, Archives, and Museum Collections

Objective. Libraries, archives, and museums are vital for learning and culture. Disasters threaten both their buildings and collections. Safety is paramount during crises, but safeguarding collections is also essential. The study investigated why five Filipiniana institutions – Filipinas Heritage Library, Lopez Museum and Library, National Archives of the Philippines, National Library of the Philippines, and University of the Philippines Diliman – Main Library – moved their collections and managed risks. **Methods.** The researcher used qualitative and quantitative methods, assessing risks based on probability and impact. **Results.** The findings revealed motivations for moving collections, either extrinsic (like renovations) or intrinsic (pride). It highlighted the importance of recognizing and prioritizing risks, even low-level ones, to protect collections and the institutions' core motivations. **Conclusion.** Failure to mitigate risks may lead to losses and damage, impacting these institutions' core motivations.

Keywords: moving collections; Filipiniana collections; risk assessment; relocation; motivation

Introduction

Libraries, museums, and archives hold the keys to our shared human knowledge and history. They are the sanctuaries of wisdom, the custodians of cultural treasures, and the guardians of national heritage. These institutions, however, face an array of challenges that threaten their collections, from natural disasters like typhoons and floods to human-made risks like fires and theft. This study delves into the motivations behind the relocation of collections from Filipiniana institutions, such as libraries, archives, and museums, as well as the risks involved.

Several institutions in the Philippines, both private and public, maintain Filipiniana collections such as books, maps, periodicals, artworks, ceramics, etc. This study uses the term Filipiniana as anything and everything about the Philippines, published in the Philippines, published by the Filipinos, created by the Filipinos, and about the Philippines that are in paper-based materials, photographic materials, paintings in canvas or wood, archaeological objects like ceramics and stones, and other objects such as metal, glass, etc.

The five Filipiniana institutions included in this study are: (1) National Archives of the Philippines (NAP) - relocated its collections to facilitate the retrofitting of its previous space, with a particular focus on safeguarding Spanish collections dating back to the 16th century; (2) National Library of the Philippines (NLP) – the construction of their new building drove the relocation efforts for the Filipiniana Division of NLP; (3) University of the Philippines Diliman – Main Library (UPDML) – relocated its collections due to the construction of a new building, with key insights provided by the University Archives Division and staff members; (4) Filipinas Heritage Library (FHL) move was motivated by both intrinsic and extrinsic factors, including a renovation to enhance access and space utilization, as well as the desire to share their collections with future users, and (5) Lopez Museum and Library (LML) – move was prompted by the deterioration of the Benpres building, necessitating the protection of their valuable collections. Key insights were provided by the Head Librarian, Assistant Librarian, and Registrar/Museum Assistant.

The importance of safeguarding cultural heritage has been well-documented, with studies highlighting the significance of risk management. According to Lagrama (2011), the field of cultural heritage has always valued the preservation and conservation of its materials: moveable

and immovable, tangible and intangible. Risk will always be a factor in any undertaking, so it is essential to have a disaster management plan. She also presented and analyzed the risks to the collections of the college libraries and main library of the University of the Philippines Diliman, as well as in selected government libraries in the periphery of the campus. She used semi-quantitative risk analysis to place numerical values in some data she needed. In her study, she found out that the major threats to library collections are fire and water. Disaster preparedness is vital, with Estrella (2013) emphasizing the need to raise awareness and preparedness among staff to minimize potential damage during calamities.

Wood and Duffy (2016) underscore the diverse risks libraries face, including natural disasters and human-made threats, shedding light on effective mitigation strategies. Hasenay and Krtalic (2010) emphasize sustainable measures for safeguarding collections, including comprehensive disaster management policies and public awareness.

The physical relocation of collections is a routine task influenced by factors like circulation and maintenance. Planning and coordination are crucial, as Gohn (2015) emphasizes, ensuring a successful move. Lindsay's (2017) case study reveals the importance of systematic organization and teamwork during relocations, while security risks, as noted by McDonald (1994), remain a significant concern. Disruption of security can result in losses, thefts, or damages to collections, highlighting the need for careful planning and oversight during the move.

In congruence with the above studies, especially the studies of Lagrama (2011) and Estrella (2013), this study also used semi-quantitative risk analysis to identify the risks and create measures to lessen the impact of the identified risks in moving the library, archive, and museum collections. Most of the abovementioned studies talked about the importance of creating a disaster management plan, including devising strategies to preserve and conserve the collections. To achieve the same success as the presented literatures, this study adopts the gained strategies and ways on how to properly move the collection from planning, to organizing, to personnel management, and so forth.

Objective. With the evident value of the Filipiniana collections and the importance of mitigating risks in moving them, this study explores the various motivations of Filipiniana institutions for moving their library, archives, and museum collections, and the perceived risks, and challenges of moving the collections, and the methods done to mitigate them.

The objectives of the study are the following: to identify the motivations of the Filipiniana institutions for moving their collections and the risks that they have encountered, to know the measurements/procedures that they have made to address the risks, to recognize the other risks that may have affected the collections, and to recommend practices for institutions that plan to move or relocate their collections.

Methods

This study aims to address the intricate challenges related to the relocation of library, archive, and museum collections, with a particular focus on Filipiniana institutions. By employing a semi-quantitative risk analysis approach and integrating qualitative and quantitative methods, this research endeavors to shed light on the motivations, risks, and challenges associated with this critical process. The protection and preservation of cultural and historical artifacts are paramount in a world filled with uncertainties.

