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Exploring The Interrelationships Of Organizational Resilience, Business Continuity And Disaster Recovery: A Basis For University Of Batangas Disaster Resilience Plan

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Abstract: *Disasters such as typhoons, earthquakes, volcano eruptions and pandemic have an impact on how higher education institutions perform their functions. Over the past three years, one institution, which has faced all these challenges, is the University of Batangas. The objectives of the study are to rank the disaster affecting the university operation, assess the organizational resilience, business continuity plan and disaster recovery plan, determine the significant relationship of the different components and proposed an organizational resilience action plan. In this exploratory research design, the researchers developed a researcher-made questionnaire. 165 respondents assessed the components of organizational resiliency, business continuing and disaster recovery plan. Most of the respondents that participated were college students. The researchers utilized several statistical tools in their study, including mean, standard deviation, Pearson-r correlation coefficient, and regression analysis, as the foundation for their research findings. The pandemic was considered the most disruptive disaster affecting the university operations. Significant findings on items such as risk management and readiness, organizational context and components of the business continuity plan were considered in the preparation of the plan. Business continuity and catastrophe recovery plans are strongly correlated with or associated with organizational resilience. Disaster recovery plans are heavily impacted by the business continuity plan. The proposed university organizational resilience plan may make UB agile in addressing and handling disruptions or disasters, maintaining the operations function and delighting the stakeholders. Lastly, it is recommended that the proposed organizational resilience plan may be implemented to evaluate its effectiveness as the basis for future research.*

Index terms *– , business continuity plan, disaster recovery plan, disruptions, organizational resilience*

I. INTRODUCTION

Over the past two years, the world has witnessed a series of significant disruptions, including typhoons, earthquakes, volcano eruptions, and a global pandemic. These events have had a profound impact on the lives of people across the globe, often constituting life-changing occurrences. Among the entities affected, the higher education institutions have faced considerable challenges in the face of such disasters. Stakeholders such as students, parents, teaching and non-teaching staff, found themselves navigating an uncertain and unsettling period. The prevailing sentiment among them was one of distress, as they grappled with a sense of uncertainty and disarray. Amid these circumstances, a prevailing sense of despair permeated, compounded by the mounting frustrations and apprehensions surrounding academic pursuits and professional engagements.

Consequently, a significant interplay exists between natural disasters, labor dynamics, and education. According to the Center on Conflict and Development (2016), the destruction of school infrastructure caused by disasters not only reduces accessibility but also increases the costs associated with attending school for numerous children, as it leads to the destruction of educational facilities. Natural disasters, as external shocks, often disrupt the economic stability of families, sometimes compelling children to participate in income-generating activities to offset the financial impact.

To alleviate the impact of disasters, organizations have to plan and prepare for them. For one, the organizational resilience continuity plan has the ability to reduce the negative impact of disruptions and maintain its operations to a predefined normal level even with risks. Also, the business continuity plan (BCP) includes the loss when distractions occurred in a specific scenario (Targeted News Service, 2021), and prevents interrupting the operation - making swiftly and smoothly continues before and after the

disaster (Mohamed, 2014). It also makes the business safe from any disaster as it serves the recovery system and prevention of any threats (Sharma, 2020). Good business continuity plans are built in accordance with strong institutional security and privacy policies (Educause, 2023). The business continuity plan is a very important plan maintaining the critical services and function ensuring a good decision making and communication strategy (Deloitte, 2023). Having the plan can prevent economic lost learning from the estimated USD $17 trillion loss of lifetime earnings for today's generation of schoolchildren (UNICEF, 2022). On the other hand, disaster recovery plan (DRP) is not a usual or a common plan for academic institutions. As stated in the report of Educause, large campuses do not have a strategic plan for disaster recovery. The plan is the pivotal in the overall business continuity plan strategy maintaining the service level (Long Beach City College, 2023). Implementation of the plan needs top management's support, should be understood by all stakeholders and have recognition that the plan is needed in the first stage (University of Missouri System, 2019).

