Oliver's Rumination: A Short Video Game About Failure

Shaemus Spencer
srs2404@rit.edu

Follow this and additional works at: https://scholarworks.rit.edu/theses

Recommended Citation

This Thesis is brought to you for free and open access by RIT Scholar Works. It has been accepted for inclusion in Theses by an authorized administrator of RIT Scholar Works. For more information, please contact ritscholarworks@rit.edu.
Oliver’s
Rumination
A Short Video Game About Failure


Submitted by Shaemus Spencer | Approved May 2018
School of Design, College of Imaging Arts & Sciences
Rochester Institute of Technology
Committee

Dan Deluna
Associate Professor, Visual Communication Design
Chief Thesis Advisor

Chris Jackson
Associate Dean, College of Imaging Arts & Sciences
Thesis Advisor

Shaun Foster
Associate Professor, 3D Digital Design
Thesis Advisor

Shaemus Spencer
Candidate, MFA in Visual Communication Design
Contents

I. Introduction
   Abstract
   Thesis Statement
   Problem Statement
   Target Audience

II. Design Process
   Initial Research
   Literature Review
   Script Development
   Visual Development - Props
   Visual Development - Color Palette
   Development: Sound
   Development: Animation
   User Testing, Feedback, and Changes

III. Final Product
   Final Gameplay
   Final Visuals

IV. Conclusion
   Results
   Future Considerations

V. References

VI. Appendix I
   Scripts

VII. Appendix II
   Thesis Proposal
Abstract

Studying and working in a creative field requires designers and artists to produce consistently high-level, novel work. In some cases, taking risks to pursue new concepts, methods, or products is highly valued. At the same time, not all companies, students, or individual artists have the resources to risk should their exploration fail. What remains is a crossroad: creative professionals and students are rewarded for taking risks, but are often unable to do so because the possibility of failure carries too much weight.

Changing the way creators see failure could revolutionize the way they work. By accepting and incorporating failure into the beginning stages of a creative project, designers and artists can free themselves to think beyond the expected and create stronger work. They stand to lose less time, money, and quality than if that failure happens in the later design or production stages.

For some designers, even this early failure is still daunting, because the way some creators view failure is purely negative. In order to avoid negative feedback and pain, failure is avoided altogether by pursuing weaker concepts, simpler methods of execution, or it can result in a project being abandoned altogether. What remains is a situation where many artists and designers would benefit greatly from a change in the way they view their own personal creative failures, in order to improve their working process and overall performance.

Currently, the video game industry is expanding to include more experimental titles which allow for contemplative gameplay and emergent gameplay. These new games often tackle complicated themes, and can offer players a space in which to experience trauma, struggle, or moral dilemmas without real-world consequences. In doing so, these games introduce coping mechanisms to players in a low-stress way, and there is research which suggests this experience can translate to real-world skill development.

This thesis project aims to combine visual design principles and simple gameplay into an interactive experience which provides players an environment to experience failure without real-world consequences. The goal of this experience is to provide a cathartic experience for the player, with the game acting as a reminder that failure and iteration are common, and that they can be used strategically for creating stronger end results.

Keywords
Design, 3D Design, Game Development, Iteration, Failure, Gameplay
Thesis Statement

This thesis project explores failure, struggle, and iteration as they relate to the creative process, and will attempt to create a cathartic gameplay experience which allows players to perform failure and find value in that failure as part of a successful process.
Problem Statement

Failure is extremely common in art and design. In a field which requires creativity on-demand, nearly all creative professionals experience failure at some point in their careers. It can be personal, in the form of “artist’s block,” or weak concepts. It can also be professional failure, coming as harsh criticism or a lack of public interest in one’s work.

Failure can be extremely painful, to the point where in some cases those who experience it simply do not admit to having failed (Sitkin, 1992), or avoid potential failure altogether. Some research suggests that regular failure, if not coped with properly, can lead to poor confidence and a reliance on old ideas or workflows which had previously led to moderate success, even if those workflows were weak or resource consuming (Foumberg, 2016; Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Stadd; Wolfe, 2015). In educational settings, when students see failure as insurmountable there becomes no incentive to try again in order to succeed (Blanco-Herrera, 2015), and failure becomes a constant with no perceived way out. In some cases, repeated failure can even ruin a career or crush an entire organization (Sitkin).

Designers and artists are sometimes - often unintentionally - rewarded for a low-risk creative process. Without taking risks, artists and designers can still get good grades, jobs, and feedback on work. This leads to an environment where the design process can be rigid and structured with very little room for taking risks or failing, unless there is explicit allowance or proper funding for risk taking (Foumberg, 2016; Petroski; Popova; Stillman, 2012). In an industry driven by deadlines and great ideas, it can be difficult to argue for “strategic failure,” when a route that is perceived as faster and safer is available.

Within the past thirty years, several studies have attempted to evaluate the value of failure in multiple fields. Some researchers theorize that repetitive trial and error leads to better overall results (Burkeman, 2016; Foumberg, 2016; Grant Halvorson; Petroski; Shepherd, 2011; Sitkin, 1992; Syed, 2015; Wolfe, 2015; Young, 1968), as each failure allows someone to glean incremental knowledge. In cases where those who fail see it as a positive or are given room to try again, those who failed tended to have better end results and have a more positive attitude toward occasional adversity in their work (Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Wolfe, 2015). In creative fields especially, being able to rapidly produce ideas or iterate on weak designs can be the difference between a successful career and one which stagnates. When iteration on
failed ideas is encouraged and treated as a learning opportunity instead of an end result, students and professionals tend to feel less negative emotion toward failure, and feel it for shorter periods of time (Blanco-Herrera, 2015; Shepherd, 2011; Wolfe, 2015), greatly encouraging the likelihood that they take valuable risks.

If designers and artists can be taught to cope with failure and adjust to it accordingly, they may be able to internalize the habit and move beyond that step faster in each future project they tackle. The challenge then comes in teaching that both failure and struggle are acceptable steps in the design process.
Target Audience

Oliver’s Rumination is aimed primarily at two groups:

**Group One:** People who are interested in contemplative and emergent gameplay
**Group Two:** Students and young professional in creative fields

Content and style were developed to match current games marketed toward these groups. This includes tone, story content, and visual style.
Initial Research

To start Oliver’s Rumination, an initial round of research looked at three areas:
Current contemplative gameplay experiences publicly available
Best-practices and work-flow for independent game development
Timeline development for production

Games with similar themes and gameplay mechanics were investigated, including The
(Blow, 2016), and Dr. Langeskov (Pugh, 2015).

