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BREAKING OUT OF THE HIGH SCHOOL ENGLISH CLASSROOM: A DESCRIPTIVE QUALITATIVE STUDY ON THE USE OF EDUCATIONAL BREAKOUT BOXES

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Abstract

Although much research has investigated the use of game-based learning or GBL in classroom instruction, there is still scarce literature on the educational use of breakout boxes, a physical escape room kit. In addition, studies conducted in Asia, especially in the Philippines are rare to none. The purpose of the thesis was to explore and describe the novel approach to classroom instruction, identify its engaging elements and perceived value, and potentially bridge the gaps. Data were collected from observations of five breakout sessions in a class of twenty-seven learners, a focus group discussion with twelve students, and interviews with three teachers. Thematic analysis was used to discover emerging themes and the educational breakout boxes' perceived value. Observation notes and participant responses in the focus groups and interviews resulted in seven themes that relate to the breakout game's engaging elements: story, rules, role-play, failure, social features, visuals, and music. There were also three emerging themes related to the game's perceived value, namely: engagement, skills, and adaptability. To the author's knowledge this is the first study to explore educational breakout boxes, their engaging power and perceived value in a Filipino classroom context. The study also revealed the role of design in these novel GBL approaches to teaching and learning. Also, the findings add to the literature on game-based teaching and learning especially on the educational use of breakout games.

Keywords: Game-Based Learning, Educational Games, Breakout Boxes, Teaching/Learning Strategy.

Introduction

To thrive in the modern world, learners today need experiences that allow them to collaborate, communicate effectively, be open to different perspectives and take in group feedback into their schoolwork. These 21st century soft skills go beyond mastery of subjects and have become essential for long term success (González-Pérez & Ramírez-Montoya 2022 [34]; Sulam & Musyarofah, 2019 [73]; Hussin, 2018 [41]). Because of this, there has been much interest in the innovation of teaching strategies and methods that promise the practice of these skills in the classroom. In fact, this innovation has deepened beyond its physical space and has strengthened the idea of creating new learning environments in which these identified skills are assimilated in the learning experience (Menggo, Suastra, Budiarsa, and Padmadewi, 2019 [54]; Anagün, 2018 [4]).

In this regard, and taking into consideration that innovation in education is still evolving, many researches in the field (Lamb & Doecke, 2017 [49]; CERI, 2008; Jacobs, 2010) agree that in order to improve and enhance the present learning environments where 21st century skills are being built, teachers should leave their comfort zones and challenge themselves to innovate in their instruction. In doing so, there is a need to observe and learn from new teaching and learning practices.

With the advent of computers and the internet and with it the increasing popularity of games, especially digital games, among today's youth, many teachers address this challenge by gamifying their classrooms. Games are inherently motivating and ubiquitous in this digital world. According to a study (Qian & Clark, 2016 [60]), there is a growing trend of using games and applying game-based learning or GBL among education practitioners. By exploiting the power and this popularity of games through a GBL approach, these educators have innovatively changed their teaching and learning landscape into a game-like classroom. However, the concept of GBL, though is becoming one of the most widely used contemporary pedagogical terminologies, is seldom misunderstood. A widely accepted definition of the term is by Karl Kapp (2012), an expert in the field of games and education, where he defines it as a facilitator of learning by laying its foundations upon a game: the process is more easily followed while the concepts and skills are assimilated. Being conceived as the integration of games and learning, GBL is being advocated as a major component in teaching in a 21st century classroom (Miller, 2012 [55]; Bermingham, Charlier, Dagnino, Duggan, Earp, Kiili, & Whitton, 2013 [8]).

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As the conversation in education reform moves forward, and education bodies and professionals are increasingly and constantly leveraging 21st century essential skills, teachers attempt to apply GBL in their instruction by coupling games with reform. Many factors such as interactivity, immersion, and engagement motivate the use of games for educational purposes (Qian & Clark, 2016 [60]; Kapp, 2012, 2016). An innovative game-based teaching and learning approach that seems to grow in popularity in western classrooms in this regard is the use of an escape room. Escape rooms are considered to be engaging learning environments, which promote learning through strategy, teamwork, and problem-solving. While traditional escape rooms make use of a locked room, locked toolboxes or most popularly known as breakout boxes, such as those created by Breakout EDU are used in classroom settings. These educational breakout boxes have recently gathered interest of educators and researchers in understanding how these experiences can be part of learning activities and requiring its players to apply their knowledge and 21st century skills to accomplish learning goals in a limited amount of time (Stewart, 2019 [72]). The escape room concept and its adoption as a pedagogical tool in the form of a breakout box is considered to have great potential to foster desired skills among learners (Brown & Coronel, 2019 [12]; Kelly, 2018 [47]; Scumaci, 2017; Rouse, 2017 [64]).

While present western educational methods especially in the American educational landscape are adopting the use of breakout boxes to support 21st century learning through learner engagement, there are only few scholarly articles (Bellow, 2019 [7]; Edwards, 2017 [26]) to support the number of breakout practices in American learning spaces. This lack of literature is further magnified in Asian classrooms. In the Philippines, there are already existing researches (Jorda & Omega, 2015 [42]; Conte Jr., 2017 [18]; Ahmad, Malik, Siddiqui, & Khan, 2018 [2]) on GBL practices; however, there is a paucity of research in using breakout boxes in a Filipino academic or even a non-academic learning space. That is why in this study, I explored the implementation of educational breakout boxes in my own classroom where I listed down emerging elements of engagement that occurred in the five implemented breakout sessions with a class of high school learners from a private high school where I worked at. This paper focused also on how the breakout activities were perceived by the participants, its value and feasibility in education.

Statement of the Problem

This study sought to explore and describe the use of breakout boxes in instruction in the context of the Oral Communication course in an eleventh-grade senior high school class. As such, the following research questions had been formulated to guide this study:

1. What elements of the breakout boxes activity facilitate learner engagement?
2. What are the participants' perceptions and perceived value of their educational breakout experience?

Scope and Limitations of the Study

Though GBL is greatly considered in this paper, the focus of this descriptive study points at the educational use of breakout boxes. The research covered all twenty-seven students of an eleventh-grade class and two teachers who facilitated the breakout sessions. There was a total of five breakout sessions conducted during the second semester of their Oral communication class. Going over the indicated number of breakout classes may exhaust significant resources.

Given the small sample of participants, the findings of this study are not generalizable to all classrooms of the high school or the Philippines but only to the participating class of the research locale, yet unit heads and Filipino high schools may consider this as point of reference. The intent of the study is to gain in-depth knowledge about educational breakout boxes in the context of a 21st century classroom in the research locale.

Theoretical Framework

Games are inherently engaging and can act as rich primers that demonstrate among learners a meaningful and deep involvement in classroom activities (Gee, 2017 [33]). Such engaged learners are speculated to initiate and persist on mastering and applying learnt knowledge and skills, resort to intimate information processing and problem-solving strategies, and demonstrate positive attitudes towards the learning process (Plass, Homer, & Kinzer, 2015 [59]; Kapp, 2012, 2016).

Often the desire to address this kind of learner engagement in GBL instruction is centered and incorporated in its design for quality learning immersion (Lazzaro, 2004 [51]). Much research (Plass et al., 2015; Domagk, Schwartz, & Plass, 2010 [24]) into designing a learning game includes recognition that it represents a designed cognitive, affective, behavioral, and sociocultural experience. Learning games following these representations deliver a realistic context in which these experiences provide a meaningful illustration and practice of concepts and skills as well as provide a surrogate for realities that give a rich learning experience (Kapp, 2016) as told in a number of testimonials among western educators in their use of educational breakout boxes. Van Staalduinen and de Freitas (2011) [77] developed a framework (Figure 1) that

overlaps with these accounts and was adapted as a design guide in creating the breakout boxes of this study.