The study's methodology consists of two phases. The first phase involves qualitative exploration through in-depth interviews with personnel from selected Filipiniana institutions. These interviews provide valuable insights into their motivations for relocation, disaster

preparedness, and the strategies involved in moving collections. The scope of the movement process encompasses planning, preparation, packing, storing, transporting, unpacking, setting up, public engagement, and meticulous documentation.

The second phase employs a semi-quantitative approach by utilizing a survey questionnaire based on Lagrama's work in 2011, with some modifications to suit the research context. Respondents are asked to assess the probability and effect of potential hazards when relocating library, archive, and museum collections. The below scales used for probability and effect are calibrated to help quantify the severity of risks.

Probability:

- 1 – Rare (1 in 5 years);
- 2 – Sporadic (1 in 3 years);
- 3 – Unusual (1 in a year);
- 4 – Likely (happens every couple of months);
- 5 – Almost certain (1 per week / month).

Effect:

- 1 – Insignificant (loss of <1 working day / no damage to the collection / no injuries);
- 2 – Low (loss of <2 working days / up to 5% damage to the collection / no injuries);
- 3 – High (loss of <3 working days / up to 10% damage to the collection / no injuries);
- 4 – Severe (loss of <4 working days / up to 25% damage to the collection / major injuries);
- 5 – Catastrophic (loss of 5+ working days / 50% or more damage to the collection / major injuries and fatalities).

The risk rating for each hazard is computed using Brokerhof's formula: Risk = Probability x Effect (Brokerhof, 2006).

This formula facilitated the calculation of the level of severity for each risk. To categorize these risks effectively, the study adopted risk rankings inspired by Lagrama's work in 2011, designating risks as high, significant, moderate, or low.

Table 1

Risk Rankings

High	18.75–25.00	Risk that must be eliminated or significantly reduced
Significant	12.50–18.74	Risk that needs to be monitored; a mitigation plan must be in place to reduce risk
Moderate	6.25–12.49	Risk that needs to be monitored; but less rigorously and are less urgent in nature
Low	1.00–6.24	Demand less attention, but not to be totally ignored

The study includes 5 heads, 1 consultant, and 17 staff members that were involved in the moving or relocating of collections of the five Filipiniana Institutions such as the Filipinas Heritage Library (FHL), Lopez Museum and Library (LML), National Archives of the Philippines (NAP), National Library of the Philippines (NLP), and University of the Philippines Diliman – Main Library (UPDML). The study maintains ethical standards, with informed consent obtained from the participants.

Results and Discussions

Motivations of the Institutions in Moving Filipiniana Collections

Motivation plays a crucial role in the success of any endeavor, and the relocation of Filipiniana collections is no exception. This study explored two fundamental types of motivation: intrinsic and extrinsic motivations.

Intrinsic Motivation (IM): This type refers to behavior that is inherently satisfying or enjoyable. The intrinsic motivations that they mentioned are being glad, having pride in it; enjoyment, and happiness. As the NAP respondent said, “We are glad that we will now have our own home for our national treasures” (G. Gomez, personal communication, March 3, 2020). For the longest time, their archives were housed in the National Library of the Philippines. The NAP respondent also mentioned having pride in it. Enjoyment was mentioned by the Head Librarian of the Lopez Museum and Library “Of course, we enjoyed moving our collections because our hands are the same hands that wrapped collections such as a hundred-year-old artwork and a hundred-year-old book and that we (were) entrusted to wrap and pack precious collections like the paintings of Luna, the original letters of Rizal, and ceramics found in the 19th century” (M. Servida, personal communication, March 9, 2020). The Head Librarian also specified happiness as an intrinsic motivation noting that their institution can now provide more seats, better access, and state-of-the-art facilities and services. They also now have more freedom to maximize the physical space in their new location. Similar to what has been discussed in Denovan and Abott (2007), the respondents’ motivation in moving their collection was thinking that the collection would be enjoyed by future users. They were not only motivated by their goal of opening the new building by inviting collections to show, but also by the chance of being able to provide greater browsing experiences and use of collections to patrons and future users, emphasizing that print collections are still relevant to 21st-century researchers and future generations.

Extrinsic Motivation (EM): Extrinsic motivation, on the other hand, is linked to goals or outcomes that are separable from the action itself.

Table 2

Extrinsic Motivations of Filipiniana Institutions in Moving the Collections

Institution	Extrinsic Motivation
Filipinas Heritage and Library (FHL)	Renovation
Lopez Museum and Library (LML)	Development of new house/building
National Archives of the Philippines (NAP)	“ <i>Obligado</i> ” [Obligated] (G. Gomez, personal interview, March 3, 2020)
National Library of the Philippines (NLP)	Construction; Major rehabilitation and renovation
University of the Philippines Diliman – Main Library (UPD-ML)	Renovation/Retrofitting

These motivations are fundamental to risk management and mitigation during collection relocation, as they can influence decision-making, drive personnel performance, and ensure the safety of the collections and individuals involved.

Collections

All five (5) Filipiniana institutions included in this study have collections of paper-based and photographic materials. Only three (3) Filipiniana institutions have paintings and these are the Lopez Museum and Library, the National Library of the Philippines, and the University of the Philippines Diliman – Main Library. Two (2) Filipiniana institutions such as the Lopez Museum and Library and the University of the Philippine Diliman – Main Library have archeological objects collections and four (4) of the Filipiniana institutions except for the National Archives of the Philippines have other museum objects.

