

Game Design Document (GDD)

Poco (Save the world)

Created: 6 August 2021

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Tutorial: 5

<https://github.com/Bonasladybug/Poco-Game>

GDD version 2.3(version1.0 game)



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1.Overview

Poco is a Role-Player Game (RPG) inspired by an American native quote ("The earth does not belong to man, man belongs to the earth. All things are connected like the blood that unites us all. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself." - Chief Seattle) and the story of the importance of the environment issue. The Player accomplishes story-based objectives while battling enemy creatures in a number of fantasy environments. The main target of the Poco game is kids and adolescent which challenged them to save the earth from Rubbish. This game, by advancing the story in addition to entertainment, makes the environmental problem more significant. And it can be said that it is a good way to predict the future of our story and the earth.

1.1 Game abstract

The game take place in the small village where Shabbish (who stole the soul of the earth hiding there) try to control the world and destroy it. Shabbish is producing rubbish every day. Poco and animals join together to fights and rebuild the nature with their power.

1.2 Objectives to be achieved by the game

- Rescue: The specific goal in this game is to find the Shabbish and take back the soul of the earth.
- Destroy: The Player destroys the rubbish bags.
- Exploration/Capture/Collect: The player explores different areas by following the flower path to find the animals and get different tasks that help to rebuild the green area. The player collects the seeds..
- Build: The player uses the seeds to rebuild the village(earth) by planting them in farmland area.

1.3 Core gameplay

The main activity of the game is destroying rubbish bags by Throwing a Mushrooms at them. Cleaning the land from pollution and rebuilding it by planting the seeds and etc. The charm of the game is its friendly atmosphere and helping the ground. (The purpose of this game is to raise awareness to keep the ground clean). Feelings of usefulness, as well as friendship with animals, are notable.

1.4 Game features

- Abilities(attack moves)
- Equipment(Mushrooms)
- Characters(Poco,Rubbish bags,Animals)
- Buildings(Houses, Farm land area, Flower paths)
- Objects(Seeds,Hearts)
- Environments(Village,Green areas, Firesmoke, Dandelions, Pixel Clouds, Day and night cycle)

1.4.1 Genre

Poco is an RPG story adventure game made in a 3D model combined with 2D objects in the world's fantasy environment.

1.4.2 Number of players

One player game (Poco is the main character)

1.4.3 Game theme

The game is narrative-based with challenges in fantasy gameplay.

1.4.4 Story summary

The story begins where Poco goes to the village where Shabbish has gone. The village has become empty due to the prevailing conditions, and the people have taken refuge in other areas. Shabbish is getting angrier every day and trying to destroy the earth. As if bewitched, he is confused that there is no hope for the earth and must destroy it. He produces a significant amount of rubbish every day and leaves it like plastic waste.

Poco, with the help of the earth and her friends (animals), goes to war with the Shabbish. The animals are scared and hide somewhere to protect themselves from garbage, and each of them is waiting for Poco to help in this part of the village. They give her different tasks to rebuild the environment and fight for green space such as seeds, hearts and etc.

Poco is unaware of the power that she has and gradually learns how to defend the earth with the guidance of his friends. She can plant seeds and revive the spirit of the earth.

2 Mechanics

2.1 Game elements categories

- Characters:

- Main Character: Poco

- NPC's:

- Animals(Rabbit, Tiger, Goat, Rooster, Horses)

- Enemies:

- Rubbish bags

- Weapon:

- Mushrooms

- Power:

- Seeds

- World game:

- Green area

- Houses

- Trees

- Dandelions

- etc

- Sounds:

- Nature sound (background)

- Heart sound



2.2 Rules

- Read Note Board
- Read Story and Guide
- Find the animals
- Do the tasks
- Shot mushrooms to destroy the rubbish bags.
- Collect seeds
- Rebuild village by planting seeds

2.2.1 Interaction rules

- Shooting mushrooms
- plant seeds on farm lands area
- Garbage bags chasing poco

2.2.2 Artificial Intelligences

- Rubbish bags disappear by shooting mushrooms.
- shrubs are planting with seeds.

2.3 Game world elements

There are some stones, grass, trees, flowers, fire and etc.

2.4 Game log elements

- Health
- Inventory System
- Story and Guide
- Mini Map
- Note Board



Health: By eating the heart, She boost her health.

