Crisis Management Board Game

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Abstracts: This objective of study was to develop a crisis management board game for business organizations. This research used document analysis methods to study from two important sources: Devlin's book Crisis Management Planning and Execution; an academic article titled "The Most Useful Crisis Management Examples: The Good, Bad, and Ugly" by Marker. The results demonstrated extracted lessons from five key scenarios, namely case studies of Tylenol, Union Carbide India, Mattel, Samsung, and Pepsi, which were used to formulate simulations and responses to each crisis situation. This board game was developed based on Dodge's game design and development concepts, which clearly defines the elements in the development of a board game. However, the implementation should be done carefully in terms of the roles and responsibilities of personnel in each business organization. In addition, due to the situations created in this board game, all types of crisis may not be covered by these events. Therefore, further development of a crisis management board game with a variety of situations and scenarios is necessary for knowledge development and understanding of personnel in different types of organizations.

Keywords: Crisis Management, Board Game, Tabletop, Corporation

1. INTRODUCTION

Organizational crises occur when organization's stakeholders suddenly confront with unexpected events leading to organizational unrest. In other words, a crisis is a situation that disturbs organization's stakeholders in particular organizational memebers and leads to instability in its operations. The crisis in the organization may occur for many reasons such as technological failures, employee disputes, violence, theft, terrorism, illegal behavior (e.g. bribery, fraud, concealment) or financial deterioration[1]. Therefore, it is important to prepare employees to face these unexpected and unpleasant situations. However, a recent study on crisis preparedness found that over the past two decades, only 5-25% of Fortune 500 companies have been in crisis preparedness. Some executives viewed that when faced with a crisis organizations under executive leadership are able to cope with those situations without prior planning[2]. Organizations' failure to respond to crises is not simply caused by the organization's lack of a crisis management plan, but the inconsistency of reviewing the present crisis management plans and practices to ensure the readiness of utilizing this plan in real life situations is occurred[3]. Training is essential for critical preparedness, particularly the use of games in crisis management training. However, there are not many board games related to crisis management namely AFTERSHOCK, Pandemic[4], Flood Risk Awareness[5], and COVID Buster[6]. Board game development for learning and training on crisis management for business organizations has not yet been found despite Its necessity[7]. The use of board games in training on crisis management to help increase the necessary skills of crisis management and prevention in organizations has been overlooked and needs more attention. Therefore, this research aims to develop a crisis management board game for business organizations.

2. LITERATURE REVIEWS

2.1. Board Game Design Process

To effectively design a board game, Dodge[8] suggested these following steps for a board game developer.

       Step 1 Content Analysis - At this stage, the designer must try to analyze the content and determine the issues or elements that are relevant to the content as much as possible. This should be a fluid process and works best in groups. This brainstorming helps identify the most plausible issues with which a board game could be

designed, regardless of the quality of those issues. At this stage only the maximum number of relevant issues is needed. Removing the least likely or least interesting issues will be done later.

Step 2: Incubation - After the designer has worked out the possible issues related to the board game topic to be designed, the designer should pause for a moment before revisiting the issues identified in the first step. At this stage, the breaking time will allow the board game designer to rethink about the issue and come up with the different ideas compared to the first step leading to explore the connection of things and the creation of more new options. Add more ideas to the list to take in the next step.

Step 3: Unitization - This step is a step in bringing the issues. That has been defined to classify the categories related to the board game that needs to be designed. Prepare a large piece of paper that divides the area into six sections and assign them the following topics in each area: Pieces, Patterns, Paths, Probability. Probabilities, Prizes, and Principles. After that, write down the points outlined in Steps 1 and 2 properly for each section. Where more than one topic or item is appropriate, write down on all topics that apparently are appropriate. Identifying the six areas involved in board game development is extremely important as they are essential elements of a board game. The explanation of the importance of each component can be explained as follows:

Pieces are elements that are defined as player representations that are used in the game to move around. An area designated on the board or designated as a device that helps keep score for board games.

Patterns are elements that designers must consider if some points in the analyzed content can be incorporated or combined. What are some things that, when combined, lead to something new and unique.

Paths are elements that designers must determine if the content they are given determines the progression of the game-related story that can be used as a path in the board game. There are any places listed in the content that could be routed for use in playing board games.

Probabilities are those elements that determine if something contained in the content can happen by chance or occurred beyond the control of the person concerned.

Prizes are about the value received from a board game including what the player wants or tries to get

Rules (Principles) Statements that set guidelines for playing the game.