Kundan (2020) states that BCP is a set of actions that need to be taken in case of crisis that will keep it running whereas DRP is a subset of the BCP that focuses on restoring critical function in business. Which simply states that BCP always has a DRP addressing specific steps in restoring and recovering organization or business aspects. As supported by Nollau (2009) as she emphasized that it is important to understand BCP and DRP as how they work together to ensure continuity and integrity of systems. Good BCP and DRP are living documents that unambiguously detail scenario-based contingencies for responding, resuming, recovering and restoring operations (Cook, 2015). Organizational resilience has become essential to business continuity and recovery. BCP and DRP are both subcomponents of organizational resilience as it is the ability to anticipate issues ahead of time and develop a plan handling the problem (Posey, 2022). The impact of organizational resilience is positively affected by mediation in the business process capabilities (Ahmed Saleh, 2022). Meaning emphasis of the relationship between resilience and business continuity through organizational practices (Estrada, 2021). Integrated business continuity and disaster recovery planning for efficient and effective resuming and recovering of critical operation after being disrupted proposed model addresses strategic level, the context of organization explored main features of organizational resilience are recognized (Sahebjamnia, 2015).

Despite the clear and urgent need for effective continuity plans, some organizations tend to overlook their importance or place them at the bottom of their priority list. For example, a revealing insight comes from a survey conducted among small and medium-sized enterprises (SMEs) in the Philippines back in 2015. Surprisingly the survey found that a whopping 77 percent out of 513 enterprises did not have a proper written business continuity plan in place. This oversight led to prolonged disruptions in their day-to-day operations and production when disasters struck (Macapagat, 2019). The consequences of this lack of preparation are tangible in the substantial damages caused by natural calamities and extreme events. Over the course of a decade from 2010 to 2019, the total cost of these damages increased to an astonishing PhP463 Billion. Notably, the year 2011 witnessed the highest number of recorded natural disasters, reaching a staggering 367, while the most tragic toll in terms of human lives lost occurred in 2013, with a heart-wrenching count of 7,056 reported deaths (Mapa, 2020).

The advent of the COVID-19 pandemic has served as a wake-up call for organizations, highlighting the crucial need for a well-structured continuity plan in times of crisis. Among the sectors significantly impacted, the field of education stands out prominently. The recent COVID-19 pandemic has affected 185 million students across 45 countries in the Europe and Central Asia region. This distressing scenario laid bare the lack of readiness among educators and administrative bodies to swiftly adapt to the sudden shift in the educational landscape (Donnelly, Patrinos & Gresham, 2021).

The Philippines stands among the five countries that experienced delayed or postponed resumption of face-to-face classes as the pandemic unfolded. Consequently, Filipino children have continued to miss out on valuable learning opportunities due to prolonged school closures (UNICEF, 2021). Educators are deeply concerned about the extended hiatus in schooling, recognizing its adverse implications on students' learning capabilities and future prospects (De Guzman, 2021). Bollettino et al. (2018) has revealed a considerable gap in disaster management capacities, indicating a lack of resilience and preparedness across various disasters in the Philippines. In this context, the Asian Development Bank (2021) has emphatically stressed the urgency for the Philippines to fortify its education system's resilience amidst the ongoing challenges of COVID-19. The institution further underscores this juncture as an opportune moment for the education sector to enhance its planning, coordination, and partnerships, thus ensuring a robust, high-quality, and resilient education system accessible to all.

One institution which has been affected by more than one disaster in the last years was the University of Batangas. An institution established in 1948, UB is an autonomous, private institution located in Batangas City offering basic education, higher education, graduate studies and law. Aside from being affected by the pandemic, as all schools in the world have been, UB was also affected by strong typhoons that caused floods and landslides in students and employees' place of residence. Also, since they cater to students living all over the province of Batangas, the University was impacted by the eruption of the Taal Volcano located in Taal, Batangas because some students and staff reside along the 'danger zones' declared by the government. Even though UB managed to effectively navigate through these disasters with the help of its learning facilities, such as the learning management system, strong leadership from administrators, and active cooperation from the academic community, it's important to recognize that the institution's success in future challenges is not guaranteed. This situation highlights the essential lesson that there's a crucial need for a comprehensive organizational resilience action plan. To lessen the impact of any disasters to University operations, academic institutions like UB must be well prepared to face challenges like different disasters that can hamper the organization's operation. The organizational resilience dimensions, business continuity and disaster recovery components shall be considered as the backbone for the organizational resilience continuity plan in getting the stakeholders' perceptions to reflect their experiences encountering the different disasters.