2.5 Assets list

- Environment Background (village)
- Texture
- 3D Models
- Frames / Buttons
- Screen frame
- Story and Guide Dialuge
- Continue
- Main menu
- Tasks
- Conversations
- Screens
- Main Menu
- Game Over
- Level Passed
- Characters
- Main Character(Poco), Enemies(Rubbish Bags), Animals(Rabbit, Tiger, Goat, Rooster, Horses)

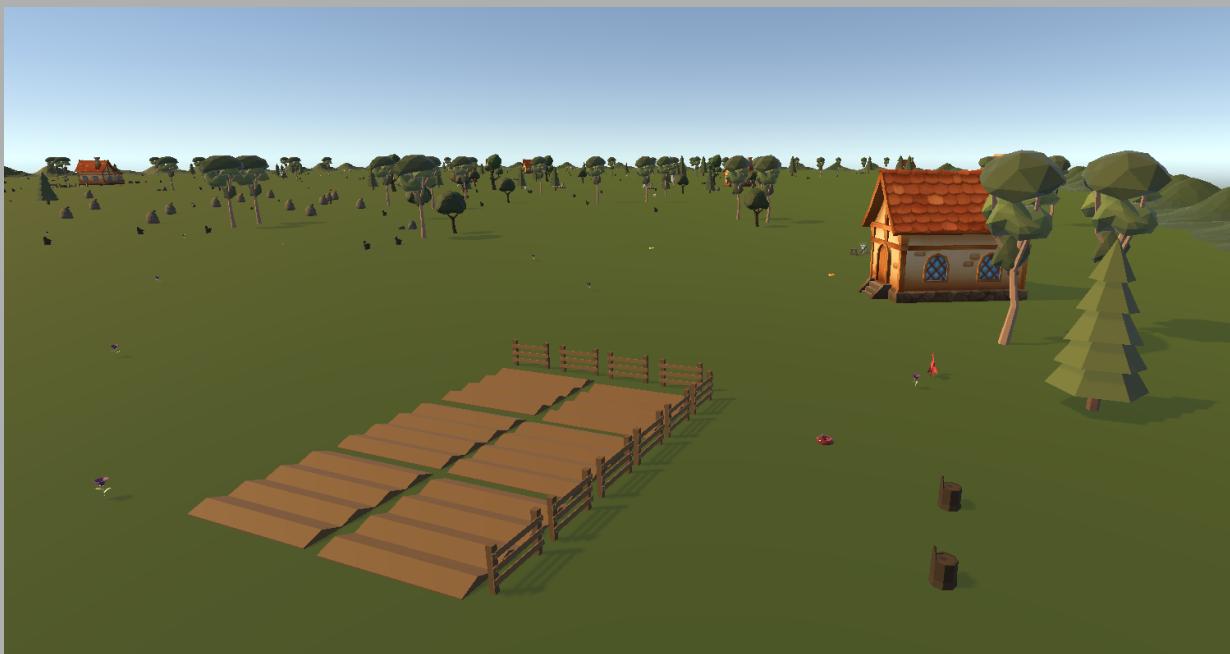
- Weapon
- Mushrooms
- Objects (Inventory Systems)
- Seeds
- Objects (Worlds)
- Stones
- Houses
- Grass
- Fire
- etc
- Music Track
- Background nature sound
- Sound Effects
- Heart sound
- Fonts
- Lato
- LiberationSans
- SansPoster

3.Dynamics

3.1 Game World

The world game start from small village with green area.

Graphics is based on 3D and 2D style.(Unity design)



3.1.1 Game theme details

All inhabitants leave their houses due to the Shabbish, but a few Animals remain to help poco against the spell and save the soul of the world.

Green space with the sound of nature and birds. A grassland with local trees and houses.

The form of the landscape is based on typically seen features of the village. The village represents the types of plants and trees that are common such as maple and pine trees, houses.

The weather represents a sunny day in spring with dandelions in the air.

The game represents a day and night cycle. The player can take as much or as little time completing tasks as they wish.

3.1.2 Missions/levels/chapters Flow

The game environment is limited to the village. The player cannot enter the house or use objects that are not assigned to him/her. He/She is limited to doing what they are asked to do. (Tasks). Missions complete by doing the Tasks.

3.2 Missions/levels/chapters elements

The mushrooms destroy the Rubbish bags and Shabbish.

