Life lessons from Irish folklore via video games.

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Abstract

This thesis paper discusses life lessons from Irish fairies and folklore in the context of narrative games. As part of this research, a cozy 2D narrative game demo called "Exercise your Demons" has been developed. With rigorous user testing of this demo through anonymous surveys, this paper will try to conclude on the question "How can Irish folklore impart lessons of modern-day struggles through narrative gaming?". Critical evaluation of any results will also be made, discussing any limitations such as bias and small sample sizes.

In "Exercise your Demons", the player takes the role of a jobseeker who finds themselves working at a gym called "Tír na Sióga". Without realizing, they find themselves surrounded by fairies and creatures only heard of in folklore. These fairies and creatures are known tricksters, so the player needs to make morally sound decisions to avoid any bad outcomes.

The goal of this paper is to fill a gap by evaluating if teaching life lessons seen in Irish folklore through narrative gaming is feasible. This research also feeds into the game demo which has the potential to create a niche narrative video game that is fun and culturally relevant.

Based on comparative analysis against lessons learned from the literature review and binomial testing, we reach a conclusion where we reject the null hypothesis and accept that Irish folklore can be used to teach life lessons relevant to the struggles of our daily lives through narrative gaming. There are some limitations that should be considered, and more research is required with a larger sample size to make sure that these conclusions are indeed correct.

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Chapter 1: Introduction

The introduction gives context for the study and introduces the research question and hypothesis. It also discusses the objectives and justifies the importance of the study. Lastly, it summarises the paper, showcasing the content of this thesis.

1.1 Background and context of the study

This thesis discusses how life lessons from Irish fairies and folklore can be used to teach users through narrative gaming through the development and testing of a video game artefact.

"Exercise your Demons" is the artefact that has been created in conjunction with this research. It is a 2D narrative game based on the 'good people' from Irish fairy tales and folklore. The user takes the role of a character who struggles to find a job and under mysterious circumstances ends up working in a gym filled with good people. The good people are fairies who are seeking to better themselves. Being down in the dumps, the player needs to work to help others while helping themselves.

This artefact, along with existing literature, is used to evaluate the core ideas underpinning the research question with user testing. While evaluating the research question, some proposals will be made for future work to improve the artefact and iterate on the work done so far. Since narrative work is subjective, the feedback will be opinionated but should still show if the narrative has achieved its goals.

1.2 Research problem

This research aims to shed light on the following question: ***How can Irish Folklore impart lessons of modern-day struggles through narrative gaming?***

Hypothesis (H_1): Irish folklore can be used to teach life lessons relevant to the struggles of our daily lives through narrative gaming.

Null Hypothesis (H_0): Irish folklore does not contain life lessons that are relevant to modern-day struggles that can be taught through narrative gaming.

1.3 Objectives and aims of the research

The main goal of this research is to create and evaluate a video game artefact to test the hypothesis described above. The results are evaluated and cross referenced against existing

literature to figure out the success and relevance of teaching life lessons based on Irish folklore in video games.

The secondary goal is to create and iterate on a fun and interesting narrative experience. A lot can be learned from others' work and using existing literature in a modern context can allow us to create something novel and exciting, especially when we are dealing with mischievous and capricious creatures such as the Irish Fairies (Quinn, 2024).

1.4 Justification for the study

This research covers a niche topic that is culturally relevant and needs to be explored further. The artefact can be used to spread awareness of the Irish culture while teaching important life lessons if the research is successful.

This is a great learning opportunity. I am personally learning about character development in an interesting niche and can share my learnings with my peers. As someone who has multiple years in the software development industry and usually focuses on the technical aspects of computer science, this project is the perfect way to throw myself out of my comfort zone and try something I would usually avoid.

The produced artefact is publicly available and open-sourced, which preserves parts of Irish culture while reimagining Irish fairy tales into a narrative relevant to our current day struggles in an accessible and interactive medium of video games.

1.5 Structure of the dissertation

The paper starts off with a Literature Review. This discusses the relevant ideas that are necessary for this research to succeed. It also starts to question and help us understand the kind of narrative content that should be presented in the artefact.

Methodology follows on from the Literature Review. It defines the binomial test used to answer the research question while evaluating any limitations encountered from the approach.

Next, in the Design section, we dive deeper into the concept of the artefact and the impacts of the literature review on the design itself. In this section, we discuss the narrative as a whole and the scope of the finished artefact.

In the Implementation section, we follow through on the design, discussing the process for the creation of the artefact and how it has changed from its design stages due to technical limitations and time constraints.

After we have fully discussed the research, methodology, and artefact concept and development, we look at the Findings and Discussion. This section covers the results from the user testing. It looks at these results while also highlighting any relevant information from the literature.

Once all the findings are consolidated, the paper concludes on these. It evaluates the success of the research and how it affects the hypothesis while proposing improvements and future work for both this research and the video game artefact, "Exercise your Demons".

Chapter 2: Literature Review

This literature review summarises and highlights relevant ideas and concepts that are necessary to understand the area of study. It also starts to explore some of these ideas to start shaping the video game artefact this research will produce.

2.1 Review of relevant literature

This section discusses relevant literature that has an impact on the game artefact and research question. It focuses on Irish fairy tales that were used to create the narrative, only highlighting the relevant characters present in the artefact. It also discusses life lessons that can be learned from fairy tales and applied to video games.

2.1.1 Relevant Irish Folklore

To understand Irish fairy tales, we first need to grasp their roots. Many authors, including Yeats (1888), discuss multiple possibilities for what fairies are and where they come from. These authors compiled a collection of stories passed down throughout history which discuss multiple possibilities for what fairies are and where they come from. These include:

- 'The gods of the earth' from the book of Armagh.

- 'The gods of pagan Ireland' from the Irish Antiquarians.

- Fallen angels whose indecisiveness got them thrown out of heaven (Curran, 2007).

Fairies are usually depicted as mischievous and capricious creatures. They elicit fear and should not be messed with (Quinn, 2024). According to Curran (2007), they were once so fearful that it was even forbidden to use the word 'fairy'. Alternative names like the 'good people' and 'little people' were usually used.

After investigating multiple stories about the 'good people', I decided to focus on the Banshee, Pooka and Dullahan as the characters driving the narrative for the artefact. These characters have interesting narratives which I would like to explore further.

2.1.2 Banshee

Banshees are bad omens who wail and sing in chorus for the death of some holy or great one (Yeats, 2022). In other stories, they are vengeful ghosts who follow a family which did them harm (Curran, 2007). Be it premonitions or vengeance, there are many interesting narratives to discover here.

