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Disaster Management Plan for Academic Libraries in Lucena City

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**DISASTER MANAGEMENT PLAN FOR ACADEMIC LIBRARIES IN LUCENA
CITY**

A Thesis
Presented to the Faculty of the School of Information Knowledge Management and
Graduate Studies and Teacher Education Research
Philippine Normal University
Manila

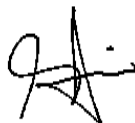
In Partial Fulfillment of the Requirements for the Degree of
MASTER OF ARTS IN EDUCATION with Specialization in Library and
Information Science

by

MARISEL V. SANTE

APPROVAL SHEET

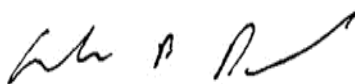
This thesis entitled “**DISASTER MANAGEMENT PLAN FOR ACADEMIC LIBRARIES IN LUCENA CITY**” prepared and submitted by **MARISEL V. SANTE** in partial fulfillment of the requirements for the degree of **MASTER OF ARTS IN EDUCATION with Specialization in Library and Information Science**, is hereby recommended for approval and acceptance.



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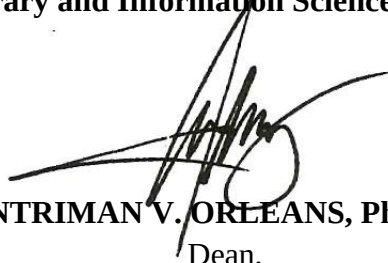
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The Researcher

DEDICATION

To my husband ***JONAS***,
my daughter
JENDI,
family and friends
this humble piece of work is for you.

The Researcher

M.V.S

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ABSTRACT

Researcher: MARISEL V. SANTE

Title: Disaster Management Plan for Academic Libraries in
Lucena City

Key Concepts: Disaster Management, Academic Libraries, Library
Personnel, Disaster Prevention and Mitigation,
Preparedness, Response and Recovery

Degree: Master of Arts in Education

Specialization: Library and Information Science

Adviser: Roaima Lynn B. Antonio, MA

Threat due to several disasters is one of the center apprehensions in the library. As such, this study aimed to investigate the possible threats or hazards that may happen in academic libraries. It is also aimed to find out the factors that contribute to academic libraries' vulnerability to disaster. Moreover, this study addressed the possible hazards or threats in terms of prevention, mitigation, preparedness, response, and recovery. The qualitative design of the research was utilized. Developed checklist, validated interview questionnaire and note-taking were the researcher's strategies to collect precise data. Gathered data were presented and interpreted qualitatively using thematic analysis. Results showed that academic libraries are high risks to typhoons, fire, and security threats.

Further, the findings of this study also revealed that academic libraries are not prepared for different types of a disaster such as a typhoon, fire, security hazard, floods and many more as they do not have an existing disaster management plan. Likewise, in academic libraries, preventive measures are not enough to lessen and avoid the possible impact of a disaster.

With these collected data, a written library Disaster Management Plan has been developed which hopes to help the academic librarians fulfill the particular needs of their libraries in case disaster strikes. This plan has not been developed to sustain all their needs rather provide general measures for specific hazards, threats, and content of a disaster management plan. Also, this can be altered to suit the specific needs of other academic libraries.

CHAPTER 1

THE PROBLEM AND LITERATURE REVIEW

BACKGROUND OF THE STUDY

The Philippines, by virtue of its location, climate, and topography, is one of the most disaster-prone countries in the world according to Alampay (2014) as cited by Calilung (2016). It has a land area that measures around 299,764 square kilometers and its coastline is about 36,000 kilometers known to be one of the longest coastlines in the world ranking at the fourth spot. Moreover, the country is surrounded by three bodies of water: on the west and north by the South West Philippine Sea; on the east by the Pacific Ocean; and on the south by the Celebes Sea and the coastal waters of Borneo. The archipelagic nature of the Philippine coastal and extended swamp areas increases vulnerability to storm surges, tsunamis and sea level changes.

The Philippines encounters an average of 20 earthquakes daily, or 100 to 200 earthquakes annually for the reason that the country is also a part of the Circum-Pacific seismic belt and is positioned in between two major tectonic plates, the Eurasian and Pacific Plates which are responsible for the creation of earthquakes and tsunamis. Also, there are currently exists more than 300 volcanoes in the country and among them are 22 active ones and 36,289 kilometers of its coastline which is highly prone to tsunami. Likewise, the Philippines is exposed to a high potential for natural disasters and anthropogenic hazards. It is a known fact

that the country is vulnerable to disaster and most of the recorded events with great number of casualties were unexpected (Luna, 2016).

For the past years, earthquakes, volcanic eruptions, typhoons, and floods have been the most dominant problem of the country. Floods affected more people and cause more damage to property than any other (Quiambao-Udan,2019). Among the natural disasters that affect the country almost annually as reported by the (NDRRMP) were floods and storms.

One such example is the rampage of Super Typhoon Yolanda (International Code Name: Haiyan) on November 8, 2013, at Tacloban City. The loss experienced from the typhoon Yolanda was tragic, and the battered location is strongly recovering from the disastrous event until today.

In the study of Brower and Magno (2011), Typhoon Ketsana, locally known as ‘Ondoy’ devastated the northern part of the Philippines in 2009. In less than ten hours, this typhoon destructed P11 billion worth of property and quenched the lives of 464 people. It is quite clear that storms and typhoon pose a serious threat to the different regions in the country.

In Southern Tagalog Region particularly in Quezon province, the 2019 report of the Provincial Disaster Risk Reduction and Management Office revealed that the province is susceptible to various hazards and to the potential impact of climate change. Quezon is considered one of the most vulnerable provinces in the Philippines due to the presence of hydro-meteorological and geological hazards.

An average of five typhoons directly hit 10 to 20 municipalities each year. Mt. Banahaw which is stagnant for so many years is considered to be a major threat together with earthquakes happening twice a year.

Being the capital city of Quezon province, Lucena's formal education is extended by 43 private schools consisting of one university, 10 colleges, and three theological schools, 10 secondary schools with elementary and pre-school education. Each school has designated library. Relatively to the provincial report of Lucena City Disaster Risk Reduction and Management Council, flood is a major disaster reference to the city hazard map which primarily includes the two major rivers of Dumacaa and Iyam as a risk due to its location of crossing the heart of the Metropolis and estimated to affect nine barangays each. In addition, whenever a sea surge takes place along Tayabas Bay, six barangays of Lucena City will be flooded. Finally, as being geographically located near the Municipality of Sariaya, Lucena City is also considered a catch basin at any time Mt. Banahaw will have its powerful eruption again since 1909.

To answer these natural events, planning to reduce the impact of disasters should be given a priority. Being prepared is the first step towards ensuring that an organization is ready to handle a potential disaster like in the libraries and other information centers. The library building, print and non-print collection, as well as furniture and equipment all have symbolic value which is irreplaceable when lost or damaged as a result of a disaster.

From a research article on disaster planning by Kaur (2009), the term disaster has a widespread scope as it comprises natural disasters and man-made disasters. The most frequent types of disaster that are initiated by people either intentionally or accidentally are fires, water damage, power failures, building and maintenance deficiencies, poor storage conditions and poor environmental control. On the other hand, natural disasters include earthquakes, landslides, floods, storm, lightning, volcanic eruption and storm surge. According to Issa (2012), disaster is defined as an event that “results in the sudden removal of records and documents from accessibility and use”.

Another research coming from Issa’s paper (2012), stated that in a library's point of view, a disaster can be an incident or occurrence which directly or ultimately disturbs the services of the library, for example, the interruption of services to patrons for a short or long-time basis.

Libraries in these kinds of disaster-prone areas are no exception from sudden losses or destruction. As a result, a librarian who manages personnel including staff, users, and visitors, and receives holdings into his/her repository has a responsibility for their safety.

Threat due to several disasters is one of the center apprehensions in the library as of now. One cannot anticipate all the risks. He/she may never know what will happen but being prepared to mitigate the circumstances will reduce the damages in the library.

The purpose of this study was to investigate the possible threats and hazards that may happen in academic libraries. It focused on the factors that contributed to academic libraries vulnerability to disaster, as well to determine the precautions and preventive measures of the academic libraries in case of disaster. Their awareness and readiness on disaster will help protect all the assets when disaster strikes. Thus, the main inspiration behind this is to reduce the damages in the library at the time of disaster.

The basic safety of the library from the above-mentioned disasters is the vital concern of this paper. With this, the study is certain to be beneficial to library personnel since this paper will be able to move everyone to action and understand what library disasters are and what they can do in getting into the act of mitigating, preparing and managing them. Also, to the administrators, that they maybe enlightened and equipped with the necessary mindset and preparedness to face any disaster especially in the library. It is hoped as well that this study will give contribution to the field of library science by providing avenue in the importance of disaster management in libraries. As end users of the library, students and other clientele are expected to benefit from this study by placing preventive measures and securing their collection. In addition, the outcome of this study can be utilized as a basis for related researches in the future.

LITERATURE REVIEW

This part presented the related literature, studies and concepts which are vital to the present study. The following literatures provide the researcher with useful insights, comprehensive and in depth understanding of the different concepts involved in this study.

Disaster

Every year, millions of people around the world are affected by either human caused or natural disaster. Disasters take different forms, like earthquake, floods, or fires (Quebral, 2016). Zaveri (2012) claimed that disaster is an occurrence arising with little warning. It happens with such amount that it ends average life of a human person for a long period and requires main strength for the community or country to stand. In addition, Mallery (2015) said that disaster comes from the Latin word “ill-starred” and it was considered to be a certain result of unavoidable bad luck.

Likewise, according to 3G Elearning (2017), disaster was originated from the French word ‘desastre’, and it was to be the combination of two words, ‘des’ which means bad and ‘aster’ meaning star. Therefore, it signifies bad star. Disaster is described as situation that can strike one or many; these are also dangerous events experienced unexpectedly anytime, anywhere.

There are many types and causes of disaster, both natural and manmade. Man-made disasters are caused by interacting with the surroundings while natural disasters are those outcomes from several natural forces such as floods, typhoon, earthquakes and many others. A disaster is not just the occurrence of an event; a disaster occurs if that event or process negatively influences people and society. It is a phenomenon that can cause damage to property, life, and interfere the functioning services of people that can cause several losses such as material, economic and most importantly human.

Every year, millions of people and properties are affected by these two types of disaster. According to Arcilla-Serapio (2016), in a disaster people can experience the danger of physical injury or worst death, losses of home, properties, community and others. Such stressors place every human at risk and possessions with a great impact that totally disrupt the normal operations of an area.

Likewise, Oliva (2016) shared that hazard becomes a disaster only when an area is not prepared for it. Ban Ki-moon (2010), the Secretary General of the United Nations, on his encouraging message once said that disasters cannot be eliminated or eradicated but everyone can mitigate the risk such as reducing damage and save more lives. Every day and everywhere there are no way to escape hazards because they are part of life. It can be recognized but hard to avoid. An area that is hazard-prone may raise its disaster risk especially if it is not well prepared for the possible disasters arising coming from that hazard.

Estrada and Cruz - Calilung (2016), mentioned that a disaster happens when hazard have effects on vulnerable people. There is a given equation or formula to simply understand the concept of disaster. The occurrence of disaster is presented by the International Federation of Red Cross and it is shown by the words below:

$$\frac{(\text{Vulnerability} + \text{Hazard})}{\text{Capacity}} = \text{Disaster}$$

As presented in this formula, disaster is the outcome of the combination of vulnerability and hazard. The result of which will be moderately lessened by the capacity. Capacity refers to the capability of the people to reduce its risk or to mitigate its destroying effects.

To provide a clearer understanding of this equation some points were given emphasis. First is the vulnerability, it pertains to the characteristics of a community, or asset that make it prone to damaging effects of a hazard. Such examples are poor design and construction of a building, insufficient protection of assets, and lack of information awareness, inadequate preparedness measures and neglect for wise environmental management. Second is hazard, this idea describes a condition that threatens a person, thing or situation and it could be classified as man-made or natural. Related to this condition natural hazards comprise the geologic hazards like earthquake and floods as well as atmospheric hazards like storms and typhoons. Third is capacity, refers to the individual or group abilities to mitigate the effects of risks/hazards or causes of disaster (3G Elearning, 2017).

With the above descriptions of vulnerability, hazard, and capacity, it could be determined that vulnerability reducing, hazard decreasing in an area and strengthening the capacity of a person is the key towards lessening the effects of disaster.

In relation to the present study, library is one of the organizations that are very apprehensive about the issue of risks and disasters that threaten library services and assets due to several man-made and natural causes. Different types of libraries such as universities, colleges and museums or archives are precious storehouses of information and knowledge, if one vanishes, it could vanish forever that's why careful disaster planning are necessary to be prepared to save knowledge for future generation.

Neil (2014) added that with careful planning in all phases of disaster management, it will improve the outcome of a bad situation. When the library faces disaster, Zaveri (2012) confirmed that the first priority is usually the safety of the human lives and the infrastructure, then salvaging and rebuilding the collections, and restoring services. However, library should not only focus on response and recovery, it should also put emphasis on disaster mitigation and preparedness for the reasons that if the libraries are aware and prepared or have any preventive measures against any type of disaster then it can be avoided as well as reduce the impact of disaster.

In addition, Issa (2012), mentioned in his paper that when a librarian receives holdings and assets into his repository, it involves the responsibility or accountability for their custody. If the library is damaged or lost due to disaster, all holdings and other aspects may be put at risk. In a library's point of view, disaster can be anything or event which directly or indirectly affects the regular services of the library like disruption of services to readers.

Issa (2012) stated also in his paper that there is a difference between the nature of events that are characterized or pronounced as disasters in the library. Natural hazards like flood, earthquake, typhoon or volcanic eruption are called disasters because of the effects they have on people as well as their normal occurrence. Another is man-made hazards or events like fire, war or terrorism, building deficiencies and chemical spills are named disaster, because of their effects on materials and properties of the library. Nevertheless, criminal acts, like book vandalism and mutilation and theft are also categorized as physical disasters.

Ugwuanyi (2015) defined library disaster as the result of unexpected deletion of documents and records from accessibility and use; it can also be regarded as an event that cannot access documents permanently. Disaster can be viewed as any case which threatens the safety of a person; and/or damages to a library's buildings collection or things therein like equipment and system.

According to Olanrewaju Issa (2012), fire and water are considered the ultimate threats to the collections while physical damage is considered to be less likely. But there are three hazards that the personnel should be aware of in order to lessen the problems in the library. The following are the possible threats to library and its resources:

1. Fire could originate from either external source such as the risk of lightning strikes and shrub fire while internal sources are coming from the use of electrical appliances like computer, sockets, lamps, power boards, electrical wiring, chemical spills and other equipment within the collection buildings.
2. Water hazards are from external and internal sources. Such external sources are storms or external flooding that leaks into the building. This hazard could also cause structural damage to the building, like clogged gutters from the roof and when the storm cannot be handled by the outside water drain. For internal sources these includes the leaks or accidental release from sprinklers, fire hoses, burst water pipes and overflowing sinks.
3. Physical damage to the collection consists of building structural failure, theft like illegal entry to the building, and vandalism of library collections.

All of these hazards can be avoided or mitigated by precautionary measures that lead to eliminate or reduce the possible disasters that are likely to happen anytime, anywhere. According to Karen (2009), he stressed that disaster be it natural or man-made can be mitigated by a comprehensive, systematic, disaster preparedness program; which provides identifying, avoiding or preventing risks and for responding efficiently & effectively to any disasters or emergencies.

Management of Disaster

One of the most important aspects of library management is to deal with disaster management and planning. According to Arcilla-Serapio (2016), disaster management is the actions taken by an organization in response to sudden events that are harmfully affecting people or resources and threatening the continuous operation of the organization. He stated also that disaster management contains the development of disaster recovery plans in order to minimize the risk of disaster and to handle them when they do arise and the implementation of such plans.

In addition, Estrada (2016) claimed that a disaster management goal is to lessen the damaging result of disaster. It could be seen by personnel responsibilities that involved resources organizing and managing. It also deals with the aspects of emergencies such as preparedness, response and recovery.

On the other hand, disaster management in library context refers to the pre-disaster activities of risks reducing and increasing preparedness. All libraries established disaster management technique, processes or procedures and a well-

managed disaster plan as this would contribute in preventing disaster in the library. Such plan should be responsible for step-by step instructions that help reducing panic, appropriate decision making, reducing damages to collections and limit recovery costs.

According to Aziagba and Edet (2008) as cited by Kostagiolas and Araka (2011), disaster management is a vigorous process that needs good cooperation and coordination among different types of professionals. Another as addressed by IFLA McIlawaine (2006) on *Disaster Preparedness and Planning: A Brief Manual*, proper management of risk is needed by reducing the incident and or by decreasing the consequences when they take place. Moreover, determining and categorizing of risks according to the rate of recurrence and rigorousness should be a vital concern of any libraries. The assessment of risks at libraries is as follows:

1. Risks from outside the building like library location, geographic condition, commercial or industrial properties that could possibly damage the building, and pollution etc.
2. Risk from the construction of the building such as roofs, windows or areas with lower ground level, fire risks like electrical circuits, or flammable materials, flooding risks from water pipes, air conditioning systems, rain gutters and lastly from human mistakes or errors and lack of attention.

3. Risk from human intervention like burnings, vandalism, and other security concerns.

In every library risk cannot be avoided, thus, a disaster plan should be manifested and needs to be ready for the worst. Security issue of all kinds are at the top of librarian's minds (Albrecht, 2015). It is the responsibility of every librarian to implement and develop a disaster plan so that security within the library will be established. If the worst happens the use and effectiveness of disaster plan are the most valuable policy and training document that a library can depend on. In that case, it is advantageous that all libraries should be prepared with disaster management plan that caters to all forms of disaster.

In order to understand better the meaning of this plan, Donald, J.D. and Levine-Clark, M. (2017), defined disaster plan as a set of written procedures that prepared in detail by the library managers to deal with unexpected events that cause probable harm to personnel, destruction to equipment, collections and other facilities or short-term interruption of library services.

Likewise, a disaster management plan according to Zaveri (2014) is based on the risk assessment of the library. The plan includes roles and responsibilities, guidelines and procedures to be followed, urgencies for saving and recovering materials, emergency supplies location, methods of salvaging and services from outsiders. In addition, according to the IFLA manual (2006) disaster management

plan is different for every types of library and it depends on its size, composition and financial status.

Finally, this plan cannot be recognized if this will not follow the four stages/phases of disaster management. The four phases of disaster management cycle are preparedness, prevention and mitigation, response, and recovery. As, Luna (2016) referred in the cyclical model, he mentioned that reducing the risk is needed so that disaster impact will be reduced.

Disaster management cycle

Given the different nature and several causes of disasters, planning to reduce them is not easy. Everyone needs careful planning in all phases of disaster management. By knowing and following the disaster management cycle, the outcomes of a bad condition or situation may be vastly enhanced or improved. Each process in disaster management such as prevention, mitigation, preparedness, response, and recovery are a continuous cycle that is very significant in disaster risk reduction in the library.

In the present study, creating a disaster management plan is highlighted with support of careful planning for every process. Such processes serve as tool for reducing risk in the library. When disaster strikes, the stages in disaster management cycle should be taken into consideration.

Mitigation/Prevention

The first process or phase is mitigation. It is done by taking long term precautionary measures after risk analysis like identifying and minimizing the risks coming from the building, its equipment and fixtures and the natural threat of the area. The primary risk that the library experience is unauthorized access like theft, flooding and fire. As Muir and Shenton (2002) mentioned in their paper, the important part of the disaster management process is identifying the potential risks. These risks can never be avoided much can be done to mitigate their effects.

According to Kostagiolas and Araka (2011), possible risks should be assessed and rated according to the incidents and consequences. They mentioned the possible prevention measures that the library should be given priority and they are as follows:

1. Records of all library disaster events should be maintained according to their frequencies and consequences.
2. There should be a responsible person for disaster preparedness plan that review the methods and proposals in order to help the coping strategies of the library.
3. Regulations and plans for health and cleanliness should be identified.
4. Backup copies of library data and information should be provided regularly.

5. Library security enhancement.
6. Regular building inspections; and
7. Checking and repair of defective wiring and leaking pipes.

All of these prevention measures lead to a good building maintenance which are very essential to disaster mitigation. An ounce of prevention is worth pound of care and prevention or mitigation is always better than care.

