 

**COLLEGE OF INFORMATION TECHNOLOGY EDUCATION**

**STRANGER SHOOTING GAME:**

A Capstone

presented to the

College of Information Technology Education

PHINMA Saint Jude College

In Partial Fulfillment

of the Requirements for the Degree

of Bachelor of Science in Information Technology

by

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**CHAPTER 1**

**The Problem and Its Background**

**Introduction**

In this generation, many people are still playing an arcade. Because the Arcade game has been known to improve cognitive abilities when it comes to skills, with the help of our game and its uniqueness your capability to overcome any level of the stage will increase. Also, the theme and flow of this game will benefit IQ overcome this game.

Stranger things are the theme of the games, it is based on the movie, all the place, the character, the enemy, and also the story of it. The stranger things is a number 1 Netflix series in the past months because of the timeline of the story and all the artists. Stranger things are most famous in the Philippines because of the genre in the movie and also the CGI effect of the movie. All the people are waiting for season 5 the last season that they have. That's the reason why the programmer wants to create a game called Stranger Shooting Game it's inspired by the movie. The programmer is needed to combine the two, the Space Shooter and the Stranger Things to build the Stranger Shooting Game, which has the features just like the Space Shooter that is exactly in the arcade and also has the design just like Stranger Things. The programmer has to combine the two (50/50) in terms of design because the programmer wants to see the user and the design of the two. The programmer wants to help regarding the timing and advanced knowledge when you play the game. The game mechanics focus on increasing the timing and advanced knowledge of the user.

The Stranger Shooting Game has a design that is good in the user's eyes and also the design of the buttons, information, images, and the design of the characters. Stranger Shooting Game has 4 characters, and that user chooses whatever the user wants. The game mechanics of the game, the spaceship of the character has a speed of 5% that's the common movement of the character. The bullets coming from the spaceship have a speed of 20% which makes the enemies destroy and also the enemy has a speed of 5%. The twisted part of the enemies, on every level in the game the specific enemies have a speed of 25% for level 1, level 2 has a speed of 30%, level 3 has a speed of 35%, and lastly for level 4 has a speed of 40%. The programmer wants to test your advanced knowledge and timing for this game by using all the things that the game provided, when the user destroys the specific enemies that have a speed of almost 45%, the score is shown on the scoreboard in the game when the user reaches 30 or 50 scores in every level, it means the user has a capability in advanced knowledge and timing in life. This game is not only for enjoyment and also provides a lesson that can the user do in real life.

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**Conceptual Framework**

- Evaluating the prototype for the game system

- Designing a prototype for the game system

- Identifying the people who are a fan of the movie series Stranger Things and know the game called Space Shooter

**Figure 1.** Conceptual Framework on the Stranger Shooting Game

**Statement of the Problem**

This study aims to design and develop a Stranger Shooter Game.

Specifically, it seeks to answer the following questions:

1. How does the game will work in this generation?
2. What is the process of implementing this game?
3. What are the data requirements of this game?

**Hypothesis**

This study hypothesizes that there is no significant relationship between evaluating the prototype game system in terms of continuing to fully develop the game system.

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**Scope and Limitation**

The scope of this game was implemented by using software which is focused on people who like to play arcade games. Furthermore, we applied the theme of stranger things in this game; Designing is based on the movie.

On the other hand, this study is limited on which the system cannot be accessed if there's no application.

**Significance of the Study**

The accomplishment of this study is significant to the following individuals:

**Fans of Stranger Things.** This study benefits them in terms of experiencing the theme of the series name “Stranger Things” throughout the game.

**Arcade Gamers**. This study benefits them in terms of arcade game entertainment.

**Future Game Developer**. This study can be a useful reference and information for their upcoming game development.

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**Definition of terms**

The following terms are defined operationally to provide a common frame of references:

**Space Invaders** relating to the game (Wikipedia. (n.d). In Wikipedia.com Information <https://en.wikipedia.org/wiki/Space_Invaders>)

**Stranger** relating to the movies series (Merriam-Webster. (n.d.). Stranger. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from <https://www.merriam-webster.com/dictionary/stranger>)

**Arcade Game** a usually coin-operated game design for play at an amusement arcade (Merriam-Webster. (n.d.). Arcade game. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/arcade%20game)

**Game Mechanics** are the rules or ludemes that govern and guide the player’s actions (https://en.wikipedia.org/wiki/Game\_mechanics)

**Advanced** being beyond other in progress or ideas (Merriam-Webster. (n.d.). Advanced. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/advanced)