A work-flow and timeline was developed in tandem, establishing finish dates for 2D
sketches, plot development, sound recording and sourcing, color palette development,
asset production, level planning and development, level scripting, and polish.
Literature Review

Video Games, Art, and Design


Ernest Adams, a well-recognized voice in the game design community, discusses the perception of art and whether video games will ever be perceived as a legitimate art form. Analyzing the fundamentals of art, Adams looks at the current state of game design and where he feels games need to go if developers seek to produce games as “art.”


In this lecture, Chris Bourassa of Red Hook Studios discusses the importance of a strong visual direction when developing a game. Bourassa argues that a strong visual direction should be the bedrock of all game design, as it can inform the game at several steps along the way, and is often part of what makes a game memorable.


Videogames and Art provides readers a look at the complicated relationship between video games as a medium and the art world. Clarke and Mitchell attempt to provide answers to questions about the nature of game playing and whether video games will ever be considered art. Through case studies and interviews, the authors of Videogames and Art look at gaming from a perspective outside of the mainstream, and propose the future of gaming lies more in art and design, and less in traditional game design conventions.


Game Art provides looks into the creative end of video games from 40 unique perspectives. Some artists interviewed worked on multiple AAA titles, while others are independent artists. Featuring artists from around the world, Game Art provides practical advice for character development, world building, art direction, and more.

Schrank and Bolter look at the fundamentals of avant-garde theory, and describes examples of video games which follow in the avant-garde tradition. Arguing that there are opportunities for game design to address political and social issues, Schrank and Bolter question whether games can be an avant-garde art form, and if they are, propose ways to discuss and critique them.

---

Video Game Design and Development


In this lecture, Joel Burgess discusses the method for producing hundreds of unique locations inside of two triple-A games. Burgess describes the process from concept to completion, and explains how iterative design has become a staple in Bethesda's design process.


In Playing with Sound, Collins addresses sound in video games from music to sound effects and dialogue. Collins looks at how these sounds impact the player, add to or detract from immersion, and add to the interactive player experience.


In this talk, Dan Cox explains the vital relationship between game level design and interior design. Cox argues that by studying fundamentals of interior and architectural design, level artists can make better game spaces which guide the player through light, scale, and color.

In Critical Play, Mary Flanagan provides a needed discussion on the state of non-traditional games. Encompassing a wide variety in types of games, Flanagan looks critically at the role of serious games and their roles in social and political issues. Flanagan also discusses the need for more mainstream “critical” gaming, and proposes an updated method of development for this style of game creation.


Garber-Barron and Si provide a case study of their research into a storytelling program which uses numerical assignments to tag narrative elements and determine how a user reacts to them. This program assigns data to user responses and adjust the method of storytelling according to an algorithm, and seeks to determine whether there is a preference for story progression based on age or gender. The goal of the paper is to describe this methodology and investigate the balance between introducing novel topics in storytelling and user reaction.


Artist Gavin Goulden, part of the team responsible for Bioshock: Infinite, discusses the importance of embracing iteration in design for games. Breaking down his team's artistic and technological approaches, Goulden emphasizes that as an artist, work is always going to be made that nobody will see, and this should be embraced for its potential in better overall product instead of being avoided.


In this text, Hill-Whittall provides a look at the process of creating, marketing, and shipping a game for independent developers. Complete with interviews from independent game companies, proper dissemination practices, and marketing strategies, Hill-Whittall provides new developers a starting point for making and shipping their creations.

Jesper Juul, an icon in academic research on video games and game culture, looks at the growing world of “casual gaming” and its ability to attract non-traditional gamers. A Casual Revolution discusses the history of “casual” gaming and where the industry is headed, or should head, in order to continue fulfilling the needs of game consumers while producing high quality work.


In this book, Jesper Juul looks at the importance of failure in game design and the effect failure has on the player. Juul also explains some of the psychology behind failure, its usefulness in learning mechanics or design elements, and how failure as a game design has changed in the past three decades. Juul argues that video game design is a fine art of allowing the player to fail in order to learn and improve skills which can be used to further progression, and failure in games can help players overcome failure in other disciplines.


Environment artist Jane Ng provides a complete post-mortem style dissection of the art direction, level design, and construction of the game Firewatch. Ng discusses tips and tricks for small game design teams, and provides creators a look at working on a game design with a heavy focus on visual style and environmental narrative elements.


Regarded as one of the required texts for all game developers and designers, Level Up provides information on virtually every aspect of game design. Looking in depth at the brainstorming process, character creation, level design, and a breakdown of a proper Game Design Document, Level Up is an invaluable book for any designer who needs a starting point when creating a game.

In *The Art of Game Design*, Schell provides a comprehensive look at what makes a good game, covering the use of iteration, level planning, and visual design. Schell is hoping to provide readers an understanding of the psychology and elements that are universal across games, from board games to virtual reality simulators.


In his text, Totten provides an in-depth examination on level design in games. Discussing design from the lens of historical architecture, Totten gives real-world examples of narrative elements, emotional design in spaces, sightlines, and more. Providing studies of countless games and their level designs or floor plans, this text becomes an invaluable resource for designing game levels and worlds with real impact.


This article describes the process of creating a 3D interactive storytelling game. Guided by the authors, two students created a 3D game about Jack the Ripper wherein players had agency, and the game had multiple outcomes. The article describes the process the students took from planning branching paths, to art direction, and ultimately to the programming and execution of the game. The dissemination of this article provides a look at one method of developing a game with a basic level of player agency.

---

**Design Process, Creative Block, and Failure**


In this article, Burkeman addresses methods for problem solving and working through creative block. Burkeman discusses how to combat feeling “stuck” in a design or creative process, and describes how those methods can be applied to multiple disciplines.

Psychologist Angela Duckworth provides an in-depth dissection of her work on why some people fail when faced with adversity while others succeed. Arguing that everyone has some level of “grit,” Duckworth says that the amount of “grit” someone has can predict how likely they are to stick with a project or career path. Duckworth also discusses the psychology of failure, how some people cope with failure, and the impact failure can have on our lives. Finally, Duckworth argues that “grit” is not set in stone - everyone can become someone like Steve Jobs or Einstein, it just takes passion and perseverance.


Foumberg addresses the increasing popularity of teaching failure in beginning art courses. Citing professors and classes in Chicago’s top art schools, Foumberg uncovers why faculty and students alike find the new approach beneficial, arguing that the opportunity to fail allows students to become more experimental and focus on iteration over production of only one undeveloped idea.