Figure 1: Banshee, Illustrated by Andrew Whitson (Curran, 2007)	**Figure 2:** Banshee, Illustrated by Dermot Flynn (Quinn, 2024)

See stories:

1. How Thomas Connolly met the Banshee (Jackson et al, 2022) (Yeats, 2022)

2. The Banshee of Mac Carthys (Yeats, 2022)

2.1.3 Pooka

Pookas are known for creating harm and mischief and can assume many terrifying forms ranging from goblins to animals like goats, eagles and most prominently black mares (Curran, 2007). I would like to focus on the 'mare' stories as I find them more captivating. After all, if you are taken on a gallop by a pooka and survive, you will be rewarded with the gift of sense and cleverness at the end of the journey (Quinn, 2024). This fits with the theme of my artefact.
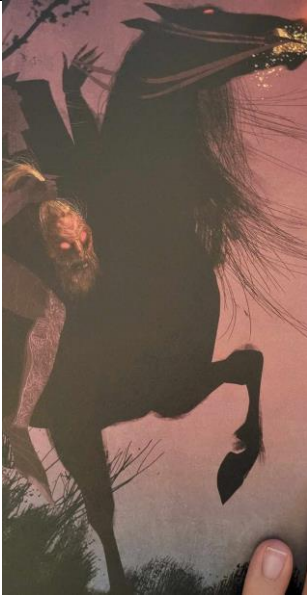
Figure 3: Pooka, Illustrated by Andrew Whitson (Curran, 2007)	**Figure 4:** Pooka, Illustrated by Dermot Flynn (Quinn, 2024)

See stories:

- The Kildare Pooka (Jackson et al, 2022)

- Taming the Pooka (Jackson et al, 2022) (Yeats, 2022)

- The piper and the puca (Yeats, 2022)

- Daniel O'Rourke (Yeats, 2022)

2.1.4 Dullahan

The Dullahan, also known as the Headless Horseman, is a harbinger of death. Some stories describe him or her as Crom Dubh's descendant, taking physical form to take souls for the ancient god (Quinn, 2024). The fairy has a limited power of speech as its disembodied head is only permitted to speak once per journey (Curran, 2007). This is an interesting narrative constraint I would like to explore further.

| **Figure 5:** Dullahan, Illustrated by Andrew Whitson (Curran, 2007) | **Figure 6:** Dullahan, Illustrated by Dermot Flynn (Quinn, 2024) |

See stories:

1. The Good Woman (Croker, 1834)

2.1.5 Life Lessons in Mythos and Folklore

Morality is an important lesson that Irish folklore imparts. The stories teach us about empathy, resilience, and the outcomes of our actions (Ivaylo, 2024) while invoking lessons of bravery, sacrifice, loyalty and kinship (Mohamed, 2024). The goal of these stories is to help us grow as people by understanding "virtues like courage, kindness, and perseverance" (Ivaylo, 2024). Ivaylo also says "Characters in fairy tales face challenges and triumphs, urging readers to think about their own decisions." Making interesting challenges and triumphs for the characters while introducing player choice through dialogue options could urge a sense of morality from the players.

"Irish folklore teaches us that the land is not something to conquer or control, but something to respect and protect." (Hayden, 2024) In Irish mythos, we also get a lot of environmental lessons. We should treat nature with care, leaving things untouched to preserve their magic and value as small acts of carelessness can have major consequences. Respecting and protecting nature is important. I'm not sure how relevant these environmental lessons would be to the narrative, but they are worth considering.

Mythos and folklore also cover societal issues. For example, the "portrayal of the Banshee as a powerful and independent woman is significant in a culture where women's roles were often restricted to the domestic sphere. It offers a glimpse into the possibility of female autonomy and agency in a society where such ideas were not commonly accepted." (Irish Pagan School, 2023). Today, these issues may be less prevalent, but it is important that we remember and learn from them. Putting Irish fairies in situations faced by current and old societal problems could add depth to the narrative work.

2.1.6 Narrative writing

Knowing what we now know about the lessons that Irish folklore teaches, one core narrative template comes to mind: John Campbell's Hero's Journey (1949). The condensed version of John Campbell's Hero's Journey, also known as The Writer's Journey, has 12 stages (Vogler, 1998). I expect we can apply parts of the hero's journey to all characters to allow them to overcome challenges through perseverance while showing off virtues like bravery, courage and kindness.

Non-linear narratives present many problems, but we can work around these by integrating linear stories into nonlinear gameplay (Bateman, 2021). I plan on allowing the player to meet characters in different orders based on the events that are available, so some level of gating will be necessary to make sure the game plays out in a linear manner while allowing the player to explore.

2.2 Identification of gaps in existing research

Game narratives based in Irish folklore seem to be few and far between. Within this research, there seems to be a gap. There is a lack of application of lessons Irish folklore teaches in video games. This research and accompanying game artefact try to address this gap.

There are also many life lessons to learn from Irish Folklore but there is a gap in documenting and categorising these. Trying to find consolidated lessons within the field of research leads to limited results and could be a topic to evaluate in the future as a separate work that builds on top of some of the ideas in this paper. This kind of paper has benefit in preserving stories passed down for generations while also researching why they have made such an impact and have been passed down.

Below is a discussion of two of the many video games that miss the mark in filling the gap of teaching life lessons through Irish folklore.

2.2.1 Folklore

Folklore, developed by Game Republic and released exclusively for the PS3 in 2007, is a mystery narrative game based in a small town in Doolin in Ireland (Hell Fire RPGs, 2021). At first glance, it seems like it's very relevant to this project, but the main use of fairies here is for combat. You capture creatures and use them for combat. I thought I managed to find a narrative very similar to what I planned but it turned out to be completely different. It's hard to find more information on this game as it's not easily accessible.

2.2.2 Hades

Looking at adjacent mythos-based narratives, we can find many works based in Greek mythos like Hades. It doesn't hit the specific gap around Irish folklore but it's a good example that the artefact made for this research should strive towards. It is a Greek mythology-themed roguelike video game developed and published by Supergiant Games. Perhaps what makes Hades stand out is its approach to relationships. While romance and friendships aren't the primary goals of the game, they serve an important narrative function, as well as being well-written and compelling (Steele, 2023). The interactions between the whole cast make these characters memorable and interesting. We can see that they have existing relationships between each other on top of the ones they develop with the main character. The fairies forming relationships in my artefact is an avenue I have not considered and need to think about.

2.3 Theoretical framework

This research is grounded in facts about the Irish fairies and creatures while considering wider life lessons Irish folklore discusses. This is fundamental to producing an artefact based on reality while keeping the narrative culturally relevant and appropriate.

Drawing from Joseph Campbell's Hero's Journey and Chris Bateman's discussions on nonlinear game development, we also have a framework for narrative writing for our characters that should create challenges and triumphs that we can build on to create characters with a lot of depth.