Locations

The location of the move of five Filipiniana institutions include the original location, the interim/permanent location, the transportation vehicle used, and the problems/concerns encountered in moving their collection from the original to the interim/permanent location. In this study, two (2) Filipiniana institutions moved within their original location and also used offsite storage; these are the Filipinas Heritage Library and the National Library of the Philippines. The Filipinas Heritage Library (FHL) moved most of its collections that are non-rare to the same building where it was originally located at the Ayala Museum, Makati, but to a different floor. Only the rare collections were moved to the offsite storage located also in the Makati area. The FHL decided to have off-site storage because the rare collections must be stored in a place with good environmental conditions and the interim location within their building does not have temperature and humidity control capabilities. During the interview, the Manager said that they hired a van to transport their rare collection to the offsite storage in Makati Area. With regard to moving their collection to the same building but on a different floor, one of the problems that the manager mentioned was the use of the elevator. Because it was the same regular elevator used by the employees and visitors in the building, they need to wait for the availability of the elevator for the movers to use it. Likewise, if the movers are using the elevator, employees and visitors who need the elevator will also have to wait. This caused traffic in the elevator use.

According to the respondent, the National Library of the Philippines (NLP) print materials were only moved within the building except for the artworks (paintings, sculptures, woods) that were originally located on the 3rd floor of the NLP building. NLP artworks were moved to the National Museum of the Philippines (NMP) and are now on loan. The NMP was in-charge of the packing and transporting of the artworks and they used trucks as their vehicle. In moving other collections within the NLP building, the problem that they encountered was the number of times they need to move their collection within the building. Each time renovation and retrofitting take place in the NLP building, they will need to move their collections from the interim storage to another free space within the building. Moving their collections several times means that they have to touch and pack the collections more often. One of the respondents said that the handling of the collections damages the book covers and binding especially of their fragile and rare collections.

The Lopez Museum and Library (LML) was originally located at the Benpres Building, in San Antonio, Pasig City.

When construction of their permanent home began, the LML collection was transferred to the interim site on Aurora Blvd., Ermitano, San Juan City. The two locations are about 6.5 km away from each other and because of the distance, the LML had to hire trucking to transport their collections. They related having encountered a problem in relation to the location and hiring transport vehicle for their trucking: the environmental concerns while in transit. Based on the interview, the LML had initially thought of using trucks that are temperature- and relative

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humidity-controlled. However, due to budgetary concerns, they had to minimize the use of such trucks to only the high-risk objects which comprise only about 10% of their collection. Another problem that they encountered was the difficulty in loading and unloading pallets. The respondent said that there were no loading bays in place and pallet trucks were expensive to rent or procure.

The new National Archives of the Philippines building is now located on the Ground and 6th Floors of the PPL Building on U.N. Avenue, Paco, Manila. For the longest time, the NAP was housed at the National Library of the Philippines in Kalaw, Manila. They transferred to a new building when the NLP needed to renovate and retrofit their building. According to the respondent, in 2019, the NAP bought the PPL Building in Paco, Manila to be their permanent home because they were obligated to leave the National Library of the Philippines. The respondent also shared that the PPL Building was not yet designed to be used as an archive building, so they had to repurpose the rooms of the building. The rooms served as their offices. They removed the partitions to put the shelves for the archive collections. In the future, the NAP planned to relocate their offices in Port Area and U.N. to the PPL Building in Paco, Manila.

During their transfer from Kalaw to Paco, they used a truck to transport their collection. Since the collections that were transferred are national and cultural treasures, a guard and a regular employee were made to convoy during the trucking. The respondent also related that the lengthy distance between Kalaw and Paco created problems with the transfer such as traffic and obstructions on the road. The collections were on the road for hours.

The University of the Philippines Diliman – Main Library (UPDML) was located at Gonzalez Hall in UP Diliman, Quezon City. Their collections were transferred to the three (3) interim storages located in separate buildings in UP Diliman because of the renovation and retrofitting of Gonzalez Hall. The interim storages are less than 1 km radius of Gonzalez Hall. They started to transfer their collection in 2019.

Although the UPDML had the shortest distance from the three Filipiniana institutions that moved their collections outside their original location, they are the ones who experienced water damage due to inclement weather while collections were in the truck. During the interview, the respondent shared that they started moving their collections in September 2019, but in March 2020, when the lockdown was announced due to the Covid-19 Pandemic, their move was also stopped. During the lockdown, some of the personnel were able to continue visiting the interim locations to check the conditions of the collections because they live within the University of the Philippines Diliman. It became their advantage compared to the other institutions with interim locations that were far from the original location and the personnel involved in moving their collections live far as well. The respondent also shared that some of their personnel were able to visit the locations only by walking. Lastly, the respondent also shared that one of the problems/concerns that they encountered in relation to the location was the unavailability of transportation. To countermeasure this problem, the respondent shared that at times, they used their personal vehicles to transport their collection.