Step 4: Aligning - It is the placement of game content in accordance with the structure of the game. To consider whether the game's direction is in the direction required according to the content set or not. It combines all six board game elements together.

Step 5: Drafting - In this process, the designer has to constantly ask oneself what the players would do when playing this board game. Players will focus on the game itself or whether the game design can help players understand the content or learn the points they want. Will players who have won this board game have to learn the material better than others? If the answer is no, game designers need to develop and improve the game to make it more efficient and interesting.

Step 6: Incubating - After experimenting with the board game outline developed in step 5, the designer should pause for a while to allow the brain to develop new ideas and perspectives. About the board game that was designed after taking a break, bring in new ideas. It was added to a previously designed board game and led to a process of trials with a group of players to the point where the issuer saw that the game design could go the way it was intended.

3. RESEARCH METHODOLOGY

As for the process of research and development, it consists of five important parts as follows:

1. Review of relevant documents and literatures. This research was conducted to review documents and research related to crisis management and board game design and development to determine the issues that will be used in the development of tools for collecting data to be used in the development of board games.

2. Development of data collection tools. After reviewing relevant documents and literature Research tools have been developed to be used for collecting relevant data, especially on issues related to crisis management. to be used in the design and development of board games in the next step The tools used to collect data were generated from relevant literature and sent to experts to assess the content validity of each questionnaire.

3. Board game development in crisis management. When collecting data from a sample of employees working in a business organization registered in Thailand. The next step is to use the findings to design and develop a crisis management board game that focuses on specific crisis issues based on the research data.

4. Experimental use of crisis management board games. When developing a board game Crisis management completed the next step is to bring board games to trial with a sample group of employees of a business organization to assess the suitability of the game to see if it can meet the intended objectives or not.

5. Board Game Improvements. After Trial When used for testing and receiving evaluation results and feedback from employees who have tried this board game, the information will be used to develop and improve the board game to meet the needs of both content and In terms of further game design

4. RESULTS

The results of the analysis of relevant documents found examples of crisis management situations classified by type of crisis as follows:

1. Devlin's book[9] on Crisis Management Planning and Execution, which classified crises into two types: non-physical damage crises and physical damage crises.

2. Academic Article titled "The Most Useful Crisis Management Examples: The Good, Bad, and Ugly" by Marker[10]. The information from these two sources was used to define situations that mimic real situations that occurred in the past according to different types of crises to be linked to the design of board games by analyzing critical events to determine the situation message in the card game as follows (Table 1).

The five example scenarios used in the development of the crisis management board game are described below.

Table 1: Examples of situations related to crisis management that lead to the formulation of situational issues in the card game of the crisis management board game.

example situation	Defining situations in card games from examples of real situations
In 1982, seven people in the Chicago area died after taking Tylenol capsules poisoned with cyanide. Tampering is believed to have occurred when someone injected a chemical into the capsule and returned it to the shelf. The death remains unresolved, but the way Johnson & Johnson handled it has become a case study for teaching effective crisis management at Harvard Business School and elsewhere. The company's then CEO, James Burke, was named one of the greatest CEOs in history for the way he dealt with fear. For example, Johnson & Johnson 's handling of crises : *Quick and decisive action:* From a book about the Richard Tedlow case, professor at Harvard University, as of the afternoon of the first two deaths, the company suspended all advertising for the product, sending 450,000 text messages to hospitals. Doctor's office and other stakeholders, and established a toll-free consumer hotline. At over $ 100 million, the company recalled all of its products from store shelves, which was one of the first nationwide recalls. Although government officials felt that doing so was too much. Johnson & Johnson has also issued a warning to consumers not to use pain relievers. *Honesty and Integrity:* Despite evidence that the poison was introduced through store shelves, Johnson & Johnson made no attempt to evade blame. As a result, Burke was praised for his honesty. The company has become a pioneer in the development	The death of a consumer who has ingested a poisonous capsule as the CEO of the organization. How will you deal with this crisis? 1. apologize for the incident 2. Suspend all advertising of the product and find out the cause of the problem. 3. Recall all products from the shelf 4. Send messages to notify all stakeholders in no time. Players are presented with different information cards and have to sort them in the correct order to advance to the next stage. The ordering of the data is as follows. **1-3-4-2**

of tamper-proof packaging and eventually switched from capsules to more tamper-resistant caplets. Burke frankly regretted that the company did not immediately take action.

In less than a year, Tylenol regained its market share and sales leadership. According to the results of a Brand Spark study, it has been found that Tylenol continues to gain a high level of consumer trust.