Grant Halvorson looks at two methods of creation, the “be-good” method and the “get-better” method, and argues that the “get-better” method allows for greater learning and ultimately more success in the long run. Grant Halvorson argues that the anxiety and frustration that come from the desire to “be-good” disrupts the ability to think and create affectively. On the other hand, the “get-better” method allows room for mistakes, and argues that these mistakes lead to greater iteration and a stronger end product.

In this short article, Popova discusses Arthur Koestler’s work The Act of Creation. Popova discusses his major theories of bisociation, the importance of the “ripeness” of an idea, and generational amnesia. By examining these psychological phenomena, Popova hopes that readers can better understand their own creativity and the creative process.


Shepherd, Patzelt, and Wolfe conducted an experiment on failure, emotional responses to failure, and coping mechanisms. Their research reveals that in situations where failure is seen as a negative, people tend to have poor emotional responses to failure, and those emotions last for a long period of time after the failure has occurred. On the contrary, people who perceive failure as useful (or who work in environments where failure is acceptable in a process) tend to harbor negative emotions for less time after failure has occurred and learn more from the failure in the long run.


Sitkin discusses the virtues of failure and iteration, explaining how “strategic failure” can be used in many disciplines to overcome adversity and create strong end results. Sitkin argues that failure can be embraced as long as it is seen as a means-to-an-end, and not just a final result.


Allison Stadd looks at Zen practice and psychology to give readers a method for dealing with failure. Stadd argues that failure is useful for growth, especially in design, and the ability to recover from that disappointment might be more useful than the failure itself.

In this short article, Daniel Stillman discusses the strengths and faults of using a design process. Stillman suggests that while some designers and artists feel that a process can be rigid and limiting, using the design process which fits for each individual can allow for a more iterative process and ultimately a better overall product.


This article discusses why iterative attempts at a design and failing at them is far more useful in the long-term than taking one long, invested attempt. Citing examples including the Dyson Vacuum, Disney Pixar, and experimental teaching techniques, Syed points out how failure in design should be embraced, and being public about that failure can help dispel the idea that creativity and innovation come from a magical, unseen source.


Wolfe and Shepherd expand on prior research on failure and explore the ability of people to cope with and overcome failure in a professional setting. In this text, Wolfe and Shepherd describe methods for dealing with failure and ways to ensure organizational success.

Young, James Webb. 1968. A Technique for Producing Ideas. 4th ed. Chicago: Crain Communications, Inc..

In A Technique for Producing Ideas, James Webb Young outlines five steps that he finds useful in problem solving. Arguing that this technique is usable across disciplines, Young does not focus on any one profession, but simply describes his approach to critical ideation and iteration.
Storytelling and Narrative


Professor Karl Bergström provides multiple frames to view storytelling for tabletop and digital games. Bergström discusses seven frames and poses which describe methods in storytelling and the overall effects they have on player immersion and agency. Bergström’s article provides useful terminology to describe several methods of storytelling and their impact on game players.


Grinder-Hansen and Schoenau-Fog look at how environment design, asset location, and NPC presence in digital games affect a player’s perception of both the space that the game occupies and the level of immersion the player experiences. The authors created a study where players play one of two games, each with unique assets and NPCs, and a metric was created to judge their immersion and flow. The article intends to discuss the results of the study, and provide means for improved storytelling in interactive media.


Professor Hartmut Koenitz seeks to address current language regarding interactive digital narrative while at the same time providing foundations for successful future research. Koenitz describes five areas where language and research needs to be addressed in order to better serve creators and players of interactive storytelling. Koenitz is attempting to identify issues in IDN research and provide places for future researchers to delve in and address.

With their research, Pirtola et. al. seek to determine whether changes in timeline in a game narrative which result from a player’s choices (Unexplained Agency-Related Incoherence or UARI) negatively impacts the player experience, or if it is something that should be included more frequently in game design. By establishing an experiment with two games, one where players are introduced to anachrony which can be explained and one where it cannot, the authors review responses from the players in an attempt to determine whether the resulting UARI are detrimental. The article hopes to present this information and dispel the long-held assumption that UARI in game design should be avoided, when in reality many players responded positively to the UARI.


Sercan Şengün, a Professor at Istanbul Bilgi University, examines the method of player choice in Silent Hill 2, and assesses whether it is successful in creating true player agency, while also discussing its emotional impact on the player. By describing the method that Silent Hill 2 uses as “invisible agency,” Şengün proposes that this unique and underdeveloped method of subconscious choice allows the player to become immersed in a way not seen in other video games - the choices made are never intentionally made, and Şengün argues that this allows players to remain identified as the character for longer periods of time. This paper identifies invisible agency as an underutilized tool in game design, and seeks to suggest why it should be used, and the potential payoffs for the player.


In Video Game Storytelling, Evan Skolnick examines common tropes in game narrative design and discusses essentials for creating believable, well-paced game stories.

Ekber Servet Ulas argues that narrative and interaction can be combined in a video game setting by informing the user of a story through setting, set dressing, and a non-linear pathway. Writings by Manovich and Pearce are used to describe video games as a spatial medium, one where the nature of user-input glues together the story and the space it occupies. Ulas is attempting to argue against the common sentiment that video games allow too much user input to allow for a proper narrative, in order to shed light on the value of interactive games as storytelling vessels.

Immersion, Emotion, and Learning


Blanco-Herrera, Groves, Lewis, and Gentile discuss the nature of video games as teaching tools and the power they have as instructional vehicles. Blanco-Herrera et. al. describe the potential of video games as environments for exploring complex themes and issues in a "safe" way, where choices and outcomes do not have real-world consequences. However, the authors argue that this experience could translate to better preparation for real-world problem solving.


Ian Bogost breaks down the power of video games in political, advertising, and educational settings. Bogost argues that video games are intensely powerful with the ability to persuade and teach with a high level of nuance. Bogost defends the argument that video games can provide a place for players to experience complex emotions, and that they can have the power to change a player's perspective on difficult moral subjects.

Boot et al, researchers at Florida State University and the University of Illinois, propose that people who play video games regularly perform better in areas of attention, memory, and movement tracking than those who play video games less regularly or not at all (387). The authors developed an experiment in which participants were divided into one of three groups, each group playing a different game designed to test one particular area of improvement (attention, memory, or executive control), and tested throughout the multi-week experiment in these areas. The authors’ goal is to reinforce the accepted notion that even casual gaming can improve a number of “visual and attentional skills” (387). This research adds to and informs the works of Clark et al (2011), Dye et al (2009), and Karle et al (2010) and their exploration of skills gained from regular gaming.