The researchers closely associated with the institution have observed a recurring issue: the university's response to disasters has, on occasion, lacked swiftness and proactive decision-making. This has resulted in confusion among stakeholders, who often find themselves uncertain about official announcements and guidelines during critical moments. To address this concern, the implementation of an organizational resilience continuity plan becomes paramount in ensuring safety and the seamless operation of various functions. Recent challenges, particularly the ongoing pandemic, have highlighted vulnerabilities within different organizations, including academic institutions. Given the circumstances, there is a growing belief among researchers that the time has come to integrate these elements into the strategic management plan. This integration seeks to formulate an organizational resilience action plan, influenced by the perspectives of stakeholders. This comprehensive approach aims to establish a robust university business continuity plan and disaster recovery plan, both crucial in safeguarding the university's core operations.

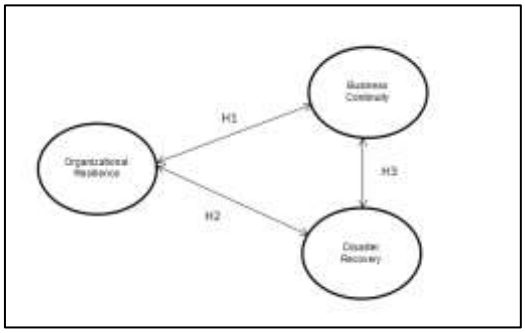
In accordance with these considerations, the researchers present the following hypotheses for your consideration.

H1. Organizational resiliency and business continuity plan are significantly related.

H2. Organizational resiliency and disaster recovery plans are significantly related.

H3. Business continuity plan significantly affects the disaster recovery plan.

For better understanding, here is the Figure 1 Conceptual Model:



This study aims to propose an organizational resilience action plan. This plan aims to provide effective management guidelines for decision-makers within the university, enabling them to enhance the institution's operational framework and optimize students' learning experiences, ultimately fostering resilience in the face of unforeseen disasters. More specifically, the study aims to attain the following research objectives:

1. To rank the disasters affecting the university operation;
2. To assess the leadership and strategy, culture and behavior, organizational resilience, business continuity plan and disaster recovery plan;
3. To determine the significant relationship of the different components; and
4. To propose a university organizational resilience plan.

II. METHODOLOGY

To be able to answer the research questions, the researchers employed an exploratory research design. It is exploratory as they wanted to evaluate the casual relationship among the variables. The respondents of the study are the stakeholders of University of Batangas – Batangas City which the sampling method employed was stratified sampling. Total of 165 respondents have returned or completed the survey for the period of 3 months (February to April 2023).

The researchers created their own survey questionnaires to collect the information they needed. These questionnaires have four parts. In the first part, stakeholders are asked to rank different disasters based on how much they affect learning and the university's operations. The second part has questions about three aspects of organizational resilience: leadership & strategy, preparedness & risk management, and culture & behavior (The International Consortium of Organizational Resilience, 2016). The third part includes questions about seven parts of the business continuity plan: the organization's context, leadership, planning, support, operations, checking how well things are going, and making things better (ISO 22301:2012 Framework Diagram, 2012). The last part has questions about five stages of the disaster recovery plan: preventing disasters, reducing their impact, getting ready, responding when they happen, and recovering afterward (McEntire, 2021).