In 1984, toxic gas leaked from a Union Carbide India pesticide factory in Bhopal, India. Killed 30,000 people from immediate and long-term effects. (According to estimates) and about 575,000 people were injured. The accident is one of the world's largest industrial disasters.

The leak is caused by the introduction of water into the chemical tank resulting in a heated and inevitable reaction. Several inquiries have found evidence of the company's negligence. But internal analysis blames employee sabotage.

Researchers have written exhaustively about the accident. And some of the lessons cited are universally useful in crisis management. This includes the following lessons:

Practice emergency procedures: The plant has no contingency plan. And factory workers do not know how to respond to emergencies. There is no effective public warning system or public education on the risks that exist.

Prioritize in crisis preparedness: The company reduced training and staff at the factory to save costs. The demand of the gas mask is not enough and many of the factory's safety mechanisms were disabled or crashed. In addition, many experts have found that operator is not enough for the machine to work safely on the night of the accident. The supervisor delayed the initial investigation of the minor leak until after the crew had taken a break instead of proactive

Information sharing: Union Carbide plant in the US was discovered earlier this year that there may have been an escape reaction in a chemical tank. But they are not communicating with factories in India. When a leak occurs Factory officials do not notify senior managers or local authorities. Most of the information about the chemicals involved including methods of treatment when exposed It is proprietary and not disclosed. Therefore, health authorities and hospitals in Bhopal did not immediately

A company with a pesticide factory found a toxic gas leak affecting the lives of more than tens of thousands of people after this event. This company has established a crisis management plan in the organization. Which is the approach that you, as a crisis management expert, present to the company?

1. Establishing a regular emergency response drill plan.
2. Determine readiness priorities such as training, purchase of protective equipment and verifying the readiness of safety mechanisms.
3. Disclose the facts about the chemical composition for the government officials being able to manage incidents and provide medical treatment when an incident occurs.
4. Determine the number of operators to be sufficient to deal with situations that may occur in the future.

Players are presented with different information cards and have to sort them in the correct order to advance to the next stage. The ordering of the data is as follows.

1-2-4-3

know which of the victims had been exposed to what. (So the best antidote can't be given.)	
In 2017, toy maker Mattel recalled nearly 2 million toys contaminated with illegal lead paint. Such actions angered parents and attracted the attention of supervisors. The problem is caused by contract manufacturers using colors that are not licensed by Mattel within a few days. Mattel identifies factories, halts production and launches investigations. The company voluntarily extended its investigation and conducted two more product recalls even adding unrelated problems to them. The company requires rigorous testing of new products before they can be sold. The change of supplier and arrange their own employees in contract manufacturing facilities had been done. Mattel communicated consistently and repeatedly apologized. The company has been praised for their quick and straightforward response. And now the company has a reputation for reliability.	Your company is a toy manufacturing company that found that your toys were contaminated with unlawful lead paint. The problem is caused by the manufacturer not using the paint as permitted. In this case, what will you do? 1. Recall and halt production altogether. 2. Set rigorous testing standards for new products before they are released. 3. Change a new raw material supplier 4. Continue to communicate and apologize over and over again. Players are presented with different information cards and have to sort them in the correct order to advance to the next stage. The ordering of the data is as follows. **1-3-2-4**
In 2016, Korean electronics company Samsung faced a crisis when its Galaxy Note 7 smartphone exploded due to battery problems. Sales plummeted as airlines banned passengers from carrying phones on board. Samsung responded immediately and responsibly. Transparent that the cause was not immediately known and pledged to identify the problem. The company brought in 700 engineers to solve problems and open up research to third parties. Once a problem has been identified, the company communicates it clearly and introduces quality assurance and safety features. Samsung has also launched a campaign aimed at connecting its brand image with a larger purpose and improving its culture.	Your company is the world's largest mobile phone manufacturer. Your new product, the Metaverse smartphone, exploded in use. As a result, sales plummeted and airlines banned phones from being carried on board. How will you manage this situation? 1. Clearly stating that the cause is unknown. 2. To mobilize a team of engineers to solve problems and present the results of research to the public. 3. There is clear communication to solve problems. **4.** Launched a campaign that connects the brand image. Players are presented with different information cards and have to sort them in the correct order to advance to the next stage. The ordering of the data is as follows. **1-2-3-4**
In 1993, Pepsi was heavily accused of product safety. The scandal begins with an elderly couple in Washington claimed to	You are a carbonated soft drink company where consumers have posted clips of