**Knowledge** the fact or condition of knowing something with familiar gained through experience or association (Merriam-Webster. (n.d.). Knowledge. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/knowledge

**User** the one that uses the characters (Merriam-Webster. (n.d.). User. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from <https://www.merriam-webster.com/dictionary/user>)

**Speed** rate of motion: such as a bullets (Merriam-Webster. (n.d.). Speed. In *Merriam-Webster.com dictionary*. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/speed)

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**Level** measurement of the difference places (Merriam-Webster. (n.d.). Level. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/level)

**Programmer** one that prepares an instructional program (Merriam-Webster. (n.d.). Programmer. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/programmer)

**Design** to conceive and plan out in the mind (Merriam-Webster. (n.d.). Design. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/design)

**Timing** placement or occurrence in time (Merriam-Webster. (n.d.). Timing. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/timing)

**IQ** isa number used to express the apparent relative intelligence of a person (Merriam-Webster. (n.d.). IQ. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/IQ)

**Shooting** the act of shooting a bullet (Merriam-Webster. (n.d.). Shooting. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/shooting)

**People** arehuman beings making up a group or assembly or linked by a common interest (Merriam-Webster. (n.d.). People. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/people)

**Capability** the quality or state of being capable (Merriam-Webster. (n.d.). Capability. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/capability)

**Character** one of the attributes or features that make up and distinguish an individual (Merriam-Webster. (n.d.). Character. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/character)

**Spaceship** isa vehicle used for space travel (Merriam-Webster. (n.d.). Spaceship. In Merriam-Webster.com dictionary. Retrieved September 25, 2022, from https://www.merriam-webster.com/dictionary/spaceship)

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**CHAPTER 2**

**Review of Related Literature**

**Local Literature**

According to Luca Chittaro Gamification and serious games are increasingly employed for attitude change purposes. However, they frequently exploit a limited set of game elements, such as points, badges and leaderboards, and scarcely explore the use of more complex elements that make games engaging. In this paper, we focus on game elements from the arcade genre, and their use in serious games for attitude change. In particular, we propose a serious game for mobile devices that employs arcade game elements for attitude change in aviation safety, and we assess its effects with two different studies. The first study compares the immediate effects of the serious game vs. the traditional approach (safety card), showing that the game is more engaging and can improve attitudes towards aircraft emergencies in terms of users’ self-efficacy and perceived vulnerability to the risk. The second study assesses the effects of the serious game when used over time (1-week) in a naturalistic setting, showing that the game can engage users and increase knowledge about correct and wrong behaviors. In both studies, engagement turned out to play a mediating role that we analyze in detail.

Reference:

Chittaro, L., & Buttussi, F. (2019). Exploring the use of arcade game elements for attitude change: Two studies in the aviation safety domain. *International Journal of Human-Computer Studies*, *127*, 112-123.

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**Foreign Literature**

According to Hamdani A and Kusuma W.A. An important criteria to be considered in the development of games is the game experience. It is directly linked to the difficulty of the game, which can be in the static or dynamic way. Players with different abilities in the same game may not fit in traditional difficulties models. The dynamic difficulty adjustment (DDA) provides a better gameplay, as the challenges in the game fit the player’s abilities. Thus, this work proposes the development of the parameter manipulation technique for dynamically adjusting difficulty, aiming to improve the gaming experience. It is necessary to emphasize that the proposed approach uses probabilistic calculations that will be used in the challenge function. A questionnaire was applied to a sample of students in order to determine whether there were statistically significant differences in the perception of game play, difficulty of the game and desire to play several times with and without the use of the technique. The results showed that the dynamic version was better evaluated regarding game play and appropriate difficulty when compared to easy and hard versions.

Reference:

Hamdani, A., & Kusuma, W. A. (2019). Generation of space shooter level using genetic approach. Jurnal Informatika, 13(1), 1-6.

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**Local Studies**

           These studies talk about Gamification and serious games are increasingly employed for attitude change. However, they exploit a limited set of game elements, such as points and leaderboards. In this paper, we focus on game elements from the arcade genre. We propose a serious game for mobile devices that employs arcade game elements.

**Foreign Studies**

           These studies proposed important criterion to be considered in the development of games is the game experience. Dynamic difficulty adjustment (DDA) provides better gameplay, as the challenges in the game fit the player's abilities. A questionnaire was applied to a sample of students to determine whether there were statistically significant differences in the perception of gameplay.