The researchers consulted two experts from the field of academe and industry to validate the survey questionnaire. Also, the researchers conducted the pilot survey and tested the internal consistency of each item before the real data collection. A 4-point likert scale was used for assessing the organizational resiliency, business continuity and disaster recovery plan, ranging from Strongly Agree (4) to Strongly Disagree (1). The researchers utilized Google form in distributing the survey questionnaire. The result of the pilot survey using Cronbach's alpha was 0.99 indicating an excellent level of internal consistency.

The researchers utilized several statistical tools in their study, including mean, standard deviation, Pearson-r correlation coefficient, and regression analysis, as the foundation for their research findings. Furthermore, the research adhered to the guidelines outlined in the Data Privacy Act of 2012. This legislation prioritizes the confidentiality and anonymity of the stakeholders, and it was ensured that their participation in the study was entirely voluntary. Any data or information collected was treated as highly confidential, handled with utmost care, and will be securely disposed of once the research study is completed and published. Additionally, any ethical concerns that arise would be appropriately addressed by the researchers in accordance with the institution's policies.

III. RESULTS AND DISCUSSION

Disasters Affecting University Operation

Universities are intricate institutions that deal with a variety of dangers on a regular basis. These hazards have the potential to significantly affect the university's strategic goals, financial viability, reputation as an institution, and educational quality. As a result, it is critical for university leaders and stakeholders to recognize, evaluate, and manage these risks in a proactive manner. There are some typical hazards that have an impact on university operations which have to be prevented and reduced. There are also frameworks and best practices that higher education institutions have used.

Table 1. Ranking of disruption experience by the respondents

Disruption	Mean Score
Pandemic	1.98
Typhoon	2.49
Volcanic Eruption	2.67
Earthquake	2.87

1 is the highest and 4 is the lowest

According to Table 1, based on the timeline from the year 2019 to the present, the COVID 19 pandemic with mean score of 1.98, was the top disruption encountered by the respondents, followed by typhoon, volcanic eruption and earthquake with 2.49, 2.67 and 2.87 mean scores, respectively. The pandemic was rated the highest since the pandemic is a widespread and protracted disaster that has an impact on every part of the university. In the face of a pandemic, the institution has struggled to preserve its academic standards, financial stability, social cohesion, and strategic vision. While the pandemic temporarily closed the university for almost two (2) years, it kept running with a reduced staff and offered all of its courses

online. The COVID 19 epidemic has also caused the most significant disruptions to educational systems, affecting billions of students. The university had minimal face-to-face interactions when it first opened in AY 2021–2022. UNESCO (2021) claimed that the COVID 19 caused the worst global interruption of schooling in history, causing more than 27 million Filipino students in the Philippines to be impacted by the right to learn after school hours.

With a mean score of 2.49, a typhoon was another disruptive natural event for university activities. The university has adequate communication and backup power systems to fend off any significant interruptions brought on by typhoons. Furthermore, class disruptions caused by typhoons typically last for an average of 3-7 days, whereas the pandemic extended over a span of more than a year. The next least disruptive natural event for universities was the volcanic eruption which is relatively rare and localized, and may not affect all areas of the university. Despite being situated in the same province as Taal Volcano, the University's location remains sufficiently distant from active volcanic zones, resulting in minimal impact from their activities.

UB Resilience Components

Universities are complex and dynamic organizations that face various challenges and uncertainties in their internal and external environments. These challenges can affect the quality, reputation, sustainability, and performance of the university and its stakeholders. Therefore, it is essential for universities to develop and maintain resilience, which is the ability to anticipate, cope with, adapt to, and learn from disruptions and changes. Resilience can be enhanced by focusing on three interrelated components: leadership and strategy, preparedness and managing risks, culture and behavior. By strengthening these components, universities can become more agile, flexible, innovative, and collaborative in facing the current and future challenges of higher education.