In History, the Humanities, and New Technology, Brown presents a series of discussions on the history and nature of video games and what roles the might play in the near future. Discussing storytelling, aesthetics, ethics, and identity in video games, Brown establishes a strong reference point for readers interested in discussing the academic and social values of video games.


Clark, Fleck, and Mitroff, researchers at Duke University, investigate why video game players perform better in areas of attention, memory, and change detection than non-video game players. The authors’ purpose is to understand why regular gamers perform at higher levels in certain areas than non-gamers, so that those areas can be better understood and exploited.

Researcher Georgios Christou provides some of the first concrete evidence connecting the visual appeal of a game and the level of immersion a player experiences. Prior to his research, much of the writing done on game immersion implied the role appeal had on immersion; here, Christou establishes an expansive set of quantitative data which shows a direct correlation between a game’s level of appeal and its ability to immerse players.


Dye, Green, and Bavelier, researchers in the Department of Cognitive Sciences and Center for Visual Science at the University of Rochester, propose an experiment to further test regular video game players’ attention allocation in three areas: alerting, orienting, and executive control (1780). The goal of the experiment is to add to data on skill improvement and video games, especially in youth. This research reinforces previously held ideas that video game players receive a benefit in attention and focus, but also provides new data in the accuracy of a change in focus, and gives researchers data for a group of participants which had not been previously studied (youth).


Geslin et al, researchers at universities across France, propose that color intensity, brightness, and density are key components to producing an emotional response in video game players. The authors set up an experiment in which they showed eighty-five participants twenty-four randomly selected frames from video games, each with different levels of chromatic intensity, saturation, and brightness, and analyzed the responses each viewer reported. The authors’ purpose is to attempt to provide game designers a tool for color scripting, and to propose a method for creating the intended emotional response in games through color design.

Gomes et. al. present a set of metrics by which characters in games can be judged to be “believable” as existing in a space by players. The authors look to historical examples of literature and character traits which are believed to provide more substance to artificial intelligence. The paper sets out to explain in detail how content creators can provide believable characters, and ultimately how they can ask users for feedback to assess that believability.


Arguing that game design is seeing a renaissance in style, approach, and visual design, Katherine Isbister seeks to describe the methods by which designers and writers instill emotion in their game. By looking at recent contemporary examples of games, primarily independent games, Isbister uncovers the nuanced approach many games are taking to create more emotionally moving experiences.


Mahood and Hanus, researchers from The University of Texas at San Antonio and The Ohio State University respectively, aim to explain how immoral actions of a player-controlled character in an RPG impact complex player emotions, specifically guilt. The research done by Mahood and Hanus is extremely useful for game designers and developers who may be interested in creating dynamic and engaging narratives which help impact the emotional response of the player.

PJ Manney asserts that our growing attachment to technology is making us less empathetic, and theorizes that storytelling is the key to reviving our connections to one another, and possibly the key to saving humanity. Looking at the science behind how and why we feel empathy and invoking the writings of researchers in the field of literature, Manney argues that storytelling allows us to experience traumatic and difficult things safely, providing a broadened sense of compassion for others and for ourselves.


In her article, Professor Stacey Mason dissects concepts of immersion, agency, and how the two are employed in narratives in conjunction with each other and separately. Mason unpacks two kinds of immersion, mechanical and narrative, and describes two types of agency, diegetic and extra-diegetic. Mason then proceeds to discuss their complicated relationship in narratives. Mason is attempting to define specific terms that can be used to explain methods for creating immersion in narrative so that creators and researchers might be able to better understand how readers and players react to narrative texts and games.


Nacke, Wehbe, Stahlke, and Noguiera provide an in-depth look at the effect emotionally charged gameplay can have on the game player. This article adds to the depth of research describing the ability of video games to be used as persuasive tools. Nacke et. al. also describe how these emotional experiences might translate to real-world implementation of ideas and concepts by game players.

In this lecture, the studio director of thatgamecompany (responsible for games including Journey and Flower) provides an in-depth look at what made thatgamecompany a pioneer of experimental game design.


This collection of essays and research articles presents readers with several looks at cognition, affect, and emotion in video games. Focusing on the power of gameplay as an emotive tool, this book provides current, cutting-edge research on player experience and the effect of highly emotional video games.


David Weibel and Barthomäus Wissmath seek to fill a gap in research which addresses the relationship between presence (a sense of immersion in a game space) and flow (immersion caused by being involved in an action). The researchers developed an expansive study which sought to uncover how these concepts are related in game design, and whether they also impact enjoyment. The paper provides empirical data on flow, presence, and how those are interpreted by a game player in multiple settings.

Similar Games


Thatgamecompany’s most successful game draws heavily on emotional themes, exploration, and visual design to create a game that is moving and immersive. With no written text, dialogue, or instruction, Journey allows players to learn through exploration and uses design principles to create focal points and visual interest which move the player forward.
The small development team at Thekla, Inc. released The Witness, a game bordering more on visual experience than traditional video game. The Witness is a puzzle based game which encourages user exploration through a vivid and diverse island landscape while uncovering the secret behind where the island’s inhabitants have gone. The Witness combines a strong visual style with experimental narrative elements to create a game which adds to the growing realm of experimental gaming.

Playdead’s most recent game and spiritual successor to Limbo, Inside is a short game which focuses on the concept of choice, abandonment, and freedom. Strong visual design allows players to stay immersed for long periods of time as there is no text or dialogue in-game. Inside also challenges the typical game format as the end-state can be interpreted as player failure, as both of the endings require the player character’s death.

Often thought of as a return to vintage difficulty in gameplay, Dark Souls is a game which relies almost exclusively on player failure as a learning mechanism. In Dark Souls, failure is an expectation. Players learn enemy weaknesses and level pathways by repeated attempts, and the game is known for being very unforgiving.

Another exploration in difficult gameplay, Bloodborne retains many of the game mechanics found in Dark Souls while improving graphics and incorporating strong narrative elements.

From indie developer Lucas Pope, Papers, Please is a game set in a Soviet-inspired country. The player assumes the role of a government official responsible for checking immigration papers as people enter the country through a border checkpoint. Creating a commentary on complex relationships of power, societal norms, and the nature of video games, Papers, Please quickly gained critical acclaim from both academic and mainstream audiences.