**Synthesis of Related Literature**

Both local and foreign literature have the same purpose, which is to give the

Users of the game get the best literature information when they play the game. Both pieces of literature have different purpose to gain, but all can improve the user's knowledge of literature.

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**CHAPTER 3**

**The Methodology of the study**

**Research Design**

Quantitative Research is defined as the systematic investigation of phenomena by gathering quantifiable data and performing statistical mathematical or computational techniques. We design the experiment for this research.

**Population and Sample**

**Distribution of Respondents as people who knows the movie series Stranger Things and know the game called Space Shooter**

**Table 1**

|  |  |  |
| --- | --- | --- |
| **Respondent** | **Population** | **Sample** |
| College | 30 | 35 |
| Senior High School | 4 | 35 |
| Junior High School | 1 | 35 |

It is shown in table 1 that there are three (3) types of respondents which is College has thirty (30) respondents, Senior High School has four (4) respondents, and Junior High School has one (1) respondent in the population. The sample has an equivalent of thirty-five (35) total respondents.

 

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**Research Instrument**

The researcher used some instruments the needed those instrument will able to help the researcher to gather data. The researcher used the internet, website, and other information to gather data.

The researcher will to used a survey questionnaire to get more information from 35 peoples who are a fan of Stranger Things and knows the game called Space Shooter.

**Validation of the procedure**

This research was made and proven by us to help and provide enjoyment to the user, especially for the people who are a fan of Stranger Things and knows the Space Shooter.

**Data Gathering Procedure**

These are the process that the researcher to gather data and collects all the information needed.

1. The researcher conducted a research topic.

2. The researcher finds the possible respondent those who are related to the

conducted topic.

3. The researcher finds a place to conduct a survey with their responded.

4. The researcher creates questioner for those people who are related to the

conducted topic

5. The researcher collect all the information and through responded.

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**Statistical Treatment of Data**

The various data that the researcher gathered will be subjected to data presentation, analysis, and interpretation to present the answers of the respondents based on the structured questionnaire that we provide. The following formula will be used:

Percentage: n/N x 100

Solving formula: n =

Where n= frequency

N = number of respondents

n = total respondents

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Questionnaire in Integrative Programming and Technologies

(STANGER SHOOTING GAME)

Researchers:

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Alvarez, Rodcen Manalon, Christian

Jomillo, Dave Berry Marasigan, Baron

Name:\_\_\_\_\_\_\_\_\_\_\_\_ Year:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Age:\_\_\_\_\_\_\_\_\_\_\_\_\_ Course:\_\_\_\_\_\_\_\_\_\_\_\_\_

**Direction:** *Yes or No:* Read the question carefully and write the correct answer before the number.

\_\_\_\_\_\_1. ) Do you know the movie series Stranger Things?

\_\_\_\_\_\_2. ) Do you know all the characters in the movie series?

\_\_\_\_\_\_3. ) Do watch the movie series until the end?

\_\_\_\_\_\_4. ) Are you waiting for season 5?

\_\_\_\_\_\_5. ) Do you like all the characters?

\_\_\_\_\_\_6. ) Do you hear the soundtrack in the movie series?

\_\_\_\_\_\_7. ) Are you familiar with the game called Space Shooter?

\_\_\_\_\_\_8. ) Have you played the game Space Shooter?

\_\_\_\_\_\_9. ) Are you enjoying playing the game Space Shooter?

\_\_\_\_\_\_10. ) Do you think the game Space Shooter is enjoyable?

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**CHAPTER 4**

**Presentation, Analysis, and Interpretation of Data**

This chapter represents the analysis and interpretation of the data gathered from the people who are a fan of stranger things and know the game Space Shooter which aimed to determine the existence of the movie and the game. The data found in this chapter were arranged according to the knowledge of a fan using the instrument of the survey.

**Sub-problem No. 1** Do you know the movie series Stranger Things?

**Table 2**

**Peoples know the movie series Stranger Things.**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 28 | 80% |
| No | 7 | 20% |
| **Total** | 35 | 100% |

In table 2, twenty-eight (28) answered yes, and seven (7) answered no. Many of our respondents choose yes because most people know the series Stranger Things and they are familiar with it.

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**Sub-problem No. 2** Do you know all the characters in the movie series?

**Table 3**

**Peoples know all the characters in the movie series**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 16 | 45.71% |
| No | 19 | 54.28% |
| **Total** | 35 | 100% |

In table 3, sixteen (16) answered yes, and nineteen (19) answered no. Many of our respondents choose no because most people who watched don’t know all the characters in the movie series.