Preparedness

Preparing and planning on how to respond in case of disaster is the next step of the disaster management cycle. Preparedness is a pre-disaster action that are carried out within the context of disaster risk management and are based on risk analysis. These include the enhancement/development of a complete preparedness strategy, policy, structure, cautions and predicting abilities, and plans to assist those who are at risk (Luna, 2016). In addition, Zaveri (2004) added that preparedness pertains to those organizations, communities and individuals that respond immediately to disaster situations. It is also a continuous process of planning, managing, organizing, training, preparing and improving activities for the enhancement of capabilities of an organization to prevent, protect against, respond to and recover, from the effects of disaster.

It was further claimed by Zaveri (2004) that preparedness consists of warning, threat, precaution, and disaster impact. Warning defined as identification of hazard for a period of time but not yet threatening in a specific place.

Threat is identification of hazard and evaluated as threatening in a particular area.

Precaution an action taken after receiving of disaster warning like closing of schools and offices; ready for power interruption, and checking for the water supplies and disaster impact can vary between different types of disaster such as an earthquake, the impact is very short and no warning yet the result is very risky. A storm it has a long impact for time and warning period, however it may pass or back-track.

Preparedness assumes that there is responsiveness of the probability of a disaster in an organization and willingness of the members to contribute to the work in preparing to face the disaster. Preparedness may consist of roles of disaster response team, availability of the plan, revision of plan, staff training, identifying the priority material for salvaging, document maintaining and updating to support the implementation of plan, creating and continuing links with outside agencies and individuals, supplies collecting and maintaining that will be used as an alternative equipment, recovery area identification and organization, re-establishing services to patrons or users.

Preparedness comprises the response team identification, emergency action team training, recovery work areas identification, and safeguarding the supply of materials and equipment (Newey, Lepschi & Croft, 2008). According to them, if the staff experience disaster in the library the security staff should know the steps to minimize the possible damage while waiting for another rescue or emergency

team to arrive. Such steps consist of assuring library users and staff is not in danger. Human safety first before library materials protection. The significant step to take in an emergency is reducing the source of problems. For example, in case of fire, library personnel should have known and trained to use fire extinguishers to put out the fire. In the incident of water problems, the staff should be knowledgeable to cut off the water supply to the affected place. The succeeding step is to get library materials out of danger. See to it that the area or situation has been assessed before cleaning and salvaging the materials. In other words, it is better to be equipped for disaster that could happen in the library. Possibly, the ultimate threats to library collections are considered to be from water and fire, for that reason it is significant that the library staff should be prepared, mindful and attentive to take any measures pertaining to these problems.

In terms of preparedness measures, Kostagiolas and Araka (2011) enumerated some measures that will guide the library staff in case of disaster. The following are the different preparedness measures:

1. Evacuations and drills should be conducted at annual basis.
2. First aid training for staff.
3. Signs installation.
4. Provisions for insurance.
5. Determine and identify the rare and valuable assets or materials to be saved or recovered.

6. Cooperation with other libraries should be maintained in order to share resources and knowledge.

7. Ask assistance with local police and fire fighters in the area.

Knowing all of these preparedness measures can lessen the fear, apprehension and losses that a disaster can cause. Disaster planning or preparedness is a vital component of the overall management plan for libraries as well for archives. An effective disaster plan can be shown in an institution which is strongly dedicated to their plans. Everything that is planned ahead of time is surely well worth the time, effort and resources (Olanrewaju Issa, 2012).

Response

When disaster strikes, the third important task is a suitable response. According to Zaveri (2004), response talk about the immediate steps and activities taken to protect individuals, resources, equipment, tools and utilization of the necessary emergency services in the disaster area but these steps would vary according to the kinds or types of disasters.

Mallery (2015), also agreed that this phase emphasizes on people and collections. Response lists and designates the responsibilities suggested for the disaster response team and motivates the administrations to pinpoint people ahead of time to fill the roles. As dPlan opines, the disaster team members should know how to think clearly, act carefully under pressure and handle the tough situations

and make good decisions. Indeed, the leader of the team should manifest strong leadership in stressful situations.

Similarly, Muir and Shenton (2002), points that to have an effective disaster response, the team should possess strong leadership, right communication, staff with previous disaster experience and training, not only that but types of communications with employees, library users, dealers, media and other outside organizations should also be considered. However, communication is one of the aspects in disaster response that is frequently failed to recall in the planning process. That's why all aspects that will contribute to the efficient disaster response should be given an emphasis and importance so that responding to a disaster will be a challenging task.

Aside from assigning responsible persons and appointing team leader to salvage personnel in the event of disaster another points to ponder in this phase is all about salvaging or saving priorities and protection of information. Salvage main concern, both physical and digital resources should be recorded by collection and location. Records of these priorities can save time and money, and also make sure that the data is accessible as quickly as possible. In the same way, response phase covers much thorough information with regards on the cleaning, repairing of books and some library materials that was destroyed by water, fire and other related factors or hazards (Forrest, 2005).

These activities were not simple once and for all; it has to be considered each library to do their own actions however it should take some measures to achieve an appropriate response in the library like identifying clearly the responsible person for managing emergencies, technical staff participation, and delegates volunteers from faculty and students.

Recovery

The last phase or process in the cycle of disaster management is recovery. The purpose of this phase is to bring back the affected zone to its former condition. According to Luna (2016), recovery is the assessment and action taken right after a disaster strikes which helps restoring and improving the pre-disaster conditions of the affected community, while inspiring and assisting the necessary changes to reduce disaster risk.

In the library's point of view disaster recovery is the step or process that assess the mutilation of the collections, damage to the arrangement of furniture, library records and people. It includes cleaning of the materials in the library, salvaging the collections such as organizing, cleaning, drying, and fixing of the ruined materials, replacement of the missing items and most important is the restoration of library services (Zaveri, 2004). Likewise, Forrest (2005) added that rebuilding and reestablishment of the facilities is also being considered. Thus, this last phase is getting back to normal.

Foreign and Local Studies

Velasquez, Evans and Kaeding (2015), studied risk management and disaster recovery in public libraries in South Africa. The study emphasized on risk management and disaster plan for every disaster that may occur. This study was a qualitative research and conducted personal interviews with the library managers and librarians to the four public libraries. The outcome from interviews was analyzed using grounded theory and the result was that none of the partaking libraries have a risk management and disaster plan.

Their research is related to the present study since the researcher aims to investigate on the academic libraries' disaster plan similar to the study of Velasquez, Evans and Kaeding, while the difference in the aforementioned study concerned on risk management and disaster recovery in South Africa public libraries.

The study of Kaur (2008), on disaster planning in University libraries in India aimed to look into the neglected area of the university. His paper is a case study of two libraries in two universities in Punjab that experienced flood for the period of July 1993. His study revealed that the libraries did not have a disaster plan in both universities, librarian's attitudes towards disaster and disaster planning is not their priority at all because of few risks they experienced. Based on the revelation of the study, his recommendation was all libraries and information

professionals must change their attitude towards disaster and they have to be prepared to deal with disaster.

The present study is related to the work of Kaur in the sense that they both gave significance or value to the disaster planning of libraries. However, this study differs on the subject focus. The present study gives attention on disaster management plan of academic libraries that put an emphasis on the potential threats or hazards that may happen in academic libraries, their vulnerabilities to disaster and the precautions and preventive measures activities on disaster management. On the other hand, Kaur's study was on disaster planning in university libraries in India that only has been neglected and it was a case study.

Meanwhile, Issa (2012) conducted another study which tried to determine the possible causes of disasters at the Kwara State Public Library in Llorin. The study also aims to know the library's disaster prevention plans and measures in order to take an action on the problems in the library. Issa's paper also wanted to see the budgetary allocations for disaster planning in the library. Based from the findings of his study taken from interview and observation reports it was revealed that the library experienced the main disasters such as earthquake, floods, fire and leakage of roofs. Likewise, his study disclosed that the library has insufficient funding and no budgetary plans for disaster. In total, observation shown that there is no disaster management professional in the library. His study concluded that, they have to call the attention of all professionals in the library because of non-

existing disaster preparedness plan. For recommendations, Issa (2012) stated that the library should establish a committee or team for disaster management. The fire extinguisher, fire escape routes and exits should be made known where to locate and demonstrate to use as well as conducting fire drill to train emergency procedures. There should be a regular building assessment for fire detector, water sensing alarm and maintenance of drainage and plumbing system and most importantly, the parent institution should provide enough funding for the library in case of disaster.

The study conducted by Issa (2012), bears implication or significance on the present study because it recognizes the importance of disaster preparedness plan in the library. Both of them want to determine the possible threats in the library. In the present study the main concern is to find out the awareness of librarians regarding the possibility of disaster happening in their libraries as well as surveying the vulnerability of libraries to disasters and determining the current disaster management precautionary, preventive measures and activities.

In their study, Echezona, Ugwu, and Ozioko (2012) they searched on disaster management in terms of perception, problems and strategies in University libraries in South Eastern Nigeria. This study employed a survey research design to collect information or data from libraries in selected University libraries in South Eastern Nigeria. The main instrument for collection of data was the questionnaire and these data were analyzed by means of percentages, mean and

standard deviation. In this study, it was discovered that awareness on disaster management by some librarians are very few and have little knowledge towards disaster. From this study, some problems that affect disaster management were recognized and the most striking ones are absence of disaster preparedness and recovery plans. Their study disclosed a number of strategies to make sure an effective disaster management in the library. Such strategies were training of library staff on the use of firefighting equipment in offices and others and nurturing awareness of libraries in order to keep in safe the documents from disaster. With this implication, attending to the issue of disaster preparedness and management should be taken seriously to ensure the safety and security of the collections through sufficient disaster preparedness and management.

The study of Echezona, Ugwu, and Ozioko (2012) is somewhat related to the present study since their focused is on disaster management which is also to be tackled on the present study. The only difference is the focus of the study which is pertaining to perception, problems and strategies of libraries towards disaster.

Kostagiolas, Araka, Theodoro, and Bocos (2011), conducted another study which aimed is to review numerous disaster management approaches for academic libraries. The study used survey to gather data regarding disaster management approaches and find out the level of risk and disaster preparedness in Greek academic libraries. Dealing with disaster management within academic libraries in Greece was inefficient or neglected which is the finding of the study. Some

reasons why it was ineffective were economic crisis fearsome; it lowers the level of disaster preparedness because of lack in equipment and personnel, maintenance, insufficient building and not enough funding.

A similar study by Zaveri (2012), shown that they focus in one type of Indian institution libraries pertaining to disaster management issues. Determining the disaster management practices and issues in libraries in India was the main objective of this study. Finding out the perceptions of librarians regarding the possible occurrence of disaster, examining the susceptibility of libraries to disasters, assessing the level of disaster preparedness among libraries, examining the mutilation caused by disaster coping with disaster and developing guidelines and sample disaster management plan for Indian libraries are the main components or objectives of this study. In this paper, the researcher tries to find out or examine the different phases of the disaster management cycle in libraries. The study would like to know the awareness on the pre-preparedness aspects and the risk factors of the libraries. This research is intended to cover the different issues of disaster in various types of libraries- University, college, public and private.

It can be noted that the most of the studies reviewed were on disaster preparedness planning in the libraries. They gave the researcher understanding and information of how the present study should be conducted. The present study has some resemblance with most of the studies reviewed since it is also pertaining to

library disaster management. However, the study differed from the previous studies in terms of the library that was assessed and the instrument used.

The researcher found out that research literature on library disaster management is not being given so much attention. Most of the libraries in the Philippines, especially academic and school libraries do not have a thorough or comprehensive disaster plan.

Pascua (2015) conducted a study focused on creating a disaster management plan for the Immaculate Conception Academy East Library. Her study aims to assess the risks and hazards of the physical set up of the library and its collection exposure. Likewise, evaluation of the current disaster management measures of Immaculate Conception Academy East Library is another aim of her paper. Based on the data collected from the surveys, questionnaires and interviews, the library shown that there is no formal written disaster management plan. It also revealed in her study the top three library risks which are fire, flood and infection. The study shown that the awareness and preparedness of the library staff should be given an attention. She recommends that the Immaculate Conception Academy East Library should have its own specific formal written disaster management plan same with the institution that there should have school emergency and disaster preparedness committee and from there, creation of disaster management plan will be started.

One of the important concerns of a disaster management plan is to lessen the risks as much as possible (International Federation of Library Association and Institution, 2006). At that moment, before conceptualizing a disaster management plan it is very significant for every library or institution to do a thorough risks and hazard assessment of happenings of potential threats to the library and its collection. In addition, disaster management plan helps also the institution to maximize the efficiency of response if a disaster arises. In line with this, a library needs to focus on evaluating existing response procedures such as security, storage, facilities, cleaning practices and safety protections. This is essential to incorporate and make best use of the applicable procedures when writing a disaster management plan. The researcher found it helpful to refer to the study conducted by Pascua (2015) which is about creating disaster management plan, which was also intended in the present study.

Another study on disaster management is conducted by Sarmiento (2003), His study focused on UP Solair Disaster Management and Recovery Preparedness for the University of the Philippines School of Labor and Industrial Relations. The main objective of his study was to determine if there is an existing disaster management plan for the UP Solair library and proposing or recommending a disaster management plan if ever it doesn't have one. In order to ensure the safety of the library staff and other users of the UP SOLAIR Sarmiento made them as target benefactors. The result of this research was determined by means of surveys

on the awareness of library users and staff on different kinds of disasters, individual interviews who are highly reliable and skilled in their respective fields with respect to disaster management and accomplice observation on storage and preservation of library materials in the library. Likewise, the researcher was able to come up with the different recommendations that would be beneficial to the library from the fire safety inspection and electrical inspection. The study also proposed a disaster management plan for the UP Solair as guideline and set of procedures on what to do in the event of a disaster. It involved basic description on how to handle library materials that are damaged by fire and water.

The present study also would like to develop a propose disaster management plan for academic libraries, but not limited to fire and electrical only as Sarmiento (2003) studied.

Furthermore, Nicerio (2010), undertook same study which is disaster management for the Philippine Supreme Court Library. This study intended to find out the kinds of hazards the library and its collections, as well as to determine the kinds of disasters and hazards the library has experienced since its rehabilitation from destruction due to bombing of Manila during World War II and how it has coped with the incidents which are recommended by IFLA set of standards and to propose the applicable disaster management and recovery program that can best meet the needs of the Library of the Supreme Court of the Philippines. The respondents of this study were the Librarians of Supreme Court and staff who

were interviewed and answered the questionnaire on the risks encountered by the collection and the building. Based on the data gathered from the questionnaires, it was found out that the Philippine Supreme Court Library does not have its own disaster management plan. The staff also does not know if they have such plan or not. In this study the researcher identified some possible hazards that can affect the total collection of the library. Some potential hazard that are always on top were fire, followed by earthquake, then power failure, bomb threats and violent mass actions, included also were water leaks and possible danger of termites and rats. Based on the findings of the study, again, there is no disaster management plan for Philippine Supreme Court Library. Awareness on the significance of disaster management plan was not exercise by the staff. Experiences of annual drill are all organized by the disaster management team and it emphases on the Supreme Court as an institution; there is no individual training sessions on how to take care of the library collections.

With this research it is closely related to the present research study in the sense that this related study gave emphasis on the awareness of the staff about disaster management plan and focus on how to take care of the library collection when disaster arises.

Luz (2014), studied how prepared the Manila City library for disaster and what ways can be done to improve its disaster preparedness. In his study he made use of descriptive and qualitative research. He also made an on-site observation

and conducted risk assessment at the library using the guide of the IFLA Disaster Preparedness and Planning Manual (2006). The study aims to help the Manila City library be more prepared in dealing with disaster in different aspects such as preservation of the library and its collection as well as the safety of the staff and the users. From the data collected it showed that Manila City Library is not equipped for a disaster in the sense that its location is a disaster-prone area and where the flooding is a common incidence. According to National Building Code of the Philippines, the building is risky due to lack of sufficient exits and not enough width of the stairway. He found out also that the library does not have a disaster plan or a disaster team but only preventive measures. Therefore, the researcher recommended and proposed in his study that the library should have its own disaster plan and disaster team to minimize the risks that may threaten the Manila City Library.

The present study is related to the study conducted by Luz (2014) for the reason that the current study would like to know how the academic libraries are prepared when it comes to collection and safety of the people especially in the event of disaster. It also caught the attention of the present researcher whether a disaster team is available in the academic libraries in the locality.

Another study undertaken by Estrella (2013), concentrated on creating disaster management and recovery plan for the library of Marikina City. The researcher used risk analysis which is a semi-quantitative approach so that the

study obtained an objective result. According to the outcome of the data gathered from survey questionnaire revealed that top three threats were: property destruction because of typhoon and storms, flooding because of river overflow and unsecured roofs. Awareness of the librarians and staff should be given consideration in such a way that when disaster strikes, they only not be dependent on basic skills and information coming from attending seminars but on actual-based knowledge so that they will be equipped and prepared. As a result of the past experiences of disasters in Marikina City library the researcher recommended the formulation of a disaster management plan.

The paper of Estrella (2013) focused on formulating a disaster management and recovery plan for the library which is also related to the present study. The present study is closely connected because of the location of some academic libraries in which important subject of the researcher.

Tiangco (2000), undertook a survey to determine the functionality and efficiency of an existing disaster management and recovery program for the National Archives of the Philippines by means of checking the guidelines and techniques in recovering damaged documents and papers in an occurrence of disaster. This was an exploratory study pioneering research in the area. The field of disaster management has yet to be known of its consequence to archival management in the Philippines. Thus, thorough inquiry, observation of participants and questionnaires were used in data gathering. It was confirmed from

the result of the study that the Records Management and Archives Office of the Philippines have no disaster and recovery management plan. This affected the carrying out of a disaster and recovery management plan. The disaster and recovery plan must include significance of Archives Awareness, insufficient information on the significance of disaster preparedness and recovery, not enough support availability of manpower, inadequate funding and undue politics. The researcher was then enthusiastic and challenged to formulate a disaster management plan.

Since, there is progressive development in the field of disaster management in the library the current study is paralleled to same study so that different areas in this field will be enhanced and will be of help to the library as well as to the institution.

Cruzata (2015) conducted an evaluation of the disaster management plan of the selected academic libraries in Quezon City. The purpose of the study was to identify the factors that impede the effective implementation of the disaster management plan of the six academic libraries in Quezon City. The study gave emphasis on the strength and weaknesses of the disaster management plan in the areas of earthquake, fire, and flood prevention and detection, and emergency supplies, disaster kits and disaster emergency team. Come from the result of the study conducted by Cruzata (2015), she found out that the framework for disaster management plan which is created by the National Disaster Risk Reduction and

Management Council (NDRRMC) do not follow by the six academic libraries in Quezon City. Five out of six these institutions only have preliminary planning for disaster and ignored the remaining steps for the pre-disaster phase. All of them do not have plan for the Disaster and Post-Preparedness phase. When it comes to strength and weaknesses five out of six have strong building that met the standards for earthquake inspection and five out of six do not have equipment when fire and floods strikes them. Finally, the study identified the factors why disaster management plan was not implemented they are budgetary constraints, lack of management support and the lack of manpower same thing with the lack of long-term tenure of the personnel which is very important to the succession of the library personnel. As a result of evaluation conducted by the researcher there is no existing disaster management plan in the six selected academic libraries.

Several local studies that dealt on disaster management plan for library have been the bases of the researcher to pursue and design similar disaster management plan for the improvement and upgrade of academic library.

STATEMENT OF THE PROBLEM

This study aimed to investigate the disaster management readiness of academic libraries in Lucena City and how they address the potential hazards or threats in the occurrence of disaster. Specifically, it seeks to answer the following questions:

1. What are the probable threats that may happen in academic libraries?
2. What are the factors that contribute to academic libraries vulnerability to disaster?
3. How do academic libraries address possible hazards or threats that may happen in terms of:
 - 3.1 prevention and mitigation;
 - 3.2 preparedness;
 - 3.3 response and;
 - 3.4 recovery
4. Based on the findings of the study, what disaster management plan can be proposed for academic libraries?

Conceptual Framework

The library is the center of any organization whether constitutional, commercial or academic. Truly, it is the nerve center of an academic institution. It contributes to the education of the people. It helps in achieving goals especially when it comes to research and gathering information. With the vast amount of money spent on the improvement of a library, overseers of the library should be mindful, keep the materials, buildings, and personnel against any form of disaster.

In other organizations like in government and other sectors, disaster risk reduction is their priority. They think of disaster preparedness, mitigation, responses, and recovery so that when disaster strikes, they will know what to do.

