**CAPSTONE PROJECT**

**DAGOHOY’S REVOLT: A 3D EDUCATIONAL GAME FOR ELEMENTARY PUPILS**

**GROUP 2**

**SECRET CLASS**

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M-F 10:30-12:00

**Chapter I**

**Introduction**

**Project Context**

Francisco Dagohoy led the most prolonged rebellion against the Spaniards in Philippine history, which was carried out for 85 years from 1744-1829. There are several recorded reasons as to why the revolt rose. One of them being forced labor which caused havoc in several lives involved. Yet, the primary basis of the uprising against the Spaniard's authorities based in Bohol is the refusal of a Jesuit priest to give a Christian burial to the brother of Dagohoy. The heavy strings of events that Dagohoy carried pushed him to make a vow to his brother about his wrongdoings. Dagohoy inspired his comrades to carry on the revolution against the injustice of the Spaniards that set the lives of the many into hardship. What Dagohoy did is one of the significant contributions against turning down the oppressive authority of the Spaniards before.

Despite the revolutionary act of Dagohoy, it remains unknown to numerous Filipinos and students, which makes the noble effort of Dagohoy unrecognized. Incorporating it into the lesson plan isn't serving enough to leave a mark on students, like other revolutionaries, due to the lack of ways to narrate it to the class effectively. Hence, intertwining it to something modern can be an efficient way for individuals to know the story of Dagohoy.

Educational games are innovative and modern ways to encourage learners to accumulate needed knowledge they have difficulty mastering. It stimulates the user's minds extensively while having fun. Furthermore, it also serves as a channel to deliver a specific topic without any burden due to the fun factor. It gives the users a chance to enhance their knowledge by learning through play. Hence, narrating Dagohoy's revolt into an educational game is believed to be an efficient way of re-telling his noble ways of serving the nation, which is significant to give honor.

Furthermore, the educational game will be delivered in a three-dimensional form to encourage a larger group of users that can benefit from the game itself. The way the game is built is modernized, which can successfully cater to the twenty-first-century learners as it will not bore them. The unique username interface of the game also serves as the factor to persuade a large group of technology users to utilize the game.

The researchers aim to thoroughly narrate the story of Dagohoy's revolt to the youth by incorporating it into a three-dimensional educational game with a novel user interface. This game is created to educate the users and set a reminder that learning can be done entertainingly. Dagohoy's revolt is a necessary part of history that should be continuously passed onto the next generation to remind the importance of fighting back against oppression.

**Rationale**

Heroes are the people who bravely fought and sacrificed for the freedom of the nation. They are the people doing heroic in history and recognized by many immeasurable people in the country. Moreover, they made significant positive contributions to the expansion and development of society and represented all folks.

Nowadays, there are countless unsung heroes in the Philippines. Hence, Francisco Dagohoy and these people whose courage and deeds deserve the same recognition level as Jose Rizal, Andres Bonifacio, and other heroes whom the young Pilipino acknowledge in the aspect of heroism. Much has been said about our national heroes, but not many stories have been written about heroes from provinces who did their best to defend their turf against foreign rule (De Guzman, 2019).

Considering, (mga heroes daw need ug recognition. Pero nganu ang problem is nay uban heroes local or sa provincial heroes is wala na ma recognize karon. The boholanoes young children wala naka identify sa mga heroes ari sa atung province. That is why we need a way to help the young children remember and identify the hero who once fought for the freedom of the people. The young children nowadays been

Playing games online ,

Put into other things that the student learn and enjoy

Which is why

(SUMPAYAN PA)

**Purpose**

The purpose of this project was to develop a user-friendly and effective application that enables the pupils to easily and quickly view the information that examines their comprehension of History. It would also give them interesting and exciting ways and would be able to establish a deeper appreciation of the story about Dagohoy's Revolt. Moreover, this project creates an alternate method of learning Dagohoy's Revolt of every pupil throughout this school year's new normal.

This project focused on checking the students' understanding skills and improving the traditional way- the paper-based learning system that the pupils prompt in many schools and departments. Therefore, the researchers aimed to enhance pupil's awareness using a 3D (Three Dimension) Educational game while making it entertaining for the pupils to study.

**Objectives**

General Objectives:

The main objective of this project is to design and develop a 3D (Three dimensions) Educational game for the Grade 6 Elementary pupils while aiming to provide a convenient way for the pupils to learn Dagohoy’s Revolt history.