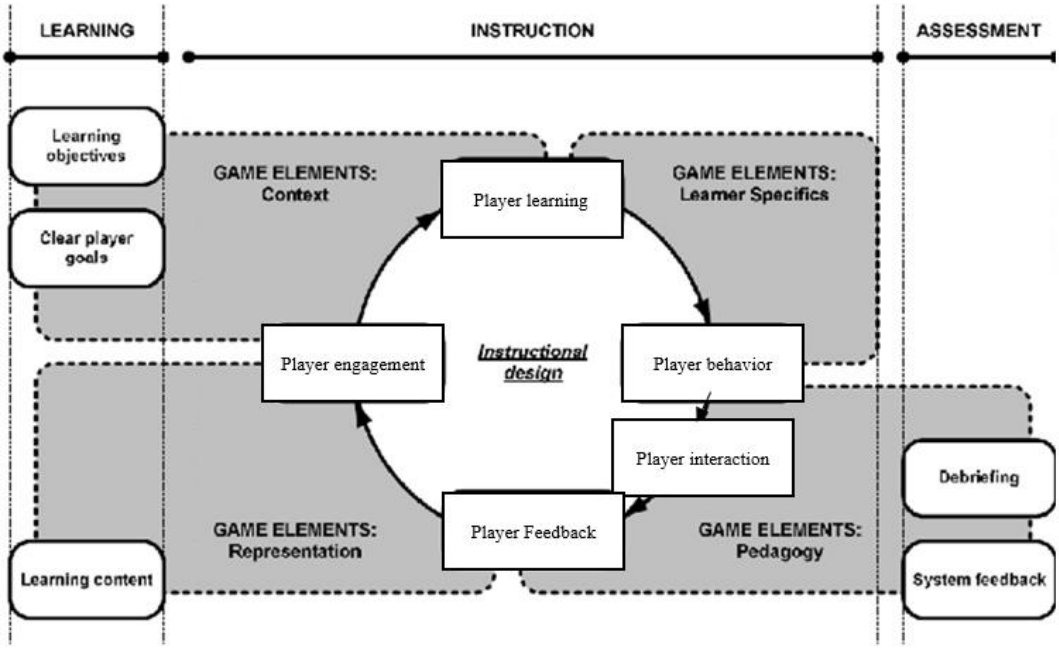

Figure 1: GBL Framework Adapted from Van Staalduinen & de Freitas Game Design (Van Staalduinen & de Freitas, 2011 [77])

Methodology

- **Research Design**

Because there are only a few relevant researches regarding the use of breakout boxes in classrooms more especially so in a Filipino high school classroom, this descriptive study employed a qualitative approach of investigation.

Kim et al. (2017) [48] argues that a descriptive qualitative research design is appropriate for research questions focused on providing a rich data set that often brings to light new knowledge or awareness that may have otherwise gone unnoticed or encountered. Such is the case for the breakout game innovation in a Filipino senior high school classroom.

Thus it supports the purpose of this study to explore and describe the use of a breakout box gaming strategy based on an escape room concept to help Filipino learners learn about the lessons in their Oral Communication class, find out whether there is educational value to the use of breakout boxes, which may become helpful inputs in making an educational decision about its use in Philippine education specifically in the context of engagement in a 21st century Filipino senior high school classroom. The research was conducted at my workplace with my own learners. Two other teachers had facilitated one and four educational breakout games respectively to be played in class. This allowed me, the researcher to be a non-participatory observer of the whole breakout experience. As such, the descriptive qualitative research method seems both sufficient and appropriate as I did not aim to determine cause and effect, nor discover generalizable truths or make predictions. Rather, I sought to explore and describe the educational breakout boxes phenomenon.

- **Participants/Respondents of the Study**

This descriptive exploratory study was conducted with the Oral Communication students of a private local senior high school. The location and sampling were not a result of random sampling, but a result of convenience as I, the researcher of this paper, is an English teacher of the school. Thus, I have a direct relationship with the school in question. The participants were a class of senior high school learners from an eleventh-grade section and two teacher-facilitators of the educational breakout game. There was also a teacher-observer involved in the breakouts. After the games' completion, the students were consented to participate in a focus group discussion and a one-on-one interview was conducted with the two instructors and the observer. It is important to note that the discussions and interviews were conducted in English, but was not restricted among participants.

In the activity sessions observed for this research, the students were randomly divided into three groups. The three groups played five educational breakout games in a span of a given period. Each of

the groups played simultaneously in a room. The games were planned around the Oral Communication subject's lessons and competence aims guided by the school's curriculum.

Other elements from the national curriculum, the school's vision and mission, its SHS goals and curriculum, the subject's core standards and aspects of 21st century learning were implicitly applied and argued to be natural occurrences of the game. The easy to hard clues and codes and practical and complex elements that needed collaboration and creativity to be deciphered and unraveled were intentionally included in the planning of the lesson. The amount of information amongst other elements put in the breakout experiences require the learners to work systematically, collaborate effectively, take initiative, and accept leadership roles.

- **Instrument/s of the Study**

There were five breakout sessions facilitated, video-recorded, and observed for this study to gather the initial data on the educational practice of using breakout boxes in a Filipino classroom. Field notes were written on this an observation sheet and was used as a ground for discussion in the focus group discussions and the qualitative interviews. The discussions were piloted by a guide. Initial script and questions on the guide aimed to invite a somehow structured yet thoughtful and permissive atmosphere which attributed to the development of an open environment. This type of social scape benefited the group dynamic where the learner-participants discussed topics from the guide themselves rather than a moderator-dominated communication. Semi-structured interviews were also conducted in this thesis to gather teacher perspectives on educational breakout boxes. Each research question has corresponding probing questions.

- **Data Collection**

This section is divided into three sections, where the first section shows how the data was collected and queued from the observed lesson; the second section describes how the focus group discussion responses were transcribed and systemized; and the third section presents how the interviews were conducted and arrayed.

- ***Observed lessons***

To be able to directly inspect and look for evidences regarding the problems presented in this paper, I observed and video-recorded educational breakout game sessions of eleventh-grade students at the Oral Communication course classroom of the senior high school where I worked at, wherein in these classes another teacher facilitated the whole breakout experience. Field notes made were used when analyzing the students' perception and experience of the breakout activity. Direct observation is a necessary mean to obtaining data in case study research (Yin, 2009). It is also considered the best method to gather the initial data since the purpose of observation was to form a ground for discussion in relation to the problem statements. Choudhury (n.d.) argues that this non-participant observation is the best option for this research for being as non-invasive as possible and helps maintain the researcher's impartial status. The observation data formed the basis for participants' reflections in the focus group discussion and one-on-one interviews, and thus giving insight concerning the focus of the study.

- ***Focus group discussion***

The focus group discussion or the FGD provided the second source of data to address the research questions through video recording of the discussion of the party. The FGD contained 12 participants from the class of eleventh-grade students and I, the moderator of the discussion. For Rabiee (2004), the recommended number of participants is between six and ten. However, Osborne and Collins (2001) argue that a group between four to twelve is practical and can be more productive.

Furthermore, according to Dilshaf and Latif (2013), the FGD puts less emphasis on the researcher, but rather give more value to the interaction between participants (p. 192). The researcher plays the role of a moderator where he organizes, conducts, and controls the focus group process (Dilshaf & Latif, 2013, p. 193). He aims not to generalize answers from participants but gain insight in participants' viewpoints on the issue. This type of qualitative data gives the researcher less control over the development of the conversation and discussion; however, moderating it favors the aim of attaining perceptions on the benefits, if any, regarding the use of breakout boxes in the high school classroom.

An FGD guide was provided to serve as protocol for the discussion. It included a list of questions derived from the research questions. This functions as a guide for the discourse but was not intended to be rigidly adhered to (Rabiee, 2004; Osborne & Collins, 2001).

A simplified form of the actual discussion in the form of written texts was used for analysis. Anderson (1990 as cited by Dilshaf & Latif, 2013) argues that the transcription of information depends on the research's purpose and intended readers (p.196). As such, transcription of the discussion was done according to the focus of the study thus excluding the linguistic features and elements irrelevant to the study.

- ***Interviews***

Following the completion of the five educational breakout games conducted in class and the FGD, one-on-one semi-structured interviews with three teachers were conducted. Two of them were facilitators of the game while the other asked permission to observe because of personal interest to the educational breakout strategy. For this paper, a semi-structured interview as reported by Pole and Lampard (2002) was seen as a fitting method because of its structuring through an interview guide (see annex C) that facilitates the analysis of responses in categories and permits a conversation of individual opinions and experiences in a non-constraining manner. This methodological step was administered to gain additional data to address both the main research question and the sub-questions.

The questions were constructed mainly regarding the teachers' experience and perceived value of learners playing the breakout games. The questions were open-ended inquiries to obtain as much of the participants' perspective as possible. These gave an opportunity to address issues not addressed in the FGD.

The qualitative interviews were used in this study to obtain teachers' perspective on the research questions aside those gotten from the learner-participants in the FGD. These interviews give new insights into a social phenomenon as they allow respondents to reflect and reason on the focus of the study (Folkestad, 2008). I may have had also diverged to pursue an emergent idea during the interview process in detail. Consequently, conducting the interviews with the teacher-facilitators and an observer were critical to the success of this study as they could not only provide insights on the investigated phenomena but could suggest evidences related to it as well (Yin, 2009).

- **Procedure**

Following ethical considerations in research including confidentiality and trustworthiness, specific steps were undertaken in preparing for data collection. The first step was to ask permission from the senior high school director, the assistant director for academics, the Humanities and Social Sciences (HUMSS) chair, and the grade 11 English cluster head. The informed consent forms to parents of the learners and to invited teachers were then given after securing the permits. While waiting for the signed consent letters, I, the researcher constructed the FGD and interview guides and consulted with my research supervisor for their improvement.

After the preliminaries and ethical steps, the five breakout sessions were carried out and overlooked. A camera phone was used to video-record the breakout experiences. Following the conclusion of the breakout activities, the FGD and qualitative interviews were conducted. A closed-door venue was reserved for privacy. The camera phone and an audio recorder were used respectively in both these data-gathering processes and I jotted down notes for important comments from the participants. No data or information gathered were given to anybody else. The recorded data were kept and subsequently destroyed.