According to Kostagiolas and Araka (2011), disaster management is very significant among different types of professionals. However, it is an issue that has received little attention, especially among libraries. Some researchers on disaster management are focused only on the institution as a whole but not in the library itself.

Furthermore, the present study is based on Release and Crunch model theories. These theories are explained by Blake, Davis, and Wisher (2012). Accordingly, the claim states that only when risks meet a vulnerable condition does a disaster happen and when people are incapable to anticipate, survive and recover from disaster condition is at risk. This study was anchored in the Release Model in as much as it deals on how risks can be reduced. These would involve prevention, mitigation action to decrease risk. Release model clearly states how the libraries will be able to stand after disaster strike while Crunch model explains why disaster happens and what disaster is all about.

Another concept by Tekeli-Yesil, (2006) explains that disaster occurrence whether natural or man-made cannot be absolutely stopped or prevented, that is why disaster management is a key component for handling with them. Libraries cannot be exempted in experiencing those disasters, like any other institutions private or public in order to cope with these distresses when disasters arise, library preparedness is the best strategy to deal with them.

Security for libraries, personnel, patrons as well as collections is the aim of disaster planning. Disaster planning is an important part of security program of a library, with a formal written plan; the library will be able to react promptly and efficiently to disaster in order to decrease the damage or loss it may take along (Policy development.)

Furthermore, Tekeli-Yesil, (2006) mentioned that risk assessment should be followed by assessing hazard and vulnerability. In the framework, hazards and risks serve as basics to identify and to determine, manage, and evaluate risks.



Figure 1 – Hazard-risk diagram

Hazard is a situation that poses a level of threat to life, property or environment (3G Elearning FZ LLC, 2017) whereas risk is the chance of possibility of suffering harm and loss as an outcome of a precarious event. Thus, the level of risk depends upon the exposure of something to a hazard. This can be conveyed as:

Risk= Chance (c) x Loss (L), the result of risk analysis is commonly approximation of the risks situations or scenarios (Calilung, 2016).

Through this, risk analysis serves as the basis for the creation of disaster plan for the library. Inadequate analysis of risks could lead to inefficient use of resources assigned by a library to its disaster management program.

There are several theories that are very valuable for disaster management aside from policy development and risk assessment. This framework supports to take actions when a disaster happens. Jamaica through the ODPEM (Office of Disaster Preparedness and Emergency Management), has embarked on a Comprehensive Disaster Management (CDM) programme that explains the cyclic process in which planning and reducing the disaster impact and take steps to recover after a disaster has transpired. Defined actions at all points in the CDM cycle will lead to better preparedness, warnings, reduced susceptibility or the prevention of disasters during the next recurrence of the cycle. The four phases of the CDM cycle includes: *mitigation, preparedness, response and recover*. These four phases will work for making disaster management plan because it composed of managerial functions (3G Elearning FZ LLC , 2017).

A disaster plan should be comprehensive that comprises smaller plans in which entails the three significant phases of respective disaster such as *before phase, during phase and after phase*. *Before phase* which comprises the prevention and mitigation and preparedness plans; meaning entailing daily repetitive operation. *During phase* oblige response to disaster while *after phase* is implementation of the recovery plans (Aliyu & Issa, 2012).

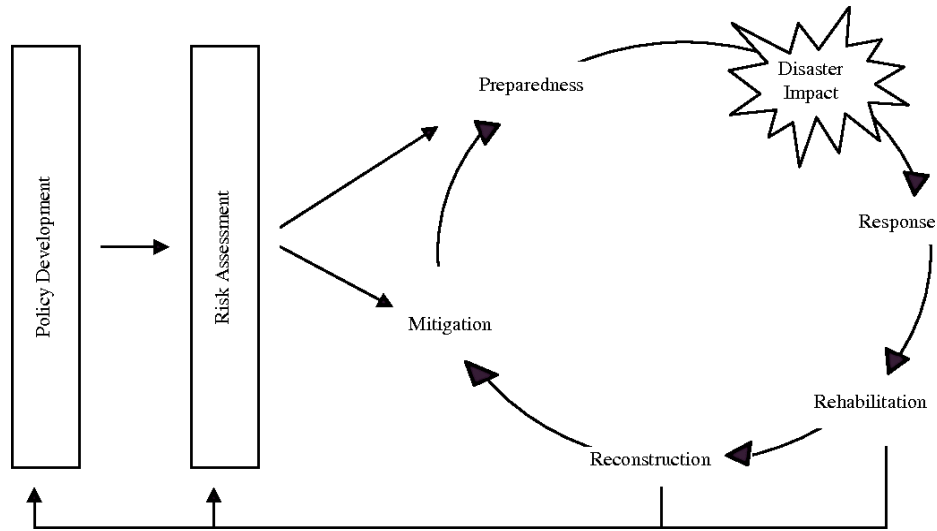


Figure 2. Disaster Management Cycle (Tekeli Yesil, 2006)

In the aforementioned diagram, the disaster management cycle order is divided into two phases: *risk reduction phase* and *recovery phase*. The risk reduction phase is the phase before arising the disaster. Mitigation and preparedness plans are included in this phase. On the other hand, recovery phase follows after an incidence of disaster. In this phase, response, rehabilitations and reconstructions plans are involved.

Risk Reduction phase starts by clarifying policies and strategies. This is followed by assessment of risk such as identification of different kinds of disasters, effect and consequences on the whole library, estimated costs and reparations of collections, and expected costs to change and restore documents, records, equipment and facilities.

The recovery phase starts by responding to necessities of an institution right after an incidence of disaster. Recovery phase is said to be an effective if there is an existing preparedness and mitigation plans, like training of library personnel and staff, giving instruction to different sectors and department at risk and assessment of an existing emergency measures or procedures.

In *preparedness phase*, training of staff, familiarization with the plan and types of disaster, experienced staff members or personnel are necessary because it contributes to the effectiveness of *response*.

Rehabilitation and Reconstruction involves of actions taken after an incidence of disaster to facilitate and resume services. Rehabilitation is considered to be intermediated from immediate response to long term- reconstruction however Reconstruction is the full renewal of all services and stable construction of thoroughly damaged infrastructure.

For this study, the framework is based on International Federation of Library Association and Institution (IFLA) Disaster Preparedness and Planning Manual (2006). This framework which divided into five steps applies in this study in order to help in guiding and creating Disaster Management Plan for academic libraries.

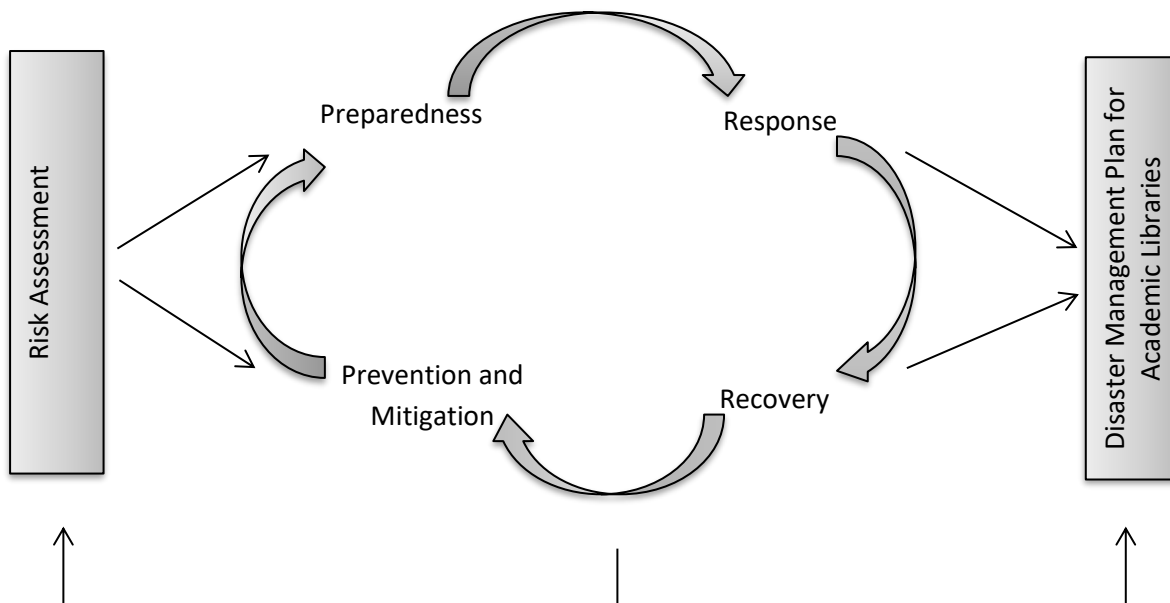


Figure 3. Conceptual Framework of the Study

As an immediate and practical output of this framework, strategies and guidance on how to form or develop a disaster management plan for academic libraries will be shared. The researcher considers the conceptualized disaster management cycle model for the direction and foundation of the study.

As shown in Figure 3, disaster management cycle by Tekeli – Yesil (2006) serves as the anchor in this study, the arrows in this frame refers to an uninterrupted and continuous cycle which links one cycle after the other. The cycle starts with **Risk Assessment** which refers on determining and recognizing possible threats and hazards to the library, personnel and collections as well the library’s vulnerability to disaster.

Next is **Prevention and Mitigation**, in this phase performing own risk assessment and recording preventive maintenance procedures of the library are encouraged so that comprehensive preventive measures could be implemented and when disaster happens damage to buildings, collections and staff may possibly be minimized.

Then **Preparedness**, developing emergency plan should be considered which consist of staff training, familiarizing with the plan and types of disaster, and placing of experienced staff members or personnel.

The third phase is **Response**; this phase is where preparations are put into action. People, building and collections are put into consideration. It is a complete accomplishment taken by library during disaster. This section needs a disaster team that should be able to reason out clearly under pressure, consider all choices quickly but carefully make decisions and act so that immediate assistance and support to the affected library must be attained.

The last phase is **Recovery**, promptly after the disaster takes place, the restoration of basic services of the library and the beginning of the repair of infrastructure to their usual state or condition begins. Furthermore, its purpose is to achieve the basic needs of the library while waiting for long-lasting and effective solution.

The contribution of each phase in the output of the study disaster management plan that starts from risk assessment to implementation is vital. By following the five steps in disaster management cycle specifically in response and recovery phase can help ease the execution of this plan in case of disaster.

Definition of Terms

Disaster – any incident which threatens human safety and/ or damages, or threatens to damage, library buildings, collections, contents, facilities, or services (Matthew & Eden, 1996 p.4).

Disaster management – includes disaster control planning, but also encompasses broader issues such as risk assessment, training and finance necessary for its implementation (Matthews & Eden, 1996). Disaster management is a strategic planning and procedure that is administered and employed to protect critical assets and people from severe losses or damages when natural or human made calamities and catastrophic even occur (3G Elearning FZ LLC 2017).

Disaster plan – A set of written procedures prepared by the library staff in advance to deal with an unexpected occurrence that has potential to cause injury to personnel or damage to equipment or to collections and/ or to facilitates sufficient to warrant temporary suspension of services (The Dictionary for Library and Information Science, 2005).

Disaster planning – defined as an on-going process by which educational institutions seek to prevent loss of collections using data gathered to identify and mitigate risks; prepare and revise written disaster plan and train staff in response procedures (Reitz, 2004).

Hazard – are possible threats that may come unexpectedly or otherwise. It can lead to a disaster in an institution or community if (a) an institution is exposed to it and (b) an institution's circumstance or situation make it vulnerable to hazard (Oliva 2016).

Hazard identification and Risk analysis (HIRA) – encompasses all activities involved in identifying hazards and evaluating risk at facilities, throughout their life cycle, to make certain that risks to employees, the public, or the environment are consistently controlled within the organization's risk tolerance (Center for Chemical Process Safety).

Mitigation – the lessening or limitation of the adverse impacts of hazards and related disasters (Arcilla-Serapio, 2016).

Policy development – The decision process by which individuals, groups or institutions establish policies concerning to plans, programs, or procedures (Operational definition).

Prevention – implementing measures which will remove or reduce any danger.

Preparedness – pre-disaster activities that are taken by a library based on sound risk analysis to avert serious damage to facilities, collections, or personnel in the event of major incidence such as flood, fire or earthquake, including preventive measures formulation of an effective disaster plan (Reitz, 2004 & Luna, 2016).

Recovery – in this phase, activities are geared towards the restoration of basic services and the beginning of the repair of physical, social and economic damage. Restoring the disaster site and damaged material to a stable and usable condition. It is the development, coordination, and execution of service-and site-restoration plans for impacted communities (3G Elearning, FZ LLC, 2017).

Response – procedures to follow when disaster strikes or actions carried out in a disaster situation with the objective to protect personnel, alleviate damages to the facilities and collections and reduce financial losses (Operational definition). The main tool in response is the implementation of plans which were prepared prior to the incident. Response activities are post activities geared towards: providing emergency assistance; reducing probability of additional damage; speeding recovery operations; returning services or systems to normal level (3G Elearning FZ, LLC, 2017).

Risk – the combination of the possibility of an event and its negative consequences

(Arcilla-Serapio, 2016).

Risk assessment – is the process of measuring or assessing risk, developing strategies to manage it, and determining the quantitative and/or qualitative value of risk related to a concrete situation and a recognized threat (Technology Disaster Response and Recovery Planning, 2015).

-Ascertaining the dangers to the building and its collections.

Vulnerability – refers to the impact a hazard has on people, infrastructure and the economy (3G Elearning FZ, LLC, 2017). Vulnerability may arise from various physical, social, economic, and environmental factors such as poor design and construction of buildings, inadequate protection of assets, lack of information and awareness, limited recognition of risks and preparedness measures, and disregard for wise environmental management (Arcilla-Serapio,2016).

CHAPTER 2

PROCEDURES

This chapter describes the procedures involved in conducting the study. It presents the research design and methodology, research site, selection criteria and participants, data collection, data analysis, role of researcher, methods of validation and potential ethical issues.

Research Design

The qualitative design of research is utilized in this study. According to Hammersley (2013) as cited by Cohen, Manio, and Morrison (2018), qualitative research is defined as a form of social inquiry that tends to adopt flexible and data-driven research design, to use relatively unstructured data, to emphasize the essential role of subjectivity in the research process, to study a number of naturally occurring cases in detail, and to use verbal rather than statistical forms of approach.

The primary purpose of the researcher in utilizing this design was to ascertain the potential risks and hazards of the academic libraries in which they are exposed to and the library's vulnerability to disaster as well as determining the preventive measures of the library especially in the occurrence of disaster.

Selection Criteria and Participants

The purposive sampling method was used in this study. According to Cohen, Manio, and Morrison (2018), purposive sampling is used in order to access “knowledgeable people” those who have thorough knowledge about particular issues by virtue of their professional role, power, expertise or experience. Academic libraries were purposively selected as respondents in this study since they have the capability and resources to plan, develop and execute a disaster management plan. To get deeper understanding, trustworthy and reliable information, this research used the following inclusion criteria for the chief or head librarian: (1) those who served the library for at least 5 years; (2) those who are members of disaster management team and (3) those with experience and training regarding disaster.

Chief librarian was interviewed regarding the possible hazards or threats that may happen to their library, its vulnerability to disaster, and how they address the hazards that may occur before, during and after the occurrence of a disaster. This is done in order to get deeper understanding and accurate answers for the research questions. Thus, it is sampling with a purpose.

The researcher considered the complete list of academic libraries in Lucena City namely: Alpha Centuari Educational System-ACES, Calayan Educational Foundation Lucena City, Sacred Heart College, St. Anne College, Inc., STI College

Lucena, SLSU Lucena, Maryhill College, St. Alphonsus Regional Seminary,
Manuel S.Enverga University, Lucena.

Instruments

Gathering of essential data for this study is through interview. According to Cohen (2018) the use of the interview in research marks a move away from seeing human subjects as simply manipulative and data as somehow external to individuals regarding knowledge as generated between humans, often through conversation. Furthermore, Cohen coined the word *inter-view* as an interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situatedness of research data.

The researcher used an interview guide approach wherein topics and issues covered are specified in advance, in outline form. This was utilized so that the researcher may decide on the sequence and working phase of questions in the course of the interview. This was undertaken so that comprehensiveness of the data and data collection remain systematic for each respondent. Logical gaps in data were also anticipated and closed. Interviews remain fairly conversational and situational.

The contents of the interview guide was patterned from several literatures and studies particularly coming from Organisation of Library and Information Services (2018), International Federation of Library Association and Institution

(IFLA) Disaster Preparedness and Planning Manual (2006) , dPlan: The Online Disaster-Planning Tool (www.dplan.org,) which is an online tool intended for cultural and civic institutions that is used for creating disaster plans (NEDCC & MBLC, 2005).

The interview questionnaire elicited the following pertinent information: 1.) probable threats and hazards that are most likely to occur in the library. 2.) library vulnerability, ascertain factors that may contribute to the library's vulnerability to disaster. 3.) and preventive measures that addressed the possible threats that may happen in the library.

The initial questionnaire and interview guide were forwarded to a panel of experts for validation. Head librarians and colleagues were tapped to review the questionnaire in terms of its appropriateness in library setting. Experts on the field of disaster management were also consulted to review the instrument in terms of its technicality and accuracy of terms used. The instrument was revised based on their comments and suggestions which includes layout for easy appreciation of participants, way of questioning to elicit needed response and data, proper use of technical terms in disaster management and others. Experts also recommended that interview questionnaires should be open-ended in nature to ensure continuous discussion and elicit responses needed by the study.

Upon revision, the instrument was pilot tested to librarians who matched the same criteria as the respondents but were not selected as participants of the study. Further revision was applied based on the result of the pilot testing. This includes simplifying some questions to be easily understood and changing font style and font size for the convenient of the reader or participant of the study. These activities were done to ensure the validity of the research instrument.

Data Collection

The researcher sought permission from the Director of the Human Resource Development Office of the identified institutions to formally conduct the study. Upon approval, face to face interview with the chief or head librarian of academic libraries is scheduled. To ensure the safety of the participants, the interview location was determined by the respondents, to where they most feel safe and comfortable at their most convenient time. When possible, the interview took place at the respondent's school premises, or in their library for security purposes.

Developed checklist, validated interview questionnaire and note taking on what happened were the researcher's strategy to collect precise data. Coding of the participants is done to ensure anonymity of the research participants.

Coding of In-Depth Interview for the Chief or Head Librarian of Academic
Libraries in Lucena City

Data Collection Method	Coding	Participants
In-Depth Interview	CL-1 – CL- 9	Chief Librarian 1 – Chief Librarian 9

Data Analysis

The major approach to qualitative data analysis is coding. According to Creswell (2012) a code is simply a name or label that the researcher gives to a piece of information. Coding is the designation of category label to a piece of data, decided in advance or in response to the data that have been collected. Coding is the process of breaking down segments of text data into smaller units (based on whatever criteria are relevant), and then examining, comparing, conceptualizing and categorizing the data Cohen, Manion and Morrison (2018).

In this paper, the qualitative data is drawn from the in-depth interview of academic librarians in Lucena City. This is done by getting all the responses and analyzing the data based on the study. Open coding was done through the engagement of the researcher with the participants and by conducting it the researcher was able to gather necessary data needed. All the data that was gathered were paired and thoroughly chosen so that there would be specific choice of categories. Data gathered were tabulated, categorized and paired based on their classification. With the help of other librarians selective coding was done to

formalize the links and relationships of the data. The data that was summed and categorized by the researcher and participants were further developed to form a single concept that would explain the whole process on library disaster management. The codes and categories were bent toward analysis and write up in order to complete the study. After the strict categorization of each concept that was deduced from the gathered data from its simplest to its complex form the researcher have reached theoretical saturation which means that there are no additional data that can be found to develop another property of category. When coding and categorizing have been completed, analysis continued by integrating all the formed categories to come up with library disaster management plan.

The tabulated result was then presented to experts in the field of disaster management. These included one expert who conducted workshops and lectures on the topics. Members of the local government units (LGU) in charge of the disaster risk reduction management of Lucena City where also tapped by the researcher to review the coding and tabulated data. Suggestions of these experts where incorporated in the study such as the inclusion of preventive measures for each phases of disaster management.

Ethical Consideration

The researcher assured the participants that all information collected shall be treated with utmost confidentiality and that their anonymity shall be preserved. The researcher responsibly protects data in a way that will keep them inaccessible

by persons not involved in the study. No known or possible risks can pose danger to the respondents in any harm, as this research will only involve a survey. Answering the interview however, may consume a portion of participant's time. The results of the study or any other related data may be published for scientific purposes, but the names of the participants as well as any related identifiable references remain withheld.