Specific Objective:

* To create a game that will have a campaign/story mode that tells the story of Francisco Dagohoy’s Revolt.
* To create a game playable for PC and Mobile devices
* To provide a game that can play through online and offline.
* To create a website that contains the download page and trailer of the game.
* To provide an unlimited time for the pupils to play
* To provide an entertaining way to learn
* To reduce the time and effort involved in studying Dagohoy’s Revolt
* To provide accurate Dagohoy’s Revolt history
* To provide a

**Significance of the Study**

The study aims to support Dagohoy’s Revolt: A 3D Educational Game, which might help the pupils enhance their comprehension of Dagohoy’s Revolt. Thus, after a systematic gathering of the data, this study could be beneficial to the following:

* **To the Principal**. The result of this study would lead and serve as a basis for them to implement an effective methodology that would enhance the performance of the pupils.
* **To the Teachers**. This study would provide effective strategies for enhancing the pupil's comprehension skills in a game-based way. It also serves as their guide to obtain a more effective and efficient way of teaching stories.

* **To the Pupils.**This would help them improve their comprehension of History as well as their understanding skills. It would also give them interesting and exciting ways and would be able to establish a deeper appreciation of the story about Dagohoy's Revolt.
* **To the Parents and Community.** This study would encourage and educate the community, especially the parents, to support the teachers and their learners in achieving collaborative and meaningful teaching and learning process.

* **Future Researchers.**

This study would help them build their ground on how to start and develop a 3D Educational game. It will serve as a guide and reference for those interested in conducting the same study. It will give them ideas on what concept and gameplay to apply to their project.

**Scope and Limitations**

**Scope:**

This project developed an educational game about Dagohoy’s Revolt via 3D (Three dimension) game engine. A mobile and pc application for the pupils was developed for the purpose of easy learning and knowing about Dagohoy’s Revolt and be played anytime the pupils wanted. In addition, a website was also developed to display the download button for an easy access to the game for the pupils to download.

The performance and score of the pupils will only be seen and checked on the gadgets that the pupils used. The project was intended for the pupils to

**Limitation**

**Definition of Terms**

**CHAPTER II**

**Review of Related Literature**

* **Title**: Retrieving a Folk Hero through Oral Narratives: The Case of Francisco Dagohoy in the "Sukdan" Rituals

**Citation:** Aparece, U. B. (2013). Retrieving a Folk Hero through Oral Narratives: The Case of Francisco Dagohoy in the “Sukdan” Rituals. *Philippine Quarterly of Culture and Society*, *41*(3/4), 143–162. http://www.jstor.org/stable/43854726

In the absence of written records, oral traditions, including narrative performance forms, may fill in the gaps in history. They include some elements of reality since the tribe's bards typically sing them in response to historical events or occurrences. A biographer must contact oralists while researching the biography of a folk hero. In this research, oral tales spoken during shaman performances were the primary source of data used to recreate Dagohoy's early life. The sudden shamans, who are the guardians of the culture and history of the village where Dagohoy was thought to be the leader, were the primary informants. Northern Bohol's local shaman is known as the sukdan. Dagohoy became famous for his amulets, talismans, and charms, in addition to his courage and deeds of valor.

* **Title:** Historical Dictionary of the Philippines

**Citation:** Guillermo, A. (2011). Historical Dictionary of the Philippines.

In Bohol, a well-known rebel commander. Jesuit friars gave Dagohoy the Christian name Francisco. He is most known for leading an 85-year rebellion against Spain (1744-1829), the longest in Philippine history. The revolution began when a Spanish priest refused to grant Dagohoy's brother a Christian burial after being murdered on a mission to capture a renegade. Dagohoy incited 3,000 villagers to rebel, pillage the wealthy Jesuit estates, and murder the friars in retaliation for this insult. Dagohoy took his troops to the steep highlands of Bohol to build defenses against the Spanish. After many government expeditions failed to remove him, Dagohoy carried out successful attacks on churches and government buildings in the following years, attempting to expel all Spaniards from the island. The government promised to allow secular priests to serve in churches and suggested a general amnesty to appease him. Still, these concessions only encouraged the rebels to continue their armed rejection of Spanish authority.