It was revealed that the interim location has a great impact on the movement of collections and risks may occur because of this. One of the risks was the requirement for truck to be equipped with features that can control the fluctuating temperatures and relative humidity, especially for the high-risk collections. According to Adcock, Varlamoff, and Kremp (1998), the effect of fluctuating temperature and relative humidity on collections are (a) condensation and possibly resulting in mold and other problems excess moisture causes, (b) may produce minimal stress in materials that are free to expand and contract, (c) affect the dimensions and mechanical properties of organic materials and can lead to damage if they occur over a short period of time, and (d) visible damage can take the form of flaking inks, warped covers on books, and cracked emulsion on photographs. Another problem that the respondent mentioned was the traffic. Traffic may

threaten the collection because, according to Adcock, Varlamoff, and Kremp (1998), factories and traffics cause dust and gaseous pollutants. Pollutants such as sulphur dioxide, hydrogen sulphide, and nitrogen dioxide combine with moisture in the air and form acids that can attack and damage library material.

Personnel involved in moving collections

The study reveals the varying approaches of these institutions when it comes to personnel involved in moving collections. The Filipinas Heritage Library relied on maintenance and janitors from their service provider, hiring additional help as needed, while the Lopez Museum and Library enlisted both regular and project-based personnel from the Eugenio Lopez Foundation, along with hired movers. In contrast, the National Archives of the Philippines hired 15 contractual personnel, and the National Library of the Philippines employed job orders. The University of the Philippines Diliman – Main Library utilized a combination of library personnel for packing and contractual staff for transportation.

The respondents from these institutions demonstrated differing levels of experience in moving collections. The Filipinas Heritage Library had minimal experience among their staff, while the Lopez Museum and Library had some personnel with prior moving experience, albeit with different processes. The National Archives of the Philippines assigned guards for security and four regular employees to receive and arrange collections. The National Library of the Philippines had librarians and section heads leading the planning and implementation of the move, with the National Museum of the Philippines assisting with artworks. The University of the Philippines Diliman – Main Library used both non-supervisory and supervisory staff for various tasks related to moving collections.

Despite varied levels of experience among personnel, the study found that the perceived risks of physical damage, vandalism, and theft during the collection moves were not rated as significant or high. Proper supervision, knowledge sharing, and in-house training for third-party service providers could mitigate these risks.

The personnel involved in moving collections can be categorized into three groups: (1) *Personnel from the Institutions*, including librarians, consultants, management, and building administrators, who oversee the project and ensure building and storage security, (2) *Support Staff*, such as janitors, building maintenance support, and guards, who handle the packing, unpacking, and security of the collections, and (3) *Third-party service providers*, including packers, movers, transport, and drivers.

Process of Moving

Regarding the process of moving or relocating collections, all five institutions indicated that they did not use international or local guidelines or standards as their primary references. The Lopez Museum and Library was the only institution with existing guidelines for handling different types of collections, which they used as a reference. These guidelines covered various aspects, including proper handling, packing, storage, environmental conditions, and equipment use.

The Lopez Museum and Library outlined their process, which included planning, inventory, packing, storing, transporting, unpacking, and shelving. They classified objects into three categories, determining the storage, packing, and trucking requirements. They also consulted with staff members to assess needs and costs. The Filipinas Heritage Library, on the other hand, based their move on the identification of materials to be relocated and planning to accommodate ongoing activities and renovations.

The National Archives of the Philippines used plastic bins, boxes, and sealed cabinets for packing archival collections, ensuring that boxes were not overloaded. They created a transfer procedure policy to guide the move, drawing from their own experiences and enhancing their strategy.

The National Library of the Philippines developed written guidelines for their systems and procedures and actively modified them based on their experiences. They used various protective materials for different types of collections, including plastic boxes for fragile items and archival boxes for rare collections. Detailed documentation of their processes helped monitor the proper handling of collections and protective materials.

The University of the Philippines Diliman – Main Library did not refer to any guidelines or standards but formed a committee to manage the move. Their process included planning, identification, packing, labeling, transportation, unpacking, shelving, and documentation. The library staff went through extensive planning and had to adapt to challenges related to interim storage, transportation, and shifting university administration. They documented their entire process and developed guidelines based on their knowledge and experiences.

The study revealed varying practices in personnel involvement and processes for moving collections among the five Filipiniana institutions. While some institutions had existing guidelines, others relied on their own experiences and knowledge to execute successful moves. Proper planning, documentation, and training played pivotal roles in mitigating risks and ensuring the safe relocation of valuable collections.

Perceived Risk/Risk Assessment (Hazards and Risks)

In the context of moving collections within Filipiniana institutions, it is essential to recognize and address the potential hazards and risks associated with the process, even though the primary motivations for these moves include renovation, development of new facilities, construction, and restoration to enhance access and services. The successful relocation of collections should not only focus on completing the logistical aspects but also on ensuring the safety of both the collections and the personnel involved.

The study considered various types of collections:

- a) paper-based materials, including books, periodicals, documents, records, newspaper clippings, maps, and paintings on paper;
- b) photographic materials, such as negatives, prints, and microfilms;
- c) paintings on canvas and wood;
- d) archaeological objects, such as ceramics and stones;
- e) other museum objects, including metals and glass.

For paper-based materials, the top three hazards with the highest probability of occurrence included dissociation, physical damage, and pollutants (all rated at 2.5), and mold outbreaks (rated at 3.6). Notably, these hazards are all caused by human factors rather than natural disasters or incidents. On the other hand, the top three hazards with the most significant impact on paper-based materials due to the move were fire (rated at 4.11), building damage or collapse (rated at 3.55), and mold flooding (rated at 3.27). While these six hazards, including flooding, mold outbreaks, dissociation, insect/vermin infestation, storm/typhoon damage, and physical damage, are moderate risks that require rigorous monitoring, all other remaining risks were categorized as low-risk, demanding less immediate attention but still warranting consideration. Notably, none of the hazards were classified as significant or high-risk.