- **Data Analysis**

To explore and describe the instructional practice of using educational breakout boxes in the AdDU senior high school Oral Communication class of grade-11 Sales, a thematic approach to data analysis was used. Though there was a deductive nature in the method used because of a number of initial codes drawn from researcher expertise, topic of inquiry, and existing literature, it still leaned and retained the benefits of inductive analysis. This qualitative strategy allows the educational breakout boxes' practices and patterns of learners' 21st century soft skills to emerge as data is examined. A qualitative approach such as this is well suited for examining emerging themes when there is yet to have an established body of literature and scholarly works associated with the use of breakout games in educational settings especially in Asian and Filipino classrooms.

Thematic analysis has been criticized as a vague method of analyzing data (Holloway & Todres, 2003); however, early proponents (Attride-Stirling, 2001; Fereday & Muir-Cochrane, 2006) of the method argue that data should be analyzed in a methodological manner to gain useful and meaningful findings. In order to swamp the criticism on the strat being vague, the six clear and detailed key stages of Clarke and Braun's (2013) carefully structured procedure was followed in the study (see figure 2).

Step 1: Become familiar with the data Step 2: Generate initial codes Step 3: Search for themes	Step 4: Review themes Step 5: Define themes Step 6: Write-up

Figure 2: Braun and Clarke's Six-Phase Framework for Doing A Thematic Analysis

Results and Discussion

The main objective with collecting data for this study was to attain a clearer perception about the paper's research questions namely: 1) *What elements of the breakout boxes activity facilitate learner engagement?* and 2) *What are the participants'' perceptions and perceived value of their educational breakout experience?* As such,

five breakout lessons were observed, a focus group discussion was administered, and one-on-one semi-structured interviews were conducted.

Themes that emerged from the learners' focus groups were compared and contrasted to the themes generated from the semi-structured interviews with the teacher-facilitators and an observer. The results were analyzed via thematic analysis within the context of the reviewed literature. The process that was applied to the transcripts elicited key concepts that were evident in the data. These themes were viewed as essential in determining the elements in the breakout game that facilitated learner engagement and the participants' perceived value of the educational breakout strategy.

This section is divided into three separate sections where the first section narrates and describes the design process of the breakout boxes and the participants' experience with them. The second section describes the emergent themes relating to the first research question while the third section discusses the core categories addressing the second research query. Wherever relevant, findings from the initial observations and field notes were used to validate and enrich discoveries across data sets.

- *The design and experience of the breakout boxes*

I used the basic escape room concept with a GBL framework (Van Staalduinen & de Freitas, 2011; Kapp, 2016, 2012) on a space-limited scale by using a locked toolbox as the puzzle to be solved. The learner-participants were divided into teams of three teams and were given a toolbox with locks and various puzzles to solve.

Breakout Box 1

The scenario: A zombie theme was used; Dr. Seifer, the mad professor who plans to unleash a deadly airborne virus, and his biochemistry students were the two main characters. A bioscience motif was used to mark the various items and props to draw the students' attention to the steps needed to successfully open the toolbox and navigate inside the box to acquire the virus' antidote. The teacher-facilitator explained the storyline to all of the learner teams. The premise of the story was: Dr. Seifer had plans to unleash a zombie disease that would turn anyone who came into contact with it into a living undead.

The process: I provided two toolboxes for each learner team. One was a large box while the other was a smaller one. The objective of the game was to be the first team to present to the instructor the opened locks, a directional lock and a number lock, with the medicine for the zombie virus. Specific verbal instructions on how-to play the game were given by the teacher-facilitator beginning with the objective, rules of the game, and the game's narrative.

The activity: Following review of the scenario and the rules, the activity began with the teacher-facilitator narrating the game's backstory. In line with the escape room concept, pre-set hints were made available to the student teams. The hint cards were locked at a smaller lock box and could be used any time throughout the activity. The first puzzle was the Oral Communication handout put beneath the small toolbox, there was implicit information on the lesson handout specifically the number of proxemics zones, models of communication, and its types. These formed the passcode for the number lock. Once opened, the small box gave the learners a blacklight that was used to flash on papers scattered across the room. These sheets contained clues to unlock the large box, which was the main challenge of the breakout.

There were several sheets using this same format with the revealed information being hints on which papers were clues and red herrings. The clues that were found lead the learners to the purpose of the spread-out arrows in the room. On the doctor's rant note, it contained disarranged colored steps of the basic communication process. Each step represented a colored arrow scattered across the room. These were pointers to the directional lock code. The puzzle solutions and invisible tips provided a progressive pathway toward achieving the objective which was opening the large box. Each clue led to another hint that required to be decoded from solving the previous puzzle. Sometimes the codes unlocked the next puzzle while other codes were for the locks on the toolbox. One of the first codes opened with the puzzle required knowledge of the lesson intended to be reviewed in the game, while the other puzzle required the communications skills inherent in the target competencies of that lesson such as differentiating the various models of communication.

The outcome: The large toolbox contained the antidote for the zombie disease. The directional lock was a logic puzzle that required the learners to recall the chronological order of steps in the communication process. This was because the order was disarranged in one of the papers and each of the colored steps pertained to a colored arrow scattered around the room. The scenario was specifically constructed to review the process of communication and its nature. Throughout the entire activity, the teacher-facilitator observed the interaction among the group, but he did not provide any assistance or answer any questions until he was approached with a hint card. Learners were given forty-five minutes to complete the activity – 'solve the riddle and save

the world from the virus'. When completed, the learner teams were to bring the antidote to the instructor to save humanity. Two teams out of three succeeded in the final quest.

Breakout Box 2

The scenario: An alien theme was utilized; A group of special FBI agents who deals with inexplicable paranormal cases are the main characters. A paranormal motif was used to indicate the various items and props to draw the students' attention to the steps needed to successfully open the toolbox and navigate inside the box to acquire the secret weapon to fight off the alien invasion. The teacher-facilitator explained the storyline to all of the learner teams. The premise of the story was: Michael Cali, a top-secret government agent had not only discovered elaborate alien invasion on earth, but he found something that could stop it. Knowing aliens were hot on his trail, Cali hid the secret away in a lock box and scattered the clues for the agents to discover.

The process: I provided two toolboxes for each learner team. One was a large box while the other was a smaller one. The objective of the game was to be the first team to present to the instructor the opened locks with the weapon against the alien invasion. Specific verbal instructions on how-to play the game were given by the teacher-facilitator beginning with the objective, rules of the breakout, and the breakout's story.

The activity: After the review of the scenario and the rules, the activity began with the teacher-facilitator narrating the breakout's narrative. In line with the escape room basic design, pre-set hints were also made available to the student teams in this breakout. Hint cards were locked at a smaller lock box and could be used any time throughout the activity. The first puzzle was a 2020 calendar. The circled months made up the code for the three-digit lock on the small box. Once opened, the small box gave the learners a blacklight that was used to flash on papers scattered across the room. These sheets contained clues to unlock the large box, which was the ultimate goal of the breakout.

There were other various sheets using this same format with the revealed information being hints on which papers were the actual clues. One example was the comic strip where learners were tasked to identify communication strategies used by each speaker in the strip to direct them to the combination of the directional lock clasped on the large box. With the help of a blacklight, the identification task became easier because of the hints it revealed. The other clues that were found soon after lead the learners to the lock combination puzzles to the remaining locks that were attached to the large box's hasp. Encouraging teammates to work with each other, rather than turning to the facilitator for the answers, was a challenge for the teacher at this stage, but also a vital element of the game. While a number of learners were visibly frustrated and some were unsatisfied with the given hints, the teacher-facilitator attempted to step back and let them work through the task together.

The outcome: The large toolbox contained the secret weapon to fight the alien invasion. The locks on the large box's hasps were a series of puzzles that required the learners to recall the functions and the verbal and non-verbal cues in communication. Throughout the entire activity, the teacher-facilitator observed the interplay among the class, but he did not provide any help or answer any questions until he was approached with a hint card. Learners were given forty-five minutes to complete the activity and acquire the 'weapon' that would 'defeat the alien invasion'. When completed, the learner teams were to bring the weapon to the instructor to save earth. Sadly, no team completed the mission.

Breakout Box 3

The scenario: A Harry Potter theme was adapted; Harry Potter and his friends as well as the other students from the Gryffindor house were the main characters. The famous movie's familiar props were used to identify the various items and props to draw the students' attention to the steps needed to successfully open the toolbox and navigate inside the box to find Professor Snape's Marauder's Map. The teacher-facilitator narrated the game's story to all the learner teams. The premise of the story was: Harry Potter, Ron Weasley, and Hermione Granger went after the Sorcerer's Stone, a dangerous magic artifact.