The flower path guide to finding animals.

The animals give the tasks.

The Seeds plant the shrubs.

3.2.1 Objectives

Fight: take shots at the garbage bags to destroy them with mushrooms.

Find: following the flower paths to find the hiding animals.

Tasks: Do the things that animals requested.

Collect: pick up the seeds from the ground.

Rebuild: Use the seeds to rebuild the earth.

3.2.2 Rewards

Having the powers(by doing the tasks)

3.2.3 Challenges

- Fight with garbage bags
- Find the animals
- Do the tasks
- Planting the seeds on farm lands area

3.3 Special areas

Beautiful view of the houses, trees, and dandelions with shadows of clouds.

3.4 Game interface

The main menu will appear once the game is loaded and the player has followed the “Play” prompt. This is a simple, minimalist screen, mainly consisting of the game logo, simple background imagery and plant.



Main Menu

3.5 Controls interface

Mouse:

-Left Click: Moving (Point anywhere)

Character will follow the point that mouse click it.

Character pickup items with Left click.



Keyboard:

- Key space for throwing the mushrooms.



4.Visuals and Sounds

4.1 Game visuals

Poco tries to find animals by roaming the village. The animals are hiding somewhere from fear. By following the flower paths, Poco will find them to get different tasks. The mushrooms are shooting at the garbage bags and destroy them.

4.2 Game sounds

The background music is the nature sound.

-Sound effects: Planting the tree,destroy the rubbish bag,game over



5.Document information

5.1 Document references.

All is listed in the first page.

More Documents are adds in the github Poco Game.

<https://github.com/Bonasladybug/Poco-Game>

6.Milestone

- num1: 22,06,2021 (Interface,Codes)
- nume2: 30,06,2021 (Animation)
- num3: 15,07,2021 (Levels)
- num4: 30,07,2021 (Playable)
- num5: 01,08,2021 (Publish)
- num6: 02,08,2021 (Evaluate)
- num7: 06,08,2021 (Result)

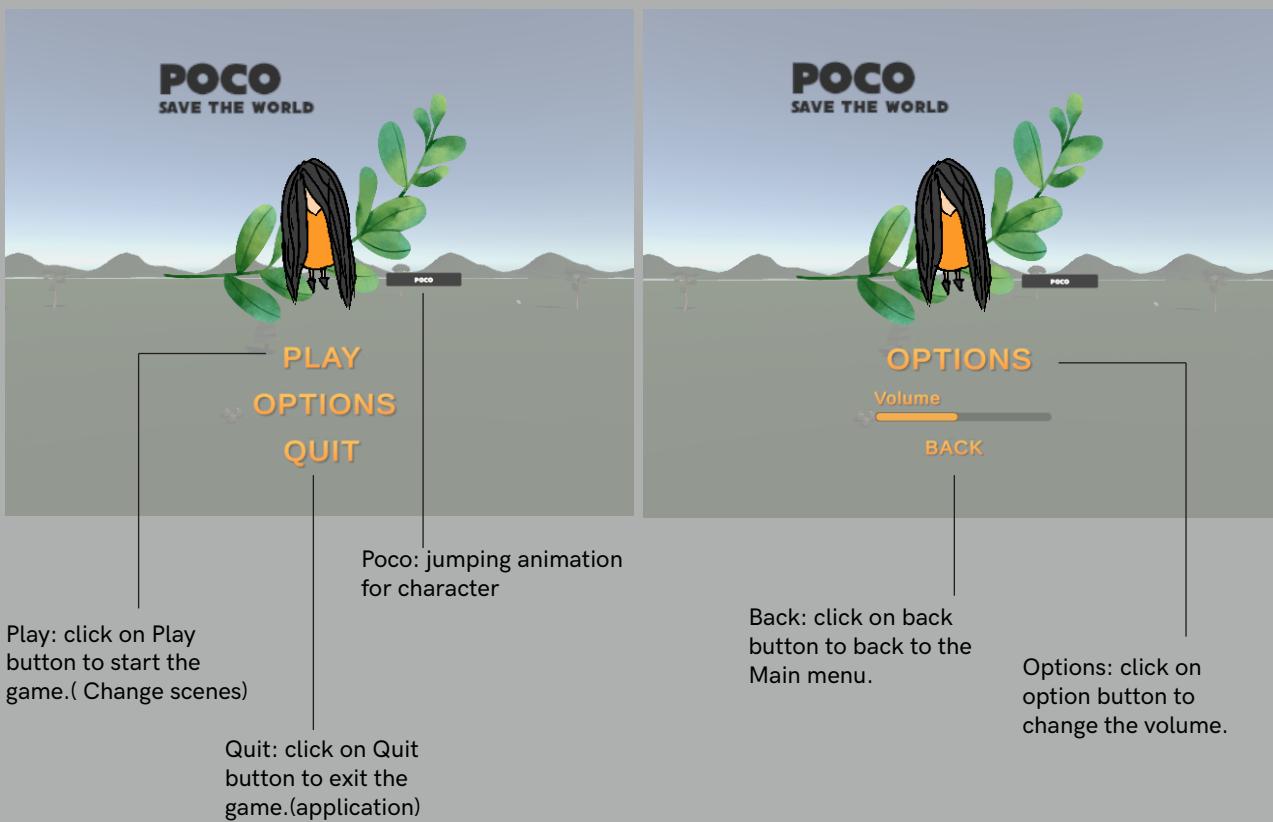
References:

- <https://assetstore.unity.com/account/assets>
- <https://www.youtube.com/watch?v=MFQhpwc6cKE&t=367s>
- https://www.youtube.com/watch?v=_nRzoTzeyxU
- <https://www.you-tube.com/watch?v=2bR13zUsHT0&list=PLZ1b66Z1KFKgp-sjQ8ldU3eh8DoQ3a14P&index=4>
- <https://www.youtube.com/watch?v=CHV1ymlw-P8&t=221s>
- <https://www.youtube.com/watch?v=HQNI3Ff2Lpo&t=194s>

7.Animation part

1.1 Animate Interface

- Scene > MainMenu



- Scene > SampleScene



Story and Guide: By clicking the button, the text will appear—text display by writing animation. Press continue to follow the instructions.

7 Animation part

1.2 Animate Environment

There are different animations for Village:

- Campfire: Fire and smoke animation.
- Dandelions: Pinki Dandelions on the air animation.
- Daycycle: Day and night cycle animation.



7 Animation part

1.3 Animate Character

- Scene > SampleScene

Character Animation: Idle,Running,throwing.



1.4 References:

- https://www.youtube.com/watch?v=_nRzoTzeyxU
- <https://www.youtube.com/watch?v=YqMpVCPX2ls>
- https://www.youtube.com/watch?v=zc8ac_qUXQY
- <https://www.youtube.com/watch?v=OjNW9G9nVoc>
- <https://www.youtube.com/watch?v=SXF1YSf3aGk>
- <https://www.youtube.com/watch?v=xxM6D6coDAU>
- <https://www.youtube.com/watch?v=qc0xU2Ph86Q&t=1042s>

8.Game AI

1.1 Follower NPC



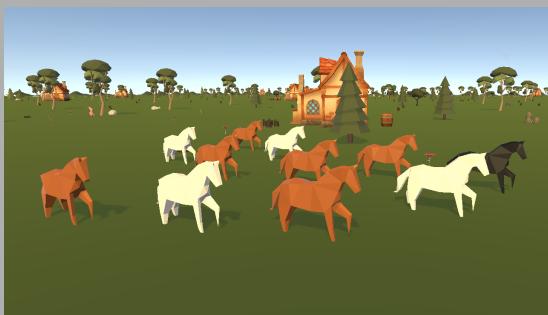
The NPC's (Dog) follow the character. The dog follows poco everywhere. If poco lost him, he will find her.

1.2 Garbage Bag



There is a range for patrolling the garbage bag. If the character gets close to them, they follows and attacks her. If it maintains a sufficient distance from that area, the garbages will return back to their patrol location.
(Patrol,Chase,Attack)

1.3 Horses



The Black one is the leader. Horse flock follow the black one. If the character approaches them, they disperse and also follow the path of their leader.

1.3 Clouds

Clouds Cubes that follow a 3D noise function. The Shadows display on the ground and moving around.