William Pugh presents a twist on the typical game narrative. In this twenty-minute game, the player acts "behind the scenes," pulling levers and pressing buttons to provide the game experience to a player who cannot be seen. The game ends with the player attempting to access the full game, but discovering that it does not exist, the "game" instead is what they just experienced. Dr. Langeskov provides a unique and clever perspective into game design, challenges what a "game" can be.


Campo Santo, a team of ten developers, released Firewatch to critical acclaim. Stunning in its visual style, and with an incredibly moving narrative, Firewatch sets a new standard for storytelling depth and graphics for independent game developers. Dealing with themes of sickness, abandonment, and shame, Firewatch presents players with a highly-nuanced gameplay experience that challenges the player to make several personal moral decision in-game.


Creator Davey Wreden gives players a look into the relationship between game creator and game player, while attempting to describe the difficult process of regularly creating high quality work. This short game, roughly one hour in length, walks players through a linear narrative which is highly emotional. The Beginner’s Guide acts primarily as a catharsis for Wreden as he attempts to describe the difficulty of constantly outputting high-quality work.


The Stanley Parable is a game about the choices players make in-game, and the nature of choice in the real-world. Presented as nineteen playable "loops" each lasting approximately ten minutes, the game allows players to alter their path with each iterative loop and affect the outcome of the game dramatically. The Stanley Parable was one of the first independent “experimental” games to reach critical success, selling over 1 million copies in just one year.
Script Development

The script for Oliver’s Rumination went through two initial iterations before user testing. These first scripts were used to develop a tone, establish a consistent narration style, and determine the length of the game necessary to tell Oliver’s story.

Oliver’s Rumination features a narrator who helps to both direct the player’s actions, while also providing story plot and character development. The first script featured a harsher narration style, with much of the narrator’s responses to Oliver’s actions coming off as blunt. In the initial script, the end of the game featured no resolution, with the player walking into a closet, the screen turning white, and the game starting over from the beginning.

The second script saw the narrator become more empathetic, and better reflected Oliver’s mood. The second script used a stronger narrative flow, from an initial conflict to a climax and eventual resolution.

In order to test the scripts rapidly, a web-based program called Twine was used. With Twine, branching stories can be written to be interactive, and a url is produced, allowing users to have several people work through text-based exploration and get a better feel for tone and flow.

After user testing, the second script was chosen. Users found it to be more engaging, with a more believable set of conflicts, character development, and narrator tone.

Scripts can be found in Appendix I.
Visual Development: Props

As script development occurred, visual development was also underway. Initial mood boards were developed to establish a driving visual style. Driving designs came from 2D graphics, 3D graphics, as well as existing games and films. Also under consideration were two key resources: time and game engine strength.

Considering all visual references and resources, a simple visual approach was selected that would rely primarily on color and value. Rather than developing time and processor-intense textures, visual interest would be developed using shape and shadow, similar to the games Inside (Playdead, 2016) and The Witness (Blow, 2016).

In order to develop a cohesive and consistent style, all objects were sketched first as a group, reviewed, then developed in a 3D software (fig. 1).

Another important visual aspect of Oliver’s Rumination were the 2D set dressings. Posters, signs, and notes were used to direct the player through the story and to build a rich narrative about the player character and other story members (fig. 2-3).
Fig. 1
Fig. 2
Fig. 3
Visual Development: Color Palette

Color and value are key design devices in Oliver’s Rumination. Because there were no painted textures, color became a key method to direct player movement and distinguish between rooms and objects. The office environment drove most of the color design in Oliver’s Rumination. In order to create a believable setting, late 80s and early 90s offices were referenced for color and value.

Color palettes and office sketches can be found on pages 26-35 of the thesis proposal included in Appendix II of this document.
Development: Sound Design

The mood of Oliver's Rumination required a range of music and sound design from cheerful and optimistic to melancholic and reflective. One area that was explored was Field Recording. In this style of sound design, ambient sounds are recorded and laid in as background tracks or manipulated to become part of a soundtrack. During Oliver's Rumination, a field recording is used to mimic a background hum of an office. These sounds were recorded inside hallways and offices over several days at different times to get hums of heating and cooling units, footsteps, and lights.

Music was also key in reinforcing mood in Oliver’s Rumination. Time and funding were taken into consideration, and because there were several varying tracks needed, license-free music was sourced.

After several discussions with players, in-game objects and animations were left without sound deliberately. Footsteps and door sounds were found to be distracting given the quiet and contemplative nature of the game, as they tended to be repetitive and reminded people they were playing a game, rather than keeping the player immersed.

Narration was also used to help guide player movement and drive story, given the short run length of Oliver's Rumination. A voice actor named Miguel Moran was brought into the project to record multiple takes of the script, which was then turned into audio cues in-game.
Development: Animation

One major design element that required several rounds of iteration and attention was in-game animations. Two areas required the development of in-game animation: answer selections and assets moving into frame so that the player could read them.

In order to add delight and give the game polish, answer selections were given subtle animations (fig. 4). Instead of appearing on screen as static choices, the options fade in with easing, and fade off after a selection is made by the player. This animation was done in-engine using a node-based system and simple code.

As the player moves through the levels there are several readable assets. In the first round of planning, the goal was to have objects be movable by the player around levels with the functionality for players to “pull” objects closer. However, the number of assets developed and time restraints required an alternate solution. Instead of the user controlling distance, readable assets were highlighted using post-processing outlines (fig. 5). When a player selects a highlighted object, the object quickly fades in to view, allowing for a simple and fast method for reading the numerous notes, memos, and posters (fig. 6).
User testing, Feedback, and Changes

In order to be sure the completed game was useful, concise, and relatable, the source content and gameplay went through several rounds of testing.

The first round of testing was implemented to check the strength and clarity of the script. Using an Online program called Twine, the script was turned into a simple text-based game. Twine uses a node-based system to allow users to quickly create prototypes which can be hosted on the Internet. By using Twine, creators can share their prototypes with many people without requiring Online hosting space. For Oliver’s Rumination, Twine was used for rapid iteration on overall plot progression, narration, and character development.

The Twine prototype was distributed to fifteen testers. Two Twine prototypes were developed. Player feedback was used to make changes early in the development pipeline. For both rounds of testing, players were asked the following questions:

1. Was anything confusing or unclear?
2. What worked well?
3. What is the message of the game?
4. What were some of the emotions you experienced as you played?
5. If you could change something about the game, what would it be? Why?