Nevertheless, any records or data obtained as a result of the respondent's participation in this study was inspected by the adviser or by the person conducting the study. It is provided that such checkers are legally obliged to keep any identifiable information from public disclosure, except where disclosure is otherwise required by law or a court of competent jurisdiction. The records to be obtained from the participants will be kept private insofar as permitted by law.

The participants were allowed to decide whether or not to participate in this study. There were no consequences if the participants choose not to participate. The research provided the findings of this study to the participants as it develops. In the event that the participant decides to discontinue his/her participation in the study, no amount shall be given or charged to him/her.

Since this study required collection of data, the researcher sought approval from the office of the Research Ethics Committee (REC) of Philippine Normal University to make sure that it is carried out according to the set policies of school.

The findings of this research will benefit the institutions, librarians and students in preparing or mitigating the impact of disaster in the library. Preparing for the occurrence of disaster and having disaster management plan will lessen the damage it may cause. Results of the study will be shared to the participants personally and through email should they want to consider the proposed plan as output of the study.

CHAPTER 3

FINDINGS AND DISCUSSION

The chapter presents the findings and discussions of the study which stands as answers to the research problems. These include probable hazards or threats in academic libraries, factors that contribute to academic libraries vulnerability to disaster, and addressing the hazards or threats that may happen in academic libraries in terms of prevention, preparedness, response and recovery. Data are presented qualitatively using thematic analysis for better understanding.

1. Threats in Academic Libraries

This part shows the different threats in academic libraries. The data were taken from the interview among nine librarians in Lucena City moderated by the researcher.

ACADEMIC LIBRARIES	EARTHQUAKE		FLOOD		TYPHOON		VOLCANIC ERUPTION	
AL - 1	12	M	4	L	12	M	9	M
AL - 2	16	H	9	M	16	H	12	M
AL - 3	16	H	4	L	16	H	12	M
AL - 4	9	M	9	M	16	H	12	M
AL - 5	12	M	16	H	16	H	12	M
AL - 6	12	M	9	M	16	H	12	M
AL - 7	9	M	4	L	16	H	12	M
AL - 8	9	M	16	H	16	H	12	M
AL - 9	6	M	9	M	16	H	9	M

PROBABILITY	IMPACT				
	NEGLIGIBLE 1	MINOR 2	MODERATE 3	SERIOUS 4	CATASTROPHIC 5
PROBABLE 5			TYPHOON High (15.55)		
POSSIBLE 4		FLOOD Moderate (8.8)	EARTHQUAKE Moderate (11.2)		
UNLIKELY 3			VOLCANIC ERUPTION Moderate (11.3)		
RARE 2					
NEGLIGIBLE 1					

RISK MATRIX ON NATURAL HAZARDS

**P= PROBABILITY OF THE
OCCURRENCE OF THE
NATURAL HAZARD**

PROBABILITY	RATING FOR THE PROBABILITY OF OCCURRENCE
1- Negligible	This probably won't ever impact your area anytime soon
2- Rare	It probably hasn't happened and is not all common
3- Unlikely	It may have happened once, but it was unexpected
4- Possible	It has happened in the past and is relatively common to the area but not certain
5- Probable	It has happened recently and is certain to happen this year

**I = IMPACT OF THE
NATURAL HAZARD**

IMPACT	RATING THE IMPACT
1 -NEGLIGIBLE	Impact is limited to a small location, there are no injuries, and /or operational loss is minimal
2 -MINOR	whole room(s) might be impacted, minor injuries might occur but can be handled on-site, and/or operations are moderately impacted
3 -MODERATE	Multiple spaces or facilities are impacted, medical treatment may be needed, and/or operations are moderately impacted.
4 -SERIOUS	The facility, collections, and people are impacted, advanced medical treatment may be necessary with potential for serious injury or fatalities, and
5 - CATASTROPHIC	Every space, operation and individual is impacted, numerous deaths and injuries occur and organizational survival is at risk

Table 1 shows the list of natural hazards that prevails in nine (9) academic libraries in Lucena City. Based on this data, the natural hazard with the highest rating for the probability of occurrence and impact is typhoon (15.55). This means that academic libraries are high risk to this type of natural disaster. The libraries are warned to be ready for the precautionary measures to lessen the impact of the said disaster. The risk rating for volcanic eruption (11.3), earthquake (11.2), and flood (8.8) means that these types of natural disasters are in moderate risk. Moderate these risks might be, still they are threats to the academic libraries. These natural disasters may have happened once still need to be monitored and be ready for the preventive measures to decrease the possible impact of the said disasters. It is utmost advantage for the library to always remember and practice the Boy Scout Motto, “Be prepared” not only to avoid unwanted outcomes but also to minimize the impact on persons, building, collection and services.

Furthermore, Issa (2012) confirmed that natural hazards like typhoon, earthquake, flood and volcanic eruptions are called disasters because of the effects they have on people, materials and properties of the library.

HAZARDS/THREATS	RISK AVERAGE	RISK VALUE
Water hazard	12.77	MODERATE
Fire hazard	15.55	HIGH
Environmental hazard	12.1	MODERATE
Security hazard	15.1	HIGH
Other hazard	9.6	MODERATE

Divide total risk assessment score by nine academic libraries RISK VALUE

Risk Rankings

High 15-25	15-25	Risks that must be significantly reduced or eliminated
Moderate 7-14	7-14	Risks that need to be monitored; prevention plan must be in place to reduce risk
Low 1-6	1-6	Demand less attention, but not to be totally disregarded

Aside from natural disaster, Table 1.2 above also shows the summary of hazards and threats in academic libraries. The table revealed that the hazard in academic libraries with the highest rating is fire (15.55), followed by security hazard (15.1). These data emphasize the fact that fire and security hazard are the major threats to the safety of the personnel/patrons, building and library collection. The risk rating of water hazard (12.77), environmental hazard (12.1), and other hazards (9.6) means that these are moderate threats that need to be closely monitored and prevention plans must be in place to reduce or lessen the risk in the libraries.

In a paper on disaster planning, Kaur (2009) agreed with the result of the study and stated that the most frequent types of disaster that are initiated by people either intentionally or accidentally are fires, and security control. However, other studies revealed that both water and fire hazards are always identified as high risk, followed by environmental and other physical hazards.

Likewise, identification of hazards is very important to avoid or reduced risks. Dealing with them requires different measures. In this study, fire and security hazards are identified and prioritized since there are several factors revealed. Participants considered that fire needs to be monitored because most of the library buildings have insufficient number of fire extinguisher, absence of water detection system, faulty wiring, overloaded socket and blocked fire exit. Likewise, libraries are also susceptible to security threat because participants claimed that their libraries have no electronic system to monitor the collection and researcher, lack of staff, absence of security measures in the library and information centers and lack of training for personnel about information security issues and procedures.

According to Brown (2019), libraries must consider security as a management issue and must be supported at the highest level of the institution. There must be widespread understanding of the importance of security to the mission of the repository and responding to any breach of security that might occur.

Other hazards that require also utmost attention and not to be totally disregarded are water, environmental and other hazards. It is important to be able to

recognize these hazards and identify the degree of impact so that they could be given proper attention by using the most appropriate strategies to deal with them. Furthermore, prioritizing hazards brings about efficient and effective hazard management.

Academic Libraries	Physical Location	Threat	RV	Building Design and Condition	Threat	RV
AL-1	The library is close at the parking area	1. Accident prone (injury) 2. Dissatisfied library user	9 M	Library building is constructed with different floors. The library has basement. The library has glass roofs, walls, windows and doors	1. Earthquake 2. Flood	16 H
AL-2	The library is close to passing private/public utility vehicle The library is close to hospital	1. Dissatisfied library user 2. Environmental hazard (chemical leaks & spills, proximity to hazardous materials)	16 H	The library is located at the 4 th floor Not enough emergency exit The library built with light materials	1. Earthquake 2. Fire	16 H
AL-3	The library is close to passing private/public utility vehicle	1. Dissatisfied library user (noise)	6 L	The library is located at the 4 th floor	1. Earthquake	12 M
AL-4	The library is located near the garbage dumps The library is surrounded by trees	1. Environmental hazard (proximity to hazardous materials & diseases) 2. Accident and building destruction	16 H	The library is not a separate building The library's stack room does not have enough capacity to hold the bulk of collection The library does not have an emergency exit	1. Fire 2. Collapsing stack room	12 M

AL-5	The library is surrounded by trees. The library is nearby river	1. Accident and building destruction 2. Flood	16 H	The library is not a separate building. The library is near laboratory.	1. Fire	12 M
AL-6	The library is close to passing private/public utility vehicles The library is located near the church	1. Dissatisfied library user	6 L	The library is not a separate building and located at the 2nd floor The library premises are located near hall for school activities and social gathering	1. Earthquake 2. Noise	12 M
AL-7	The library is surrounded by trees	1. Accident and building destruction	9 M	The library is designed by light materials	1. Fire	12 M
AL-8	The library is located near the creek The library is nearby the river The library is surrounded by trees	1. Flood 2. Accident and building destruction	16 H	The library is not a separate building. The library collection is stored near from water pipes The library premises are located near hall. The stack room doesn't have enough capacity to hold the bulk of collection.	1. Noise 2. Flood 3. Collapsing stack room and prominent cracks on cabinets	16 H
AL-9	• The library is nearby irrigation	1. Flood	6 L	The library is not a separate building and have glass doors.	1. Earthquake	9 M

2. Academic Libraries Vulnerability to Disaster

Physical location and building design and condition were the factors that contribute to the library's vulnerability to disaster. These two factors can affect the library, thus in the design and construction of the buildings susceptibility to disaster should be considered.

Table 2 presents the libraries vulnerability to disaster such as physical location and building design and condition. It is likewise presenting the exposure and threats of each of the nine academic libraries.

For the category of physical location, out of nine libraries four (4) of them are identified as high risk. Academic libraries revealed that they are highly vulnerable when it comes to a library setting. As seen on the result, the library settings is considered highly vulnerable and are more exposed to various hazards and threats when the location of the library is proximate to passing private/public utility vehicles, near the parking area, surrounded by trees, located near hospital, garbage dumps, nearby river or bridge, and creek or irrigation. Other libraries are described in moderate and low risk. Participants agreed that every library has a different state or condition which means their vulnerability to disaster varies depending on the situation.

Aside from physical location, building design and condition is also one of the factors that contribute to the library's vulnerability to disaster. These include the building foundation, structure, and location. Within the building design and

condition, three (3) libraries are considered high risk, the other libraries are described as moderate risk.

Participants believed that libraries with glass roofs, walls, and windows are susceptible to damage. Furthermore, most of the libraries are at risk from the wreckage and can cause injury to patrons since the stack room doesn't have enough capacity to hold the bulk of collection. Other libraries are earthquake hazard because there is no provision for a separate building, exposed to fire hazard because they are located near kitchens as well as laboratories and does not have enough emergency exits. Some participants agreed that the primary threat of fire in libraries is caused when fire safety rules are ignored or not adopted in the first place. The libraries are also vulnerable to flood hazard because the collections are stored near plumbing, such as water pipes, and air conditioning units. Certain libraries are located near the canteen and general services unit resulting in termites and rat problems. In addition, the researcher considered those library buildings which are located near the hall as susceptible to physical hazard because it affects the library's services and daily operation due to social activities and gathering in the school. Knowing the risks from location and building design and condition gives the participants awareness on how they prepare, manage, and prevent the incidence of disaster.

Kostagiolas and Araka (2011) said that risks at libraries are always a main concern. There are numerous factors to be familiar with when considering the risks in the library. These include the risk from outside the building like library location, geographic condition, commercial or industrial properties that could possibly damage the building, risk from the construction of the building such as roofs, windows or areas with lower ground level, fire risks like electrical circuits, or flammable materials, flooding risks from water pipes, air conditioning systems, rain gutters and the like and from human mistakes or errors, lack of attention and risk from a human intervention like burnings, vandalism and other security concerns.

In the study conducted by Oliva (2016), vulnerability is a specific situation. Vulnerability is hazard specific which means that if one library is exposed to flood it does not automatically mean that the other library is also vulnerable to flood; it depends on the risks of each libraries. Vulnerability of the libraries differs in the way they prepare for the hazard and the quantity of resources they have to prevent and manage.

3. Preventive Measures

Data on preventive measures in academic libraries revealed on Table 3 were collected and categorized into four different themes. The themes assembled were prevention and mitigation, preparedness, response and recovery.

Significant Statements	Category	Themes
The library building is provided with smoke or alarm detection system.	Fire Protection	Prevention and Mitigation
The fire extinguisher should be located strategically and is inspected periodically.		
Checking and repair of electrical system to prevent overloading and leaking		
There is annual cleaning of drainage to prevent clogging.	Water Protection	
Shelves/furniture away from water-bearing pipes.		
The library shelves are movable and 4" inches off the floor.		
Maintain records of frequency and consequences of all disaster events in the area.	Maintenance	
Regular building inspection.		
Reporting of damaged furniture and equipment.		
Regular disposal of garbage from the library.	Building security	
There are no obstacles or hindrances which may block exits and other spaces for emergencies.		
There is updated floor plan for the vicinity.		
The library has special precautions taken when potentially dangerous activities are undertaken such rewiring and refurbishing of the internal and external fabric of the building.		
The library is an earthquake resistance and has firewall.		
There is designated roving guard to check the vicinity of the building.		
The library must have steel shelves instead of wooden shelves to avoid termites.		Collection security
The library computer data backed up weekly or monthly		
Library records stored/uploaded online		
The library accession records are duplicated and stored off-site.		
The library electronic catalogues and records are duplicated and stored off-site.		
CCTV installation for security reading room improvement		
A list of external contacts and names, addresses, home and work telephone numbers of personnel with emergency responsibilities.	Library personnel emergency measures	Preparedness
The library has a pre-arrangement transportation services in the event of disaster.		
Assistance from local police and fire fighting station.		

Selecting and training an emergency response team involving voluntary members of staff who live near the library.			
The library has designated locations for temporary rehousing staff			
Signs installation.			
Building floor plans are prepared, reviewed, and updated regularly which indicate storage areas, windows, entrances and exits; fire extinguishers; fire alarms; sprinklers; smoke/fire detectors, water pipes; electrical and water supply.	Building emergency measures		
The library has designated locations for temporary rehousing material.			
There are areas which could be used for recording and packing material.	Collection maintenance measures		
Priority salvages lists made by area, stating which items are to be salvaged from individual rooms/area			
The team should be rehearsed in removing material and confident in making decisions regarding salvage techniques.			
Conduct drills once a year and participates on disaster seminars and workshops.			
The library staff trained in emergency response procedures (delegated officer-in-charge, regular training, and emergency evacuations)	Education and training	Response	
There is an established emergency procedure for raising the alarm, evacuating personnel, and making the disaster site safe.			
Contact the leader of the disaster response team to brief and direct the emergency response team.			
There is an air conditioning unit to control the temperature and humidity of the building to prevent mold growth.	Storage environment maintenance		
There is an area for recording and packing material which requires for air drying slightly wet materials and other minor treatments.			
Priorities for safeguarding work and consultation from experts as to the most methods for cleaning and repairing material are considered.	Rehabilitation measures	Recovery	
There is selection of materials to be discarded, replaced, or rebound			
There is a clean rehabilitation disaster site.			
There are consortiums with other libraries in the area in order to save time, money and resources.	External linkages		

Prevention and mitigation

Prevention and mitigation play an important role in creating library disaster management plan. Essentially, the objective of this phase is to reduce risks – avoid hazards and lessen the probable impact of disaster.

As indicated in Table 3, on the category of fire protection, participants claimed that library building must be provided with smoke or alarm detection system and that system should be checked periodically and repaired to prevent overloading and leaking of pipes. Fire extinguisher should be inspected from time to time and must be strategically located to avoid harm or injury.

Likewise, on the category of water protection, annual cleaning of drainage is necessary to prevent clogging. The same with furniture it should be movable and away from water-bearing pipes. The library shelves must be 4” inches off the floor.

Concerning the category on maintenance, participants revealed that maintaining the records and monitoring the frequency and consequences of all disaster events in the area must be done in order to minimize the impact of disaster. Aside from this, there should be regular inspection of the building and scrutiny of damaged furniture and equipment to avoid harm and injury. In addition, to avoid mold infestation regular cleaning and disposal of garbage from the library must be observed.

In the category of building security, one of the most common preventive measures of the library that is taken for granted is updating floor plan for the vicinity. Though, certain libraries have floor plans which was incorporated in the school floor plan, there was no separate updated library floor plan for other libraries. Participants mentioned another preventive measure, the library must be free from obstacles and hindrances which may block exits and other spaces for emergency. Other participants did not consider this due to lack of space in their library. Within the building security, there are some preventive measures the participants identified such as during building construction. Library should follow the standard requirement for space size. The library building should be earthquake resistant and must have a firewall. In addition, special precaution must be taken when the library undertakes possible dangerous activities like rewiring and repairing the internal and external fabric of the building. Lastly, participants claimed that it is very important if there is designated roving guard to check the vicinity of the building.

This data was supported by the study of Kostagiolas and Araka (2011), according to them plans for building maintenance should be done. There should be regular building inspection including fire extinguisher and other related system, there must be checking and repair of defective wiring and leaking pipes, and special safety measure for refurbishing of the building.

Moreover, one of the most essential activities that should be considered under prevention and mitigation is the security of collection. Participants affirmed that collection security will be most effective if there are ample preventive measures. Generally, they recognized the vulnerability of their collection to loss not by just theft or vandalism but by disaster. Participants pointed out that backing up, uploading online of computer data, duplicating and storing off-site of library records and electronic catalogues are necessary. For preventing theft or vandalism, library considered CCTV installation may protect collection against loss. On the other hand, collection can also be threatened by poor furniture and fixture. The library must have steel shelves instead of wooden shelves to avoid termites. However, some libraries cannot afford to purchase steel shelves because of limited budget.

According to Brown and Patkus (2019), several libraries fail to recognize the susceptibility of their collection to damage and loss. Collections are at risk not just by vandalism and theft but by disaster such as flood, fire and damage from careless handling or poor environmental situation. To provide the best promising security for collection, threats should be addressed. There must be common understanding of the significance of security to the mission of every library. To protect collection against loss, security planning must be considered these include proper collection storage, processing or cataloging, building maintenance etc.

Preparedness

After prevention, the next step of making disaster management plan is preparing and planning how to respond in case of disaster. Participants remarked the significant activities of emergency preparedness. It was found out that in the event of disaster, it is very important that there must be a list of external contacts and names, addresses, home and work telephone numbers of personnel with emergency responsibilities. Likewise, participants suggest that when selecting and training the emergency response team, the team must understand the workplace hazard so that once a disaster takes place, risks or danger can be avoided. However, based from the findings, participants affirmed those library emergency response teams are not yet ready to step up and help due to lack of specific disaster workshops and trainings. Provided trainings are for the institution as a whole and not specific for the library also there is no focus on saving the collection. Other participants declared that in their respective workplace managing emergency preparedness are only partially conducted.

Participants also expressed that emergency preparedness at work was about taking care of patrons and preventing injury. Saving lives is the first priority, it can be inferred from the findings that assistance from local police and fire fighting station can contribute to hazard prevention and reducing injuries. Moreover, providing designated locations for temporary rehousing staff are necessary as well as transportation services especially in the event of disaster.

These findings are supported by the study of Newey, Lepschi and Croft (2008). In their study, preparedness includes emergency response team involving voluntary members of staff who live near the library, disaster workshops and training and safeguarding the people.

In the category of building emergency measures, the table above presents the participants point of view concerning building floor plan. The participants claimed that building floor plan should be prepared, reviewed and updated regularly. This plan must indicate storage areas, windows, entrances and exits. Fire extinguishers, fire alarms, sprinklers, smoke/fire detectors should be strategically located and water pipes, electrical and water supply should always be available.

These data are supported by the study of Cobourn, Camden and Teaff (2015), disaster in a library may happen any time. It is significant for a library to have emergency measures which will describe what to do in a certain disaster. All staff and patrons in the library must be familiar with the plan and prepared so that they will be equipped in disaster. These statements are also affirmed by Olanrewaju & Issa (2012) who believed that being mindful, attentive, and taking any measures can lessen the fear, apprehension and losses that a disaster can cause. Everything that is planned ahead of time is surely well worth the time, effort and resources.

Furthermore, on the category of collection and maintenance disaster preparedness for salvaging library materials was also asserted by the participants. To prevent damage to library materials, proper measures should be recognized.