8.Game AI

1.5 References:

- <https://www.youtube.com/watch?v=NEvdyefORBo>
- <https://www.youtube.com/watch?v=KcyO1biSIOw>
- <https://www.youtube.com/watch?v=RCfBtN5ZAtA>
- <https://www.youtube.com/watch?v=Zjlg9F3FRJs>
- <https://www.youtube.com/watch?v=Mx9M0ieR1M0>

9.Publish

Web: <https://play.unity.com/mg/other/webgl-builds-82118>

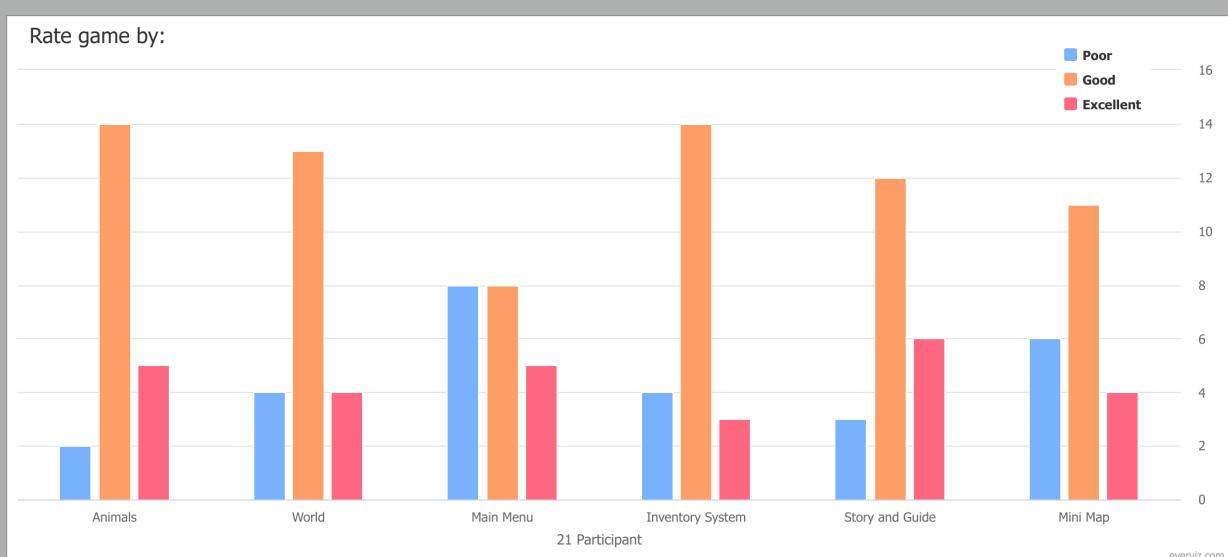
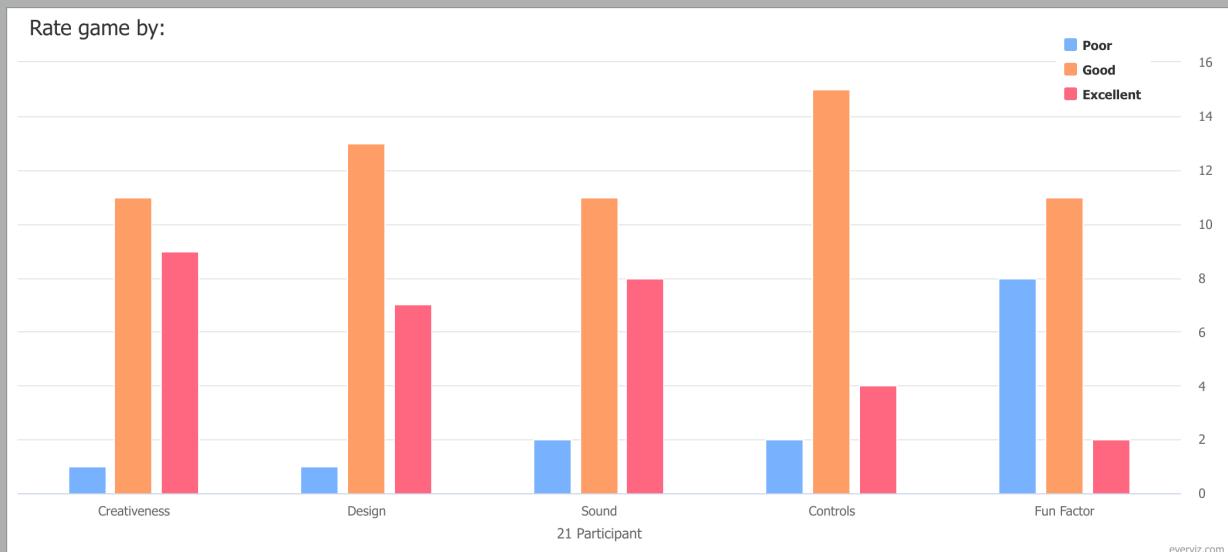
Drive: https://drive.google.com/file/d/1Tp68_hmcAmPLc5YYlN4uk8E74OSUj6vn/view