Table 2. Mean distribution of responses on components of UB resiliency

Parameters	Mean	Standard Deviation	Verbal Interpretation
Leadership and Strategy	3.64	0.50	Strongly Agree
Preparedness and Managing Risks	3.54	0.54	Strongly Agree
Culture and Behavior	3.60	0.51	Strongly Agree
Composite Mean	**3.60**		**Strongly Agree**
Cumulative Std Dev		**0.52**	

1.00 – 1.49 Strongly Disagree 1.50 – 2.49 Disagree 2.50 – 3.49 Agree
3.50 – 4.00 Strongly Agree

Table 2 indicates that the university has a high level of resilience in all three parameters, as the mean scores are above 3.60 and the verbal interpretations are strongly agree. This means that the university has a clear and coherent vision, mission, values, goals, and policies that guide its direction and decision-making. It also means that the university has effective processes, systems, and resources that enable it to identify, assess, mitigate, and respond to potential threats and opportunities. Moreover, it means that the university has a positive and supportive culture and behavior that shape its identity and climate. The table also shows that the standard deviations of the three parameters are relatively low, ranging from 0.50 to 0.54. This means that there is a high degree of consistency and agreement among the respondents who rated the parameters. It also means that there is a low level of variability and uncertainty in the data.

The results revealed that UB is aligned with its guiding principles, and this alignment reflects the university's leadership and strategic priorities. They also highlighted the sufficient inclusiveness, coherence, flexibility, and fair and updated policies that shape the perception of equality and equity within the university. Findings also showed that leaders have a clear focus on managing performance over the long term, with alignment toward achieving strategic goals. There is a consistent pattern of strong agreement across most statements, suggesting that respondents believe UB's leadership and strategic approach align well with the challenges posed by disruptions and changing environments. Moreover, the

leaders comprehend the potential threats posed by past events, using them as a basis for transformative changes and process improvements.

In alignment with the observations made by Govindasamy (2019), the findings from the preceding analysis shed light on the intricate dynamics between organizational priorities and potential risks. Govindasamy's insights and the research findings emphasizes the need for strategic decision-makers to remain vigilant and attentive to potential imbalances that may inadvertently arise amid the pursuit of organizational goals. The results underscore the importance of continuous evaluation and adaptation to ensure that priorities, including service, health, safety, and long-term sustainability, remain firmly integrated into the fabric of an institution's strategic vision.

While in the culture and behavior the outcomes reflect an overall positive sentiment among participants regarding UB's resilience. The data suggests that respondents perceive UB as actively fostering an inclusive and diverse cultural atmosphere, valuing contributions, and empowering individuals through guidance and adaptability. The findings also point to UB being seen as a secure and inviting environment for both learners and workers, encouraging engagement and ethical interactions.

The least rated items, on the other hand, show that even though the University was able to survive the identified disasters, the stakeholders still look for a more effective, efficient and sustainable way to proactively respond to any disaster or crisis. Hence, this supports the need for a continuity plan in times of disasters. Cretney's study (2019) identified a unique perspective- the occurrence of a disaster can paradoxically offer an opportunity, potentially leading to the reduction of certain risks. However, the study also underlines the importance of stakeholders being well-informed and prepared for the broader impact of disasters, encompassing both physical and psychological aspects.

And when it comes to preparedness and managing risk it emphasized that risks are inevitable, especially during disasters. While it is impossible to eliminate them entirely, many challenges can be foreseen ahead of time, allowing for preparation and effective management of their consequences. In a continuity plan, acknowledging risks and their impact may lessen the adverse effects of any crisis.

Right now, there is no comprehensive plan in response to disasters. This observation is also confirmed by the respondents since they did not give a very strong agreement in terms of describing UB as a front-runner of a disaster-proof education. For instance, when the Taal Volcano erupted in 2020, there was no clear or immediate strategy adapted to keep the operation ongoing. The situation got more complicated when the COVID-19 pandemic happened and required community lockdown. Although the University was able to survive, risks could have been prepared for and managed efficiently if there was a plan in place already. The digital technologies available in the University are important tools which can be used to prepare for disasters. Studies of Cortellazo et al. (2019), and Gilli et al. (2023) emphasize that for organizations to be disaster-proof, leaders are required to develop a combination of digital and human skills, mainly related to the ability to communicate effectively in a digitalized context, create cohesion between geographically distant followers, foster initiative and change attitudes, and deal with complex and fast problem solving.