One of the common activities that a librarian can do is to have priority salvage lists made by area stating which items are to be saved from individual room/area. Then, the library may designate locations for temporary rehousing of materials. It is very important that in case of disaster the librarian readily knows where to evacuate and put the materials. Likewise, temporary site does not hinder the normal operation of the library, the designated room maybe used for recording and packing of materials. As packing is concerned, disaster team needs training in removing material and confident in making decisions regarding salvage methods.

Kostagiolas and Araka (2011), agreed the above measures by stating that in an area where disaster always occur, the library must identify the valuable assets to be saved or recovered. The library should not forget to install labels and signage for proper guidance. Likewise, it is necessary to have insurance provision for building and collection. Nevertheless, safeguarding people is the most vital aspect than many other cases or activities.

Response

In connection with preventive measures as presented in table 3, the participants revealed that response is one of the essential aspects in averting disaster. Within the response, education and training are greatly needed by the librarians and staff to be useful in the event of a disaster. Participants confirmed that seminar and workshops on disaster are necessary, however in some libraries training opportunities for librarians and staff were not provided. Other participants

revealed that training was superficial because trainers concentrated on theoretical issues rather than practical concerns; they often used PowerPoint presentation which is often ambiguous and boring. Participants suggested that training be made more real, library staff trained in emergency response procedures where an officer-in-charge is responsible during the time of disaster. Leader of the response team must provide and establish emergency procedure for raising the alarm, evacuating personnel and making the disaster site safe. More than these, conducting drills for different scenario and getting involved in any training enhanced the safety of people, building, resources and services.

Robertson (2017), agreed that through emergency training, librarians and library staff need to be ever ready to survive the bad situation and resume library operations promptly. Training opportunities for librarians and staff need to be given because it will become useful and is proven to enhance safety of personnel and collection. Though, hands-on training does not always lead to effective preparedness for emergencies, a library can offer series of seminars or workshops so that librarians and staff will be acquainted with the basics.

Regarding storage environment, the participants of the study identified the importance of installing an air conditioning unit to control the temperature and relative humidity of the library. Slow deterioration of materials like mold growth is minimized by managing the storage environment. In addition, the participants affirmed that in case of disaster the library should have designated area for

recording and packing of material which requires air drying slightly wet material and other minor treatments.

Ogden (2017), agrees that well maintained building should be kept and that maintaining stable situation is essential. An institution should maintain and set temperature and relative humidity within the suggested ranges that can be sustained twenty-four hours a day. The temperature recommendations for areas used entirely for storage are much lesser than those for collection areas and entire facility of the library. Cold storage with exact humidity is rarely advisable for inaccessible storage or little-used collections. Likewise, to avoid heavily weakening of materials provision of good air where recording and packing are done must be clean as possible. Participants believed that care should be taken to protect and extend the life of materials. This statement was also related in the study of NEDCC Staff (2007), managing the storage environment is a challenging task because it involves gathering information regarding the building and evaluating the weaknesses and needs of library collection.

Temperature, relative humidity, and air quality have a great impact on durability of library and collections. By monitoring and managing the storage environment, one can considerably prolong the life of library collections.

Recovery

As can be gleaned in Table 3, priorities for safeguarding and resumption of work were emphasized by participants. As to the protection of working area, the participants attested that providing a clean rehabilitation disaster site is necessary. While keeping up the place, methods on selecting materials to be cleaned, repaired, replaced or rebound, and discarded are also needed. These data were supported by the study of Luna (2016), in recovery phase, damage collection assessment, library records and people are necessary as well as cleaning of library materials, salvaging collection, and restoration of library services.

Participants stated that effective method of keeping the library collection is consultation from experts. Similarly, external linkages or consortium in the area with other libraries is significant. Participants affirmed that collaboration is practiced in their area. It was initiated by Association of Librarians in Quezon province. However, MOU (Memorandum of Understanding) is only the written agreement presented in the library. Collaborating with other libraries can help the library's ability to recover quickly by creating relationships with different professionals from different libraries whose purpose is to help those who are in need. Working collaboratively allows the library to offer services more than they could alone, as this will save time, money, and resources.

According to Hagar (2015), many libraries encourage personnel to actively join the consortium due to many benefits that it offers. Collaboration offers

learning initiatives, library conveyance, and use of library's physical space. It also improves the library's ability to serve the patrons quickly and make daily operation more visible even after the incident of disaster. It is important to work in partners as it provides possibilities and allow them to share, safeguard resources, save time, energy and money.

4. Proposed Disaster Management Plan

From the results of the study, the researcher formulated a library disaster management plan which aim is to help individual libraries to use it as an example to develop their own plans. Since the academic libraries have different organizational framework, the risk factors, the physical environment, the building structure and materials may vary, the plan will need to be modified and adapted to meet the libraries need. This plan prioritizes the four key areas of disaster management: preparedness, prevention, response and recovery. Each area has a long-term goals and objectives. Moreover, these areas aim to enable librarians to become more adaptive and resilient to disaster. The following are the inclusive mechanism of library disaster management plan:

I. Statement of Purpose

The library disaster plan has been developed in case it has to face disasters like fire or flood and other hazards. This plan will help to limit the possible damage and recover from it at the earliest.

The plan is meant for the authorities, and the library staff and aims to help prevent, respond and recover from a disaster situation.

II. Goals and Objectives

The goals and objectives of library disaster management plan is to reduce, recover, repair the damaged resources and return the library daily operation to its normal function and condition.

III. Ascertaining the sources of possible disasters

This component is included in library disaster management plan because it recognizes the different threats to the library and its collections. Awareness on the possible hazards will lessen the unforeseen disaster. Possible hazards or threats addressed by the plan are natural hazards, environmental hazards, physical hazards, water hazards, fire hazards, pest's threat, security threat, and storage.

III. Libraries Vulnerability to Disaster

To reduce the potential chances of risk, libraries vulnerability to disaster is included in library disaster management plan. Incorporated in this plan are the contributing factors that severely affect the library such as risks from outside the building (physical location) and building structure (design and condition).

IV. Disaster Management Preventive Measures

There are certain measures that are taken to prevent the unforeseen disaster from causing severe impact to the library.

Phase 1: Prevention and Mitigation (Managing the Disaster Risk)

In this phase, different activities are stated to ensure that the library will reduce the risks of being affected by the disaster. Even if the hazard or threat cannot be removed, vulnerability or susceptibility can be lessened, the ability to respond and recover will be stronger. Included in this phase are natural, environmental & physical hazards, water protection, fire protection, maintenance/pest protection, security and storage protection.

Phase 2: Preparedness (Be ready all the time)

The key in minimizing fear, anxiety and losses is being prepared. The library takes basic and probable steps to lessen the effects and prevent if disaster strikes. Incorporated in this phase are disaster response team's function and responsibilities, training, collection priorities, updated documentation and external linkages.

Phase 3: Response (When disaster strikes)

This phase deals with how the library responds when disaster strikes. Immediate actions are taken to safeguard persons, properties, and emergency services.

Phase 4: Recovery (Restoration of services and building back better)

This phase consists of general guidelines and procedures to enable the library operation immediately bring back to its normal situation after an event.

V. Follow-up

These are activities that need to be updated and reviewed after an occurrence. Difficulties and limitations can be stressed and changes be made.

VI. Monitoring and Evaluation

Monitor and evaluates the progress of plans and programs and makes necessary adjustments in all phases and stages of the disaster risk management process.

(See Library Disaster Management Plan for Academic Libraries on pages 103-142)

CHAPTER 4

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusions derived and recommendation based on the findings of the study.

SUMMARY OF THE STUDY

The study aimed to identify the possible hazards or threats that are possible to happen in academic libraries. These hazards or threats are classified into eight major categories namely natural hazards, environmental hazards, physical, water, fire, pests/maintenance, security, and storage. Based on the result, the natural hazard with the highest rating for the probability of occurrence and impact is typhoon (15.55) followed by volcanic eruption (11.3), earthquake (11.2), and flood (8.8). The libraries are warned to be ready for the precautionary measures to lessen the impact of the said disasters. This research also presented the library's environmental and physical vulnerability which are categorized into physical location and building design and condition. In this aspect, academic libraries revealed that they are highly vulnerable when it comes to library setting. Within the building design and condition, three (3) libraries are considered high risk, the other libraries are described as moderate risk. The participants affirmed that library's vulnerability to disaster differs in

the way they prepare for the hazard and the quantity of resources they have to prevent and manage.

In terms of preventive measures, the study provides some measures that can possibly reduce risks, avoid hazards and lessen the probable impact of disaster. This can be done by applying the four phases of disaster management such as prevention and mitigation, preparedness, response and recovery. For prevention and mitigation various activities are identified to ensure library will reduce the risks of being affected by the disaster. Librarians also placed emphasis on preparedness which means being ready all the time and getting ready to manage once disaster strike. To minimize fear, anxiety, and losses, taking preventive measures against any type of disaster are recognized. Another essential aspect in averting disaster is response. This phase deals with how the library responds when disaster strikes. Varied safety measures are identified to protect persons, properties and services. To facilitate the fast recovery of library services and return library building to its normal condition, safeguarding work and external linkages are activities taken during recovery phase. The library's ability to respond and recover will be stronger even if the hazard or threat cannot be removed or vulnerability to disaster can be reduced as long as the system is guided by four phases of disaster management. In utilizing the qualitative method of research, the researcher gathered information, systematically

arranged, explored and extracted the data from participants to formulate a model plan which can be improved or customized according to specific needs of academic libraries in Lucena City.

SUMMARY OF FINDINGS

After carefully coding the data, detailed analysis and interpretation of the data followed. The findings are presented according to the main themes identified in this study:

1. Hazards or Threats

Possible hazards and threats in academic libraries were identified by the participants. Eight categories were formed based from the result of the study namely: natural hazards, environmental hazards, physical hazards, water hazards, fire hazards, maintenance/pests, security and storage. The study revealed that the high risks identified are typhoon and fire hazard. This means that the said disasters are big threats to personnel, building, collection and equipment. On the other hand, some of the risks identified in the study are considered moderate or low risks, still they are threats to the whole aspect of libraries and these threats are still need to be monitored and if possible, appropriate preventive measures must be implemented. The participants believed that no library is

insusceptible to numerous types of disaster, though, it may be unavoidable, but they can prepare for them.

2. Vulnerability to Disaster

The factors that contribute to the libraries vulnerability to disaster mentioned by the participants were physical location and library building design and condition. For the category of physical location, out of nine libraries four (4) of them are identified as high risk. Academic libraries revealed that they are highly vulnerable when it comes to library setting. Aside from physical location, building design and condition is also one of the factors that contribute to the library's vulnerability to disaster. These include the building foundation, structure, and location. Within the building design and condition, three (3) libraries are considered high risk, the other libraries are described as moderate risk. It can be attributed that their libraries have already taken some measures to lessen the vulnerability of their libraries to disaster.

3. Libraries Preventive Measures

Preventive measures in academic libraries are categorized into four different themes. The themes assembled were prevention and mitigation, preparedness, response and recovery.

In terms of prevention and mitigation, on the category of fire protection participants believed that library building must be provided with smoke detection system, there should be regular checking and repair of electrical system to prevent overloading and leaking as well as inspection of fire extinguisher periodically. To prevent libraries from water hazard, participants agreed that annual cleaning of drainage is essential to avoid clogging, in order to maintain the safety of collection, library shelves must be away from water bearing pipes, movable and 4” inches off the floor. On the category of maintenance, several factors arising in terms of records, building inspection, damaged furniture, equipment and disposal of garbage from the library. Within the building security, there are some preventive measures the participants identified such as during building construction. Library should follow the standard requirement for space size. The library building should be earthquake resistant and must have a firewall. In addition, special precaution must be taken when the library undertakes possible dangerous activities like rewiring and repairing the internal and external fabric of the building. Lastly, participants claimed that it is very important if there is designated roving guard to check the vicinity of the building.

One of the most essential activities that should be considered under prevention and mitigation is the security of collection. Participants affirmed that collection security will be most effective if preparing and planning how to respond in case of disaster is considered. Participants remarked the significant activities of emergency preparedness. In the event of disaster, a list of external contacts and names, addresses, home and work telephone numbers of personnel with emergency responsibilities is necessary. The team knows the workplace hazard so that risks or danger can be avoided. Trainings are provided for the institution as a whole and not specific for the library. Other participants declared that in their respective workplace managing emergency preparedness are only partially conducted.

Participants also expressed that emergency preparedness at work was about taking care of patrons and preventing injury. Saving lives is the first priority, it can be inferred from the findings that assistance from local police and fire fighting station can contribute to hazard prevention and reducing injuries. Moreover, providing designated locations for temporary rehousing staff are necessary as well as transportation services especially in the event of disaster.

In the category of building emergency measures, the participants claimed that building floor plan should be prepared, reviewed and updated regularly. This plan must indicate storage areas, windows, entrances and exits. Fire extinguishers, fire alarms, sprinklers, smoke/fire detectors should be strategically located and water pipes, electrical and water supply should always be available.

Furthermore, on the category of collection and maintenance disaster preparedness for salvaging library materials was also asserted by the participants. To prevent damage to library materials, proper measures should be recognized. Priority salvage lists made by area stating which items are to be saved from individual room/area is considered then, temporary rehousing of materials. The librarian readily knows where to evacuate and put the materials. As packing is concerned, disaster team needs training in removing material and confident in making decisions regarding salvage methods.

Within the response, education and training are greatly needed by the librarians and staff to be useful in the event of a disaster. Participants confirmed that seminar and workshops on disaster are necessary. Leader of the response team established emergency procedure for raising the alarm, evacuating personnel

and making the disaster site safe. More than these, conducting drills for different scenario and getting involved in any training enhanced the safety of people, building, resources and services.

Regarding storage environment, the participants of the study identified the importance of installing an air conditioning unit to control the temperature and relative humidity of the library. Slow deterioration of materials like mold growth is minimized by managing the storage environment. Temperature, relative humidity, and air quality have a great impact on durability of library and collections. Monitoring and managing the storage environment, one can considerably prolong the life of library collections.

In terms of recovery, priorities for safeguarding and resumption of work were emphasized by participants. As to the protection of working area, the participants attested that a clean rehabilitation disaster site is necessary. While keeping up the place, methods on selecting materials to be cleaned, repaired, replaced or rebound, and discarded are also needed. Participants stated that effective method of keeping the library collection is consultation from experts. Similarly, external linkages or consortium in the area with other libraries is significant. Participants affirmed that collaboration is practiced in their area. Collaborating with other

libraries can help the library's ability to recover quickly working collaboratively allows the library to offer services more than they could alone, as this will save time, money, and resources.

Considering these four elements of disaster management the participants will easily formulate an effective library disaster management plan.

4. Disaster Management Plan

The plan prioritizes the four key elements of disaster management: prevention, preparedness, response and recovery. These elements aim to enable librarians to become more adaptive and resilient to disaster. The plan has goals and objectives and been developed in case it has to face disasters. It includes several components such as identifying the natural disaster, hazards and threats, libraries vulnerability to disaster, and certain measures that can be applied before and after the incidence of disaster. Follow-up, monitoring and evaluation are also components that can be seen in this plan where in the progress of plan makes necessary adjustments in all elements and stages of the disaster risk management process.

LIMITATIONS OF THE STUDY

The aim of this research was mainly to identify the types of hazards and threats that are possible to occur, vulnerability to disaster in terms of physical location, building design and condition, as well as preventive measures that can be applied before and after the incidence of disaster. Risks in an area that must be comprehensively evaluated and rated according to their possibility of occurrence as well as their consequences are still not covered by this study. Likewise, detailed assessment on every stage of disaster management is limited. This study concentrated on determining whether libraries are prepared to face an emergency situation and what preventive measures must be applied in the occurrence of disaster. Formulating library disaster management plan is the purpose of this study in order to help the academic librarians to fulfill the particular needs of their libraries in case disaster strikes, however this plan has not been developed to sustain all their needs rather to provide general procedures or measures for specific hazards, threats and content of disaster management plan. This plan can also be altered to suit the specific needs of other academic libraries.

This research should also be conducted for other types of libraries such as public and school libraries in Lucena City. For future researches, this study needs a thorough investigation on every stage of disaster management as well as attitudes of library personnel in the event of disaster.

CONCLUSIONS

Based on the findings of the study, it is concluded that academic libraries are considered as a high risk on the natural disaster like typhoon and considered as a moderate risk on earthquake, volcanic eruption and flood. Library prevention and mitigation measures are necessary to lessen the potential damaged of the building, collection and serious injury of the patrons.

Further, academic libraries require different preventive measures for the various threats and hazards like fire, security, water and environmental hazards. These hazards need to be monitored, requires proper attention and use the most appropriate strategies to deal with them.

Moreover, academic libraries are highly vulnerable to disaster in terms of the physical location, building design and condition and their vulnerability to disaster varies depending on exposure and situation.

It can be concluded that Lucena City is considered as a high-risk area in terms of disasters and a Disaster Management Plan is needed to prevent and lessen the probable impact of disaster.

RECOMMENDATIONS

In line with the findings of the study and the foregoing conclusions, the following recommendations are hereby drawn:

1. Allocation of time in developing strategies on disaster management activities. Provide seminars and hands-on training for library personnel regarding disasters.
2. Seek full support and involvement of administrators concerning to disaster preparedness of the library.
3. Utilized the research output for further study and development of *Library Disaster Management Plan*.
4. Disaster Risk Reduction Integration into the Library and Information Science Curriculum.
5. Conduct a study on Collection Disaster Risk Reduction and Overcoming Traumatic Experiences from Disasters of Library Personnel.
6. Formulation of Technology Disaster Preparedness Policy.

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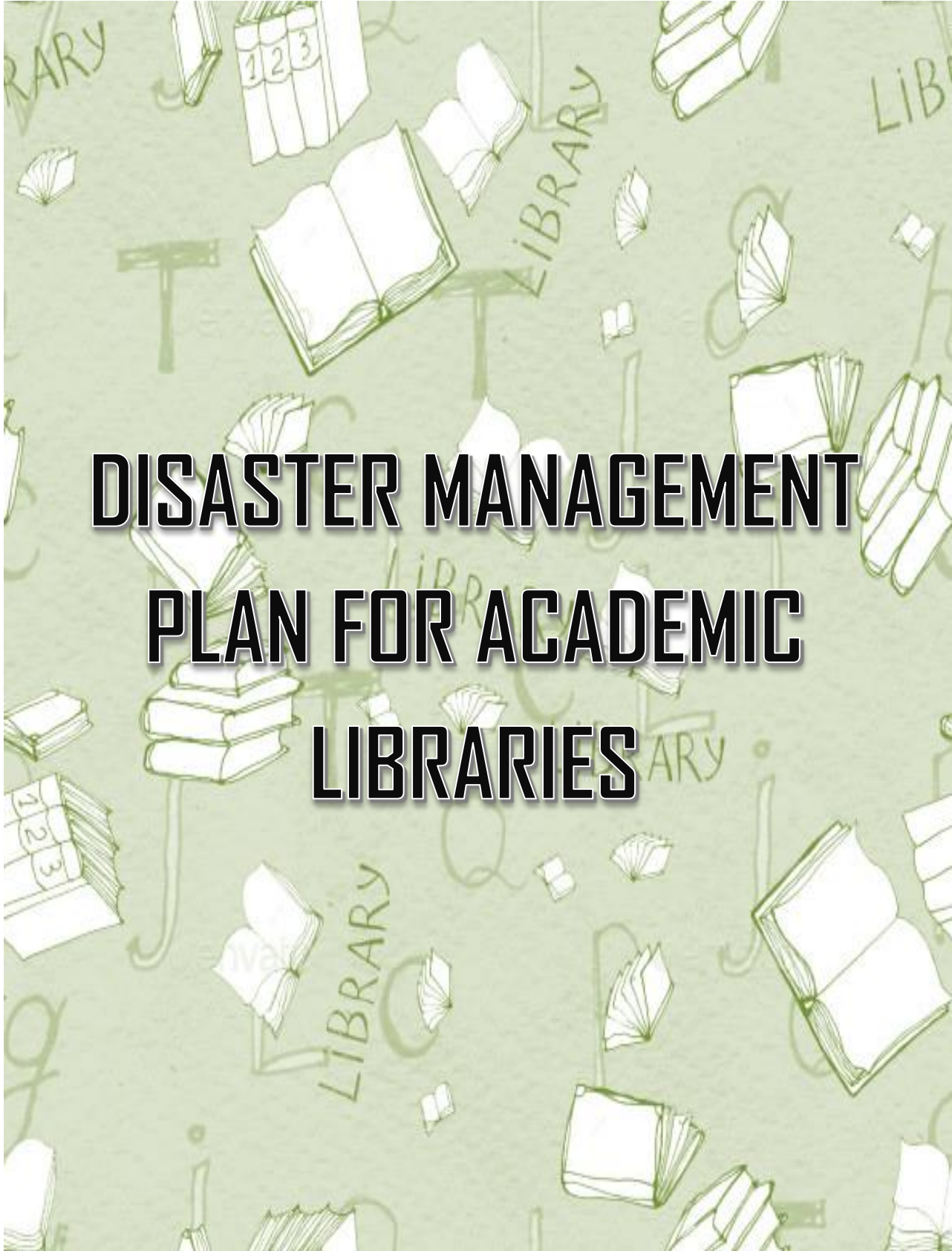
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DISASTER MANAGEMENT PLAN FOR ACADEMIC LIBRARIES

DISASTER MANAGEMENT PLAN FOR ACADEMIC LIBRARIES

I. Introduction

No library is safe to different types of disaster either natural or man-made. Whatever the cause of this, the damage and destruction it causes threatens the safety of staff, patrons, collection, building or the disruption of library services. Thus, in the event of disaster occurrence careful planning is the key towards an effective disaster management plan.