* **Title:** Motivating Children to Learn Effectively: Exploring the Value of Intrinsic Integration in Educational Games

**Citation:** Habgood, M. P. J., & Ainsworth, S. E. (2011). Motivating Children to Learn Effectively: Exploring the Value of Intrinsic Integration in Educational Games. Journal of the Learning Sciences, 20(2), 169–206. https://doi.org/10.1080/10508406.2010.508029

The notion of intrinsic motivation is essential to the user engagement that digital games generate. Regardless, educational software has long tried to use games as an extrinsic motivator by utilizing them as a sugar coating for learning material. Although digital games may provide intrinsically stimulating activities in and of themselves, it's essential to examine the impact of adding learning material to an intrinsically motivating game. Game designers have recognized the importance of learning in game design. As a result, it is believed that the phrase intrinsic integration is a better approach to describe a scenario in which "a designer combines the subject matter with the game concept."

* **Title:** Engagement States and Learning from Educational Games

**Citation:** Deater-Deckard, K., Chang, M., & Evans, M. E. (2013). Engagement States and Learning from Educational Games. New Directions for Child and Adolescent Development, 2013(139), 21–30. doi:10.1002/cad.20028

The cognitive, emotional, and behavioral states of involvement of children and adolescents influence whether they like and do well with instructional games. We offer a complete model of engagement states and apply it to educational game creation research and research on the impact of different elements of engagement on gameplay and learning. Individual variations in attention, memory, motor speed and control, perseverance, and positive and negative affect (approach/avoidance) are highlighted, as well as how they relate to social cognitions about mathematical success. Moreover, engagement drives moment-by-moment usage and learning that happens during play and ideally transfers later for both children and adults who utilize instructional technology such as an educational game. Engagement is a set of consciously goal-directed states. Motivation derived from pleasant emotions is used to grasp and maintain a learner's cognitive and motor skills, which usually requires some effort. Through their actions, engaged learners show their participation in educational activities.

**Historical Background**

Educational games are not new today. Since the introduction of video games in the 1970’s many games are released that are considered educational games, the first educational game was Logo Programming, and Turtle Academy released this game with the intent of teaching programming and mathematical concepts. Then there is Lemonade Stand; this is a business simulation game that teaches basic economics by running a lemonade stand. Lemonade Stand is considered one of the oldest and most popular educational games of all time. Oregon Trail is initially developed for students in Minnesota, and the gameplay is simply asking players to lead a family of settlers along the Oregon Trail successfully. Oregon Trail had a significant impact on educational games that causes an increasing number of educational video games the following year.

         As of today, Minecraft is one of the most popular educational games. Minecraft is considered an educational game because it enhances creativity, problem-solving, self-direction, collaboration, and other skills. On November 1, 2016, Minecraft: Education Edition is released. This is a version of Minecraft that is specifically designed for classroom use.

**CHAPTER III**

**Technical Background**

This chapter discusses the technologies to be used in developing and implementing the project.

* **Unity -** is a cross-platform game engine that is developed by Unity Technologies. This is widely used by companies and indie game developers.
* **C# -** is the programming language that will be used in this project is C# because this is the default language that unity supports.
* **Visual Studio Code -** is a source-code editor made by Microsoft. This will be used as an external code editor for unity to make programming faster because the default code editor in unity is just a plain text editor and does not have intellisense.
* **Blender** - is a free and open source 3D creation suite. It supports modeling, rigging and animation which is perfect for what 3D game needs.
* **Adobe Photoshop -** is raster graphics editor developed and published by Adobe Inc. This application will be used to create textures like normal map and height map for the materials in the game.
* **Adobe Illustrator -** is a vector graphics editor developed and marketed by Adobe Inc. This application will be used to crate graphical assets for the game like buttons and other elements that will appear in the UI (User Interface) of the game.
* **Vue.js – is** an open-source front end JavaScript framework for building user interfaces and single-page applications. This will be used to create the game’s website.

**Methodology Page**

**Design**

**Subject Selection & Description**

**Instrumentation**

**Data Collection Procedure**

**Data Analysis**

**Limitations**

**Summary of Findings**

**Conclusions & Recommendations**

**Reference:**

<https://www.esquiremag.ph/long-reads/features/unsung-regional-heroes-who-deserve-recognition-a1729-20190827-lfrm2> - [Unsung Heroes From Regional Parts of the Philippines (esquiremag.ph)](https://www.esquiremag.ph/long-reads/features/unsung-regional-heroes-who-deserve-recognition-a1729-20190827-lfrm2)