Chapter 3: Methodology

This section describes the methodology used to test the artefact and conclude on the research question. It covers the design of the user testing and discusses any limitations and ethical considerations.

3.1 Description of the research design

The artefact "Exercise Your Demons" is designed and created as part of this thesis and described in detail in later sections. It is published online at https://boopdood.itch.io/exercise-your-demons for anyone to play. Players have the option to respond to an online anonymous survey to participate in this research. Anyone who has played the game, read the participation leaflet and consented to participate can have their answers used in this paper.

Since the survey questions are open ended, the research focuses mostly on qualitative data gathering, allowing respondents to voice their opinions and concerns. By categorising these responses, we can also get some quantitative data that can be used to test the likelihood of our hypothesis. For this testing, we will utilize the binomial test. This "is a test used in sampling statistics to assess whether a proportion of a binary variable is equal to some hypothesized value" (McClenaghan, 2022).

To spread awareness of this research, social media has been used extensively as the main advertising platform. This includes Instagram, Facebook, Reddit and Discord. The advertising is focused on the core demographic which includes Irish and cozy gamers. To this end, specific groups have been identified and used to promote the project.

Focus groups were also considered but due to delays and time constraints, the idea was dropped. This had potential for more detailed feedback which could have been useful as surveys are usually not very open ended for discussion. If future work is considered, a combination of surveys and focus groups would be ideal to test the artefact again.

3.2 Explanation of data collection methods

The data is collected anonymously through an online survey made with Google Forms. The survey consists of open-ended questions where the players can discuss their opinions of the game and narrative.

This survey is open for two weeks and once closed, any data will be anonymised and stored in the secure cloud provided by the institute for use in this document. This makes sure no personal data can be used or leaked as part of this project.

Making this survey fully anonymous without gathering any personal data like age and gender makes the data harder to filter and categorise which can potentially limit data analysis. However, privacy and bias limitation is more important, so questions that could profile someone are omitted.

3.3 Discussion of data analysis techniques

All the data is text-based. This data can be used for two purposes. These include figuring out the conclusion on the initial hypothesis and the future of the game artefact. Both are important to the research and will require the use of different techniques.

3.3.1 Concluding on hypothesis

There are two specific questions in the survey of utmost importance. These are:

1. Have you learned any life lessons from this video game?

2. What life lessons did the game suggest?

Their goal is to give insight into the hypothesis based on the artefact's narrative. We can compare these to the lessons from Irish mythos discussed in the literature review to check for overlap. This will start to show if the narrative has shown any sign of successfully replicating those lessons in its character interactions.

Secondly, we can categorise the responses to do some quantitative research. Even a simple categorisation like yes or no should allow us to perform some significance testing to get p-values. The null hypothesis can then be accepted or rejected using these p-values. This will allow us to see how statistically significant the results are, while enabling us to extrapolate to the whole population, assuming the sample size is big enough.

3.3.2 Future of the artefact

This is the first attempt at this research. The artefact is limited in scope due to time constraints but there is always room to expand on this research in the future. This is a big limitation, and it's important to consolidate all the user feedback into action items that can

be used for further development. Any failures or issues that arise can be used as learnings for the next set of experiments.

To come up with a solid plan for future work, the text-based information should be summarised and prioritised, allowing us to understand the next steps to take in future research.

3.4 Ethical considerations

This research has been approved by the Institute's ethics committee. Testing can only commence once full ethics approval is granted.

The data is stored in a secure cloud for 6 months and deleted after the project is completed and graded. As needed, the data can be transferred via secure channels to the required parties within the Institute. No personal data will be collected. Only questions related to the game will be present to allow for the evaluation of the narrative. Any sensitive data provided by survey respondents will be redacted before storage.

Assuming the respondent is of legal age to participate in this survey, there are no exclusions based on any discriminatory factors. All participants are treated equally and have been provided with an overview of the research through an information leaflet including their rights, for example the ability to opt out at any moment.

There is no renumeration for participation, meaning there is no benefit for the participants outside of furthering this research, limiting any possible bias that comes with rewarding individuals.

Chapter 4: Design

This section focuses on the design and concept of the artefact. It also refers to the literature that influenced the choices made during the design process.

4.1 Game Concept

"Exercise Your Demons" is a 2D narrative game based on the 'good people' from Irish fairy tales and folklore. The player takes the role of a character who is struggling to find a job but under mysterious circumstances winds up working in a gym filled with good people.

This is a cozy narrative game with some dark themes. The target demographic is cozy gamers with an interest in Irish fairies. This demographic influences the social channels that are used for testing.

There are multiple characters that the player meets throughout the narrative. The player's goal is to meet and help them with their issues. If the player succeeds, they will grow themselves and hopefully find their goal in life. Since we're dealing with fairies who are known to be tricksters and sometimes even bad omens (Quinn, 2024), all bad endings lead to the main character's death which needs to be avoided if you want to see the good ending.

Early Prototype: https://www.youtube.com/watch?v=KJoaKhQFUJQ
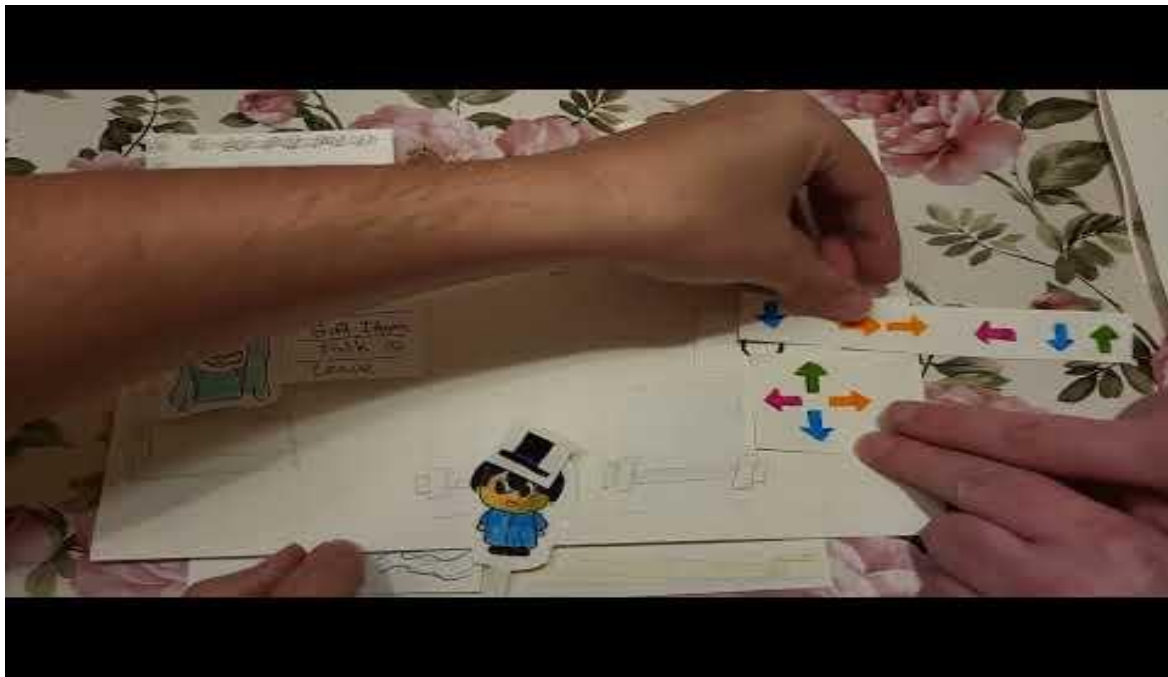
4.2 Game Setting