Disaster management plan is one of the most important facets of library management. This plan has been developed in case it has to face disaster like typhoon, fire or flood. The plan is meant for the library personnel and other authorities to inform and familiarize them on disasters, and provide guidance on how to prepare in its occurrence. It is a major requirement for the library as it reduces anxiety, making appropriate decisions which in return will minimize potential damage.

A disaster may happen at any time during or after library hours. The first priority when a disaster strikes is the safety and security of all the patrons followed by different collection of books and other items within the library.

The plan covers the entire disaster management cycle from prevention, preparedness, response, and recovery. It has been developed by the researcher in close collaboration with the chief librarians and library staff.

II. Goals and Objectives of Disaster Management Plan (DMP)

This disaster management plan is specifically designed for academic libraries to provide general procedures or measures for the probable hazards or threats that may occur. This disaster plan addresses basic prevention, and response to emergencies that may affect the patrons, collections, building and facilities, equipment and data. This plan focuses on the high, moderate and low risks the library faces such as fire, security, and water hazards. Preventive actions are covered in the proposed three-year library disaster management plan while response and recovery procedures are addressed in the body of the plan.

DMP Objectives:

1. Minimize the possibility of damage to the building, collection, equipment and patrons.
2. Guide librarians on how to go about disaster management.
3. Increasing the efficiency and effectiveness of disaster preparedness plan for effective response.

III. PREVENTION AND MITIGATION

NATURAL HAZARDS	Typhoon	Volcanic eruption	Earthquake	Flood
o	Coordinate with local community or barangay on safety plan during of times severe events.	➤ For longer-term development planning, consult available hazard maps that indicate areas declared as permanent danger zones and areas likely to be affected by different volcanic hazards so that these areas are avoided when choosing sites for developing new library building.	❖ Know the earthquake hazard in the area. ❖ Follow the standard structural design when constructing a library building. ❖ Evaluate structural soundness of the library building. ❖ Strap or bolt book shelves to walls ❖ Check the stability of hanging objects like ceiling fans.	• Learn about the area's flood risk by looking at past events. These risks differ for different places and different months. • Know the flood hazard map in the community. • Learn from previous occurrences how frequent, how high and how fast flood can occur. • Take notice of rapidly rising water and prepare plans for
	o	Recommend	Be aware of the kinds of volcanic	Trimming and

NATURAL HAZARDS

removal of unstable trees, electric posts, or any infrastructure that could fall and may cause damage or injury.	hazards present in the area. Determine the distance of workplace from the volcano. Know the kilometer radius from the volcanic summit.	chemicals and flammable materials should be stored properly in the lowermost secured shelves.	evacuation.
○ Have an emergency kit.	➤ Be aware of the meanings of Alert Levels and recommended actions.	❖ Familiarize with the exit routes.	• Have an emergency kit.
○ Participate actively in the school drills on disaster response.	➤ Be aware of the identified evacuation areas as well as designated pick up points.	❖ Know where fire extinguishers, first aid kits, alarms and communication facilities are located.	• Establish evacuation plans and procedures.
	➤ Teaching and learning volcanic hazards to library patrons.	❖ Learn how to use them.	• Participate actively in the school drills on disaster response.
		❖ Discuss earthquake safety in library.	
		❖ Conduct and participate in regular earthquake drills.	

➤ Learn about the warning systems and emergency plans. ➤ Make a library emergency plan evacuation plan, and communication plan. ➤ Always listen to the latest PHIL VOCS Alerts and information. Hear the advice of community leaders or LGUs about evacuation procedures.	❖ Have library emergency evacuation plan ❖ Know the responsibilities during emergency.
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THREATS AND HAZARDS

FIRE	SECURITY	ENVIRONMENTAL & CLIMATE CONTROL	WATER
<i>Staff</i>			
Selecting and training an emergency response team involving voluntary members of staff who lived near the library.	Training staff to implement the security plan.	Maintain records of frequency and consequences of all disaster events in the area.	The staff should know the location of sprinklers (if existing), water pipes and water supply.
Staff should consistently practice for fire scenarios (e.g. using fire extinguisher and fire alarms, emergency drills or “mock disaster”)	Enforce library rules, regulations and security procedures to patrons and staff.	Enforce not to drink nor eat inside the library for patrons and for the staff.	Ensure proper supervision of all maintenance staff.
All employees from top to bottom have received training and are aware of their assigned duty.	Staff access to restricted areas can be limited; key control can be strictly enforced; staff belongings can be inspected when staff members exit the building; and staff can be required to sign in and out of the building, both during and after hours.	Use the staff room during break or as the need arises. Designate maintenance staff to monitor the proper disposal of waste garbage and left over food from the	

Practice building evacuation in the library. Make sure the clients know the four rules for library building evacuation: Don't Talk! Don't Push! Don't run! Don't turn back!	Designate staff to different areas to ensure the safety of library collection when exhibited.	library to avoid spreading of pests.	.
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Collection

There is a priority salvage lists made by area, stating which items are to be salvaged from individual rooms/area Provide fire-proof shelving and storage for the collection especially for rare materials and	Stored off-site the vital records of library such as collection inventories. Library records stored/uploaded online. The library accession records are duplicated and stored off-site.	Storage areas are kept clean and orderly. Cleaning materials are safely stored to control the propagation of insects. Provide steel shelves rather than wood to avoid scattering of	Re-routing of water pipes that are running through the collection areas. Regular checks should be made to ensure that materials are not stored on the floor. Provide water barrier
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important records. Install as many fire doors and barriers as possible to isolate fires and slow down their spread.	The library electronic catalogues and records are duplicated and stored off-site. Regular inventory of collection. The secret pages of book stamped should not be revealed to users by any library staff Ensure that storage areas are arranged for quick and easy inspection. Ensure that plants are located where library collection are not handled.	termites and prevent shelves from collapsing. Regular dusting and cleaning of books and shelves must be carried out on regular basis. Lights should be prevented from falling directly on books.	over the tops of shelving to avoid water leaks from damaging the collection
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THREATS AND HAZARDS

Building and Facilities

Stair and hallway fire doors are kept in the closed position and are free and clear of obstruction.	Exercise proper issuance and return keys preference and for only authorized personnel to use the restricted areas.	Regular building inspection.	Install water-sensing alarm
Fire escape stairs & emergency lightning appear to be in good condition.	Consider mounting or installing of CCTV cameras and security alarms to monitor the researchers.	Provide clear policies and procedures for maintenance.	Consider repair of building according to standard and structural improvement of roofs, ceiling, walls and windows.
Illuminated exit signs are all lit, not blocked and can be easily seen.	Assign staff to properly check all the patrons who are coming in and out of the library.	Regular disposal of garbage from the library; trash cans are emptied regularly.	There is annual cleaning of drainage to prevent clogging.
The library is provided with a fire detection system.	Allocate only one entrance and exit point but with more than one emergency exit.	Dusting and vacuuming is required frequently.	The library has water proofing for building walls, floor, ceiling, and basement.
There are no obstacles or hindrances which	Establish and observe	Putting up of air-	

THREATS AND HAZARDS

may block exits and other spaces	strict procedures for closing down and locking up the library. Ensure that all the users have left the library before closing the library. If possible, installing a book security system for general circulating collections	conditioning unit to prevent mold infestation.	There is updated floor plan for the vicinity.
	Installing high-quality, heavy-duty locks, dead bolts, and hinges on all exterior doors.	Construction of the library building should be considered and the soil on which it will be constructed.	
<i>Equipment</i>			
Install local electrical circuits for each room/storage area with the capability for these to be isolated. Install circuit breakers or automatic tripping	Ensure that all electronic alarm systems are working properly and need to be operational 24 hours a day regularly checked and maintained.	Regular cleaning and dusting of equipment. The library equipment and tools like furniture, fittings and accessories, should be of standard	Regular maintenance of all water transporting or carrying system. Reporting of damaged furniture and equipment.

switches for electrical circuits.

pattern and design.

First-aid kits and other emergency supplies are readily available in the library.

Never leave a computer, electric fan, lights and all electrical paraphernalia unattended.

Routine security checks should be made daily at closing time to ensure that all equipment is turned off.

Fire hose cabinets are in good order, easily visible and accessible.

THREATS AND HAZARDS

All extinguishers need to be regularly tested, refilled, replaced and tagged.

Data Management

The library computer data backed up weekly or monthly.
Consider storage of backups (onsite and offsite), frequency of backups, and the number of backups to be created for each type of data like periodically checking backups for deterioration.
All master copies of software and their license key number should be safely stored.
All library data is

Protect the Local Area Network (LAN) from virus attack

Protect computers and data through provision of uninterrupted power supply.

Ensure that all important records/data are stored in a secure storage or vault.

The library computer data backed up weekly or monthly.

The library computer data backed up weekly or monthly

All backups should be stored in a secure, off-site location

The library electronic catalogues and records are duplicated and stored off-site.

stored on the server.			
The server should have a server room that have both fire and heat detection and smoke detection sensors.	Consider storage of backups (onsite and offsite), frequency of backups, and the number of backups to be created for each type of data like periodically checking backups for deterioration		
Install fire extinguishers suitable for electrical fires.			

The Vicinity of the Building (Physical location)

- Preventive Measures
1. Consider setting- up sound proof walls to prevent noise coming from parking area and passing private/public utility vehicle.
 2. Cut and remove tall trees and wilds plants that can be possibly damaging to library building and structures.
 3. Consider putting up barrier walls, drainage and similar structures to stop and or deferred flooding on building.
 4. Initiate dialogue and conversation to the owner of nearby hospital or building regarding the discharge of chemical leaks or toxic spills that cause possible harm to users, damage to equipment, collections and other facilities or interruption of library services.

5. Secure the cooperation of other establishments in the area.

The building design and condition

1. Consider repair of building and structural improvement of the following:
roofs, ceiling, walls and windows.
2. Security measure to ensure the safety of library materials and users when they are doing their research at the basement.
3. Take special precaution when potentially unsafe activities are undertaken such as rewiring, installation and repairing of the internal and external structure of the building.
4. Provide space for an emergency exit to avoid obstacles or hindrances when an emergency situation happens.
5. Provide an updated floor plan for the vicinity.
6. Establish routine housekeeping and maintenance measures to prevent rats and termites from spreading.
7. Install sound proofing wall especially to those libraries located near hall to prevent hearing of loud sound coming from school activities and social gathering

DISASTER MANAGEMENT TEAM

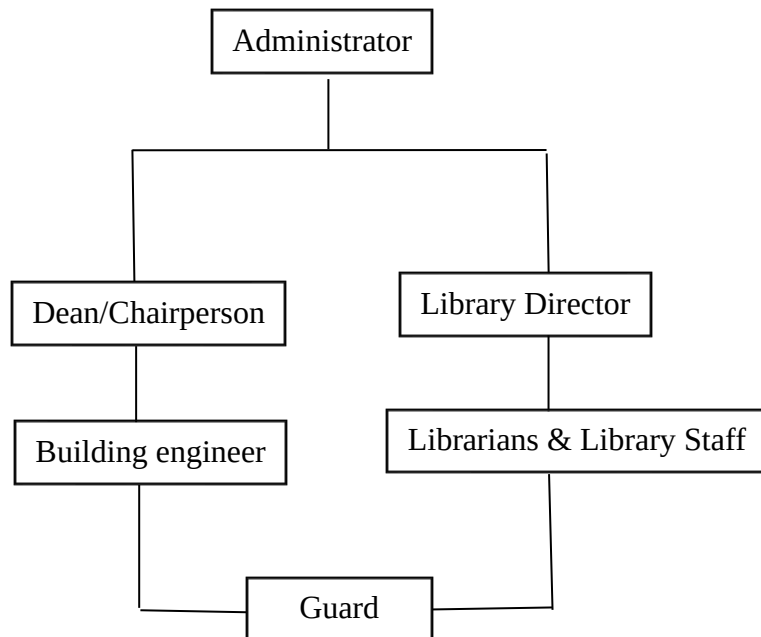
Disaster management team is responsible for planning what actions need to be taken for mitigation, preparedness of the disaster and to plan for the rescue and recovery.

Responsibilities of the members of the Disaster Management Team are as follows:

1. Administrator is responsible for the overall management of the disaster.
2. Dean Chairperson of the DMT of the school will implement the necessary administrative decisions to come out of the disaster. Finance, staff, appointment of service dealers related would be managed by the Dean. He/she will also be responsible for ensuring that necessary preparedness measures have been taken.
3. Library Director has the overall responsibility for rescuing all materials and restoration of library services. He/she will coordinate all disaster related work of the library like distribution of work, rescue and recovery of collection.
4. Library staff ensures that the clients receive proper orientation on the hazards and risks within the library. Maintain and update emergency hotline numbers etc.
5. Building engineer will be responsible for the safety, maintenance and restoring of the library premises.

6. Guard or building security officer will be responsible for the safety of the people and building. He/she will be responsible for evacuation of people in the premises to temporary rehabilitation site.

Organizational Structure of the DMT



*Library Disaster Management Team – Contact Details (**Please fill in details**)*

Designation	Name	Department	Office No.	Home No.	Mobile/Email
Administrator					
Dean					
Library Director					
Library Staff					
Building Engineer					
Guard					

EMERGENCY PROCEDURES

In case of disaster inform the following people in the order of priority.

During Office Hours		Mobile No.
7:00 a.m.-7:00 p.m.	Librarian's Office	0909xxxxxxx
7:00 a.m.-7:00 p.m.	Building security office	
After Office Hours 7:00 p.m. 7:00 a.m.	Guard	
Immediately after that contact: (please find out and fill)		
	Contact Number	Name of Contact Person
Police		

Nearby Police Station		
Fire		
Nearby Fire Station		
Contact the following depending upon the nature or case of disaster		
Ambulance		
Nearby hospital		

Please follow the instruction in case disaster happened in the library.

1. Do not panic and remain calm.
2. Evacuate people from a safe route.
3. Do not jeopardize personal safety.
4. Do not attempt save belongings.

Determine and lessen the risks coming from the natural, man-made hazards of an area and libraries vulnerability to disaster.

Hazards and Threats	Emergency Procedures
<i>If fire occurs:</i>	1. Remain calm. 2. Activate the fire alarm. 3. Call the Fire Department. 4. If the fire is small, attempt to put it out with a fire extinguisher. Do not jeopardize your personal safety. 5. Never allow the fire to come between you and an exit.

	6. Disconnect electrical equipment that is on fire if it is safe to do so (pull the plug or throw the circuit breaker). 7. Notify your library director of the location and extent of the fire. 8. Evacuate your area if you are unable to put out the fire. Close doors and windows behind you to confine the fire. Go to a designated area. 9. Do not break windows. Oxygen feeds a fire. 10. Do not open hot doors. Before opening any door, touch near the top. If the door is hot or if smoke is visible, do not open the door. 11. Do not use elevators. 12. Do not attempt to save possessions at the risk of personal injury. 13. Do not return to the area until cleared by emergency personnel. All fires, no matter how small, must be reported to a library director.
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<i>If a water leak or flooding occurs:</i>	1. Remain calm. 2. Notify building maintenance and your supervisor. Give the exact location and severity of the leak. Indicate whether any part of the collections is involved or is in imminent danger. 3. Do not walk in standing water which may have contact with wiring and may be electrified. If there are electrical appliances or electrical outlets near the leak, use extreme caution. If there is any possible danger, evacuate the area. 4. If you know the source of the water and are confident of your ability to stop it (unclog the drain, turn off the water, etc.), do so cautiously. 5. Be prepared to help as directed in protecting collection materials that are in jeopardy. Take only those steps needed to avoid or reduce immediate water damage: cover shelf ranges with plastic sheeting; carefully move materials out of the emergency area. Do not remove already wet books from shelves.
<i>In the event of an earthquake</i>	1. Remain calm. 2. Stay in the building. Take shelter within a doorway, in a narrow corridor, or under a heavy table, desk or bench.

<i>After the earthquake has stopped:</i>	3. Stay away from windows, mirrors, overhead fixtures, filing cabinets, bookcases, and electrical equipment 4. Do not attempt to leave the building, as exit stairwells may have collapsed or be jammed with people. 1. Remain alert for aftershocks. 2. Listen to local radio stations for instructions. 3. Assist those who have been trapped or injured by falling debris, glass, etc. Do not move seriously injured persons unless they are in obvious, immediate danger (of fire, building collapse, etc.). 4. Evacuate the building if safe to do so. Do not re-enter until the building has been declared structurally sound.
<i>Steps to limit Damage to Data and the System during Emergency</i>	1. Acquiring standardized hardware and software. 2. Master copies of all software and their license key number should be safely stored. 3. Securing support from Information Technology vendors for system maintenance. 4. Ensuring insurance coverage system. 5. Protecting the Local Area network (LAN) from virus attack by installing antivirus

	software and firewalls. 6. Routinely backups. 7. Monitoring staff and user internet access. 8. Protecting hardware from environmental damage. 9. Acquiring standardized hardware and software. 10. Master copies of all software and their license key number should be safely stored. 11. Securing support from Information Technology vendors for system maintenance. 12. Ensuring insurance coverage system. 13. Protecting the Local Area network (LAN) from virus attack by installing antivirus software and firewalls. 14. Routinely backups. 15. Monitoring staff and user internet access. 16. Protecting hardware from environmental damage.
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Evacuation Procedure

In advance, each staff person and volunteer should:

1. Understand the evacuation plan.
2. Recognize the sound of the evacuation alarm.
3. Know at least two ways out of the building from the regular work space.

When you hear the evacuation alarm or are told to evacuate the building:

1. Remain calm.
2. Immediately shut down any hazardous operations.
3. Leave quickly.
4. The highest ranking person who is physically present in each department is responsible for insuring all members of his/her department evacuate the area.

In addition, employees should check that all others in the work space are leaving as instructed.
5. As you exit, quickly check nearby rest rooms, copier rooms, closets, etc.
6. Accompany and help handicapped personnel, visitors, and any co-workers who appear to need direction or assistance.
7. Take with you: your car keys, purse, briefcase, etc. Do not attempt to take large or heavy objects.
8. Shut all doors behind you as you go. Closed doors can slow the spread of fire, smoke, and water.

9. Proceed as quickly as possible, but in an orderly manner. Do not push or shove. Hold handrails when you are walking on stairs.

10. Once out of the building, move away from the structure.

IV. RESPONSE AND RECOVERY

Salvage Priorities:

Setting priorities for salvaging collections is one of the most difficult but also one of the most important aspects of disaster planning. A listing of priority collections will allow the library to concentrate on the most important materials that are accessible for salvage.

As a first step, library directors or collection specialists should set priorities by department or by sections of the collection, with input from others within the department or area. Since it is most likely that an emergency will affect only a portion of the collections, these priorities are important in themselves.

However, they will also serve as a basis for setting overall collection salvage priorities for the library, which should be done by a committee made up of representatives from each department and/or area of the collections.

The library should have an up-to-date collection development policy, these policies should be of some assistance in determining which collections are most important. As a general rule, do not try to set salvage priorities on an item-by-item basis. While there may be the occasional object of value that deserves to be considered on its own, it is much more practical to designate groups of items for salvage.