The process: One large toolbox and a smaller one were given to the three learner teams. The objective of the game was to be the first team to present to the instructor the unlocked main box and the Marauder's Map that was locked in it. Specific verbal instructions on how-to play the game were given by the teacher-facilitator beginning with the objective, rules of the breakout, and the breakout's backstory.

The activity: After retelling the context of the game and the rules, the activity began with the teacher-facilitator narrating the game's plot. Pre-set hints were made available to the student teams. Hint cards were locked at a smaller lock box and could be used any time throughout the activity. The first puzzle was a snote that was stuck on the whiteboard with a magnet. The word hidden in it could only be seen from afar. It was the word code for the word lock on the small toolbox. Once opened, the box gave the learners a blacklight that was used to flash on the Harry Potter props scattered around the room. These

backdrops contained clues to unlock the locks in the large toolbox's hasp.

The succeeding puzzles used the same method to reveal latent information that identified clues from red herrings. One instance of this was when the learner teams used the blacklight to highlight numbers on the World Cup tickets. They line-up the tickets in order of seat number to arrange the highlighted digits chronologically and use the combination on one of the locks on the large lock box. The puzzle clues and obscure hints provided an immersive direction to accomplishing the acquisition of the magic map. Each solution led to another hint that required to be decoded from solving the previous puzzle. Sometimes the codes unlocked the next puzzle while other codes were for the locks on the toolbox. Other times, there were those distractors in the game. For example, all learner teams had the chance to open the flash drive, a red herring, on a laptop and find a handout on the different strategies of communication. Though this was an irrelevant part to the teams' progression in the breakout, it gave the learners an encounter with the discussed lesson embedded in the game.

The outcome: The large toolbox had the Marauder's Map in it. The directional lock, the three-digit lock, and a key lock latched it and were the main challenge of the breakout. The scenario behind this challenge was specifically constructed to encourage students to practice speaker and listener roles as well as different communication strategies such as topic-control and topic-shifting. These were observed when learner teams collaborated in their groups and correctly followed the clues on the Daily Prophet clipping and found the code to the directional lock. Once opened, they immediately jumped to the receipt which contains the three-digit lock code and the final riddle of the breakout. As the learners solved this puzzle, they were able to locate the hidden key which was used to open the last breakout box-revealing a congratulations poster and the Marauder's Map to look for and help Harry Potter, Ron Weasley, and Hermione Granger. All learner teams were successful in their attempt.

Breakout Box 4

The scenario: A noir theme was used. A teacher and his students and the malicious Jay Paul were the prominent figures. A written media leitmotif was used to characterize the different items and props to draw the students' attention to the steps needed to successfully open the boxes and obtain a saving article. The teacher-facilitator narrated the supporting plot to all the learner teams. The premise of the story was: Jay Paul wrote a spiteful article about the class which may alienate them from society; fortunately, their teacher rewrote the article but was locked and kept hidden.

The process: I supplied two toolboxes of different sizes for each learner team. The objective of the game was to be the first team to present to the instructor the opened boxes and the rewritten document that could save the class' image and rep. Specific verbal instructions on how-to play the game were given by the teacher-facilitator beginning with the objective, rules of the game, and its backstory.

The activity: Following review of the scenario and the rules, the activity began with the teacher-facilitator narrating the supporting narrative. Pre-set hints were made available to the student teams in this game too. The hint cards were locked at a small lock box and could be used any time throughout the activity. The first puzzle was the three folders with case files in it placed under the small toolbox. On each of the case folder, there was a case number with missing digits. The missing digits formed the combination of the small lock box. Once opened, the small box gave the learners a USB drive, a worksheet on speech styles, and a blacklight that was used on the game's props and papers. They held clues to unlock the large box, which was the main challenge of the breakout.

The main box was locked with four separate locks. For the three-digit lock, learner teams were required to read a comic strip, a pre-set hint. It showed an invisibly marked chronological order of events in the fictional story of Caleb and Ash. The smart art sheet led to the three marked story boxes which composed the three-digit combination of the lock. Learners used the blacklight to see the clue markings. The next course of team action was to browse through a fictional narrative between JP and Ash. The dialogue implicitly identified directional clues. These clues compose the code to the directional lock. In the speech styles worksheet, learners were asked to answer a true or false exercise. The right answers spelled the location of the key for the third lock. The final clue was located in the USB drive. It consisted of a comic strip with examples of the different types of speech context, a red herring in the game, and a video on the Harm principle. The name of the principle composed the password to open the last lock.

The outcome: The rewritten article to save the class of the fictional story was kept hidden in the locked large box. Learners were given the opportunity to apply classroom knowledge and skills to 'free' the document. Throughout the entire activity, the teacher-facilitator observed the interaction among the group, but he did not provide any assistance or answer any questions until he was approached with a hint card. Learners were given the same forty-five minutes to finish the game. When finished, the learner teams were to bring the saving article. Two teams out of three succeeded in the end.

Breakout Box 5

The scenario: A simple theme was used in this breakout. The learners themselves are the characters of the game story. The teacher-facilitator explained the plot to the three learner teams. The premise of the story was: They were all locked in the classroom and the only way out was locked in a large lockbox, but the teacher forgot where he hid the key to it.

The process: I provided a large toolbox for each learner team. The objective of the game was to be the first team to present to the teacher-facilitator a quote that would make him remember the location of the key to the box. Specific verbal instructions on how-to play the game were given by the teacher-facilitator beginning with the objective, rules of the game, and the game narrative.

The activity: Following review of the scenario and the rules, the activity began with the teacher-facilitator narrating the story. In line with the escape room concept, pre-set hints were made available to the student teams. In addition, they were also handed their group's blacklight and a couple of hint cards. In the first puzzle, students read famous quotes that had highlighted speech writing principles. With the help of a blacklight, learners properly labelled each quote to a principle, and that information led to the discovery of a location to the next challenge. In the second puzzle, the groups answered multiple choice questions that had them properly define the different principles of speech delivery. The answers to the questions revealed the next puzzle.

There were three more puzzles using this same format with the revealed information being hints on the next goal of the game. The final mission had the student groups decode an encryption based on hidden symbols they had found throughout the game to reveal a quote.

The outcome: The observed breakout lasted an hour. The teacher-facilitator addressed all learner groups twice as each team was provided two hint cards. The hints provided in the game gave learners a chance to consult with the facilitator when they needed extra help. The whole scenario was specifically constructed give the class a game review on the principles of speech writing and delivery. Throughout the entire activity, the teacher also observed the interaction among the group, and were given a time extension up to an hour to complete the activity and share to him the revealed quote that would make him point to the location of the lock box's key. When completed, the student
teams were to unlock the box and use the key inside it to escape the classroom. All learner teams succeeded in their escape.

Breakout Synthesis

During the five-game period of the educational breakout activity, I had observed several points. In the five games the class have played with the boxes, it was the first session that had the greatest number of students struggle with the gameplay and in-game interaction. Students mentioned that the hardest part was knowing what to do first. Thus, it was helpful that further guidance was given by the teacher-facilitator. This observation is consistent with those of prior research (Hagerty, 2017). However, as the learners progressed and gained experience in playing the breakout boxes, they gradually understood the value of seeing problems from different perspectives, collaborating as a team, persisting on tasks, and deeply learning through group discussions. The results of these actions made them see a pattern in the games' puzzles and clues that aided a number of groups in breaking out of the challenges especially the members who lead them. After reviewing the evidence from the first experiences, strategic adjustments were made on the next breakouts. This way, it would be less likely that students with higher overall mastery would dominate the group work. Equal opportunities among players and teams saved a lot of time, but there was still frustration among them.

The students' growth of skills in playing the educational breakouts also had grown in many of them their competitive spirit. As the time ran out, some teams had succeeded in finding the final key themselves, beating the game - in this case also defeating others. Unfortunately, not every team had the joyous experience of losing. That is why it helped that after every breakout a short debriefing time was allotted between teacher and class to discuss the moments of success and addressing the points where things could have been done in a better way. Throughout the students' participation in the experience, the debriefing stage was their only opportunity for reflection.

Reflections included the addressing of the free-rider problem (e.g. students who reap the benefits of, but do not contribute to, the group's work), which was one of the common complaints among both teacher-facilitators and learners regarding the experience. Furthermore, students reported that they did not fully understand some of the lesson content covered in some of the breakout games and asked to delve it in more depth in class, a request that was granted the following day.

Even with the presence of constraints and a few disgruntled players, most participants remarked positively about the games and wished more hands-on activities such as these. They interjected they wished other subjects undertook a similar initiative.

- *Themes on game elements that facilitates learner engagement*

One of the main objectives of this research is to identify the game elements in the breakout sessions that facilitate learner engagement. Quotations from research participants have been added to provide narrative accounts and to illustrate the themes that emerged from the study. A total of seven game elements for promoting engagement were generated using Clarke and Braun's (2013) six phases of thematic analysis. They were categorized into four categories – context, learner specifics, pedagogy, and representation – because these constructs were the mentioned game elements by Van Staalduinen and de Freitas (2011) in their framework of instructional game design which overlaps with Kapp's (2012, 2016) notion of what makes an effective and engaging learning game.