Survey link: <https://forms.gle/nKQmghw3dhA2mQVx5>

10. Study

Evaluation:

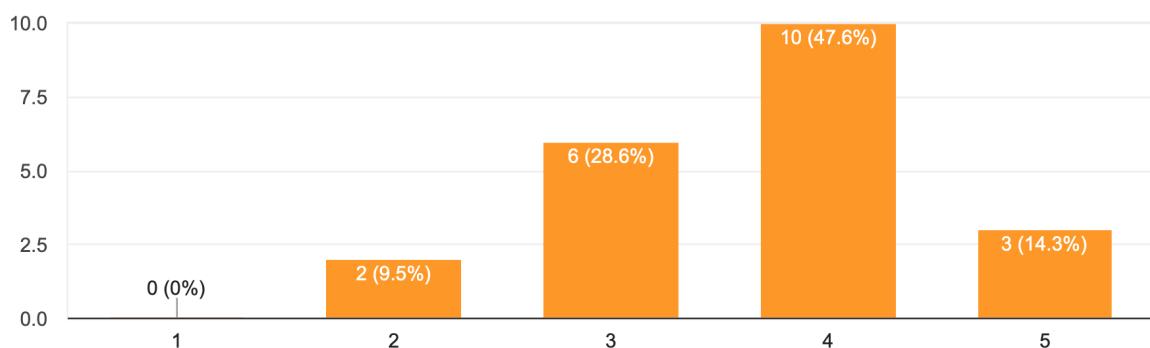
Results of evaluation in charts.



Did you feel competent at the game?



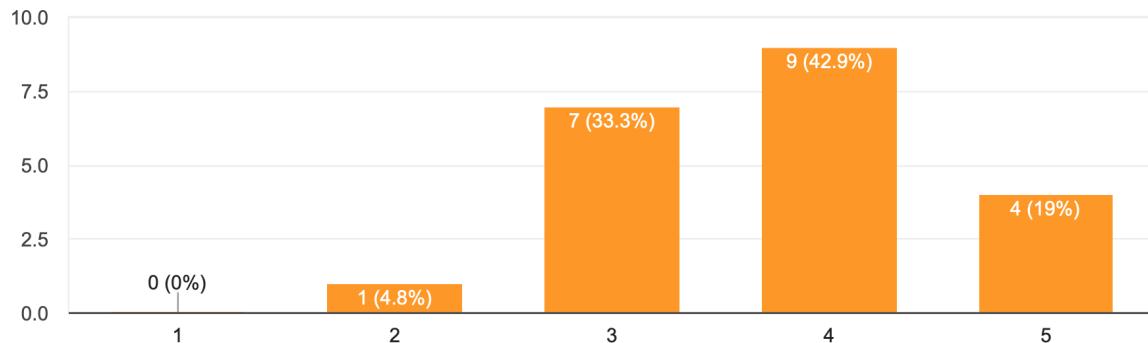
21 responses



Did you like experienced freedom at the game?



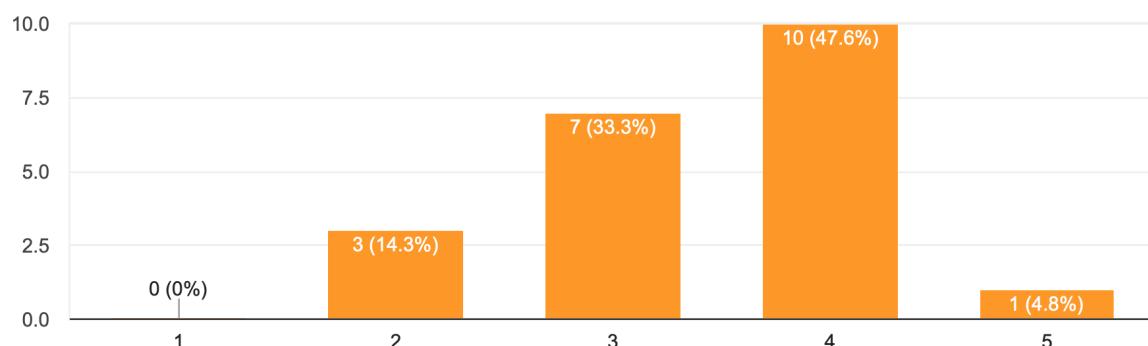
21 responses



During playing the game, did you feel like a part of the story?