**Sub-problem No. 3** Do watch the movie series until the end?

**Table 4**

**People who watched the movie series until the end**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 18 | 51.42% |
| No | 17 | 48.57% |
| **Total** | 35 | 100% |

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In table 4, eighteen (18) answered yes, and seventeen (17) answered no. Many of our respondents choose yes because most people who watched the movie series until the end.

**Sub-problem No. 4** Are you waiting for season 5?

**Table 5**

**People who wait for season 5**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 21 | 60% |
| No | 14 | 40% |
| **Total** | 35 | 100% |

In table 5, twenty-one (21) answered yes, and fourteen (14) answered no. Many of our respondents choose yes because most people are waiting for season 5

**Sub-problem No. 5** Do you like all the characters?

**Table 6**

**People who like all the characters**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 20 | 57.14% |
| No | 15 | 42.85% |
| **Total** | 35 | 100% |

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In table 6, twenty (20) answered yes, and fifteen (15) answered no. Many of our respondents choose yes because most people are like all the characters.

**Sub-problem No. 6** Do you hear the soundtrack in the movie series?

**Table 7**

**People who heard the soundtrack in the movie series**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 21 | 60% |
| No | 14 | 40% |
| **Total** | 35 | 100% |

In table 7, twenty-one (21) answered yes, and fourteen (14) answered no. Many of our respondents choose yes because most people are heard the soundtrack and enjoy it.

**Sub-problem No. 7** Are you familiar with the game called Space Shooter?

**Table 8**

**People who are familiar with the game called Space Shooter**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 26 | 74.28% |
| No | 9 | 25.71% |
| **Total** | 35 | 100% |

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As figure 8, twenty-six (26) answered yes, and nineteen (19) answered no. Many of our respondents choose yes because most people know the game is called Space Shooter.

**Sub-problem No. 8** Have you played the game Space Shooter?

**Table 9**

**People who already played the game Space Shooter**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 20 | 57.14% |
| No | 15 | 42.85% |
| **Total** | 35 | 100% |

In table 9, twenty (20) answered yes, and fifteen (15) answered no. Many of our respondents choose yes because most people are already playing the game called Space Shooter.

**Sub-problem No. 9** Are you enjoying playing the game Space Shooter?

**Table 10**

**People who are enjoying playing the game Space Shooter**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 24 | 68.57% |
| No | 11 | 31.42% |
| **Total** | 35 | 100% |

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In table 10, twenty-four (24) answered yes, and eleven (11) answered no. Many of our respondents choose yes because most people are enjoying playing the game Space Shooter.

**Sub-problem No. 10** Are you enjoying playing the game Space Shooter?

**Table 11**

**People who think that Space Shooter is enjoyable**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Frequency** | **Percentage** |
| Yes | 31 | 88.57% |
| No | 4 | 11.42% |
| **Total** | 35 | 100% |

In table 11, thirty-one (31) answered yes, and four (4) answered no. Many of our respondents choose yes because most people think that Space Shooter is enjoyable

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**CHAPTER 5**

**Summary, Conclusion, and Recommendation**

**5.1 Summary**

The research was built for the purpose of the game Stranger Shooting Game, in the people who know the movie series Stranger Things and the game called Space Shooter. The experimental method used in this research and the instrument of a survey by used to gather the data from the respondents, and analyze it by using a formulation. The questions survey was created into 10 questions and every question has connected to the research topic.

**5.1 Conclusion**

This research investigated people who are fans of the movie series Stranger Things and know the game is called Space Shooter. This study is being conducted to examine if the fans of the movie series Stranger Things understand what it is called and how they heard about it. Creating a Space Shooter Game helps the user to increase their timing and advanced knowledge in life regarding Space Shooters and tests how advanced they are with their technological knowledge. The participants were also interviewed to understand their role in the Space Shooter game and how it relates to them in life. Helping the game used to create and customize a Space Shooter game, which in my understanding of the results should increase their knowledge regarding Space Shooters and advance the user's timing and understanding in the Space Shooter industry.

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**5.1 Recommendation**

This research can be further improved by having more respondents sign up to

Join the survey. Besides that, there should be an initial assessment regarding a certain form of knowledge for example timing for the bullets is related to advanced knowledge before having them go play the game

a. The user manages to overcome all the levels inside the game.

b. The user analysis every movement of enemies and the bullets.

c. The user must be selecting their comfortable character to overcome any level.

d. The user must be enjoyed themselves while they playing the game.

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