For photographic materials, the top three hazards by probability of occurrence are dissociation (3), power outage (2.4), and flooding and physical damage (both at 2.33), all

stemming from human factors rather than natural disasters. The three most impactful hazards on photographic materials during relocation are sewage leaks (3.71), storm/typhoon damage and fire (both at 3.22), and flooding (3.11). Five hazards were classified as moderate risks, including flooding, physical damage, storm/typhoon damage, sewage leaks, and dissociation. While no significant or high-risk hazards were identified, recognizing potential threats to photographic collections is essential for taking appropriate preventive measures. Both paper-based and photographic materials share similar top hazards due to their inherent fragility and composite nature. Understanding collection types and potential risks is crucial for achieving institutional goals and applying effective mitigation measures.

For paintings, the top three hazards by probability of occurrence are physical damage (2.83), power outage (2.71), and excessive force and flooding (both at 2.67), all originating from human factors rather than natural disasters. The most impactful hazards on paintings during relocation are excessive force, lack of restraint on transit, and building damage/collapse (all at 3.33), followed by fundamental problems (3.17), and mold outbreaks, chemical damage, fire, and theft (all at 3). Six hazards were classified as moderate risks, requiring monitoring but being less urgent. No significant or high-risk hazards were identified. Proper handling and environmental control during transit are critical for ensuring the safety of paintings.

Archaeological objects, which include ceramics, stones, and rocks, are less susceptible to damage due to their stable materials. The top three hazards by probability of occurrence for these objects are power outage (2.4), lack of restraint on transit (2.29), and excessive force and pollutants (both at 2.2), all arising from human factors. The most impactful hazards for archaeological objects are building damage/collapse (3.8), excessive force and storm/typhoon damage (both at 3), and excessive chemical damage and fire (both at 2.6). Only excessive force and storm/typhoon damage are considered moderate risks, while the remaining hazards are at low-risk levels. Although archaeological objects are more stable than other collections, mitigation measures should be in place to reduce potential damage, particularly from storm-related factors.

Other museum objects, such as metals and glass, face hazards related to power outage (2.56), excessive force and flooding (both at 2.25), and dissociation and pollutants (both at 2.22), all originating from human factors. The most impactful hazards are building damage/collapse (3.5), fire (3.38), and excessive force (3.25), with excessive force being the only moderate risk. The remaining hazards are at low-risk levels. Proper packaging, fittings, room arrangements, and handling can help mitigate the risks posed by excessive force.

While most identified risks are at low-risk levels, it's essential for institutions to recognize and address them to protect their collections and ensure a successful move. Proper planning, environmental control, and transit management can mitigate potential damage and safeguard collections and personnel during relocation. Neglecting these risks can lead to unforeseen consequences, as demonstrated by the National Archives of the Philippines' experience with a fire incident post-move. Proactive risk assessment and mitigation measures are crucial for a successful and safe collection relocation.

Risk Encountered

During interviews with the respondents from various Filipiniana institutions, several common risks were identified when moving their collections to new locations. The major risks included dissociation, physical damage, and excessive force, and additional health risks to personnel were also acknowledged.

Filipinas Heritage and Library (FHL) reported that they encountered physical damage to their collections due to the inherent fragility of materials and improper handling, especially with

oversized books. Dissociation, where objects were misplaced or not adequately arranged, was a significant issue. They also faced environmental challenges, as interim storage conditions were not the same as in their previous location, with ongoing construction being a risk. FHL mentioned the possibility of collection loss, even with security measures in place. Health risks to personnel included minor injuries, fatigue, and overtime work due to the move.

The Lopez Museum and Library (LML) experienced dissociation caused by maintenance personnel, who were not librarians, handling packing and faced space limitations, making it difficult to access collections. They reported physical damage to paper-based materials, a mold outbreak, and environmental issues during transit. Loading and unloading of pallets were also problematic, as they lacked loading bays or docks, leading to delays and budgetary constraints.

The National Archives of the Philippines (NAP) dealt with traffic and road obstructions due to busy roads during the move, with personnel exposed to health risks, such as lung and bone illnesses, fatigue, and exhaustion. They advocated for hazard pay for the demanding work.

The National Library of the Philippines (NLP) faced dissociation and physical damage issues, particularly for brittle materials. Storage and space allocation were challenging, leading to overcrowded shelves, changes in shelf heights, and dust accumulation due to construction activities.

The University Archives Division of the UP Diliman Main Library (UPDML) experienced physical damage from snapped ropes during lifting and stacking of books, and dissociation was a concern, leading to updated records and collection maps. Health risks to personnel included minor injuries. They also highlighted logistical challenges, underestimation of materials, external factors affecting transportation availability, personnel issues, ongoing business processes, and transfer delays due to COVID-19 lockdowns.