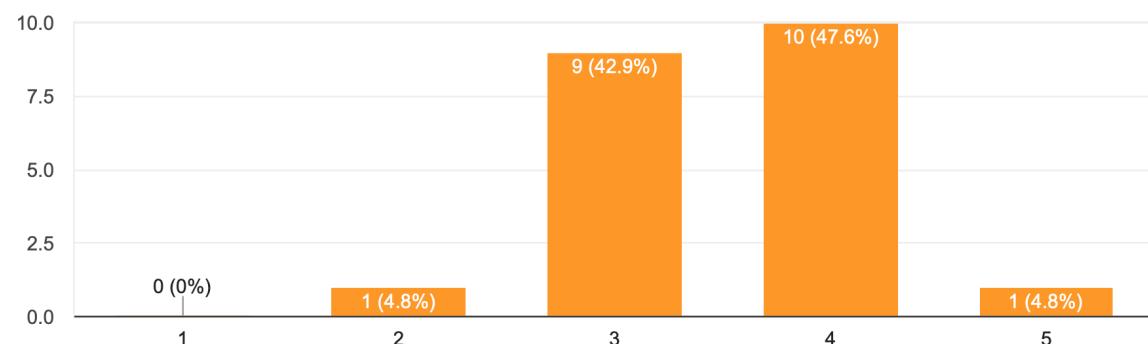
21 responses



The game was enjoyable?

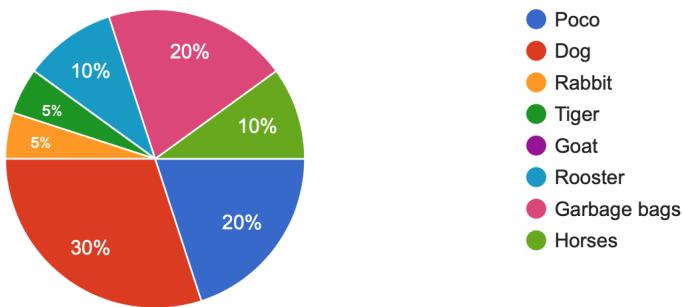


21 responses



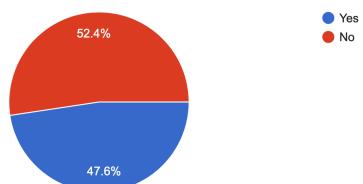
Which one is your favorite character?

20 responses



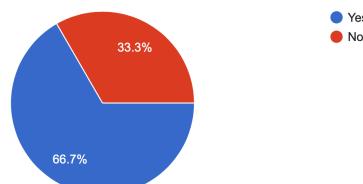
Are you done with all tasks?

21 responses



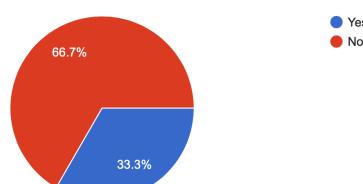
Did you easily find the animals?

21 responses



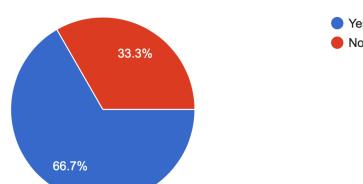
Did you destroy the garbage bags?

21 responses



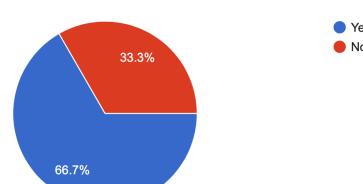
Did you plant the seeds?

21 responses



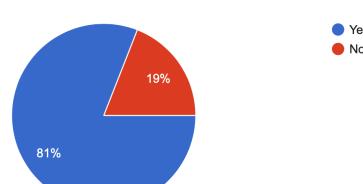
Do you recommend this game to others?