The narrative takes place across multiple locations in a fictional town called Inishsióg in County Galway, Ireland. The player can visit multiple locations including a pub, shop, restaurant and their new workplace, the gym, between character events.

As discussed by Bateman (2021), the narrative is linear and delivered through character events at different locations, but the characters will move between locations, allowing for some level of nonlinearity. To this end, all events need to have the correct gates so they don't happen out of order, while some events could be done in any order the player wants.

4.3 Narrative Design

This is a character driven narrative where the main character is trying to get their life back together. They do this by making friends with other characters in the town. The initial brainstorming has helped shape the current narrative which has evolved over the course of the project based on the character research from the literature review.
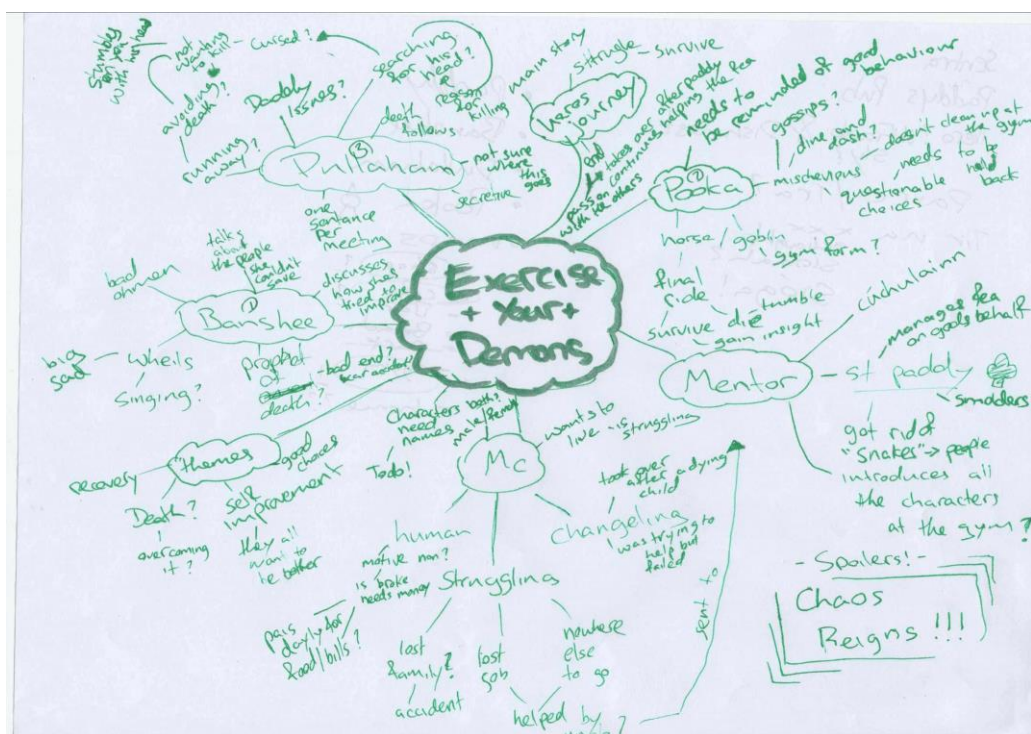

Figure 7: Narrative brainstorm

To limit scope, the narrative will only focus on a small part of Campbell's Hero's Journey - "Act 1 - The Known" (Vogler, 1998). The player will play through the 'Meeting of the Mentor', the mentor being St Paddy, and start 'Crossing the Threshold' with character introductions.

This is the expected sequence of events that will take place in the artefact.
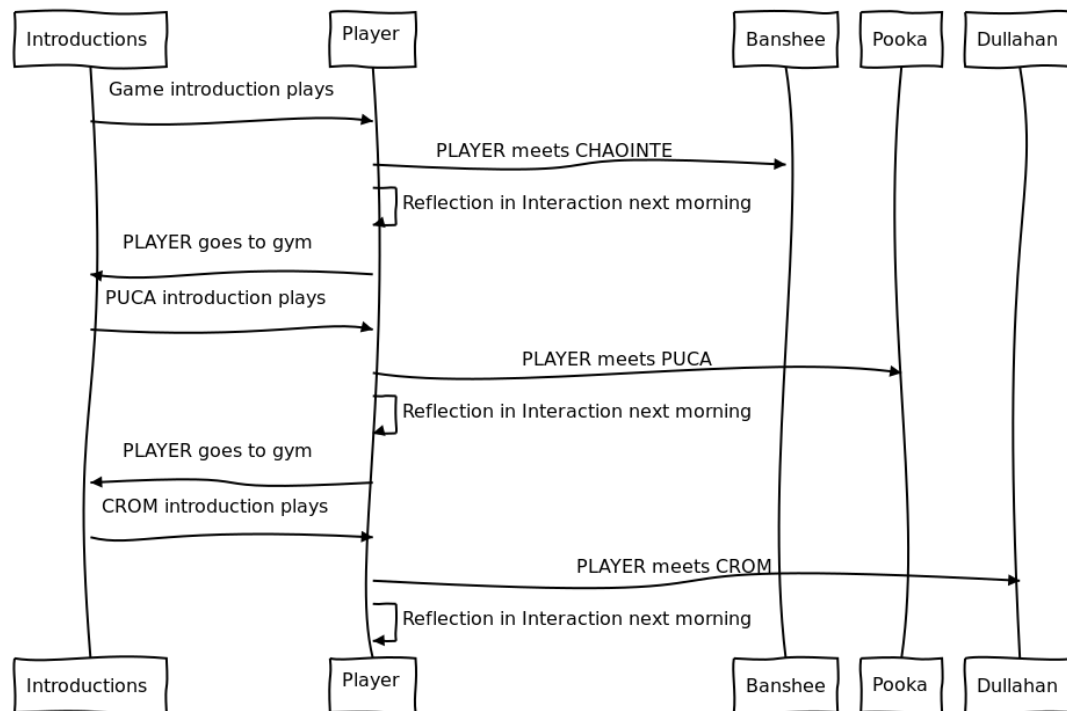
Figure 8: Narrative flow

4.4 Character Design

4.4.1 Main Character

While not acknowledged at first, the main character is a changeling that has completed their purpose in life. They are searching for something new now as they grow into adulthood and move out to live on their own. In their past life, they replaced one of two twins that passed away in a car accident with their parents. It was an act of kindness to help the parents cope with their loss. This act of kindness is the reason why they are a fitting main character for this story. Further research is required on changelings as the decision to make the main character a changeling occurred during development, changing the original design after the literature review was completed.