Table 3

Risk Mitigation Strategies

Threats/ Hazards	Risk Mitigation Strategies	Institutions
Building Damage/ Collapse	<ul style="list-style-type: none"> Inspect the new location and conduct an annual inspection of the building structure/facility. 	UPDML
	<ul style="list-style-type: none"> Conduct regular inspections by the building administrators. 	
	<ul style="list-style-type: none"> Coordinate closely with the building admin/ property manager, safety officer, and security team for preventive maintenance and drills. 	FHL
	<ul style="list-style-type: none"> Respond to damage from the building or other emergency situations. 	NLP
Chemical Damage	<ul style="list-style-type: none"> Have proper storage of chemicals. 	FHL
	<ul style="list-style-type: none"> Coordinate closely with the building admin/ property manager for monitoring and preventive maintenance. 	
	<ul style="list-style-type: none"> Avoid storing dangerous chemicals in the same room/area where the collection is located, secure the storage area of the chemicals. 	
	<ul style="list-style-type: none"> Determine proper storage and use of chemicals/cleaning agents. 	NLP

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Collapse of shelving	• Use durable shelves.	UPDML
	• Maintain proper shelving with appropriate placement and number of materials.	FHL
	• Ensure the shelves are securely installed.	
	• Shelves should be secured and solidly braced.	NLP
Dissociation	• Enforce policies/guidelines and proper workflow for metadata management and maintenance of library records.	FHL
	• Make listing and monitoring sheets of the collections.	LML
	• Make sure to supervise the packing of collections if the staff is untrained in packing.	NAP
	• Countercheck the collections, especially the unique numbers.	
	• Number the bins systematically for easy retrieval of collections, especially when it is time to unpack and shelve the collections again.	NLP
	• Manage the number of materials that can be accessed and used.	
	• Keep proper arrangement and labeling of collections.	
	• Survey target location to plan transport and transfer materials accordingly.	UPDML
	• Cascade/communicate to staff the transfer, exact location, and exact materials to be transferred.	
	• Have/create a collection map and update it every time there is movement/transfer.	
Environmental hazards	• Properly plan the transport schedules and routes to minimize periods of exposure to extreme temperatures and RH.	FHL
	• Use appropriate enclosures for packing items for transport.	
	• For environmental concerns while in transit, the temporary solution is in the timing of the loading of the trucks. If objects were moved during parts of the day when the heat is not at its peak, then exposure to extreme heat would be reduced. For this scheme to work, the trucks should be loaded only twice a day: first at 8 AM and a second trip between 2 and 3 PM when temperatures are generally lower by 2 to 3°.	LML
	• Use proper storage or custom-made boxes.	NLP
Excessive force	• Environmental conditions should be monitored, especially if there are rare books or other collections that may be suffering from vinegar syndrome.	
	• Deal only with reputable service providers.	FHL
	• Implement supervision by authorized and trained personnel.	
	• Practice proper handling of materials.	
	• Avoid storing collections in basements, attics, or other locations with high-risk levels and environmental extremes.	NLP

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	<ul style="list-style-type: none"> • Train personnel to ensure proper handling of materials, including proper packing, labeling, and transport and transfer from original location to temporary sites. 	
Extreme hazards	<ul style="list-style-type: none"> • Deal only with reputable service providers. 	FHL
	<ul style="list-style-type: none"> • Employ supervision by authorized personnel. 	
	<ul style="list-style-type: none"> • Implement strict observance of safety/security measures. 	
	<ul style="list-style-type: none"> • Review the qualifications of service providers. 	
Fire	<ul style="list-style-type: none"> • Install Fire/Smoke Detectors and Fire Sprinklers in every section of the building. 	UPDML
	<ul style="list-style-type: none"> • Strictly prohibit smoking in and around storage areas. 	FHL
	<ul style="list-style-type: none"> • Coordinate closely with the building admin/property manager and security team for monitoring and preventive maintenance. 	
	<ul style="list-style-type: none"> • Ensure availability of fire extinguishers and fire protection equipment. 	NLP
	<ul style="list-style-type: none"> • Keep the storage clean and well-maintained. 	
Flooding/Water Damage	<ul style="list-style-type: none"> • Do not use the basement as a storage area. 	UPDML
	<ul style="list-style-type: none"> • Continuously monitor plumbing and roof. 	LML
	<ul style="list-style-type: none"> • Check the roof for leaks 	
	<ul style="list-style-type: none"> • Coordinate closely with the building admin/property manager for monitoring and preventive maintenance. 	FHL
	<ul style="list-style-type: none"> • Avoid storing items in or near leak-prone areas. 	UPDML
	<ul style="list-style-type: none"> • Provide protection to materials while in transit. • Suspend activities during typhoons/rainy days. 	
Fundamental problems	<ul style="list-style-type: none"> • Deal only with reputable service providers. 	FHL
	<ul style="list-style-type: none"> • Employ supervision by authorized and trained personnel. 	LML
	<ul style="list-style-type: none"> • Practice proper storage and handling of materials. 	
	<ul style="list-style-type: none"> • Use pallets for easier lifting of piles of boxes. 	NLP
	<ul style="list-style-type: none"> • Use a cart/trolley to transport boxes of records or collections. 	
Health and safety hazard	<ul style="list-style-type: none"> • Coordinate closely with the person in-charge of renovation, protocols, and safety protocols for employees. All of these measures should be identified during the planning stage. 	FHL
	<ul style="list-style-type: none"> • Personnel should wear proper clothing, especially if there is ongoing construction in the moving area, for the safety of the personnel. 	
	<ul style="list-style-type: none"> • Safe work programs and standards should be established to ensure that all work can be carried out safely and all the associated risks are managed and mitigated. 	LML
	<ul style="list-style-type: none"> • Include written safety procedures, conduct of training, and installation of safety signage. Remember that the safety of personnel is prime and training is foremost. 	
	<ul style="list-style-type: none"> • Provide guidelines on proper use, care, and maintenance of PPE that protects personnel from potential hazards that they are likely exposed to while performing their tasks. 	
	<ul style="list-style-type: none"> • Ensure the competency of personnel involved in the planning, assessment, and execution of work. 	