For the first round of testing, players provided the following feedback (similar feedback responses have been combined):

1. Oliver’s motivations are unclear
   Some of the gameplay implementation is confusing
   Oliver seems weak natured
   It is unclear why Oliver responds so poorly so quickly
2. Storytelling through object placement is strong
   Environment of the office works well
3. Overall message is unclear
   Story has something to do with creative block
4. Feeling frustrated
   Feeling a little lost
   Feeling sad when Oliver yelled at himself
5. Make the purpose of the game clearer
   More storytelling in the environment design
   More passage of time
In order to address some of the major issues of pacing and Oliver’s motivations being unclear, a system of “days” was implemented. At the beginning of predetermined sections of the game, a loading screen was designed to show the player what “day” of the game was being played. The narration script was also adjusted to better reflect the emotional aspect of failure, and the player failure was reinforced through a series of choices with immediate in-game response. The choice at the end of the game was adjusted to make the game feel more complete. After these adjustments were made, an updated Twine text game was created, and a second round of player testing was completed using the same set of questions. Players provided the following feedback:

1. Oliver’s motives are clear and easier to understand
   Pacing is better, and sets a strong tone
2. Narration has a clear style and reinforces gameplay
   Characterization of Oliver is interesting
3. The game is about dealing with struggle
   The game is about overcoming “artist’s block”
   The game is about finding value in creative work
4. Sadness, anger, frustration
   I felt frustrated for Oliver, and felt hopeful toward the end
5. Increase storytelling with more plot-devices
   Solidify the implementation of “ideas”

After the second iteration of the Twine game, the project moved immediately into production. Existing asset sketches were developed in 3D software.

While asset development was in progress, a rough 3D template of the game was created in Unreal Engine 4 for testing. The file was provided to ten testers in order to determine the following:

1. Is the size of the rooms appropriate?
2. Does the walking speed feel normal given the size of the floor plan?
3. Do the simplified objects make sense in the space?
4. Does the eye-level of the camera/player character make sense?
Players provided the following feedback (similar feedback responses have been combined):

1. The rooms feel an appropriate size
   Some doors might need to be wider
2. Walking speed feels fine
   A run option might be useful
3. The simplified objects look cohesive
   Some rooms need more variation
4. Oliver’s office needs more set-dressing density
   The character eye-level makes sense

After adjustments were made based on player feedback, 3D and 2D assets were added to the game engine. Narration was also recorded and added to the game engine. After all assets were placed in the game engine, user testing was done in order to determine if the player could easily navigate the virtual space. This first round of testing found players getting lost in key plot areas, especially in the warehouse, primarily because of lighting and visual cue placement. Based on player feedback, several areas received lighting changes to improve player visibility, and assets were added to increase interest and plot development.

After all final 3D models and 2D graphics were added to the engine, a final round of testing was done to ensure that all loading screens, option choices, music and narration cues, light cues, door animations, and credit sequences loaded properly and without interrupting any player actions.
Final Gameplay and Visuals

The final game runs for approximately twenty minutes, but varies each time depending on the amount of time each individual player spends interacting with the game. It includes several fully-functioning features including:

- Opening animation sequence
- Voice-over narration
- Menu animations
- Music cues
- In-game object animations
- Over 100 interactive objects
- Post-processing highlights for interactable objects
- Dynamic light cues
- Pause screen functions
Shaemus Spencer | Oliver's Rumination

THE PROPOSAL
PROJECT
GOALS
PURPOSE
THE PROCESS
RESEARCH
DEVELOPMENT
THE PROJECT
VISUALS
GAMEPLAY
CONCLUSIONS
GAMEPLAY CUES
CONSISTENCY
TESTING & IMMERSION
UX IN GAME DESIGN
WHAT'S NEXT
ADAA
GAME FESTIVALS
Results

Virtual experiences can help us shape our responses to real-world problems. By engaging actively in virtual problems and problem-solving, we can build personal skills in problem solving. Oliver’s Rumination sought to dive deep into doubt, discomfort, and the trepidation involved in design and force players to relate and engage immediately. By doing so, Oliver’s Rumination attempted to provide players the realization that failure in design is common, and should be looked at as a step in a process, rather than an impossible imposition.

Based on player feedback, Oliver’s Rumination succeeded in creating an emotional experience, one of the key goals of the project. Most players reported feeling hopeful, sad, and triumphant throughout the gameplay.

Another key takeaway is that keeping designs simple and refined can allow for a huge amount of work to be completed with very little resources. Simple design can be elegant and have depth, and when working with finite resources keeping overheads low allowed for creative problem solving within confines.

The creation of Oliver’s Rumination is also a reflection on one of its main tenets: failure is always an option. At several points throughout development seemingly insurmountable problems threatened to derail the project. Tight timelines, technical issues, and an incredible amount of work provided near constant roadblocks. However, by changing perspectives and looking at struggle as a valuable part of the process, the overall development timeline became much more positive.
Future Considerations

Oliver’s Rumination is a game that would likely translate well to a VR experience. Given the first-person perspective and highly personal play experience, it would be worth exploring a VR option to further pull players into Oliver's experience, and to improve on the desired outcomes of personal reflection and long-term problem solving.

Oliver’s Rumination will be submitted to the following competitions:

2019 Adobe Design Achievement Awards
2019 Independent Games Festival
2018 Game Awards

as well as other competitions for design and game development as they become available and applicable to Oliver’s Rumination.
References

Sound Recordings and Music


Boulé, Dana, "Grace," in We All Need to Calm Down, Feb 8, 2016. Accessed March 30, 2017. http://freemusicarchive.org/music/Dana_Boule/We_All_Need_To_Calm_Down/Grace_1721


Books


Young, James Webb. 1968. A Technique for Producing Ideas. 4th ed. Chicago: Crain Communications, Inc..

---

**Video Games**


Appendix I

Thesis Scripts
Script One

Start on black screen. As the narration begins, the world fades in.

On-screen text: Oliver is a simple man, with a simple job: Oliver is a problem solver. Every day Oliver goes to work and solves other people’s problems, the big ones and the small ones too. He is very good at it.

Oliver loves his job, and (for the most part), he likes his co-workers. For the most part, his co-workers like him. Most days are wonderful. Oliver comes to work, he does his job, and he goes home with a smile on his face and a sense of satisfaction. Today was not one of those days.

Clickable Text: Go to work.

The player is in an office. It is small, cozy, and well furnished. There is a desk, some filing cabinets, some bookshelves, a small potted plant, and other miscellaneous office supplies. On the desk are a stack of papers and a pneumatic tube. On either side of the tube are two large lights: one is red, and one is green. Both are off. Just above the desk there is also a small shoot labeled “PROBLEMS.”