Category 1: Context

According to participants and GBL researchers (Kapp, 2016; Gee, 2005; Plass et al., 2015; Van Staalduinen & de Freitas, 2011), context is the GBL situation that provides contextual information for the game experience. It connects rules of play, character roles, and incentives. The events that take place advances based on learner choices. The progression in this background is moved by narratives which can take various forms. Usually, it takes on the elements that move the learner from a point of unknown to the point of knowing or realizing new knowledge or relearning prior concepts and even the practice of skills (Kapp, 2012, 2016). Generally, the context takes place in some type of fictional world which will both inform and be shaped by a story.

Theme 1: Story

From the interview I conducted with the participants, "story" came out as a game element that facilitates learner engagement in the breakout boxes activities. According to Student 1, "The backstories hooked me into the games and got me interested in playing them". A number of other participants also provide similar accounts saying the stories made the game more "interesting".

These extracts identify story as the narrative thread that pulls through the game. It adds allurement to it. In fact, in one of my observations, it seems the interactivity in the narrative puts the players in the role of protagonist where learners explicitly enjoy. This is reflective of Kapp's (2012) suggestion that embedding stories to learning games enhances learner experience through interest and engagement. Gee (2003) sees these narratives as a personified encounter that offer a distinct story experience that relate learners to the game. It was also uncovered that actively participating in the game story and feeling being in it was an immersive experience for the participants.

"Actually…the story lalo na yung Harry Potter game (particularly the Harry Potter game) made me feel I was in it, di katulad ng nanuod ka lang nun (as opposed to watching it) or reading it. Lalo kong gustong maglaro nang breakout (It made me want to play breakout more)."

Student 2 compared the breakout setting to a fantasy world, earnestly engaging in the events and surroundings. Kapp (2012) claims it is what the players do in the context of the narrative. For example, when researching about stories in games Dickey (2006) concluded stories offer "a cognitive framework for problem-solving because the narrative storyline in games provides an environment in which players can identify and construct causal patterns which integrates what is known (backstory, environment, rules, etc.) with that which is conjectural yet plausible within the context of the story" (p. 2). In other words, it guides and engages player behavior and thinking. Furthermore, Student 3 mentioned how being immersed in the fictional world of the breakout game can be a liberating experience, "…The idea of being in a different na place…you feel na free ka (you get this sense of freedom) to explore." This quote links back to game context which Gee (2003) claims to be a cause of interest and motivation to learning in games. This is further illustrated by Student 4's comment.

"The game was so much engaging because it used stories na kabalo mi (we know) at gusto namin (and we like)…like the Harry Potter and alien game. Motivated talaga kami maglaro dahil dun. (We were motivated to play because of them)."

Student 4 explained how being immersed in the story can become transferred to gameplay in the breakout game event. This effect created during play arise from the activity within the game system. Like Student 4, Kapp (2012) has found that narrative and interactivity are interrelated concepts in a GBL environment such as breakout boxes. A few participants, however, felt that the learning and fiction components of some of the breakout experiences were disconnected. For example, Teacher 1 recommended "incorporating more lessons into the plot." This suggestion is aligned with research (Kapp, 2016; Gee 2005; Van Staalduinen & de Freitas, 2011). According to Kapp (2016), educational games that employ integration of game world structure and core game mechanics with learning content can increase motivation and learning performance. In any case, it could be learned that the connection between learning

material and the game scope would benefit players' engagement and perceptively learning as well.

Category 2: Learner Specifics

While many GBL literature (Kapp, 2012, Dondlinger, 2007, Van Staalduinen & de Freitas, 2011) were referenced to gain intuitiveness on the context of learner specifics, this study defines it as gameplay, which covers the game's rules and players' identity in the experience.

Theme 1: Rules

Rules was the theme that spontaneously emerged from the discussions and interviews as participants mentioned their breakout experiences in relation to regulations in the breakout game. They are defined by experts (Kapp, 2012; Van Staalduinen & de Freitas, 2011; Plass et al., 2015) as objectives, tasks and, challenges that involve what a player must do to progress or win in the game and indicators of what is allowed in the game. These rules, Kapp (2016) claims, are also part of a game's engaging elements. They guide them to the goals of the event. Student 2 declared, "The clear goals give us a direction in playing." Here Student 2 explains that breakout games have objectives that involve working with other people to reach a specific goal. Student 5 also adds,

"Um…well if you have nothing to work towards or kung way goal (if there is no goal), anong point sa paglaro? (what's the point of playing?) Meron dapat (There should be) drive to play and continue playing the game."

In this extract, Student 5 discussed how goals are important to get learners invested in a game. It is something that motivates them to keep playing. In the case of breakout boxes, it is the effort to unlock the box and finish the game. Student 6 hitched on this and replied that the breakout goals were effective because they were clearly set in with smaller goals.

"In the game there is one main goal, and there is just that one goal, ehm, and you do the smaller goals of solving puzzles. Sometimes you enjoy them because they are fun and easy, then makalimutan mo (you forget) but when you remember "Oh my god, wala na akong oras" (I have no more time)."

Without clear goals, players are left without an effective means by which to judge their performance on a scale. It is in my observation that the lucidity of the goals of the breakouts steer the overarching task performance of a learner. This supports Plass et al.'s (2015) argument that having an understandable goal can help with player enjoyment. In addition, having smaller goals as part of a larger goal, as stated by Student 6, is also supported by past literature as this gradual revealing of goal hierarchies is often used in engaging games where player is given new tasks or quests after completion of the previous one (Gee, 2003; 2005). Thus, suggesting that the structure of goals within game rules is crucial to engagement.

Aside from goals, having rules also allows learners to have a consistent experience and provides clear guidelines and parameters for learning. As Student 3 declares in his breakout experience,

"The rules of the game were not that strict. Di rin sila ganun kaloose (They are not that loose too). But the thing with rules sa (in) breakout boxes is the game also has to obey its own rules. When you open the small box, it must contain the things to help us open the main box. Consistent ito (This is consistent) all throughout."

This degree of clarity helps make games engaging because so much is known about the breakout game after a few sessions. As what Student 4 expressed, "The rules were easy to follow." In an engaging game-type experience, Kapp (2012; 2016) states that the ability to pre-plan, carefully consider moves and run through probable what-if scenarios provides a unique and engaging experience rarely found outside of a game space. Student 7 clarifies this in his sharing that the breakout rules were "fixed and repeatable which allow for replay and re-thinking of strategies and approaches." "Mas maganahan kami sa next game (We will be more motivated in the next game)", commented Student 8 on the response.

It is also necessary to distinguish that because educational games have a learning piece, the implementation of goals and rules are more complicated than that of those in the entertainment industry (Plass et al., 2015; Quian & Clark, 2016; Stewart, 2019 [72]. One example is a participant who didn't understand a section of a lesson was uncertain about goals and rules requiring recall of said lesson. Comprehension of learning content may be needed to establish clarity and certainty. Perhaps, more research is needed to affirm this.

Theme 2: Role-play

Games invites players to reimagine themselves as different persons within the game context. It gives them the desire to feel creative and explore something normally considered as out of this world or unrealistic. In this regard, the theme of "role-play" emerged through the FGDs and interviews as a positive experience which allowed the learners to experience a new different world. Student 9 confessed, "The enjoyment of pretending or imagining can be freeing." This level of customization and personalization in the breakout boxes was an opportunity to create own experience within the games. Kapp (2012) argues this

imagination in gameplay cultivates creativity, innovation, and engagement. In accordance to GBL researches (Kapp 2012; Gee, 2003; Plass et al.; Squire, 2011), the new identity appeals to the human trait of forming self-concept which affects learning, self-esteem, and satisfaction. For example, Student 2 during the FGD commented, "Because I was acting as a character sa (in the) story, the game became more interesting and mas nakarelate ako (I was able to relate to it)." This experience was further enhanced by other learners' perceptions that playing as somebody else in the breakout sessions were fun, regardless of the context and theme.

"Masaya magdetective-detective (It's fun playing the role of a detective)…pati na rin sa pagiging student ng Hogwarts (as well as being a student of Hogwarts). They add flavor sa (in the) breakout." (Student 4)

"It doesn't matter if you are a detective or a spy, it is definitely fun playing a character in a game." (Student 3)

Making learners personally involved and responsible within the narrative through role-play was observed to put more value a breakout experience since they now have a character that needs to make it through to the end, and along the way, they may intentionally or unintentionally learn something as well. Imagining an identity through role-play is similar to clear goals and rules. Studies (Plass et al., 2015; Eukel and Frenz-Cernusca, 2017; Hermanns et al., 2018) suggest games, especially those in the education sector, have concrete methods of identity implementation. Student 7 markedly mentioned, "It would be good to have a specific character to play." It also echoed Teacher 2's response of having "distinguishing variations" in the role-play experience. This may refer to rather than fulfilling a general role of detective work, learners prefer to have a more unique identification different from other groups or their peers. Gee (2005) and Squire (2011) refer to a more visible character to evoke a greater differentiated identity. Although, it should be indicated that there is an absence of literature regarding this differentiation in the element of role-play and its effect on engagement. Possibly, this gap is because games are automatically assumed to have built-in roles for players to identify themselves with (Kapp, 2012) like escape games (Nicholson, 2018).