Business Continuity Plan

Business continuity plan pertains to a comprehensive, standardized and systematic preparation and planning in response to any unforeseen events that may threaten the operations of an organization. It has the following parameters: Context of the Organization, Leadership, Planning, Support, Operation, Performance and Improvements.

Table 3. Mean distribution of responses on components of business continuity plan

Parameters	Mean	Standard Deviation	Verbal Interpretation
Context of the Organization	3.48	0.53	Agree
Leadership	3.59	0.52	Strongly Agree
Planning	3.56	0.52	Strongly Agree
Support	3.52	0.53	Strongly Agree
Operation	3.51	0.54	Strongly Agree
Performance	3.56	0.53	Strongly Agree
Improvements	3.54	0.53	Strongly Agree
Composite Mean	**3.54**		**Strongly Agree**
Cumulative Std Dev		**0.53**	

1.00 – 1.49 Strongly Disagree 1.50 – 2.49 Disagree
2.50 – 3.49 Agree 3.50 – 4.00 Strongly Agree

Table 3 shows the mean distribution of responses on components of a business continuity plan. Highest rated is leadership with a mean score of 3.59. This is followed by planning and performance, both with a mean score of 3.56. Next in rank is on improvements, support, operation and context of organization each with a mean score of 3.54, 3.52, 3.51 and 3.48 respectively. In the following tables are the specific responses to and interpretation of significant responses.

The important highlights in the components is first in terms of the context, the results imply that during disasters, most of the stakeholders do not understand the messages being communicated to the community. For instance, students are still going to school because announcements of suspension of classes are late or unclear. Even in the implementation of UB flexible distance learning, students also experienced major issues and concerns in the course flexibility and workload. According to Ramos, Barairo, and Lopez (2021), they proposed that tasks and activities should allow for flexibility in submission, and each course should have a reasonable workload. Interestingly, this highlights a disparity between teachers/faculty and students, implying that there might have been a lack of clear understanding among teachers about the content of the memorandum, leading to a different experience for students.

Second is in operation which significantly shows, the lowest mean attained by the statement that UB excluded redundancies of long-procedure in decision making. This is closely linked to the memoranda, where stakeholders noticed that UB faced challenges in promptly providing concise decisions or precise announcements during times of disasters. This appears to be influenced by UB's organizational structure, wherein the top management may encounter difficulties in arriving at swift decisions or streamlining the decision-making process. An analysis by Useem (2006) in Harvard Business Review reveals that many large companies establish clear boundaries between decisions to be made by directors and those to be handled by executives – a scenario that parallels UB's approach to decision-making. Consequently, the institution might resort to ad hoc decisions, leading to prolonged decision-making processes that leave stakeholders waiting for resolution.

An the third component is support, which the statement that in UB everyone is involved in the system which can easily request for any documentation when needed for the purpose of learners and workers growth got the lowest mean. The stakeholders, particularly the students, encountered challenges in accessing learning materials during times of disasters. This aligns with findings from the research by Ramos, Barairo, and Lopez, which indicates that students perceived the course materials to be lacking in interactivity and engagement. Furthermore, the study highlights that students felt a deficit in receiving learner support, particularly in terms of feedback, consultation, and mentoring, from their teachers.

Disaster Recovery Plan

Disaster recovery plans are always an organization's expression of hope and readiness to face a crisis or any challenges. These plans are communicated in terms of the following parameters such as prevention, mitigation, preparedness, response, and recovery.