After a few moments, a bell chimes, and a “problem” appears out of the Problem shoot. The player picks up the paper, and reads the prompt. The paper returns to its place on the desk. The player is give two problems to solve, and does so successfully. On the third try, the red light glows.

Narrator: Oliver thought for a moment. And then he thought a little more. Eventually he had a few ideas, and he even thought they were pretty good. He wrote one down, and sent it to his boss.

Narrator: “That’s strange,” Oliver thought. He couldn’t remember the last time the red light had come on. He tried again.

“Of course, what a silly idea,” Oliver thought. Even on his best days, Oliver sent a few silly ideas to his boss. He thought some more, and tried again.
The player is given a second set of answers to the same problem. The player selects an idea, and puts it into the pneumatic tube. The red light turns on again.

Narrator: Oliver could hardly believe it. Two red lights in a row? He wasn’t sure that had ever happened. He had been up unusually late the night before, he must have been tired. Perhaps he would try to talk to some of his co-workers to get some ideas. Maybe talking to some of his co-workers would help.

The player is directed into the hallway. Along the walls are a series of posters with quotes and images on them. The player can access the offices of other employees where they find small notes. Some notes reference why the employees are absent (calendars with days off circled, notes about appointments, etc). There are also a few notes and memos referencing a “supply closet.”

Narrator: All of his co-workers were out for the morning. “I’ll just have to try again.” Oliver thought. “I can’t possibly come up with three terrible ideas in a row.”

At the end of the hallway is a door marked “OLIVER.” The player enters the OLIVER door, and is back in their office. Again they are given three solutions. Again the red light glows.

Narrator: A truly, stupendously terrible idea. Of course it was. “IDEA?” “What was I thinking?” As he stood staring at the awful red light, a horrible thought began to creep into Oliver’s mind. “What if I never come up with another good idea again?” “What if all of my ideas have always been this terrible?” He stared blankly at his office for a moment, and decided he needed to go for a walk.

The player re-enters the hallway. This time, some of the lights are dim. A few of the posters have changed. At the end of the hall is a door marked “warehouse.”

Narrator: “No,” Oliver thought. “My ideas are great. They’ve always been great. Why should today be any different? This is my job, and I am good at it. I have good ideas.”

The player enters the warehouse on the second floor, overlooking rows of shelving. There are cardboard boxes from floor to ceiling. The lights are dim. In the back of the room on the first floor are a set of pneumatic tubes, and there are pages scattered around the floor. The pneumatic tubes are labeled. If the player approaches the pneumatic tube with “OLIVER” on it, they will be able to pick up their rejected ideas.
The door for the supply closet is lit brightly, and is located high above the warehouse floor, but it is not accessible.

Narrator: It couldn’t be. His ideas from weeks ago, months ago. Some were years old. All of them here, on the floor of the warehouse or packed away in boxes. This is where the people upstairs kept the terrible ideas, he knew that. He had always thought Jan’s ideas were here, and maybe Brad’s, but never his. And yet, there they were, a pile of terrible ideas, abandoned in the basement.

The player is directed to a door in the back of the warehouse by lighting and color cues. When they go through the door, they are back in their office. Things are a mess. The stack of papers is on the floor. Posters have changed. New notes are stuck around the office. The red light won’t stop glowing and buzzing. The player is directed to close their eyes. A beautiful landscape is described, and simple assets appear in front of the player. They linger, and disappear.

Narrator: “Yes,” Oliver thought. “My ideas are terrible.” He wondered if the green light would ever work again. Had it ever worked at all? Oliver looked around. How long had his office been like this? He couldn’t remember. Maybe a vacation would help. Yes, I just need to go somewhere else, he thought. Oliver closed his eyes and imagined what it would be like. He thought about a nice cabin on a lake in the mountains up north. He pictured the trees blowing in the distance, their leaves dappled with pinks and reds from the setting sun. Birds flew close overhead. And then Oliver thought about the pile of papers deep below him, the years of ideas and work and effort littering the floor.

The player does not input an idea. Instead, they walk back into the hallway through a door that slowly opens. The door leading to the supply closet is on the ceiling. All of the other employee offices have their doors closed and lights off. At the end of the hall is a door labeled “break room.” The player enters. In the break room, there is no narration at first. The player has a short time to explore, read notes, and wait.

Narrator: Did his co-workers know? Did they all think of him as a joke? Did they talk to the people upstairs about him? (Pause) “What’s wrong with me?” Oliver thought. He tried to remember the last time he was happy, really truly happy, but couldn’t. “I have never solved a single problem,” Oliver decided. And he sat quietly, very aware of how alone and disappointed he was.
The break room fades to black slowly, leaving only a closed door.

Narrator: "I could just give up," Oliver thought. "I could just sit here in the dark, and never leave." He wondered if anybody would look for him, or if they'd even notice he had stopped solving problems.

"Maybe if I can't come up with a good idea, I can find one," Oliver thought. There must be a good idea somewhere. That's what this whole building is for! Yes, that's it. I just need to find a good idea, and then I can make my own.

The door opens. A thin red line leads out. The player is back in the hallway. The red line goes into and out of some of the employee offices. Posters have changed again. The line leads the player to a door at the end of the hall that is unmarked. The new room is small and square. It is filled with doors labeled "supply closet." All are either locked, open into walls, or are unreachable.

Narrator: None of this made any sense. Oliver just wanted things to go back to normal. He wanted to be good at his job. He wanted to go home and pet his dog and start over in the morning. He just wanted to feel okay.

The red line moves around the room and under a door marked "warehouse." Here, the red line starts on the floor, and moves the player deep into the warehouse. It goes over boxes, through shelves, and onto the walls. The player is led by the red line into a stairwell.

Narrator: Upstairs. Oliver had never been upstairs before. Only management went upstairs. But maybe that's where he could find some answers. He hesitated, and began climbing.

The stairs lead the player up several flights, still following the red line. At the top of the stairs, a door opens into a large, well-lit and spacious room. Desks are lined up neatly, everything seems to be in place. The red line stops. At the back of the room is a door labeled, "supply closet."

Narrator: "This must be it!" Oliver thought. "This is where the best solutions come from!" Oliver could feel his heart pounding, he was so close to everything being right again. Oliver crossed the room, hopeful.
The player slowly approaches the door, and opens it. White light pours out from inside the closet, and bright, cheerful music plays.

Narrator: Yes! Oh, yes! He had done it! He had found it! A great idea, a truly wonderful and spectacular solution! His boss would be proud, and his co-workers would praise him. He sprinted back to his office, confident and joyful.