Prioring Level is based on the following:

- **Usage** – Consider which materials within the collections are the most used by the patrons; these are often those that support the primary mission of the library. Use must of course be weighed against other factors such as the availability of replacements.
- **Uniqueness** – Materials in special collections (e.g., rare books, local history material, archival material, artwork) are often unique and irreplaceable, and thus will likely merit a high salvage priority.
- **Legal responsibility for retaining the records** – Archivists, town clerks, and records managers may be governed by retention and disposition schedules that establish how long records must be retained. Records designated as permanent will need to be a high priority.
- **Availability of replacements** – Even in a general circulating collection, many books may already be out of print. Consider whether newer editions are available, and whether or not a newer edition would be acceptable. It may be possible to buy

copies of some materials in another format. Also consider what materials could be accessed at other libraries or through interlibrary loan if they were not replaced. For unique materials, consider whether backup copies are available (such as microfilm of archival documents and manuscripts) and whether such copies would provide an acceptable alternative to the originals, allowing you to give the originals a lower priority for salvage.

Collection, Library Records Equipment, and Other Salvage Priorities

Priority 1: Irreplaceable materials

Priority 2: Materials essential to provide basic services or operation, materials required by law.

Priority 3: Replaceable materials like core collections, areas of excellence, and materials of high research value.

The rest of the collection should also be prioritized. (See the table below)

	Priority 1	Priority 2	Priority 3
Books			
Computer science, information & general works		✓	
Philosophy & psychology		✓	
Religion		✓	
Social sciences			✓
Language			✓
Pure Science			✓
Technology			✓
Arts & recreation			✓
- Visual & Fine Arts - Painting	✓		

Literature	✓	
• Poetry		✓
• Drama		✓
• Essays		
History & geography	✓	
• Biographies	✓	
• Asian History	✓	
• Philippine History	✓	
• Local History		
Reference Books	✓	
Bound Volumes		✓
Textbook Collection		✓

Location of the first priorities for saving and salvaging are marked on the floor plan and marked the books in red colors.

Library Records Saving and Salvaging Priority:

1. Accession records
2. Financial records

Equipment Saving and Salvaging Priorities

SERIAL NO.	DESCRIPTION OF ITEMS	LOCATION	SALVAGE PRIORITY
-----	Server	Librarian's Office	1
-----	Circulation Desk Computer/WEB OPAC	Circulation Desk	1
-----	External Storage	Librarian's Office	1

	Device/Hard Disk		
-----	Backups of OPAC and other records	IT center, Librarian's Office	2

Licensed numbers, usernames and passwords of all digital collections and databases have been noted and safely kept in the IT Director office as well as master copies of software and their License key Numbers.

Insurance Coverage (Building, Machinery & Equipment)

1. There is in charge of self-insurance for the building, machinery and equipment.
2. There is a budget for repair and replacement of the building, machinery and equipment.
3. There is person responsible for periodic evaluation of the funds, frequency of evaluation and increase set aside for insurance.
4. There are procedures that must be followed in case damage or loss and have documentation to be used during the claim.
5. There is specific amount of insurance for replacing income that is lost while damaged or destroyed property is repaired or replaced.
6. Know the insurance company's procedures for inspecting the building, machinery and equipment covered under the policy, and the steps taken if a serious exposure discovered.
7. Frequent review and updating the policy should be followed.
8. There is person responsible for reviewing and updating the policy.

9. There is procedure required by the insurance in case of services interruption.

10. For insurance policy, the following information must be needed:

Policy number:

Policy inception date: Policy expiration date

Property covered:

Amount of coverage:

Insurance Carrier: Address: Telephone Number:

Insurance agent:

Insurance Coverage for Collection

The first step in assessing the value of library's collection is to know what it has spent on the collection. There should be complete records of the details of the books and other resources purchased at the actual discounted rate. Details should include data about resources, date of purchase and actual price. All information in the accession records will be considered as an official document to be used during the claim. It is essential to protect the accession records. Keep a copy maybe a digital copy of this at safe location or somewhere outside the building.

1. There is in-charge of self-insurance for the rare books, and other special collections
2. There is fund available for salvage, repair and or replacement of collections in case of disaster.
3. The collection should be appraised for insurance purposes.

4. There is person responsible for periodic evaluation of the funds, frequency of evaluation and increase set aside for insurance.
5. There are procedures that must be followed in case damage or loss.
6. There are procedures that must be followed in case damage or loss and have documentation to be used during the claim.
7. Describe the insurance company's procedure for inspecting general collections covered under the policy and the steps taken if a serious exposure is discovered.
8. For insurance policy, the following information must be needed:

Policy number:

Policy inception date:

Policy expiration date:

Category of material:

Amount of Coverage:
9. There is person responsible for reviewing and updating the policy.

When taking insurance, the librarian or the person in charge must consider the several issues in the library. The library may have to convince the insurer that smoking and eating has not been permitted, fire safety measures have been taken, fire requirements installed according to standard, regular housekeeping and cleanliness has been maintained, there is no loose wiring or faulty switches, and there is no water leakage.

Evacuation/Emergency Procedures

1. The library should prepare floor plan that indicate various escape routes from the building and post these prominently throughout the building.
2. Indicate the person responsible for making sure that everyone leaves each floor area. Be sure to make provisions for evacuating disabled patrons or personnel.
3. Keep daily staff/ visitor log, so that current list is always available of who is in the building and ensure everyone is safely out. Number of log books depend on the size of the library.
4. Designate a specific area/areas outside the library building for staff to gather after an evacuation, so that head count can be taken.
5. Provide list of library staff who live near the institution.
6. During disaster, temporary space will be needed to serve as a base of operations for the Disaster Response Team. Central location is necessary through which all recovery activities, communications and decisions should be made and coordinated.
7. Designate one or more areas within the building, in another building within the institution or off-site to which collections could be relocated or where undamaged collections could be temporarily stored while the building and damaged collections are salvaged. The temporary space must be secured and climate controlled.
8. Designate one or more areas within the building, in another building within the institution or off-site that could be used to air-dry wet collections.

V. SUPPLIES AND SERVICES

Pre-Disaster Communication with Emergency Services

Fire and Police Department

- Provide information about the institution's relationship with fire and police responders.

Emergency Number Services

Emergency Services	Name	Mobile Phone
Police		
Fire Department		
Ambulance		
Guards/Security officers		

Maintenance Utilities

Maintenance Utilities	Name	Mobile Phone
Facilities maintenance		
Department		
Janitorial service		
Electrician		
Plumber		
Carpenter		
Computer agency		
Legal advisor		

Architect		
Water Company/Prime Water		
Electric company/ Meralco		
Telephone Company /PLDT		
Cooling system service		
Security system service		
Others		

In-House Emergency Supplies

1. The library should keep at least a basic supply and equipment kit on hand to be used in an emergency.
2. The kit should be stored in one or more sealed watertight containers and clearly labeled “Disaster Kit-Do not Use for Other Purposes” so that materials are not removed mistakenly by staff or others.
3. Indicate the quantity of supplies on hand and where the supplies are located.
4. Specify on how the supplies can be retrieved if they are kept in locked storage.
5. Assigned library staff for inventorying supplies/equipment.

Sample Basic Disaster Supply Kit

<i>Supply Kits</i>	<i>Quantity</i>	<i>Location(s)</i>
<i>Book trucks</i>		
<i>Brooms, dustpans</i>		
<i>Pail</i>		
<i>Earplugs</i>		
<i>Extension cords</i>		
<i>Fans</i>		
<i>First Aid kits</i>		
<i>Flashlights</i>		
<i>Garbage bags</i>		
<i>Gloves (nitrile)</i>		
<i>Markers</i>		
<i>Masks</i>		
<i>Mops</i>		
<i>Pencil Sharpener</i>		
<i>Plastic sheeting</i>		
<i>Plastic cover</i>		
<i>Scissors</i>		

<i>Sponges</i>	
<i>Tape with dispenser</i>	
<i>Tape duct</i>	
<i>Utility knife</i>	
<i>Vacuum</i>	

Emergency Funds

1. List the person(s) who are authorized to disburse funds.
2. If applicable, list the person(s) who can provide authorization for large purchase orders.

Volunteers/Temporary Personnel

1. Additional help may be needed to pack out wet and dry materials.
2. Disaster team should determine whether or not volunteers or temporary personnel is needed.
3. Possible sources of volunteers include staff members of other area libraries or from the LaQuep Linc organization.

VI. Staff Training

1. On staff meeting review the basic preventive measures on protection from, water, and security procedures.
2. Review specific evacuation routes and general emergency measures.
3. Review procedures for operation of the climate control system with appropriate staff.
4. Hold staff meeting to review proper implementation of the disaster plan like how to recognize a potential threat, what to do, how to report a problem, how and when to activate the plan.
5. Conduct "tabletop" disaster exercise

First Aid training

1. List staff members who are trained in first aid and/ or cardiopulmonary resuscitation (CPR)

First Aid	Date of Training	Description of Training
Staff Member		
CPR		
Staff Member		

VII. Follow –up

- ❖ After the event of disaster, the Disaster Response Team should carefully review the disaster, its causes and the recovery manner, then give a report to the Library Director or Chief Librarian.
- ❖ Recognize any revisions that need to be made to the Disaster Plan to have a more efficient and effective recovery operation for the prevention of future disaster.
- ❖ Evaluation for the emergency providers should be done to know if they are capable or incapable to help in preventing the disaster.
- ❖ Inspect the building regularly or periodically for safety purposes.
- ❖ Provide a letter of thanks to those people who have an active participation in the disaster recovery operation.
- ❖ Always provide disaster training, workshops, and preparedness drills for staff.

VIII. Distribution, Review and Updating

Distribution

1. List all staff members as well as fire department who will be given a copy of this plan and indicate where the plans will be stored.
2. Copies should be placed in all departments and at all points of contact like reference, circulation, theses and computer section.
3. Copies should be stored off-site.

4. Disaster Response Team should keep one copy of the plan at work and at home.

Review and Updating

1. The plan should be reviewed and updated yearly.
2. List the people responsible for reviewing and updating each section of the plan
 - Staff list/Disaster Team lists:
 - Preventive maintenance:
 - Facilities information/floor plans:
 - Information technology:
 - Insurance:
 - Salvage priorities:
 - Evacuation instructions:
 - Emergency numbers:
 - In-house supplies:
 - Supplies/services:
 - Volunteer list:
 - Areas for relocation/temporary storage:
 - Communication with emergency services:
 - Staff training

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INTERVIEW/CHECKLIST

Disaster Management Plan for Academic Libraries in Lucena City

A. Assessing Natural and Environmental Risks

Mark (/) the natural and environmental hazards that may harm the current location of your institution.

Natural Hazards	
☐	Earthquake
☐	Damp and swampy
☐	Flooding (located near a river)
☐	Typhoon
☐	Volcanic eruption
Environmental Hazards	
☐	Chemical leaks and spills
☐	Civil disturbances (dissatisfied library users, mismanagement of employees)
☐	Power outage
☐	Proximity to hazardous materials
☐	Sewerage (faulty plumbing)
☐	Water leaks
☐	Others, please specify:

B. Assessing Risks caused by building systems & procedures

Mark (/) the risks caused by building systems and procedures that could possibly damage the current location of your library.

Water Hazards	
☐	Absence of daily monitoring on water detection system
☐	Building foundation
☐	Collection stored in the basement
☐	Collection stored on the floor
☐	Collection in close proximity to water-bearing pipes or equipment not protected by plastic sheeting, trays to catch water
☐	Mold infestation caused by water penetration
☐	No water sprinklers
☐	Water leaks
☐	Others
Fire Hazards	
☐	Absence of daily monitoring or inspection on fire detection system
☐	Absence of fire drills
☐	Faulty wiring

	Fire exits blocked
	Insufficient number of fire extinguishers
	Irregular inspection of fire extinguisher
	No fire extinguisher
	Overloaded sockets or electrical system
	Physical forces (accidental damage cause by the staff)
	Availability of water sprinkler system
	Others
Climate/Temperature	
	Collection stored in the attic
	Collection stored in the basement
	Inadequate number of air conditioning
	Mold infestation caused by poor climate control
	No air conditioning units
	Others
Security	
	Absence of clear identification and registration for researchers
	Absence of written policies/procedures for building and collection security
	Difficult supervision of researchers due to poor layout or design of the building
	Inadequate automated security system
	Lack of staff to monitor the researcher
	Misunderstanding and dissatisfied users
	Stolen collection
	Vandalized collections
Maintenance/Pests	
	Damaged collection due to pest infestation
	Irregular cleaning like dusting, vacuuming (etc.)
	Irregular disposal of garbage from the library
	Lack of clear policies and procedures for maintenance
	Not enforcing of “no food or drink” policy
Storage	
	Books are not shelved securely
	Shelving is not attached to the walls, floor, ceiling
	Shelving is not secure to earthquake standards
	Standard shelving of 4-6 inches off the floor is not followed
	Storage of collections is on the floor
	Valuable collections placed or stored near windows
	Others

C. Academic Libraries Vulnerability to Disaster

Tick (/) the factors that contribute to the vulnerability of your library to disaster on physical location and building condition.

Physical Location	
	Bridge
	Creek
	Drainage
	Electric Post
	Garbage dumps
	Parking area
	Passing private/public utility vehicles
	River
	Trees
Building Condition	
	The library is a separate building.
	The library is located at the
	<i>Ground floor</i>
	<i>1st-3rd Floor</i>
	<i>4th Floor and above</i>
	The library is located near canteen.
	The library is located near laboratory.
	The library has a basement.
	The library has a separate areas such as reading, administrative & collection areas.
	The stack room has enough capacity to hold the bulk of collection.
	The library building built to be earthquake resistant.
	The library has glass roofs, walls and windows.
	The library has emergency exit
	The library is safe from fire flood.
	The library collections are stored at a safe distance from plumbing, electrical, and mechanical installation such as water pipes, air conditioning units, kitchens and laboratories.
	The library premises are located near hall for school activities and social gathering.
	The library experience termite and rat problem.
	The library faces a problem of mold and fungus.

D. Assessing Current Preventive Measures

Check the current preventive measures that the academic libraries address in the occurrence of disaster.

Current Preventive Measure	
	The library has smoke, fire or water detection system.
	The library has automatic fire extinguishing system.
	The fire detection and or extinguishing system in the library is inspected periodically.
	The library has special precautions taken when potentially dangerous activities are undertaken such rewiring and refurbishing of the internal and external fabric of the building.
	The library building has security system (if there is one) connected to fire/police department.
	The library has a written disaster preparedness and response plan with the following components
	a. description of emergency procedure
	b. disaster response outline
	c. emergency supplies
	d. list recovery priorities
	e. conservation experts
	f. supplies stored off-site
	g. list of staff volunteers; others
	The library staff trained in emergency response procedures (delegated officer-in-charge, regular training, and emergency evacuations)
	The library computer data backed up daily.
	The library accession records are duplicated and stored off-site.
	The library electronic catalogues and records are duplicated and stored off-site.

E. Disaster Planning. Check (/) the lists of preparedness activities that apply to academic libraries in the occurrence of disaster.

Prevention & Mitigation	
	1. The library has maintained and routinely tested fire alarms and suppression system, the building fabric, plumbing, electric gas and supplies.
	2. The library building is provided with a fire and smoke detection system.
	3. The library has water proofing for building walls, floors, ceiling, basement (if existing)

	4. The library has water sprinklers.
	5. There are enough fire extinguishers for the library.
	6. There is updated floor plan for the vicinity.
	7. There are no obstacles or hindrances which may block exits and other spaces for emergencies.
Preparedness	
	1. Building floor plans are prepared, reviewed, and updated regularly which indicate storage areas, windows, entrances and exits; fire extinguishers; fire alarms; sprinklers; smoke/fire detectors, water pipes; electrical and water supply.
	2. Priority salvage lists made by area, stating which items are to be salvaged from individual rooms/area.
	3. Selecting and training an emergency response team involving voluntary members of staff who live near the library. The team should be rehearsed in removing material and confident in making decisions regarding salvage techniques, and participated in disaster workshops.
	4. Comprehensive, step-by-step instructions on all phases of salvage operation, covering range of incidents that are possible (e.g. roof/plumbing leaks, flooding, and fire) and the various media included in the collections, such as books and journals, manuscripts/records, sound recordings, computer etc.
	5. Guidelines for long-term rehabilitation: procedures for activities including identification and labeling, cleaning sorting and rehousing, repair and rebinding, etc.
	6. A list of external contacts and names, addresses, home and work telephone numbers of personnel with emergency responsibilities.
	7. There are areas which could be used for recording and packing material.
	8. The library has designated locations for temporary rehousing staff and material.
	9. The library has a pre-arrangement transportation services in the event of disaster.
	10. There is a <i>record keeping forms</i> that may be needed in the salvage operations like inventory forms, packing lists, requisitions, and purchase orders.
	11. There is an access on the description of institutional funds available in a recovery effort and procedures.
	12. There is an <i>insurance information</i> - explanation of coverage, claim procedures, recordkeeping requirements, and restrictions on staff/volunteers entering a disaster area
Response	
	1. There is an established emergency procedure for raising the alarm, evacuating personnel, and making the disaster site safe.
	2. Contact the leader of the disaster response team to brief and direct the emergency response team.

	3. There is a preliminary assessment of the extent of the damage, the equipment, supplies and services.
	4. There is an air conditioning unit to control the temperature and humidity of the building to prevent mold growth.
	5. There is an area for recording and packing material which requires for air drying slightly wet materials and other minor treatments.
	6. There is nearest available freezing facility that transports water-damaged items.
Recovery	
	1. Priorities for safeguarding work and consultation from experts as to the most methods for cleaning and repairing material are considered.
	2. There is a conservation program for large quantities of materials involved.
	3. There is selection of materials to be discarded, replaced, or rebound.
	4. There is a clean rehabilitation disaster site.
	5. There is a replacement of treated material in the repaired site.
	6. There is scrutiny of disaster based on experiences so that plan for disaster could be improved.
	7. There are external linkages with other libraries in the area in order to save time, money and resources.

INTERVIEW QUESTIONNAIRE

1. What is the coverage of the library disaster management plan of your library?
2. How does the library disaster management plan be controlled and managed?
3. How do you design/prepare the disaster management plan of the library?
4. In case DMP is not available, what practices and strategies are employed to counteract disaster like flood, fire, earthquake etc.
5. How do you secure library collection from disaster?
6. How helpful is the salvage priority list in your library?
7. How does the library keep and followed standard quality and weather resistance code of the building?
8. In case of disaster, discuss your manpower availability in terms of the response team.
9. How do you train the library staff for disaster management?
10. Who conducts the training for disaster management in the library? How is the training conducted?
11. How often does the library staff conducts drill for different disaster scenario?