Throughout the story, they struggle with anxiety about the move but as the days go by, they seem to look forward to all the interactions with the other characters. They make some friends and decide to take over the management of the gym from Paddy to help others find their way as they stumble in and out of town.

Paddy's retirement from the gym causes conflict as the character's cozy new life is thrown for a loop! Interactions with other characters slowly reveal the fact that the player is a changeling throughout the game.

Since they are a changeling, the player gets to choose if they are a male or female twin.
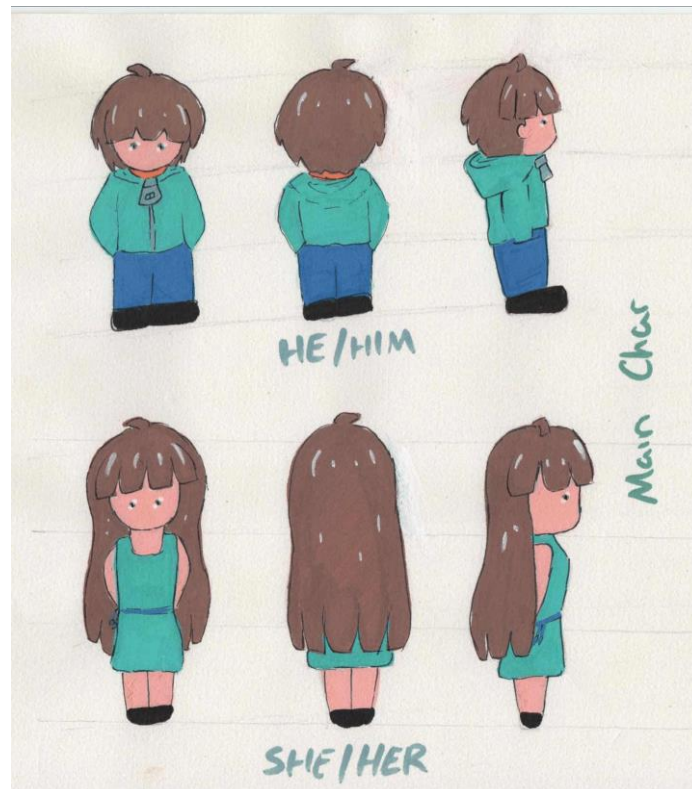
Figure 9: Main Character Design

4.4.2 St Patrick

This is the mentor character on our main character's Hero's Journey. He guides the main character in his daily duties and introduces all the good people the main character will need to befriend. He is also the proud owner of a local pub called Paddy's Pub.

Figure 10: St. Patrick Design

4.4.3 Pooka

The Pooka is a well-known trickster (Quinn, 2024) who takes many forms. In this game, he will take the appearance of a goblin. His story will focus on trying to influence the character into making bad decisions. The main character needs to keep him from succeeding if they are to better themselves. Both endings are based on the stories and consequences described by Curran (2007).

Good Ending: The Pooka transforms into a black steed and takes the player out for a ride. They are speedy but careful and the ride ends with the Pooka granting the player some hidden knowledge while they stargaze together.

Bad Ending: Learning nothing of manners and morality, the player rides the Pooka in horse form off a cliff, reaching a dead end. The last thing you see is the Pooka's sinister grin atop the cliff as you fall to your doom.

Figure 11: Pooka Design

4.4.4 Banshee

The Banshee's story is one of fear and communication problems. She is clumsy and doesn't really have a way with words. All her life, she has been trying to save humans from themselves but can't seem to communicate this in the right way to anyone. As you get to know her, she starts trying to make friends with all the other creatures too in the process. Through perseverance, she becomes brave and courageous (Ivaylo, 2024).

Good Ending: You and the others watch the Banshee sing at the pub. It's not perfect but it's pleasant to the ears. The happy Banshee thanks you all and fades away with a smile. Her performance has saved someone from their fate which she had premonitions about, setting her free.

Bad Ending: You find the Banshee wailing on the street after the main character misses her performance, which seems to have gone awry. She's weeping for you, having seen a pre-cognition of your demise with no way to stop it. She runs off in tears and as you make your way back home, a car swerves and crashes into you, taking your life.

Figure 12: Banshee Design

4.4.5 Dullahan

The Dullahan is a stuck-up god of death with a knack for losing her head. She recounts stories of her past travels and asks the player for their opinions. This is a story of reflection, which is something the Dullahan doesn't seem to have a grasp on.

Good Ending: You find the Dullahan's head on the side of the foot path. This reminds you of a chilling story the Dullahan recounted about having her head stolen by humans. She shows up hesitant. Before she acts, you tell her you found her head, dust it off and hand it over. She thanks you and you proceed to chat for a while. She tells you about her success in dealing with her father.

Bad Ending: As you turn around to face the Dullahan after picking her head up, you see she seems off. Something bad happened and she's out for blood. She proceeds to swiftly take your head and rides off into the night, continuing to kill for the rest of eternity.

Figure 13: Dullahan Design

Chapter 5: Implementation

Reflecting on the artefact implementation is important as it feeds any future work and may provide insights into the creative process. In this section, we will discuss and reflect on the technical aspects of the artefact's creative process.

5.1 Presentation and analysis of the game artefact

To fully understand the implementation process, it's good to get a feel for the completed demo. This demo is a full playthrough of the artefact from start to finish.

https://www.youtube.com/watch?v=PvkIKVA3UM8

5.1.1 Project Management

Project management is an important aspect of implementation. It allows for proper scoping of the project and keeps development on track. The artefact design stage lasted 2 weeks and the development lasted 8 weeks. This was split into 2 deliveries, an alpha and a beta, lasting 4 weeks each.

The alpha was a rough working prototype of the artefact that validated the feasibility of the project while the beta was a polished and completed demo that could be used for testing.

At each stage, the scope was adjusted, and the artefact was refined. Trello was used to keep track of all the tasks and every week the list would be updated and re-prioritised based on the parts that were most important to this research.