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	<ul style="list-style-type: none"> The staff should be more careful in lifting heavy boxes and materials; cutting tapes; and others. 	NAP
	<ul style="list-style-type: none"> Manpower must be considered, especially during the planning period. 	NLP
	<ul style="list-style-type: none"> Providing proper protective safety equipment to moving personnel 	UPDML
	<ul style="list-style-type: none"> Ensure regular breaks so as not to overextend them. 	
Insect/Vermin infestation	<ul style="list-style-type: none"> The pantry should not be near the storage areas. 	UPDML
	<ul style="list-style-type: none"> Instruct the guards and other personnel assigned to the collections to check regularly for the pests like rats, insects, and others and report immediately to the superior. 	
	<ul style="list-style-type: none"> Coordinate closely with the building admin and maintenance personnel for cleaning and pest control. 	FHL
	<ul style="list-style-type: none"> Immediately report an infestation, if any, for appropriate action. 	
	<ul style="list-style-type: none"> Maintain cleanliness in the area. 	NLP
	<ul style="list-style-type: none"> Keep food and drinks away. 	
Lack of restraint on transit	<ul style="list-style-type: none"> Hire professional movers. 	UPDML
	<ul style="list-style-type: none"> Deal only with reputable service providers. 	FHL
	<ul style="list-style-type: none"> Employ supervision by authorized and trained personnel. 	
	<ul style="list-style-type: none"> Practice proper handling of materials. 	
	<ul style="list-style-type: none"> For concerns regarding the difficulty in loading and unloading pallets, trucks equipped with lifters can be rented out for ease of handling. 	LML
	<ul style="list-style-type: none"> Use lifting aids such as trolleys rather than manual lifting. 	
	<ul style="list-style-type: none"> Identify a stable location. 	NLP
	<ul style="list-style-type: none"> Keep bookshelves and cases 2” away from the wall. 	
Mold Outbreaks	<ul style="list-style-type: none"> Use dehumidifiers. 	UPDML
	<ul style="list-style-type: none"> Check environmental monitoring and control system. Humidity and temperature should be kept at acceptable levels. 	LML
	<ul style="list-style-type: none"> For microfilm, regular rewashing and dry cabinets are needed. 	
	<ul style="list-style-type: none"> Add dehumidifiers and UV to kill molds. 	
	<ul style="list-style-type: none"> Fumigation by professionals is recommended. 	
	<ul style="list-style-type: none"> Use air conditioning, dehumidifiers, and thermo hygrometers to maintain and monitor the temperature and humidity in storage areas. 	FHL
	<ul style="list-style-type: none"> Apply immediate conservation treatments, as needed. 	
	<ul style="list-style-type: none"> Monitor the temperature and humidity of areas where the materials are being stored and make adjustments if necessary. 	
	<ul style="list-style-type: none"> Use an exhaust fan if the storage area has no air conditioning. 	NAP
	<ul style="list-style-type: none"> Have proper storage. 	NLP
	<ul style="list-style-type: none"> Avert fluctuations in temperature and relative humidity. 	
	<ul style="list-style-type: none"> Have a proper, cool, and clean environment. 	

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	<ul style="list-style-type: none"> The size and environmental condition of the storage area should be emphasized. 	
Physical damage	<ul style="list-style-type: none"> Deal only with reputable service providers. 	FHL
	<ul style="list-style-type: none"> Employ supervision by authorized and trained personnel. 	FHL
	<ul style="list-style-type: none"> Practice proper handling of materials. 	
	<ul style="list-style-type: none"> Use more sturdy storage boxes in packaging the collections. 	LML
	<ul style="list-style-type: none"> Pack and arrange the collections properly in the storage boxes and do not pile heavy boxes on top of one another. 	
	<ul style="list-style-type: none"> If the books or other collections are oversized, make sure that they are properly stacked in the boxes and use plastic bins and bubble wrap if available. 	
	<ul style="list-style-type: none"> It is important to secure the collections by using plastic bins or boxes. 	NAP
<ul style="list-style-type: none"> Keep materials away from all kinds of radiators and vents. 	NLP	
	<ul style="list-style-type: none"> Training of personnel to ensure proper handling of materials, including proper packing, labeling, and transport and transfer from original location to temporary sites 	UPDML
Pilferage	<ul style="list-style-type: none"> Strictly adhere to security measures; use of CCTV 	FHL
	<ul style="list-style-type: none"> Implement storage access controls; tracking of retrieved items 	
	<ul style="list-style-type: none"> Conduct a careful review of security and staff qualifications. 	
	<ul style="list-style-type: none"> Ensure a safe facility. 	NLP
Pollutants	<ul style="list-style-type: none"> Deal only with reputable service providers 	FHL
	<ul style="list-style-type: none"> Provide guidance/training for maintenance personnel 	
	<ul style="list-style-type: none"> Practice proper handling of materials. 	
	<ul style="list-style-type: none"> Use appropriate cleaning materials. 	
	<ul style="list-style-type: none"> Ensure proper housekeeping habits. 	NLP
Power outage	<ul style="list-style-type: none"> Coordinate closely with the building admin for preventive maintenance. 	FHL
	<ul style="list-style-type: none"> Regularly back up files/data 	
	<ul style="list-style-type: none"> Coordinate with the building manager and Corporate Protection. 	
	<ul style="list-style-type: none"> Unplug equipment and seek the assistance of an electrician. 	NLP
Sewage Leak	<ul style="list-style-type: none"> Conduct regular inspection by the building administrators. 	UPDML
	<ul style="list-style-type: none"> Coordinate closely with the building admin for preventive maintenance; immediately report incidents. 	FHL
	<ul style="list-style-type: none"> Use pallets in the piling of boxes to safeguard them in case of food or water leaks. 	LML
Space	<ul style="list-style-type: none"> Measure the allotted space and count the number of shelves per room ahead of time to lessen the problem of space. 	FHL
	<ul style="list-style-type: none"> Storage areas must be considered as one of the major components to help in mitigating the risks. 	NLP
	<ul style="list-style-type: none"> Proper planning and coordination should be in place. 	