Risk Matrix on Natural Hazards, Threats in Academic Libraries and Libraries' Vulnerabilities to Disaster

ACADEMIC LIBRARIES	EARTHQUAKE				FLOOD				TYPHOON				VOLCANIC ERUPTION			
	P	I	RS	Risk Level	P	I	RS	Risk Level	P	I	RS	Risk Level	P	I	RS	Risk Level
AL - 1	4	3	12	MODERATE	2	2	4	LOW	4	3	12	MODERATE	3	3	9	MODERATE
AL - 2	4	4	16	HIGH	3	2	9	MODERATE	4	4	16	HIGH	3	4	12	MODERATE
AL - 3	4	4	16	HIGH	2	2	4	LOW	4	3	12	MODERATE	3	4	12	MODERATE
AL - 4	3	3	9	MODERATE	3	3	9	MODERATE	4	3	12	MODERATE	3	4	12	MODERATE
AL - 5	3	3	9	MODERATE	4	4	16	HIGH	4	4	16	HIGH	3	4	12	MODERATE
AL - 6	4	3	12	MODERATE	3	3	9	MODERATE	4	4	16	HIGH	3	4	12	MODERATE
AL - 7	3	3	9	MODERATE	2	2	4	LOW	4	3	12	MODERATE	3	4	12	MODERATE
AL - 8	3	3	9	MODERATE	4	4	16	HIGH	4	4	16	HIGH	3	4	12	MODERATE
AL - 9	3	2	6	MODERATE	3	3	9	MODERATE	4	3	12	MODERATE	3	3	9	MODERATE

NATURAL HAZARDS

LEGEND – RISK LEVEL

1-6 (LOW) 7-14 (MODERATE) 15-25 (HIGH)

P= PROBABILITY OF THE OCCURRENCE OF THE NATURAL HAZARD

PROBABILITY	RATING FOR THE PROBABILITY OF OCCURRENCE
1- Negligible	This probably won't ever impact your area anytime soon
2- Rare	It probably hasn't happened and is not all common
3- Unlikely	It may have happened once, but it was unexpected
4- Possible	It has happened in the past and is relatively common to the area but not certain
5- Probable	It has happened recently and is certain to happen this year

RISK I = IMPACT OF THE

IMPACT	RATING THE IMPACT
1 -NEGLECTIBLE	Impact is limited to a small location, there are no injuries, and/or operational loss is minimal
2 -MINOR	whole room(s) might be impacted, minor injuries might occur but can be handled on-site, and/or operations are moderately impacted
3 -MODERATE	Multiple spaces or facilities are impacted, medical treatment may be needed, and/or operations are moderately impacted.
4 -SERIOUS	The facility, collections, and people are impacted, advanced medical treatment may be necessary with potential for serious injury or fatalities.
5 - CATASTROPHIC	Every space, operation and individual is impacted, numerous deaths and injuries occur and organizational survival is at risk

THREATS IN ACADEMIC LIBRARIES

AC	Water Hazard BASIS	P	I	R V	Fire Hazard BASIS	P	I	R V	Environmental Hazard BASIS	P	I	R V	Security Hazard BASIS	P	I	R V	Other Hazards BASIS	P	I	R V
AL-1	1. Water leak 2. Clogged canals 3. Absence of daily monitoring on water detection system	3	3	9 MODERATE	1. Overloaded socket 2. Faulty wiring 3. Absence of daily monitoring on water detection system 4. Sprinkler system does not have water flow alarm	4	4	16 HIGH	1. Insects infestation (rats) due to improper waste disposal and left over foods 2. Collection stored in the basement. 3. Irregular cleaning like dusting, vacuuming	3	3	9 MODERATE	1. Insufficient automated security system 2. No collection security device	4	3	12 MODERATE	1. Data loss 2. Hardware Failure	3	3	9 MODERATE
AL-2	1. No water sprinklers 2. Collection in close proximity to water-bearing pipes	4	4	16 HIGH	1. Faulty wiring 2. No fire extinguisher 3. Fire exit blocked 4. Sprinkler system does not have water flow alarm	4	4	16 HIGH	1. No air conditioning units 2. Mold infestation caused by poor climate control 3. Chemical leaks and spills 4. Proximity to hazardous materials 5. Irregular disposal of garbage from the library	4	4	16 HIGH	1. No system to monitor and record security of collection and building 2. Lack of staff to monitor the researcher 3. Absence of security measures in the library and information centers 4. Valuable collections placed or stored near windows	4	4	16 HIGH	1. Communication outage 2. Data loss 3. Hardware failure 4. Vandalism	4	4	16 HIGH

AC	Water Hazard	P	I	RV	Fire Hazard	P	I	RV	Environmental Hazard	P	I	RV	Security Hazard	P	I	RV	Other Hazards	P	I	RV
	BASIS				BASIS				BASIS				BASIS				BASIS			
AL-3	1. Water pipes running through the collection areas 2. Water system failure	4	3	12 MODERATE	1. Insufficient number of fire extinguisher 2. Absence of daily monitoring on water detection system	4	4	16 HIGH	1. Insects infestation (rats) due to improper waste disposal and left over foods	3	2	6 LOW	1. Insufficient automated security system 2. Lack of CCTV systems to monitor and record security, detect collection	4	4	16 HIGH	1. Dissatisfied library users 2. Power outage	3	3	9 MODERATE
AL-4	1. Mold infestation caused by water penetration and other drains 2. Collection stored on the floor 3. Absence of water sprinklers 4. Some library materials stored on the floor	4	4	16 HIGH	1. Insufficient number of fire extinguisher 2. Fire exits blocked 3. Absence of fire drills 4. No fire detection equipment	4	4	16 HIGH	1. No air conditioning units 2. Mold infestation caused by poor climate control 3. Improper waste disposal	4	4	16 HIGH	1. Absence of CCTV system 2. Lack of staff to monitor the researchers 3. Absence of clear identification of researchers 4. Absence of security measures in the library and information centers 5. Poor library culture	4	4	16 HIGH	1. Dissatisfied library users 2. Vandalism	3	3	9 MODERATE
AL-5	1. Shelves placed directly under pipes 2. No water sprinklers	4	3	12 MODERATE	1. Absence of smoke detector 2. Insufficient number of fire extinguisher	4	4	16 HIGH	1. Insufficient air conditioning units 2. Improper disposal of leftover food	3	3	9 MODERATE	1. Absence of security measures in the library and information centers 2. Lack of staff to monitor the researchers	4	4	16 HIGH	1. Data loss 2. Hardware Failure 3. Vandalism	4	3	12 MODERATE

AL-6	1. Water leaks 2. Building foundation 3. Absence of water sprinkler	4	4	16 H I G H	1. Absence of water sprinkler & smoke detector 2. Insufficient number of fire extinguisher	4	4	16 H I G H	1. Lights are too close to storage and display cabinets 2. Improper disposal of leftover food	3	3	9 M O D E R A T E	1. Absence of automated security system 2. No electronic security systems to control and monitor the collection	4	3	12 M O D E R A T E	1. Hardware failure 2. Vandalism	3	3	9 M O D E R A T E
AL-7	1. Water leaks 2. Building foundation 3. Absence of water sprinklers	4	4	16 H I G H	1. Old structure building 2. No smoke alarm & water sprinkler 3. No fire extinguishers	4	4	16 H I G H	1. Improper waste disposal 2. No air conditioning units 3. Mold infestation caused by poor climate control	4	4	16 H I G H	1. Absence of written policies for building and collection security 2. Lack of staff to monitor the collection & researchers 3. Absence of computer security measures	4	4	16 H I G H	1. Dissatisfied library users	3	2	6 L O W
AL-8	1. Water pipes running through the collection areas 2. Absence of water sprinklers 3. Water leaks 4. Mold infestation caused by water penetration and other drains	4	3	12 M O D E R A T E	1. Old building 2. No water sprinkler & smoke alarm 3. Overloaded sockets and extension cords 4. Electrical faults	4	4	16 H I G H	1. Improper disposal of leftover food 2. Insufficient air conditioning units 3. Lights are too close to storage and display cabinets	4	4	16 H I G H	1. Vandalized collection like mutilation of library materials 2. Lack of training for personnel about information security issues and procedures 3. Shelving is attached to the walls	4	4	16 H I G H	1. Data loss 2. Hardware Failure 3. Vandalism 4. Workplace accidents	4	4	16 H I G H
AL-9	1. Absence of water sprinkler 2. Water leaks	3	2	6 L O W	1. No water sprinkler & smoke alarm	4	3	12 M O D E R A T E	1. Lights are too close to storage and display cabinets 2. Improper disposal of leftover food	4	3	12 M O D E R A T E	1. Lack of staff to monitor the researchers 2. Lack of physical computer security	4	4	16 H I G H	1. Data loss 2. Hardware failure 3. Vandalism	3	3	9 M O D E R A T E

Libraries Vulnerabilities to Disaster

AC	Physical Location	Threat	L	I	RV	Building Design and Condition	Threat	L	I	RV
	Exposure					Exposure				
AL-1	The library is close at the parking area	1.Accident prone (injury) 2.Dissatisfied library user	3	3	9 M O D E R A T E	Library building is constructed with different floors. The library has basement. The library has glass roofs, walls, windows and doors	3. Earthquake 4. Flood	3	3	9 M O D E R A T E
AL-2	The library is close to passing private/public utility vehicle The library is close to hospital	3.Dissatisfied library user 4. Environmental hazard (chemical leaks & spills, proximity to hazardous materials)	4	4	16 H I G H	The library is located at the 4 th floor Not enough emergency exit The library built with light materials	3. Earthquake 4. Fire	3	4	12 M O D E R A T E
AL-3	The library is close to passing private/public utility vehicle	2. Dissatisfied library user (noise)	3	2	6 L O W	The library is located at the 4 th floor	1. Earthquake	3	3	9 M O D E R A T E
AL-4	The library is located near the garbage dumps The library is surrounded by trees	1.Environmental hazard (proximity to hazardous materials & diseases 4.Accident and building destruction	4	4	16 H I G H	The library is not a separate building The library's stack room does not have enough capacity to hold the bulk of collection The library does not have an emergency exit	1. Fire 2. Collapsing stack room	4	3	12 M O D E R A T E

AL-5	The library is surrounded by trees The library is nearby river	Accident and building destruction 3. Flood	4	4	IGH	The library is not a separate building. The library is near laboratory.	1. Fire	4	3	12 MODERATE
AL-6	The library is close to passing private/public utility vehicles The library is located near the church	1. Dissatisfied library user	3	2	LOW	The library is not a separate building and located at the 2 nd floor The library premises are located near hall for school activities and social gathering	1. Earthquake 2. Noise	4	3	12 MODERATE
AL-7	The library is surrounded by trees	2. Accident and building destruction	3	3	9 MODERATE	The library is designed by light materials	1. Fire	3	3	9 MODERATE
AL-8	The library is located near the creek The library is nearby the river The library is surrounded by trees	5. Flood 6. Accident and building destruction	4	4	IGH	The library is not a separate building. The library collection is stored near from water pipes The library premises are located near hall. The stack room doesn't have enough capacity to hold the bulk of collection.	1. Noise 2. Flood 3. Collapsing stack room and prominent cracks on cabinets	4	3	12 MODERATE
AL-9	The library is nearby irrigation	Flood	3	2	LOW	The library is not a separate building and have glass doors.	1. Earthquake	3	3	9 MODERATE



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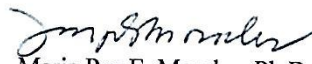
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Marie Paz E. Morales, Ph.D.
Director

CERTIFICATION

This is to certify that the manuscript of **Ms. Marisel V. Sante** whose masteral paper entitled, "**Disaster Management Plan for Academic Libraries in Lucena City**" has been edited as required.

I hope that this will merit the required task.


Enriqueta E. Alcoreza, Ed.D
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mvsante@shc.edu.ph**PERSONAL INFORMATION**

Sex	:	Female
Civil Status	:	Married
Date of Birth	:	December 12, 1980
Age	:	39
Place of Birth	:	Agdangan Quezon
Religion	:	Roman Catholic

EDUCATIONAL BACKGROUND

Master's Degree	:	MAED-LIS Master of Education with specialization in Library and Information Science (with 30 units earned and Compre) Philippine Normal University, Manila
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College	:	18 units in Library Science Manuel S. Enverga University Foundation Lucena City (2002 – 2003)
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Professional License No. 3899 (Librarian)

Bachelor in Secondary Education

Major in General Science

Sacred Heart College

Lucena City (1997-2001)

Professional License No. 0781376 (Teacher)

High school	:	Agdangan Academy Agdangan, Quezon (1993-1997)
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Elementary	:	Agdangan Elementary School Agdangan Quezon (1987-1993)
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CAREER AFFILIATIONS

PLAI - Philippine Librarian Association	Member
LAQUEPLinc – Librarians Association of Quezon Province-Lucena	Member
PAARL – Philippine Association of Academic and Research Librarians	Member

WORK EXPERIENCES

Institutional Coordinator for Library and Media Services Sacred Heart College Lucena City	2020-2021
Technical Librarian (Institutional) Sacred Heart College Lucena City	2018-2020
Senior High School Teacher (PT) Media Information Literacy Sacred Heart College Lucena City	2017 to present
SHS Librarian SHS-Learning Resource Center Sacred Heart College Lucena City	2019 -2020
College Librarian Instructional Media Center Sacred Heart College Lucena City	2004 - 2017
Part-Time Teacher College Department Sacred Heart College Lucena City	2006

Part-Time Teacher	2002-2003
Center for Alternative Non-Formal Education (CANFE)	
Sacred Heart College	
Lucena City	

Library Staff	2001-2003
Basic Education Department	
Learning Resource Center	
Sacred Heart College, Lucena City	

TRAININGS, SEMINARS AND CONFERENCES ATTENDED

- **Digitization for Long-Term Preservation and Access and Basic Concepts in Library Disaster Risk Reduction and Management**
Mini Theater, DOST-STII, Bicutan, Taguig City
November 6, 2019
- **10th CE-Logic National Conference**
21st Century Libraries as Collaborative Environments How Librarians, Researchers, Teachers, and Extensionists Shape Learning
Seda Vertis North, Astra Lux Drives, Vertis North, Diliman Quezon City
May 9-10, 2019
- **Coding Qualitative Data**
CGSTER Conference Room, CED Rm. 310
Philippine Normal University
Taft Avenue, Manila
March 23, 2019
- **(ReCALIS) with a theme “ Transforming and Connecting Libraries Through Research”**
JPL Multimedia Resource Center , Lyceum of the Philippines
Laguna Km 54 National Highway Makiling, Calamba City,Laguna
October 26, 2018
- **DPA impact on Librarians and Services**
Lucena City Government Complex
September 7, 2018

- **Makerspace in Libraries: Redesigning the Role of Libraries as Place and Space in the 21st Century Create+ Collaborate= Innovative**, Seda Vertis North Diliman, Quezon City
May 11-12, 2017
- **Moving the Scale: Maintaining a Balanced Library Collection in the Digital Age** Batis Aramin Resort and Hotel, Lucban Quezon
May 2016
- **Installation and Updating of the DOST STARBOOKS SYSTEM and Launching, Formal Signing of MOU and Training on DOST Starbooks**, Manuel S. Enverga University Foundation, Lucena City
April 11-13, 2016
- **Continuing Professional Development and Infolib Updates**
Seminar Hall, Manuel S. Enverga University Foundation, Lucena City
March 4, 2016
- **PLAI-STRLC Research in Librarianship: Capacity Building to Strengthen Research Culture”**
El Grande Residencia Hotel and Resort, Brgy. San Carlos, Lipa City
October 7-8, 2015
- **Forum on “The Library’s Role in the K to 12 Program”**
Audio-Visual Room, Sacred Heart College, Lucena City
September 4, 2015
- **PAARL – 3rd Marina G. Dayrit Lecture Series 2015**
Keeping Updated: The Fundamentals of Collection Development and E-Resource Management in Digital Libraries.
Megatrade Hall 2, 5th Level SM Megamall Building, Mandaluyong City
July 22, 2015
- **7th CE-Logic National Conference Creating a Legacy Towards Nation Building: Library and Information Specialists as Community Leaders in Today’s Information Society**
Quezon Avenue, South Triangle, Quezon City
May 28-29, 2015

- **Cataloging Policy Statements and RDA Guidelines for Philippine Libraries**
De La Salle Lipa, Lipa City
February 13, 2015
- **S2s” Selection to Shelving and General Assembly of the Association**
Queen Margaret, Lucena City
September 5, 2014
- **A Triage of Strategic, Operational & Execution Planning Towards A Blue Ocean**
Sacred Heart College, Lucena City
June 5-7, 2014
- **RDA: Introduction and Workshop**
Lucena City
September 6, 2013
- **Treating Print In A Hybrid Library Environment: Issues, Dilemmas and Directions**
Madaluyong City
July 9, 2013
- **5th Ce-Logic Conference Living Together Through Technology**
Nasugbu Batangas
May 23-24, 2013
- **1st Research Congress for the Advancement of Library and Information Services(ReCALIS) with the theme Advancing Library and Information Services through Research and Innovations.**
UP, Los Banos Laguna
May 7 & 8, 2013
- **Research Colloquium**
Manuel S. Enverga, University
March 9, 2013
- **“Web Technologies: Training for Development of Library and Teaching Resources**
Manuel S. Enverga University
March 28-30, 2012

- **5th Rizal Library International Conference “ Libraries, Archives and Museums: Common Challenges, Unique Approaches”**
Ateneo de Manila University
October 25-26, 2012
- **CANI (Continuous And Never-ending improvement on Library Profession and Services**
Pasay City - September 12, 2012
- **3rd CE-Logic National Electronic Conference
On Librarianship: In Society & Industry, Public Speaking and Excellent Customer Service In Library Environment**
Davao City
May 12-13, 2011
- **Forum on “ Face2Face: Finding Your Balance in Handling Difficult Customers**
UST, España, Manila
February 18, 2011
- **Seminar on Understanding the Roles People Play: A key towards healthy Interactions**
Sacred Heart College, Lucena City
December 22, 2011
- **Seminar on Organizational Culture and Values Revisited..Renewing Legacy**
Sacred Heart College, Lucena City
September 24, 2011
- **Seminar on Personality Development: A key Towards Better Customer Relations**
Sacred Heart College, Lucena City, August 2011
- **Seminar on Work Ethics**
Sacred Heart College, Lucena City
July 2011
- **StoryTelling: A Tool for Library Marketing**
Manuel S. Enverga University
September 18, 2010
- **PLAI-STRCL Seminar: Digital Libarary Initiatives: its impact and challenges**
Megatrade Hall, SM Megamall, Mandaluyong City July 08,2010

- **2ND CE-Logic National Electronic & Digital Subscriber's Conference Library: The Convergence of Information**
C&E Information Resource Center
South Triangle, Quezon City
May 14, 2010
- **Seminar on Effective Communication Skills and Phone Etiquette**
Sacred Heart College, Lucena City
January 2010
- **Creative Techniques in Teaching Library and Information Science**
SMX Convention Center, SM Mall of Asia
September 17, 2009
- **P.E.A.C.E. (Personality Enhancement and Communication Effectiveness) in Library Management and Revolutionizing Information of IFLA/FAIFE Internet Manifesto**
Calayan Educational Foundation, Inc. Lucena City
September 11, 2009
- **The Role of Information Professionals and Librarians in Combating Plagiarism and Other Forms of Intellectual Dishonesty**
SM Mall of Asia, Macapagal Ave. Pasay City
September 12, 2008
- **Empowering Librarians in the 21st Century and General Assembly of PLAI**
Queen Margarette Hotel, Domoit Diversion Road, Lucena City
September 26, 2008
- **3rd General Membership Meeting**
Audio Visual Room
Sacred Heart College, Lucena City
June 27, 2008
- **Study Tour**
Manila
April 2008

- **The Eminent Role of Librarians in Research Management and Development**
Sacred Heart College
Lucena City
September 14, 2007
- **User Education and Information Literacy: Current Practices and Innovative Strategies**
World Trade Center, Roxas Blvd., Pasay City
August 29, 2007
- **Shaping the Library of the Future**
World Trade Center, Roxas, Blvd, Pasay City
August 28, 2007
- **Computer Training & Workshop of Support Staff with Module on Basic Computer & Internet**
Sacred Heart College, Lucena City
May 12, 2007
- **Learning and Promoting Services in Libraries**
Manuel S. Enverga University Foundation, Lucena City
May 2-3, 2007
- **Computer Training & Workshop of Support Staff with Module on Microsoft Excel**
Sacred Heart College, Lucena City
April 2007
- **Learning and Organizing Information Resources**
Manuel S. Enverga University Foundation, Lucena City
January 18, 2007
- **The Intangibles of Teaching**
Sacred Heart College
Lucena City
October 2006
- **Librarians and their Accountabilities**
Manuel S. Enverga University Foundation, Lucena City
September 8, 2006
- **Spiritual Foundations of Ecological Sustainability**
Sacred Heart College
July 21, 2006

- **Seminar on Effective Records Management**
HED Viewing Room
Sacred Heart College, Lucena City , July 14, 2006
- **Creative Non- Violence/ Peace Building Seminar- Workshop**
Hermana Fausta Hall
Sacred Heart College, Lucena City, June 3, 2006
- **Seminar Workshop on Research Methodologies and Writing A Research Paper**
AVR, Sacred Heart College, Lucena City
February 3-4, 2006
- **Enhancement of Librarians Skills**
Queen Margaret Hotel, Lucena City
December 14-15, 2005
- **Enhancement of Librarian Technical Skills**
Queen Margaret Hotel, Lucena City
December 14-15, 2005
- **Aging and the Filipino Librarian: Issues and Concerns**
National Library, TM Kalaw St. Ermita Manila
November 25, 2005
- **Partnering and Collaboration among Libraries Museums and Archives**
National Library Auditorium, TM Kalaw St. Ermita Manila
November 25, 2004
- **Homeroom Facilitation and Teachers Professional Enhancement Seminar- Workshop**
AVR, Sacred Heart College, Lucena City
November 26, 2003
- **Emerging Paradigm: A Vision of Reference Service in a Complex Information Environment**
MegaTrade Hall B, SM Mandaluyong City
September 3, 2003
- **Forum on the Future of the Printed Word and Its Challenges to the Development of the Library Profession**
Nat'l Library Auditorium, TM Kalaw St. Ermita Mla, Nov. 26, '02