Category 3: Pedagogy

Pedagogy is a construct of opportunities embedded in the game story and mechanics for self-regulated learning during gameplay where, to Kapp (2016) and Plass et al. (2015), players carry out strategies of goal-setting, goal monitoring, and assessment of strategies used to achieve the goal. The game design allows graceful failure where it invites risk-taking and exploration as well as freedom to interact both with the game environment and co-players. In other terms, when learners play games, they are absorbing and applying knowledge voluntarily. Games allow for experimentation and choice and emphasize problem solving and creativity within the game and group space (Gee, 2003).

Theme 1: Failure

There was another theme that emerged for engaging play in breakout boxes. Specifically, the freedom to "fail" was listed as both fun and meaningful. Learners were observed to be engaged interdependently and autonomously experimenting with the breakout game mechanics of solving puzzles and unlocking locks while exploring the game world with the different props and clues spread and arranged around the classroom despite the number of tries. This was particularly clear from the discussion in the FGDs.

"There was no penalty for failing. You can try and try until you open the boxes." (Student 3)

"Lahat kami sa group (Everyone in the group) thought of ways to solve the riddles and puzzles at di kami takot magkamali (we were not afraid to fail)." (Student 10)

"Ron, my teammate, had many ideas ways to solve for the clues. Tinry namin lahat (We tried it all)." (Student 11)

The accounts profess a fresh perspective on failure. When there is a disconnect between the goals of a learner and the goals of a game (e.g. opening a number lock), it is a mistake to automatically assume there is a problem. Simply because a learner does not succeed, as defined by the game design, at a given task may not mean they failed. Rather, the performance may be the result of the way the learner chooses to engage with the task. Teacher 1 mentioned this new concept on failing to be "a unique space for growth".

When failing the game's challenge, the learner discovers a deficiency in their ability or approach. Although having little importance outside the breakout scenario, these deficiencies, like all inadequacies, are unpleasant to discover. Ironically, he or she is never required to explore these personal inadequacies as they relate to a skill set they would never need had they not do the challenges. Student 1 stated in the FGD, we had never played games like the breakout boxes before. Yung puzzles lisod siya (they're hard), pero di siya impossible (but they're not impossible). Naa na sa game kung paano siya isolve (The game already has what is needed to solve them).

The extract reveals what breakout boxes or any other games do. They promise players the capacity to repair shortcomings that they produce in the first place. Given this, Plass et al. (2015) expounds the encouragement of exploring and experimenting in games promotes failure as part of the game framework and is an expected and necessary step in the learning process and engagement to the game. Through them, feelings of control are shared; thus, giving confidence and motivation to explore and experiment (Gee, 2005; Kapp, 2016). Additionally, Quian & Clark (2016) found that learners who are engaged tend to explore more of an instructional technology to satisfy their curiosity. In relation to this, Student 1 shared, "Solving the locks especially the number lock and directional looked easy but it needed a deeper level of thinking to unlock them. So me and my other groupmates were deeply involved in discussion to know what we don't know about them."

Convincingly, this level of commitment only occurs if failure is not just regarded as an option but is encouraged as part of the breakout experience. Games pose problems, and as students attempt to solve them, they identify gaps in their knowledge and begin to develop strategies and try them numerous times until they overcome the challenge. As one other learner confessed, "I can try a hundred times in the game and still have a chance to win.".

Theme 2: Social Features

Interaction among learners in the game world is another element embedded in breakout boxes. Unsurprisingly, this social feature emerged as an important theme. The social dimension of the breakout games surfaced in the discussions and interviews and appeared to be an important source of enjoyment and motivation to play the breakouts. This is also expressed in Student 2's remark,"…the breakouts kind of let you build friendship in your group…the game always require you to group with people to complete a task." Here Student 2 describes his experience in the breakout session. His experience relies heavily on teamwork to successfully accomplish a challenge. This interaction is typically measured on how involved a learner gets and how he or she relate with his or her co-learners. This for Kapp (2012) and Gee (2003) is a way for playful activities to provide positive classroom culture that affords low-stakes competition to build collaboration skills. Like Student 2, Student 5 also gave an account on how playing collaboratively and helpfully in a group made him feel comfortable and made the breakout game an enjoyable learning experience.

"The game was fun and you learn at the same time…masking lahi lahi mi ug task sa group (even when we had different tasks in the group), tanan mi nagcooperate (all of us cooperated) and learned from each other and to solve the puzzles and break out." This statement comes in agreement with research by Plass et al. (2015) that social activities in games are dependent on trust and cooperation. This collaborative component is what learners need to accomplish goals in the play process of playful events like breakout boxes. On a related note, learners' knowledge of the competencies of other groups, and their awareness of task-relevant skills were important when playing socially, particularly in the competitive side of the breakout games. Awareness of these factors was associated with the enjoyment and thrill of social gaming in breakout boxes. Student 10 mentions,

"The thrill of competing with other groups especially when you know they are slightly ahead sa time (in time)."

The idea of collective competence in a breakout game's cooperative gameplay was also described by Student 12.

"When playing the breakout boxes with my group and against sa iba (other groups), I have had some of the most memorable experiences of my life. The class had an amazing time."

This purposeful experience appears to be largely characteristic of engaging individual experience, but one which is enhanced by the presence of others in gameplay. Regardless, Plass et al. (2015) continues, the social design feature builds opportunities for social factors to positively influence the creation of meaningful, socially supported learning contexts. The analysis of the focus group data also suggested that playing the breakout games heightened a sense of social belonging in groups. Pertaining to one of the breakout classes, Student 6 noted, "I felt I was needed by my group sa mga breakouts (in the breakouts)." This is also in line with what Kapp (2012) preaches as what games provide as socially benefiting. They encompass the desire to feel valued by teammates, not to let someone down, to interact with peers. As with action, this sociality generates an emotional response. "It brought a bonding experience in the learner groups," one teacher confessed. Gee (2003) spells out that emotions, like that of the participant's confession, parent interest. Overall, the participants' response was positive. Learners overwhelmingly preferred it to a traditional assessment, despite the activity being scored just like a test. Some commented that the activity sparked some friendly competition in an unintimidating environment and created motivational investment into the process of learning while reviewing content.

Category 4: Representation

Kapp (2016) refers representation to the aesthetic design that constitutes the information depiction of the learning context in the game. In GBL, its focus is on visual and audio alignment with educational gaming and its narrative context. Ignoring aesthetics in the creation of a learning game or any game in general reduces the overall experience of the players. The space in which the game is played, Plass et al. (2015) clarifies, becomes boring without aesthetics representing the game world. Other researchers (Gupta & Kim, 2014; Squire, 2011; Bell, 2018) agree with this argument and add if an immersive and engaging educational game is desired, effective representations are required.

Theme 1: Visuals

Another theme identified were the visuals of the breakout boxes. These pertains to the visual aesthetic design which includes visible elements that represent the overall look and feel of a game. A statement from Teacher 3 spelled out, "The props are critical for making sense of the game experience." They not only communicate educational concepts and enable players to see patterns in the gaming process, but also shape and reshape various game elements which affects choice and engagement in gameplay. Visuals are a huge part of the game play experience. If the game doesn't look appealing, then players won't want to play even if the game has a great game goal and rules. (Gupta & Kim, 2014; Squire, 2011). It was clear there were breakout games that appealed to learners while there were others that did not. This was observed to be because of the class' inclination and fondness of the breakout's story and backdrops. It is important to consider that the learners' preference plays a huge role in what the learners favor to see in the game aesthetics. Student 7 for example, talks about her favorite breakout game, the zombie-themed breakout box.

"I-I think it's because I love zombie movies like ung (the) Walking Dead at (and) Zombieland… whenever I see a game that has that kind of style I-I simply love it like… and I think it makes-it makes me more want to play it."

In this extract, Student 7 talks about how her preference for this type of visual is linked to her interest in the breakouts. Alternatively, Student 11 also talked about how he enjoys the breakout game that was Harry Potter-inspired.

"I have watched all the Harry Potter movies. Di ko nabasa yung mga libro (I haven't read the books), but I am a big fan of Harry Potter. That is why I enjoyed the break out game na may Harry Potter theme at props (that had the Harry Potter theme and props) more than the others."