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Storm/Typhoon Damage	<ul style="list-style-type: none"> • Closely coordinate with the building admin/property manager and security team for monitoring and preventive maintenance. 	FHL
	<ul style="list-style-type: none"> • Immediately report damage for appropriate action. 	NLP
	<ul style="list-style-type: none"> • Ensure a safe facility. 	
Theft	<ul style="list-style-type: none"> • Install CCTVs in Reading Areas/Shelves Areas for additional collection security. 	UPDML
	<ul style="list-style-type: none"> • Strictly adhere to security measures; use CCTV 	FHL
	<ul style="list-style-type: none"> • Implement storage access controls; tracking of retrieved items 	LML
	<ul style="list-style-type: none"> • Consider using RFID tags. 	
	<ul style="list-style-type: none"> • Have a convoy or a guard when transporting the collection, but there is no need for a siren and uniformed guards. The security system and personnel should be simple. She said to make an effort to do the transport in the simplest possible way to avoid the public's interest in the collections that are being transported, especially if they are cultural or historical treasures that are very valuable. It is riskier if uniformed security is hired for it may alarm or give a clue to the public that there are valuable items in the vehicle and interception may happen. 	
<ul style="list-style-type: none"> • Ensure the security of the facility and collections. 	NLP	
Vandalism	<ul style="list-style-type: none"> • Install CCTVs in Reading Areas/Shelves Area for additional collection security. 	UPDML
	<ul style="list-style-type: none"> • Strictly adhere to security measures; use CCTV 	FHL
	<ul style="list-style-type: none"> • Implement storage access controls 	
	<ul style="list-style-type: none"> • Implement/monitor tracking of retrieved items. 	
	<ul style="list-style-type: none"> • Set rules/procedures for handling collections. 	NLP

Conclusions

Motivations, risk management standards, and methods, and the nature of Filipiniana collections are foundational to the successful transportation of collections. Both extrinsic and intrinsic motivations drive the institutions to move collections safely. While some threats are considered moderate, effective planning and risk mitigation measures are vital to protect collections and personnel.

The study also highlights the importance of considering risks not only to collections but also to the people involved. For instance, health risks and unforeseen events, such as the Russia-Ukraine War, can impact the move. Identifying and prioritizing risks during the moving process are essential for making informed decisions.

Recommendations

The study suggests a framework that emphasizes motivations, risk management standards, and practices as the foundation for successful collection transportation. Training and equipping personnel with the necessary skills and knowledge are essential to ensure a smooth move.

Additionally, adherence to standards and guidelines, risk assessment, and thorough planning before the move can help mitigate potential risks. This includes factors like collection type, location, storage, building considerations, transportation, personnel, materials/equipment,

processes, budget, security, and weather. Ensuring security measures, like CCTV and RFID tags, can help protect against theft.

In conclusion, the study highlights the need for a well-rounded approach to move library, archive, and museum collections safely. By understanding motivations, employing risk management strategies, and effective planning, institutions can navigate the challenges of relocating their collections while safeguarding their cultural heritage.

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Збереження матеріалів філіппінської культури: розпізнавання та визначення пріоритетів ризиків під час транспортування, переміщення або релокації бібліотечних, архівних та музейних фондів

Мета. Бібліотеки, архіви та музеї є життєво важливими для навчання та культури. Катастрофи загрожують як їхнім будівлям, так і фондам. Безпека є першочерговим завданням під час кризових ситуацій, але захист фондів також має важливе значення. У дослідженні з'ясувалося, чому п'ять установ Філіппін – Бібліотека спадщини Філіппін, Музей і бібліотека Лопеса, Національний архів Філіппін, Національна бібліотека Філіппін і Головна бібліотека Університету Філіппін Діліман – перемістили свої фонди та як вони керували ризиками. **Методика.** Дослідниця використовувала якісні та кількісні методи, оцінюючи ризики на основі ймовірності та впливу. **Результати.** Результати дослідження виявили мотивацію для переміщення фондів – як зовнішню (наприклад, ремонт), так і внутрішню (гордість). Це підкреслило важливість розпізнавання й визначення пріоритетності ризиків, навіть низького рівня, для захисту фондів і основних мотивацій установ. **Висновки.** Нездатність зменшити ризики може призвести до втрат і збитків, що впливають на основні мотивації цих установ.

Ключові слова: переміщення фондів; фонди філіппінської культури; оцінка ризиків; переїзд; мотивація

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