GitHub was used to store the code and assets in a safe location. It also provides a change set for every update, allowing ease of rolling back to good known versions of the project.

5.1.2 Tools and technical stack

The artefact was built in C++ and Raylib. According to Raysan (2013), the creator of Raylib, it "is a simple and easy-to-use library to enjoy videogames programming". The documentation provided by the library is easy to understand, making it a great tool for the artefact development.

VS Code was used as the IDE for the project. With its C++ plugins and support, it is a great tool for writing and executing code. The built-in debugger also provides a great way for testing code and resolving complex bugs. The plugins used include:

- C/C++

- C++ IntelliSense

- C/C++ Extension Pack

- Better C++ Syntax

- C/C++ Themes

Lastly, R Studio and Quarto have been used as the go-to tool for documentation and technical journalling. All the documentation is written in markdown and published via GitHub pages when updates are pushed into the repository. This documentation can be found here: https://danielshappyworks.github.io/Aclaiocht-do-deamhan/

5.1.3 Narrative writing

The narrative script was written in R and Quarto in markdown using the existing tooling described above. This made it easy to maintain and update the game script. The script was written using the standard screenplay format.

Following a well-known format in an easy to update technical stack made drafting and reviews simple and fast. Some adjustments were made to the format as not all the styling

could be replicated in R but since the styling was consistent for all scenes, it's easy to understand.

5.1.4 Scene management

The game is segmented into scenes. Each one renders different areas and objects. There is a scene for every location and the overworld and the player can traverse these. By being able to add characters and objects into these scenes, the game immerses the player in the location they are in.

Scenes have also been extended into menus and a character selection, making them very malleable and extendable for new unique features. A scene manager is used to load in new scenes and the scenes can use these to facilitate movement from one scene to another.

5.1.5 Narrative implementation

The narrative engine extends the scene system. There is a Narrative Scene that renders all the Narrative Nodes associated with Characters & Locations as an overlay to the current scene. Introducing more narrative is as simple as copying the narrative script into the correct nodes. More nodes were added as development progressed when a new feature was required. The nodes that are currently supported include:

- TextNode: Formats and displays dialogue.

- ChoiceNode: Allows the player to make a narrative choice while keeping track of the selections for future use.

- AddCharacterNode: Adds a character to the narrative scene, showing them standing behind the dialogue.

- RemoveCharacterNode: Removes a character from the narrative scene.

- MoodNode: Sets the mood by changing the music playing in the background. This can be used to enhance the narrative by playing music that fits with the current mood of the scene.

- AddBackgroundNode: Sets a background colour to override the location the scene takes place in. This can be extended to textures later but due to time constraints, no bespoke drawings were created.

- RemoveBackgroundNode: Removes the background displayed at the current location.

- PassTimeNode: Passes time by a day or half a day and moves the player back to the overworld.

- SceneChangeNode: Ends the narrative scene and opens a different scene.

- RandomNode: Chooses a random node from the list to play. Useful to spice up default interactions with dialogue variation.

- ItemShopNode: Opens the item shop which is stubbed due to time constraints.

Each narrative event, known as a NarrativeScene, also has conditions and an "isForced" parameter. "IsForced" forces scenes to play when a specific condition is met, allowing us to trigger scenes as needed without player input. Conditions are used to limit when a scene can be activated and are easily extendable. They currently include:

- CharacterAtLocationCondition: Checks if a specific character is at a location while the player is at the same place.

- MetCharacterCondition: Checks if the player has completed a specific character event and distinguishes between the choice made.

- CharacterEventsCompletedCondition: Checks if all character events are completed and ends the demo. Can be used to trigger the final ending in the future.

5.2 Reflective commentary on the creative process

Reflecting on the final artefact, I am very pleased with the result. My personal goal of making a game demo that my wife would enjoy was successful. Based on this, I would like to continue this project until the narrative is completed.

5.2.1 Project Management

The artefact was well organized and completed in a timely manner and most scope was achieved. Two features from the original design were cut due to time constraints. These are the item shop wares and a rhythm minigame. These were necessary cuts made to accommodate for other more important changes, like the addition of more interactions.

These kinds of calls are hard to make but they benefit the final artefact greatly. The new interactions include:

1. A new character known as the chef who is selling food at the restaurant. Buying food passes half a day, causing all the characters to change their locations.

2. Paddy is now interactable and now sells pints at the pub. Buying a pint passes half a day, causing all the characters to change their locations.

3. A new character known as the shop keeper with a stub item shop menu.

5.2.2 Tools and technical stack

The technical stack was enjoyable. Writing C++ and Raylib is more complicated than using a game engine but as someone with a lot of technical experience, it was a good test of my coding skills.

Unlike other modern game engines, the artefact is only 17mb. This is a major achievement and makes the sharing of the artefact a lot more convenient.

5.2.3 Narrative writing

I'm not much of a writer; technical work has always been my specialty. This is very much a first for me. It felt like I was in the deep end. I found myself stuck for words or at a loss of what I wanted my dialogue to achieve. Unable to write meant my motivation was waning, especially when I just wanted to get stuck into the code instead. The fact that I used a sequence diagram instead of a storyboard for the narrative highlights this.

On multiple occasions, I got stuck, unable to write anything more. By persevering, I overcame a problem I never expected to have. As hoped, this project has pushed boundaries of my understanding to force me to make something creative.

The narrative became more light-hearted than initially expected. The design describes a darker game, but it turned out to be fun and cozy. This is likely due to the section of the game the demo covers, which is the introduction.

5.2.4 Scene management

My scene management system feels like a cheap knockoff of all the game engines that have come before this project. It's a replication of what I have personally witnessed with more

limitations, but it is very extendable into new features. I am both proud and slightly disappointed with this but seeing as the narrative is the focus, this can be reworked in the future.

5.2.5 Narrative implementation

The narrative node implementation is generic and re-usable. This means the prototype is easily extendible when the script is expanded. I'm very proud of this as it means adding more events should be easy. This kind of foresight and planning will make my life easier if the project continues beyond this thesis.

Fonts and Raylib are an odd combination and have been a thorn in my side during the narrative implementation. If they are not loaded right, they look off. I struggled with blurriness on some fonts and others didn't look quite right hence my final choice of fonts. My biggest issue here was special characters. By default, not all the font is loaded, causing special characters to not display correctly. For a game based in Irish culture where special characters can be common, resolving issues like this was important for the game to feel polished. Bugs and issues like this are a dime a dozen. I pride myself in taking the time to test and resolve these as it elevates the artefact.

5.3 Integration of theoretical insights with practical work

The theoretical insights from this thesis have been utilized in the narrative writing. The narrative writing effort was shorter than programming, but it is the core of this research, so it took multiple drafts to complete.