In this citation, Student 7 talks about how he generally enjoyed the Harry Potter-themed breakout game and the visuals that came along with it. His preference was simply because he was a fan of the movies, but it contributed to his positive experience with the breakout game. Gupta & Kim (2014) supports this in their argument that the visual experience is similar to being pulled out of one's subjectivity into a web of relations that demand attention. This aesthetic understanding depends on the notion of play through participation, which is crucial for learners in deciphering the ways in the breakout world. Student 1 identified, "I was pulled in by the visual clues that guided my group to solving the puzzles to break in the main box." He continued and specified the "Daily Prophet" and "Quidditch tickets" made him feel "being part of the story" and motivated him to advance through the Harry Potter-themed breakout. This asserts experts' (Kapp 2012; Gee 2003; Gupta & Kim, 2014; Squire, 2011) claim aesthetic elements, especially visual representations, foster emotional content and strategies that provide significant learning experiences and make the activity immersive, meaningful, and transformative.

Theme 2: Music

The final theme refers to music. It equipped the breakout games with background sounds and song effects. This is equally important when compared to visuals in creating atmosphere. Participants mentioned this game design feature as an integral part of their engagement with the breakout boxes as Teacher 3 indicated, "It livened up the classroom and is useful for helping learners feel a sense of suspense and urgency." The music fostered fun and gameplay in the breakout game events. GBL experts refer to this as capturing the subjective experience (Gupta & Kim, 2014) and invoking emotional response (Plass et al., 2015) from players. This can be captured by the detail below.

"hmm, um, I quite like the eerie sounds, like say you are in a different environment, and you are outside, that realistic say, wind sound or like birds or something, I quite like that, because I think it's immersive. Ehm, and, I mean you parang nasa isang room ka tapos kayo ng group mo natrap (it's like you're with your group trapped in a room) or something and you have to, creepy sound, I think it's important. Because it gives you that tone sa (in the) game." (Student 10)

Furthermore, Student 10 argued that sounds do not necessarily have to be realistic, but should give you a feeling fascination in the breakout experience. This is agreed upon by Student 2.

"Alam ko di siya totoo (I know it's not real). Because if I'm in like some like alien setting, it

might not be realistic at all, it might be the noise of a UFO or something like that which is obviously hindi totoo (not true) and does not exist sa (in the) real world. But it makes me imagine it."

The game's allurement was also touched upon by Student 2, who argued that sounds are important for immersion. Teacher 2 backed this claim of music's motivational influence in his narrative, "The sound effect sparked interest and inspired the learners to put a lot of effort to breaking out." This absorption to the game brought about by the music feature of breakout boxes is a picture of engagement of learners and was observed in many of the breakout sessions. Kapp (2012) clarifies that this aesthetic element of a game "motivates the player, impacting his or her critical thinking skills and emotions towards solving the game's problems" (p.625). Thus, background music is an important design feature in the breakout boxes and enhanced game play. Since breakout games aim at establishing a playful, enjoyable form of learning, background music can be conceptualized as a source of motivation to play and learn.

- Themes on perceptions and perceived value of their educational breakout experience

This portion provides a narrative of themes constructed from the analysis of data to address the second and last research question on the perceptions and perceived value of the educational breakout activity. Three themes emerged from the teachers' and learners' responses using Clarke and Braun's (2013) thematic analysis process.

Value Themes	Description
Engagement	It is the involvement in the learning and game contexts of the breakout experience.
Skills	It refers to the skills not specific to the subject, but more interdisciplinary.
Adaptability	It pertains to the reprogrammable resources and suitability of the breakout game.

Figure 3: Description of emerging theme on perceptions and perceived value

Theme 1: Engagement

Engagement during game playing was cited as a perceived value of the breakout games done in the discussions. The teachers observed that all or most of the learners were enthusiastic. This was the case for learners playing breakout boxes. According to the teachers, the high level of engagement is shown in the effort learners put into playing the game; they show perseverance and sometimes pride when opening a box.

"I see how enthusiastic they get when they play breakout boxes." (Teacher 1)

"They become proud of themselves when they successful open a lock." (Teacher 2)

"The puzzles were hard at times, but they are willing to overcome them because they feel it is important to finish the game." (Teacher 3)

In this interesting case, teachers observed that learners generally were willing to invest time in playing these games. Student 3 eagerly mentioned this in his account. He admitted that he was not an expert in puzzle games; however, the breakout boxes were engagingly challenging. Evidently, the game has enticed his curiosity to play in all sessions. He felt a sense of accomplishment and intellectual stimulation when he succeeded in finishing the game. In his own words,

"I could not express my feelings; I am very happy that I managed to win in most of the breakout games."

Many learners share the same feeling from the breakout challenges. Student 12 held; "I learned from the article breakout. It was a positive experience for me when I solved the puzzles together with my classmates". Another student (Student 10) reiterated, "Etong (This) breakout experience has provided me with the opportunity to reflect on it…Pagkatapos ng isang laro, isipin namin paano manalo sa the next game (After a game, we'll think on how to win the next one)." Action in breakout boxes drew the learners in the activity and promoted further engagement. It was a fun way for the participants to be involved and go deeper in the game while reviewing and applying their knowledge of course concepts in their Oral Communication classes. Another student (Student 7) claimed that the breakout games has helped him with his assignment. Similarly, Student 11 stated that, "This is a fun way to assess us if naa mi nasabtan sa klase (we had learned something from class).". Learners stated the experience allowed them to "think outside of the box". One learner (Student 1) even mentioned, "In the Functions of Communication breakout game where we solved for the directional lock, we used our knowledge and succeeded in opening it. This was the most fun." Several of the participants including one of the teachers (Teacher 1) said, "It was challenging for the students but in a positive

way". The theme of engagement that stood out in the quotes takes into consideration the idea of considering breakout boxes for learning and classroom use as Nicholson (2018) and Kaminske (2018) considers novel approaches to engage learner in knowledge review and reinforcement. This engagement goes hand in hand with Plass et al.'s (2015) view on the cognitive engagement aspect of educational games where it provides learners opportunities to practice existing learnings and cognitive skills for automation. The finding also supports Gee's (2005) claim that games such as breakout boxes are good at engaging learners in such a way that they give them lots of practice of concepts at an experiential level. He also mentioned in the literature which Kapp (2012) supports that educational games can, as well, at helping learners to form non-cognitive skills like collaborating with peers and solving problems in a thoughtful and strategic practice.

As much as breakout boxes can be seen as engaging learning technology, it must also be taken into notice that some learners and teachers stated that a minority did not like games or that enthusiasm decreased after the first sessions. They mentioned various reasons for disengagement during game playing, such as technical difficulties (e.g. broken locks) that frustrated students and students who did not like the readings (e.g. red herrings) connected to the game.

Despite these, the gamified approach of the breakouts engages many learners and helps them review lessons and use soft skills during gameplay. These skills are relevant, DepEd asserts, in the 21st century workplace and the information age. They are also motivated by the clear goal they are asked to work toward and by the engaging design for achieving that goal. In addition, the sessions address the issue of varying skill levels by enabling teacher-facilitators to gauge student understanding and allowing students to rise to the level of challenge they are ready for. Offering clues of varying difficulty allows students to work on the clues they are comfortable with and learn from their peers who may have different strengths or broader research skills. This scenario is also a circumstance of learning that Jesuit education preaches when it comes to opportunities for growth in the intellectual, social, and affective dimensions of a whole person. The games then provide a simple and beneficial instructional framework that makes learning more interactive, collaborative, and engaging.

Theme 2: Skills

The FGDs and interviews also emphasized the learning and practice of general skills in playing the breakout boxes. Collaborative skills were mentioned most frequently.

"I learned the value of teamwork in the breakout games." (Student 4)

"As a group, we try and try again in solving the riddles, and opening locks. We also try very hard to do these together while not asking hints from the teacher." (Student 7)

"Each member communicated with each other by giving updates on the solving the locks. Kung di masabtan at masolve ang isang puzzle (If we could not understand or solve a puzzle), we ask and collaborate with another member." (Student 9)

The breakout sessions encourage learners to collaborate and teachers reported them doing this too.

"Learners were talking with their group and shared what they thought about the clues." (Teacher 1)

"It was interesting to see learners discuss and be involved sa (in the) breakout process." (Teacher 2)

"When one member of the group solved a puzzle, he or she made sure his or her team knew." (Teacher 3)

When learners are deeply engaged and work incredibly hard in the breakout classes, along the way they are developing skills like collaboration. At the same time, it is inherent in collaboration, the practice of communication and problem-solving skills. Teacher 3 added, "Breakout boxes challenges students to communicate and think creatively to solve problems." This is bolstered by a learner's concession (Student 2) which disclosed, "We all combined our skills sa pagnaanalyze ng clues (in analyzing the clues) and asked help from each other lalo na sa puzzles (especially in puzzles) that required a specific skill." This quote also reports learners putting value on the opportunity to collaborate in these games. This ability was articulated further when a learner (Student 3) reported her most memorable breakout experience, "The most memorable and fun was the members working together to achieve the same goal."