Table 4. Mean distribution of responses on components of disaster recovery plan

Parameters	Mean	Standard Deviation	Verbal Interpretation
Prevention	3.47	0.56	Agree
Mitigation	3.44	0.59	Agree
Preparedness	3.48	0.58	Agree
Response	3.50	0.58	Strongly Agree
Recovery	3.51	0.56	Strongly Agree
Composite Mean	**3.48**		**Agree**
Cumulative Std Dev		**0.57**	

1.00 – 1.49 Strongly Disagree 1.50 – 2.49 Disagree 2.50 – 3.49 Agree
3.50 – 4.00 Strongly Agree

Table 4 shows the mean distribution of responses on components of disaster recovery plans. Rated with strongest agreement is recovery with a mean score of 3.51. This is followed by response, with a mean score of 3.50. Next are the following parameters: preparedness, prevention and mitigation each with a mean

score of 3.48, 3.47 and 3.44, respectively. Results show that the strong agreement in terms of recovery expresses the stakeholders' firm belief that the needed human resources, skills, infrastructure and facilities are already in place in the University. A comprehensive plan is needed to make the most of these available tools that can aid in recovery. The lack of this plan explains the low rating received by mitigation which refers to the institution's ability to plan for, manage and minimize perceived risks such as disasters.

In the mitigation component the results shows that stakeholders, particularly the students, perceived that they are not well oriented on the school rules and regulations and support system. Since this concern is needed only in certain incidents, its discussion in the regular orientation activity of the students is not usually emphasized. Researchers also noted that such a topic is not included or discussed in the UB Student Handbook (Revision 7 dated April 11, 2023). The relevance of orientation about school policies and procedures is emphasized in the research of Matt (2022).

When it comes to prevention component, for stakeholders, a drill should be specific for a disaster and must be developed by the school which they should be in the form of a workshop. This claim of the stakeholders is supported by the result of the study of Vasquez, Marinkovic, Bernales, Leon, Gonzales & Castro (2018) which affirmed the importance of students' participation in the local planning of the school evacuation plan, as necessary to strengthen their preparedness in case of disasters. When it comes to regular inspection and repairs, organizations have to do it regularly to address immediate concerns (Shaw, 2005).

While in the preparedness component response shows that UB is not prioritizing the installation of the warning system or disaster management strategies. This implies that there is really a need to be intentional in terms of the University's preparation for any disasters. Macapagat (2019) stated that when businesses do not have continuity plans, the delivery of products, functioning of facilities and the employees' performance are affected.

Significant relationship of the different components

In preparing the continuity plan, it is necessary to determine the relevance of the assessed components to ensure that target parameters and areas are addressed and dealt with.

Table 5. Significant relationship of business continuity plan on organizational resiliency

Component	Pearson-r	p-values	Verbal Interpretation
Business continuity plan	0.91	0.01	Significant

Significance level is 95% (<.05)

In table 5, indicates that generally, in the perception of the stakeholders, UB maintains its business functions and mitigates risks during and after the disaster occurs. A strong business continuity plan helps UB to maintain its organizational resiliency in responding quickly to any interruption. Wu (2021) found out that a business continuity plan is a main indicator of organizational resilience so firms must be encouraged to integrate the business continuity management into risk management and program planning for more robust organizational resilience and for continuously adapting changing business continuity management strategies.

Table 6. Significant relationship of disaster recovery plan on organizational resiliency

Component	Pearson-r	p-values	Verbal Interpretation
Disaster Recovery Plan	0.85	0.01	Significant

Significance level is 95% (<.05)

In Table 6, underscores the stakeholders' prevailing perception that even during times of disaster, UB exhibits a propensity for effective recovery. These findings emphasize the imperative for UB management to proactively establish a comprehensive integrated recovery strategy, one that is both sustainable and capable of effectively mitigating, preventing, and promptly responding to disasters. In a pertinent article,

Ross (2021) underscores the distinction between business (organization) resilience and disaster recovery plans, highlighting that while they are occasionally used interchangeably, they serve distinct purposes. The article further accentuates the role of the disaster recovery plan in addressing potential disruptions as a component of the broader resilience strategy.