The narrative is composed of scenes with world interaction and player choice sprinkled in between. This is influenced by Bateman's (2021) discussions around linear story telling in a nonlinear world. The player can only access scenes when they have met the correct criteria to see them. When considered as a bigger whole, the narrative combines into the main character's Hero's Journey.

The characters in the narrative are all based on information compiled from books, with Curran (2007) and Quinn's (2024) contributions serving as the basis of the characters' designs and ideas. Many of the aspects of these characters were not explored in the narrative as only the introduction is covered in the final artefact.

In the short segment of the narrative that has been implemented, the characters are designed to make the users think about the general topic of morality and introduce the players to possible life lessons that the artefact could expand on in the future.

Chapter 6: Findings and Discussion

The focus in this section is to discuss the findings from the anonymous survey. The findings will be analysed and compared against data from the literature review as described in the methodology.

6.1 Presentation and discussion of the research results

The survey had 15 anonymous respondents out of the 28 people who downloaded the artefact. All respondents have played the game for over 5 minutes. This shows that most of the testers would have played enough of the artefact to see most of the narrative. From my own testing, it takes about 7-10 minutes to play through the demo. This implies that the testers properly played the artefact.
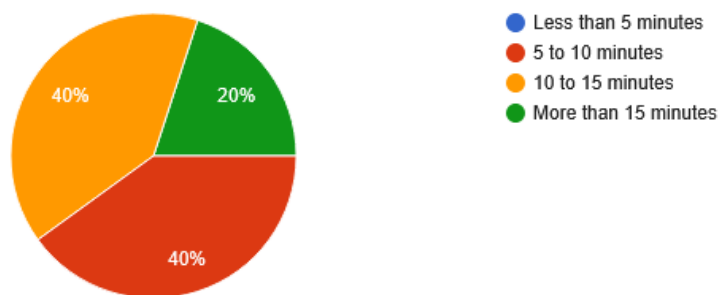
Figure 14: Users play time

The survey respondents were also asked to describe the game to someone who has never seen it. 14 testers responded. All the responses showed insight into the type of game this is, including comparisons to cozy games, visual novels and point and click adventures, all of which apply based on user tastes and playstyle. 12 of these respondents also discussed in detail the core narrative focus on Irish fairies, folklore and culture. This shows a high level of understanding of the game artefact from the survey respondents.

6.1.1 General artefact feedback

There is always positive and negative feedback. Both are worth considering and discussing to evaluate the future of the artefact and figure out what changes are necessary. This section compiles the general feedback provided by the survey respondents.

6.1.1.2 Positive Feedback

Survey respondents generally agree that the game has an interesting and enjoyable narrative concept which shows a lot of promise. Many of the testers like the idea of this demo being turned into a full narrative game. This implies that there is a target audience for this kind of artefact.

The artefact is quirky and silly which makes it more charming. The users enjoy the game's humour and visual style and want to see more of it. There are many funny and great references to Irish culture which the users also enjoyed. This is great as games based in culture can walk a fine line between being humorous and insulting. This has been a worry during the narrative writing process that proved to be unfounded.

While not discussed in detail in this paper, the users really enjoyed the music, especially as it changes in tone to match the narrative. These tonal shifts immersed the users into the narrative and gave the narrative more depth, creating urgency as needed and relaxing with the tone when the narrative calms down again. The audio-based comments are a great reminder that text is not the only way we can convey emotion and immerse the player in video games.

6.1.1.2 Negative Feedback

While there was a lot of positive sentiment around the narrative, some users thought the narrative is too short and may be lacking depth. Since the game only covers the introduction, there was limited time to add a lot of depth, and some users raised their concerns about this. This is a major limitation and could impact the thesis results.

The rest of the negative feedback was more technically oriented and requires some updates to the game code to resolve. While not being relevant to the research, it is worth listing some of the problems encountered by the users, so we are aware of the pitfalls affecting the artefact as it affects the users' experience. The issues include:

1. The introduction is too open. There is some confusion about what needs to be done or where the user needs to go.

2. The core characters are not interactable outside of the gym.

3. Multiple 2D assets are blurry due to asset scaling issues.

4. The lack of window scaling and full screen mode makes the dialogue hard to read on certain screens. This is a major problem on 4k devices.

5. The fonts are too small and sometimes not very clear.

6.1.2 Results relevant to the research

This section will discuss the lessons the users have learned and/or seen in the artefact. The answers to the core questions will be categorised into any lessons learned and lessons learned that also appear in Irish folklore.

The lessons learned include:

- Be kind to people.

- Make sure to stand up for yourself.

- The Pooka and the Dullahan are not to be messed with.

- Respect people's personal space and boundaries.

- Don't be afraid to get a little bit confrontational if someone is being troublesome.

The lessons seen include:

- Be respectful and don't be rude to others.

- A little apology goes a long way.

- Honesty is the best policy.

- Don't judge a book by its cover.

- Stick up for yourself.

- Be kind to others.

- Everyone has their own struggles.

- Patience is a virtue.

- Don't be afraid to question something that is wrong.

- Sometimes a little confrontation is necessary.

For the question "Have you learned any life lessons from this video game?", 11 have learned a lesson, of which 5 were relevant to lessons seen in the literature review. 5 of the participants did not state the relevant lessons associated with their answers since the question did not ask them to elaborate, so 5 out of 6 provided a lesson relevant to the review. 1 person has added that while they didn't learn any new lesson themselves, they see value in a full game which teaches life lessons to their kids if it was more child friendly.

For the question "What life lessons did the game suggest?", 13 have seen a lesson, of which 12 were relevant to lessons seen in the literature review. The wording in this question proved much better for extracting information from the respondents.

With this information, we can use the R programming language to figure out the statistical significance of these results by applying the binomial test to figure out the p-values. The sample size is small and consists of two outcomes when categorised, making this the right test for the job.

```
1   probabilityofSuccess <- 0.5 #50% chance of learning a lesson
2
3   #Learned a life lesson
4   result <- binom.test(11, 15, p = probabilityofSuccess)
5   print(result)
6   #lesson was relevant to literature
7   result <- binom.test(5, 6, p = probabilityofSuccess)
8   print(result)
9
10  #Seen a life lesson
11  result <- binom.test(13, 15, p = probabilityofSuccess)
12  print(result)
13  #lesson was relevant to literature
14  result <- binom.test(12, 15, p = probabilityofSuccess)
15  print(result)
```

Figure 15: Testing significance in R

For the question "Have you learned any life lessons from this video game?", the p-value for the respondents that have learned a lesson is 0.1185. The p-value where the lessons discussed were relevant to the literature review is 0.2188.