have found a syringe in their Diet Pepsi can. Over the course of a week, there were 50 reports of various objects. Found in Diet Pepsi cans — pins, sewing needles, bullets, screws, bottles, etc. In response, Pepsi has released a four-part video campaign showing the exact steps each can follow in its production. These videos proved to have no chance of being tampered with before being sent to stores. Pepsi was also given a security video showing a woman in Colorado inserting a syringe into a can of Diet Pepsi at her grocery store. This reassures the consumer that Pepsi is pure in this case. After internally asserting that the business had not done anything wrong, Pepsi took an effective precaution with a video campaign. Instead of claiming innocence and allowing for controversy. Pepsi proved it using educational videos and security tapes. The company also purchased a print ad titled "Pepsi, Proud to Introduce … Nothing" as a humorous attempt to move on from the incident.	syringes found in the company's beverage cans, and since then have reported about 50 different objects found in company cans. How will you, as an executive of the company, proceed? 1. Launched a campaign showing the stages of production. 2. The release of CCTV footage showing someone sneaking stuff into the can. 3. recall all products 4. Declaration of responsibility for the person who suffered damage after verifying the facts Players are presented with different information cards and have to sort them in the correct order to advance to the next stage. The ordering of the data is as follows. **3- 4 - 1 -2**

Rules

- Assign 4 players and one facilitator.
- Playing time is about 1 hour.
- Players will roll a dice to determine who will start the game to play the role. "Crisis Manager"
- Start the game and repeat step 3 every time the game starts a new situation.
- The person who gets the highest score from rolling the dice plays the role of "Crisis Executive" and choose a situation card that has a total of 5 situations. The facilitator will pick up the situation card and read it as well as handing out crisis management procedures cards to everyone who plays the game.
- "Crisis Executive" role has each player read his/her information and prioritize methods for responding or coping with crisis situations that arise in correct orders. If correct order has been made, "Crisis Executive" will get 5 points while 0 point will be given for the wrong order and will be disqualified from rolling the dice in the next round. The chance will fall to the player who has the second highest score in that round. If correct answers will receive 4 points, 3 points and 2 points respectively.
- After all 5 situations have been played, the facilitator needs to sum up the scores. Whoever has the highest score wins this game.

Equipment

- The board is used to play games.
- Game Cards (5 Scenario Cards / 4 Scenario Response Procedure Cards per Situation, 20 total)
- Answer sheet and score sheet
- Dice

CONCLUSIONS

This research uses document analysis methods to study from two essential sources: 1) Devlin's book Crisis Management Planning and Execution (2007); 2) an academic article titled "The Most Useful Crisis Management Examples: The Good, Bad, and Ugly" by Marker (2020). The research results extracted lessons from five key scenarios, namely case studies of Tylenol, Union Carbide India, Mattel, Samsung, and Pepsi, used to formulate

simulations and responses to each crisis situation. This board game was developed based on Dodge[8] game design and development concepts, which clearly defines the elements in the development of a board game. The number of players consist of 4 players and 1 facilitator. Duration of play 1 hour. Players need to throw the dice to determine the person who is to start in the game to play the role "Crisis Manager" after obtaining the first crisis situation. Repeat step 3 every time a new situation begins. The person who gets the highest score from rolling the dice will play a role. "Crisis Executive" and choose a situation card with a total of 5 situations, the situation card will be picked up and read by the facilitator as well as handing out crisis management procedures cards to everyone who plays the game. "Crisis Executive" role has each player read their information and prioritize methods for responding or coping with crisis situations that arise in the correct orders. Five points are to be given for those who get the right orders, on the other hand, wrong orders will get 0 point and will be disqualified from rolling the dice in the next round and the chance will fall to the player who second highest score of dice roll in that round. If that player gets a correct answer, he/she will receive 4 points, 3 points and 2 points respectively due to the rank of his/her chance to answer the question of that specific situation. After all five situations have been played, the facilitator needs to sum up the scores. Whoever has the highest score wins this game.

Developing a crisis management board game for businesses is very important in enhancing the understanding of crisis management as a critical component of training and educating business people. However, the implementation should be done carefully in terms of the roles and responsibilities of personnel in each business organization. In addition, due to the situations set in the game, the type of crisis may not be covered by each type. Therefore, further development of a crisis management board game with a variety of situations is necessary in the future for the benefit of developing the knowledge and understanding of personnel in different types of organizations. Also, this study recommends some changes in the guidelines for setting the rules and game mechanics in the next development to increase the enjoyment of playing board games.

ACKNOWLEDGEMENT

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