Table 7. Significant relationship of business continuity plan affects disaster recovery plan

Component	Pearson-r	p-values	Verbal Interpretation
Disaster Recovery Plan	0.90	0.01	Significant

Significance level is 95% (<.05)

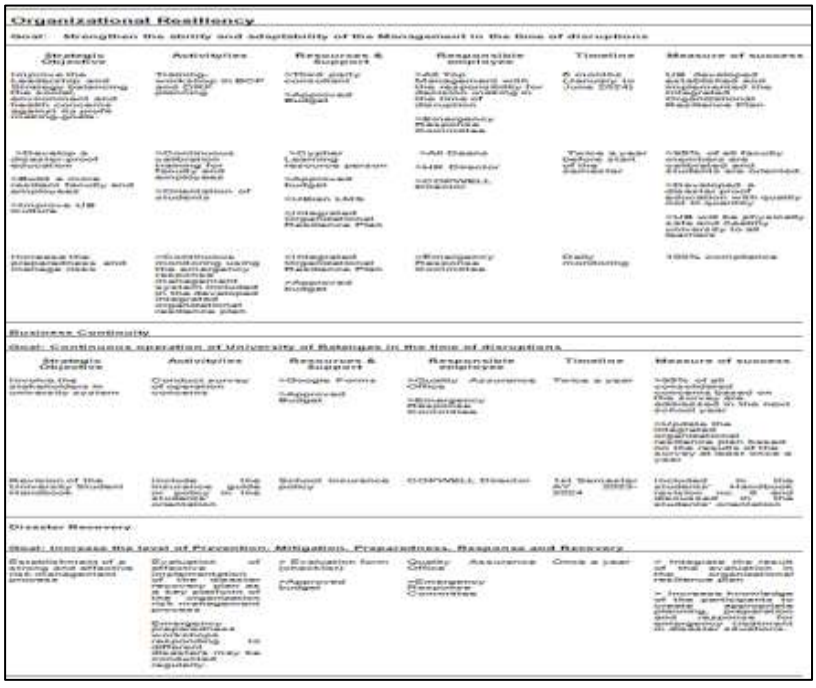
In Table 7 shows that the critical importance for UB to maintain competitiveness even in the face of disasters, necessitating joint implementation of both a business continuity plan and a disaster recovery plan by the administration and stakeholders. The prevailing stakeholder perception indicates that UB's operations can be reinstated effectively when a well-structured continuity plan is in place. Business continuity and disaster recovery are interconnected practices that play a pivotal role in enabling an organization to sustain its operations following adverse events (Moore, Bigelow & Crocetti, 2023). Furthermore, the notion of integrating disaster recovery into a business continuity plan is substantiated by Gjoko (2022), highlighting the feasibility of combining the two strategies. Cervone (2006) also argues for the necessity of this integration, emphasizing that both practices are indispensable and are commonly synergized (Sawalha, 2021).

Propose university organizational resilience action plan

This proposal outlines a comprehensive University Organizational Resilience Action Plan, derived from the insights and conclusions drawn from recent research. The aim of this proposal is to establish a strategic framework that enhances the university's capacity to navigate and recover from disruptive events, ensuring the continuity of operations and safeguarding its stakeholders' interests. Building upon the research findings, this action plan integrates key principles of business continuity and disaster recovery, aligning them with the university's specific needs and objectives.

The table highlights the specific components that demand meticulous consideration, as outlined within the associated activities, making them the central focus of the plan. The proposed plan incorporates success metrics, serving as clear benchmarks to gauge the attainment of the outlined activities. The far-reaching impact of this plan is anticipated to reverberate not only among the employees but also resonate significantly with administrators and stakeholders alike.

The plan objectives are assured that the organization's operations are functional, reduce the impact of disruptions on the organization, maintain the stakeholders' satisfaction and achieve fast recovery from the disruption.



IV. RECOMMENDATIONS

Based on the findings, the proponents recommend the following:

1. The future researchers may conduct the same study; however, instead of one organization, they may use the whole sector or industry as the locale of the study.
2. The future researchers may develop an organizational resilience model using the PLS-SEM approach.
3. The University's Disaster risk management committee may validate the strategies and activities involve in the proposed organization resilience plan.
4. The proposed organizational resilience plan may be implemented to evaluate its effectiveness as the basis for future research.
5. Other Higher education institutions may use the proposed plan as their guide in addressing and handling disruptions or disasters.

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