21 responses



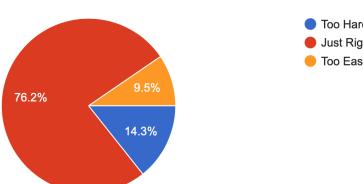
Do you interested in playing the final version of POCO in the future?

21 responses



The game's difficulty in general was:

21 responses



Q.The things I like most about the game:**18 responses: (Take a look at some of the participants' answers)**

- The overall graphic and atmosphere was really nice. Personally it's not my genre but for genre fans it could be really fun :).
- The Concept of working with the animals was cool!
- simplicity and creative, dialog, AI
- the visuals, the ui, general style, put really much thought on creating the right atmosphere, even with day/night cycles
- The story is very environmentally friendly, which is very important in this day and age. I really believe that if our children had the opportunity to play these games, they would not only have fun, but also learn a lot.
- The creative story and the flower path

Q.The things I like least about the game:**15 responses: (Take a look at some of the participants' answers)**

- sometimes it just get stuck, may be issue with Mac build
- The controls especially the pickup mechanic wasn't super intuitive. It involved a lot trial and error-
- The garbage bags could kill you in an instant.
- I couldn't destroy the garbage bags by throwing mushrooms at them so I couldn't finish the quest.
- the text writing speed is too slow, when clicking on continue it shouldnt skip to the next one, and instead skip the typing first.
- The insect sounds (but that's just a personal pet peeve lol)

Q.This game could be improved by: (comments/suggestions):**16 responses: (Take a look at some of the participants' answers)**

- Give poco a skin
- More interactive and busier world, sound effects when something happens, better UX using inventory, More control over direction of shooting mushrooms, small surprises in the story, etc.
- Adding more controls for the main character, the dark mode could be a bit less dark perhaps as it was not easy for me to find things when it got dark.

9.Study

Results:

The assessment was conducted among 21 participants. The youngest participant is 20 years old, and the oldest is 32 years old. Approximately, they play video games at least once a month. In terms of creativity, design sounds, and control, the average comments are excellent. There is some weakness in the fan factor part, but the good statistics are still higher.

In the other part, which is related to the game's graphics, it seems that the 2D and origami-shaped animals and the game world are in good order with a significant difference. In the menu section, the positive and negative comments are almost the same. The satisfaction rate is leading in the Inventory system, story and guide, and mini-map part.

Intrinsic Motivation Inventory(IMI)

Disagree 1 2 3 4 5 Agree

• Interest/Enjoyment

Q: The game was enjoyable?

0,1(R),9,10,1

• Perceived Competence

Q: Did you feel competent at the game?

0,2(R),6,10,3

• Effort/Importance

Q: The game's difficulty in general was:

2(R),16,3

• Perceived Choice

Q: Did you like experienced freedom at the game?

0,1(R),7,9,4

• Relatedness

Q: While playing the game, did you feel like a part of the story?

0,3(R),7,10,1

The 47.6% of participants can do all tasks, which means that they can follow the flower path to reach the animals, destroy the garbage, and finally plant the seeds. 66.7% of participants find the animals and get tasks. In contrast, 68.7% can't destroy the garbage for two reasons. First, they can't find the Goat to get the keyboard instruction on how to destroy the garbage bags. Next, they were attacked easily by garbage bags. 67% passed

the level by finding the rooster and planting the seeds.

According to the answers obtained, the most important thing mentioned is being unique, simple, Creative, and friendly of the story and the game world. The interaction between the main character and the animals has been enjoyable.

The least interest in the game was due to the momentary shaking of the camera and the game mechanics. The sound of nature is sometimes loud, and not knowing how to throw mushrooms. The reason for some of them is justifiable. For example, the volume can be changed by lowering the volume. the player can following the flower path to find the animals. Some other criticism is due to the game from the website version of the game. The quality and speed on the web are lower than in the original game. The last point was about improving the game. Among the cases mentioned was giving skin to the main character. (Poco)

Adding more controls for the main character and make various challenges for the difficulty of a game. Such as hiding the garbage bags in different areas.

In conclusion, Evaluation shows the remarkable number of participant like to play the final version of Poco game, and they recommended the game to others. The power of the game is related to the aesthetic and dynamic parts. It can be said that they enjoy during play the game. Nevertheless, the game has bugs that will be fixed in the next version.