These extracts show that learners appreciate playing breakout games. Some value working with practical tasks, some value being able to collaborate with peers, others enjoy being able to move around the room while some enjoy complex thinking tasks. Elements seen in the findings draw clear parallels to 21st century skills, most of which can be seen in the school's curriculum. The engagement to practice these skills in game settings, Kapp (2016, 2012) noted, ramp up learner performance, mastery, and acquisition of such skills. Classes that implement educational breakouts delivers lasting results in an unforgettable winning experience (Clarke et al.,

2017). Although, some participants revealed that their groups had experiences of "not winning" in some of the breakout sessions which left them frustrated.

Nevertheless, this study's FGD and interview sessions suggested that the breakouts have helped learners, mostly in the development of their interpersonal and social skills. They have appraised the games for it. The extracts also suggest that the games have brought significant benefits to students, in terms of their critical thinking and problem-solving skills. They reported that they have helped learners to make evaluative decisions too. At the same time, the findings suggest as well that the students had to use their relational skills as they worked in tandem with their peers. Evidently, the breakout boxes have helped them to improve soft skills that have been deemed necessary by DepEd in 21st century work and life. In addition, the breakout experience also triggered learners' willingness to help each other during the game events which is an opportunity distinctive of Jesuit schooling that aims to integrate not just the intellectual dimension of a learner but also his or her social and affective domains.

Theme 3: Adaptability

Breakout boxes are a great way to add fun into the classroom and help build student excitement for learning. From the teachers' perspective, the activity is so adaptable. And this came out a lot in the interviews. Teacher 1 commented, "It is easily differentiated for classrooms just by reprogramming locks, edit embedded lessons and adjust the objectives to match lessons". He was also quick to point out, "You don't need a lot of money to create a have your own breakout box." In fact, a teacher doesn't need the physical resources needed to make a breakout box, you can actually completely digitize the activity. With a digital breakout, there is no need for the equipment. All that is necessary is a device connected to the Internet (Breakout EDU, n.d.). Teacher 2 also brought up, "This type of game seems applicable for any grade and age level too." The findings are supported by acclamations in literature that the breakout strategy can be used with students at all levels and across content areas (Adams et al., 2018; Clarke et al., 2017)

In the FGDs, a student's remark sides with the teachers' belief of a breakout game's adaptability with his account, "Para sa akua (Personally), I think that pwede siya sa daghang subjects (it fits a lot of subjects)…just think and use a topic from the subject, create a story for it, and the game is good to go" (Student 5). This is also referred to in the review of literature that by building the game around a storyline, it adds, there are endless opportunities to add elements from previously taught lessons (Nicholson, 2018). Though there were also a remark from another learner (Student 1) where he acclaimed a condition, "It can be designed for any subject actually. The only difficulty would be designing the games that incorporate lessons since it is different sa mga (among) subjects." This statement reveals a fact that in order for a breakout game to run smoothly, the teacher must be deliberate about identifying intended outcomes before the session, generating problems and clue sequences to achieve specific learning objectives, and anticipating potential hurdles in order to scaffold instruction to facilitate students' progress through the activity. This is being shed light on in Kapp's (2012) argument that if the teacher is a skilled game designer, then the game would be a success.

When an education professional thinks of the design of these breakout games, the combination of traditional and digital learning resources may provide the right arena for their effectiveness. Therefore, teachers ought to understand the costs and benefits of using ubiquitous technologies as well as traditional tools in a context where relevant skills are increasingly integrated into the games. This suggests that breakout game elements, including boxes, locks and puzzles could support educational goals. Therefore, educators are encouraged to utilize significant resources in the design and creation of breakout boxes or even digital versions of these. This study has indicated that students can acquire relevant skills and competences from these educational games; that may be used in their personal life and in future employment prospects which has been enumerated in the DepEd curriculum. This set of abilities are what learners need to develop in order to succeed in the information age. And along with the practice of these skills, instructors are expected to create a safe environment during the breakouts in which learners can learn from mistakes and wrong turns and develop the capacity to reflect on them which is reflective of a Jesuit practice to learn from doing, failing, and looking back on them to grow.

Conclusion

On elements of the breakout boxes activity that facilitate learner engagement

The findings from the thematic analysis show seven emerging elements and were categorized into four constructs from the adapted framework in the literature namely, context, learner specifics, pedagogy, and representation.

The results highlighted narrative context as a facilitator of learner engagement in the use of educational breakout boxes in an eleventh-grade class during five sessions of their Oral Communications subject. Plass et al. (2015) discloses that narratives provide contextual

information for learners during play where in the gaming experience, it generates their motivation to start playing till completion of the game event. This engagement is contributed by the fictional component the story brings. This component, learners revealed, put them in an imagined role where they solved fictional but realistic problems that are contextual in nature. This is part of the pedagogical construct of the game experience.

Another element significant to the facilitation of learner engagement in the breakout that emerged were the game rules which are learner-specific. These mechanics, which is also termed by Gee (2005) as engines for motivation to play learning tasks in the games, created a patterned behavior among learners where it matched the desired learning and behavioral goals of the breakout boxes. One key behavior that grew out of the findings which contributed to this pattern was interaction with the game. The in-game features such as the immediate engagement with the breakout game's content supported this player-game interaction by lending a situated meaning in players' actions. This is perfectly exemplified by a citation of one learner where the immediate or imminent challenge of discriminating clues and solving clues utilized what he learned from past lessons and breakout experiences in order to move on. Central to this value were the challenges presented in the experience. Kapp (2016) supports the motivating pull well-designed adversities in learning games typifies. In addition, this type of experience merits in itself the freedom to fail and explore. Kapp (2012) expresses this freedom as safely doing something uncertainly and then start over again when wrong with minimal consequences and almost no longer-term negative implications then exploring different approaches to problem-solving.

research participants also highlighted their social encounters, a theme in findings, in the breakout games as a critical factor in their engagement with the activity. It is what attracted them to initiate and engage in the game. Their willingness to constantly look for clues, solve, puzzles, and the feeling of achievement whilst successfully unlocking locks with classmates prompted players to generate value of the breakout game. In the literature, this kind of sociality engages players into embedded learning by pushing them to participate in groups, use collective knowledge to meet goals while feeling being an integral part of a group (Plass et al., 2015). The social feature, a teacher-facilitator confessed, was a natural occurrence in breakouts.

Finally, the games' representation through their aesthetics enhanced the overall experience of learners within the plot of the breakout activities. Some participants mentioned the design of the clues and music played added to the dynamic of the gameplay and set their mood to pursue challenges in the breakout game.

On participants' perceptions and perceived value of educational breakout boxes

The findings indicate that participants perceive the activity as engaging, useful, and adaptable. The main conclusion to be drawn from their reflections is that the novel approach to educational usage in classrooms is not only seen as fun, but also relevant to learners' development within the range of specific pedagogical perspective such as from an Oral Communications teacher and a 21st century educator.

The findings underlined engagement as a perceived value of breakout boxes. In participant sharings, it can be inferred that the fun learning was emphasized as an enabler in a more focused practice of knowledge application and authentic communication of concepts. Furthermore, the participants also revealed that apart from the engagement in games that facilitated learning outcomes on subject content, it also triggered a practice of skills which was perceived as a benefit. Teachers in the study argued breakout games have strong link with 21st century skills stated in the curriculum. This is supported by literature (Clarke et al., 2017) and presupposed that this connection could lead to skill acquisition and mastery through practice within the gamified setting. Also, these games can be adapted to any subject or grade level.

Recommendations

The need for learner-participants to work together to succeed in a time-pressured but fun environment allows students to develop communication skills; it can also reduce the problem of having students who reap the benefits of, but do not contribute to, the group's work, which is one of the common complaints among teachers and learners regarding traditional group-based learning activities. Additionally, breakout boxes provide a platform for bringing technology to the classroom, as websites, videos, or other interactive digital material can easily be incorporated into the various puzzle of the escape activity. Creating puzzles that address the learning objectives and force students to engage with the material instead of just searching for clues requires time and thought. Once the game has been developed though, it can be used repeatedly in successive years. Additionally, this experience may be fully designed and implemented online. With the recent rise of distance learning and virtual learning environments, highly engaging activities like breakout boxes could provide instructors of digital face-to-face courses with an added value capable of increasing students' motivation and getting them back in the meet. Although the initial investment of

time and effort to design and create educational escape rooms is, in principle, notably higher than that of other traditional hands-on learning activities their perceived positive effect on student engagement as well as their ability to be reused in the following years makes it worthwhile. Any implementations of the breakouts, however, should include pilot testing in order to estimate the time required to complete the game and to identify any errors that could prevent successful completion.

Given these further implications, the study intended to contribute to an in-depth knowledge and write-ups of breakout boxes' potential to support teaching and learning across different disciplines. The results may extend the road map for further research, offer new insights to researchers, and provide educators with effective advice and suggestions on how to incorporate breakout boxes into their practice.

Conflict of Interest

There is no conflict of interest by the author in this manuscript.

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