For the question "What life lessons did the game suggest?", the p-value for the respondents that have seen a lesson is 0.007385. The p-value where the lessons were relevant to the literature review is 0.03516.

6.2 Interpretation of findings in relation to the research question

We have a long list of the lessons the players have learned. These range from lessons about the Irish fairies themselves to genuine life lessons. The lessons include a combination of morality, understanding and respectfulness. While not everyone learned or found a lesson in this artefact, the narrative does cover a lot of important issues that can teach us lessons about our daily struggles.

The first question does not show statistical significance in either teaching life lessons or teaching life lessons specific to Irish folklore as the p-value >= 0.05. The question seems flawed as it does not encourage elaboration. This means the question requires some re-evaluation.

The follow up question shows statistical significance as the p-value < 0.05 using the categorisation and binomial test approach. This implies we should reject the null hypothesis. Therefore, we are accepting that Irish folklore can be used to teach life lessons relevant to the struggles of our daily lives through narrative gaming.

From the results, we can also see that teaching general life lessons in video games is even more likely than teaching specific lessons we see in Irish folklore, which is to be expected as some life lessons may not be covered or discussed within folklore.

6.3 Comparision with existing literature

While not exactly utilizing the same vocabulary as the literature review, the respondents discuss many similar moral lessons. Virtues like bravery are discussed through standing up for yourself when dealing with bullies. Respect is also a common theme which, depending on the context, could fall under empathy, loyalty and/or kinship. There are a lot of crossovers between these two which strengthens the case for rejecting the null hypothesis.

There is no mention of any reverence for nature in the survey responses. This is a big miss in the narrative and a failure to capture a core pillar of the lessons Irish folklore tries to impart. The next iteration of this artefact should consider the lack of responses that relate to this topic as it is important to cover these concepts in a game based on this culture.

A case can also be made for teaching players about the fairies, creatures and gods that appear in Irish mythos. Even if irrelevant to this research question, some respondents do mention lessons about the Pooka and Dullahan that indicate another teaching opportunity.

Portraying these characters as described in the literature review is important to make sure the players do not get the wrong idea about who these characters are.

6.3 Reflection on the limitations and implications of the study

The study makes a strong case for rejecting the null hypothesis in favour of the alternative, meaning that we can in fact teach life lessons from Irish folklore in video games. There are multiple limitations that should make us question these results.

Bias is the first one on the list. The data was categorised by me. When categorising the data, I made sure to be rigorous. However, analysing text-based responses can be difficult and open to interpretation. If someone else were to look at this data, they may categorise it differently. For future work, a secondary experiment with a panel of unbiased judges categorising the data may be a way to resolve this kind of bias. Alternatively, if no judging panel is feasible, using AI could be a great alternative for categorising data and sentiment analysis without bias.

The second limitation is that the sample is small. 15 people is likely not enough to extrapolate to the whole population. Testing for statistical significance at this size is difficult. We can start making educated guesses, but more research is required. We also need to consider the implications for treating the data like a coinflip. The binomial test for p-values used a 50% chance of someone learning a lesson from the game but it is possible that this value should also be tweaked to give more accurate results. More consideration should be given to the types of tests used in future research if the sample size is large enough to allow for these.

The questions need some rework. The question "Have you learned any life lessons from this video game?" does not indicate the answer should be elaborated on. Multiple respondents say they learned a lesson and we have no idea what it was. Alternative research methods like focus groups would be a better fit here, but the second question "What life lessons did the game suggest?" asks the respondents to re-iterate their answers. Without this backup question, this research would have been in a lot of trouble.

The last limitation, which is also a talking point within the survey respondents, is that the narrative is too short and lacks depth. It's hard to fully teach lessons in the introductory

segment of a game. The results look promising, but it would have been better to test with a completed narrative, allowing for more time for lessons to sink in.

Chapter 7: Conclusion

7.1 Summary of key findings

Overall, my research indicates that we should reject the null hypothesis in favour of the alternative. This means that Irish folklore can be used to teach life lessons relevant to the struggles of our daily lives through narrative gaming. The research also shows games can be used to teach life lessons in general. This result needs to be taken with a grain of salt as there are many limitations discussed in the findings that apply here. These limitations include limited sample size and possible categorisation bias.

There are a lot of crossovers between the lessons discussed in literature and the lessons discussed in the findings. This indicates that the artefact correctly portrays most the research that fed into it. There are some expectations here around the importance of nature in Irish folklore. The artefact does not successfully cover the lessons taught on the topic of nature.

People appreciate Irish humour and culture. The Irish game development community should strive to incorporate it into their work. Based on the feedback given, this work demonstrates the importance of sharing the Irish culture with others.

7.2 Contributions to the field

There appears to be a gap in the market for media related to Irish folklore, especially games. This research and artefact have the potential to fill that gap as players are excited to see games based on their own cultures.

This research is very niche and aims to address a lack of representation of Irish folklore and the lessons it teaches through video games, but there also seems to be a gap around research into the lessons taught by Irish folklore. More general research to categorise the lessons across folklore stories could help us understand Irish culture and the social expectations in Ireland. Most work around this is documented on websites with no real peer review processes, making reliable information hard to find. Other research that diverges from this specific paper would also contribute to the field. Discussing this extra gap is important as it informs other researchers of gaps they can pursue.

7.3 Suggestions for future research

The research needs to be tested with a wider group of people. The sample size is too small to accurately reject the null hypothesis . This research makes good strides towards answering the question but falls short when it comes to the research sample. The testing in this paper was done through social channels that focused on Irish gamers who may be interested in cozy games. Next steps would also involve sharing the game with a wider market. To reach a wider audience the game would need a proper, advertised release. A more complete version could be released into early access on platforms like Steam to get more feedback from a wider audience.

The artefact should be fully completed with more fleshed out characters. This has the potential to teach life lessons more effectively. This would make further research more substantial while making sure the lessons have some time to sink in.

There is a lack of narrative elements discussing the importance of nature in Irish folklore. The narrative should consider retrofitting these topics into the wider story. This could also be addressed by adding new characters that can cover the topic of nature. This would cover an important aspect that was referenced in the literature review but not acknowledged by the survey respondents.

It is also worth considering re-adding removed scope and fixing the technical problems found during testing. This has the potential to add more interactivity and improve the usability of the artefact which is necessary to make sure the artefact does not impede any ongoing research.

7.4 A final note

I have achieved my goal of sharing my interpretation of parts of Irish culture with others. Creative work can be difficult and draining. This was very much out of my comfort zone, and I hit a wall with writer's block. People have been wonderful, and their feedback was plentiful. With their help, I got the opportunity to try something new, learn from it and share it with others through this paper.

Thank you for taking the time to read this work.

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