The player walks back through the spacious office, down the stairwell, and back into their office. The lights are bright, everything is in order, and one idea is on the desk. The player selects it, it is sent through the pneumatic tube, and after a short pause, the green light glows.

Narrator: Finally. The problem had been solved. It was so simple, really. Oliver sat in his office, enjoying the warm glow of the green light. Yes. What an accomplishment.

The player stands in the office for a few moments. Another problem presents itself.

Narrator: This time, Oliver knew just what to do.

The door to the office opens. The player walks through the hallway, into a stairwell, into the spacious office, and back to the supply closet. The door opens, but nothing happens.

Narrator: What? How could it be? They were just here. All the ideas he could hope for had been right here moments ago. “They must be in here somewhere,” Oliver thought, and he went inside.

The lights around the player dim. The player walks into the supply closet. The door closes.

End.
Script Two

Start on black screen. As the narration continues, an animation fades in showing the player the office setting, and pans through a few hallways in the office.

Narrator: Oliver was a simple man, with a simple job: Oliver was a storyteller. Every day Oliver went to work and came up with ideas for stories. He sent them off to different departments where they might become books, or movies, or games. Many of them became quite popular. Oliver loved his job. He liked his co-workers, and his co-workers liked him. Oliver was happy, and most of his days were wonderful.

Most.

On-screen text: DAY ONE
The player is in an office. It is small, cozy, and well furnished. There is a desk, some filing cabinets, some bookshelves, a small potted plant, and other miscellaneous office supplies. A clock on the wall reads just after 9. On the desk are a stack of papers and a pneumatic tube. On either side of the tube are two large lights: one is red, and one is green. Both are off.

Narrator: Oliver thought for a moment. He had a couple ideas rolling around in his head from the night before, and he thought they were pretty good. He sent one into the tube for consideration.

Three options appear on the screen. The player selects one, and a short animation plays where a piece of paper is sent through the pneumatic tube. After a brief moment, the green light glows.

Narrator: “Not too bad,” Oliver thought to himself. He might even have another one in him.

Three more options appear on the screen. The player selects another, and the same animation plays out. The green light glows.

Narrator: Splendid.

On-screen text: DAY TWO
The player is back in the same office. It is 10 o’clock. Without narration, three options appear. They are somewhat worse ideas than the first set from the previous day, but not egregiously so. The player selects one. After a brief moment, the red light glows.
“That’s strange,” Oliver thought. He couldn’t remember the last time the red light had come on. But no one was perfect every time. He recomposed himself, and tried again.

Three more options are given, slightly stranger/sillier. The player selects one. The red light glows.

Narrator: Oliver could hardly believe it. Two red lights in a row? In all his years here, he wasn’t sure that had ever happened. Maybe talking to some of his co-workers would help.

The office door opens, and the player is directed into the hallway. Along the walls are a series of posters with quotes and images on them, mostly inspirational or work/office related. The player can access the offices of other employees where they find small notes. Some notes reference why the employees are absent (calendars with days off circled, notes about appointments, etc). Some offices have references to the employee’s job (one guy is in HR). In a few offices, there are also notes which reference getting “something from the supply closet.”

Narrator: All of his co-workers were out for the morning. “I’ll just have to try again.” Oliver thought. “I can’t possibly come up with three terrible ideas in a row.”

The player heads back to their office. Once inside, three more ideas appear. They are becoming unreasonable. One is selected, and after a longer-than-usual pause, the red light glows.

Narrator: Oliver stood very still, and thought to himself, “oh no.”

On-screen text: DAY THREE
The player is in Oliver’s office. It is slightly messier than usual. It appears just the tiniest bit dimmer. The clock reads 3PM. The pile of papers is smaller, and messy. Three ideas appear. They are absurd. The player selects one. The red light glows almost immediately. The narration runs during this process.

Narrator: Oliver had been at it all day, with no luck. All day, nothing but terrible ideas. It was all he could think of. “Belts for snakes.” “Wallets for your dog.” They weren’t even stories! What was wrong with him? Slowly, a horrible sensation crept into Oliver’s mind. “What if my ideas have always been terrible?” He stared blankly at his office for a moment, and decided he needed to go for a walk.
The player re-enters the hallway. This time, some of the lights are dim. A few of the posters have changed. The player can still investigate co-worker offices, and those have slight changes too, but are still tidy and well-kept. At the end of the hall is a door marked “break room.” As the player walks through the hall, the narration plays.

Narrator: “No,” Oliver thought. “My ideas are great. They’ve always been great. Why should this week be any different? This is my job, and I am good at it. I have good ideas.”

The player enters the break room. There is a small kitchen area with seating, and simple kitchen items. A small note recommends checking the supply closet if anything is needed.

Narrator: Maybe he could get some ideas in here. Oliver looked around at the empty coffee pot and the unwashed dishes. His mind was blank.

On-screen text: DAY FOUR
The player is in Oliver’s office. It is a disaster. The red light blinks for seven seconds. The player cannot move.

On-screen text: DAY FIVE
The player is in Oliver’s office. It is a mess. The clock reads 11. Lights are off, implying it is 11PM. There are no prompts to enter.

Narrator: Oliver had given up. “Have I ever had a single good idea?” he wondered. He honestly wasn’t sure. He couldn’t even be sure that the green light had ever worked. “I’m so tired,” Oliver thought. The red light only seemed to mock him. Oliver could barely stand to be in his office, so he left.

The player moves to the hallway. Posters have changed again, and are much sadder in message. The hallway is dim. A light blinks. The player can walk through the hallway. As they do, an unmarked door opens into a new hallway. The end of the hallway has another door, marked “warehouse.”

Narrator: The warehouse. Oliver had never been here. He had never dared. The warehouse was where all the bad ideas were kept. He had always been too proud to go there. But at this point, what more did he have to lose?
The warehouse door opens, and the player enters.

The player is in a small, empty room with a large window and a door. It is dark. As the player approaches the window, lights in the next room flicker on and reveal a huge warehouse full of metal shelving and cardboard boxes. Just in sight are a series of tubes. The door unlocks, and the player can walk through, along a catwalk, and take a lift down to the lower floor. The metal shelving units have signs, which read “BAD CONCEPTS AA-AB,” “BAD CONCEPTS AB-AC,” and so on. The boxes are all labeled with different names of people who work in the office, but the majority of them say “OLIVER.” If the player walks up to the tubes, they can see that they are also all labeled. Under most of them are canvas carts filled with the same pieces of paper Oliver uses to submit ideas. If the player approaches Oliver’s cart, they can pick up some of the bad ideas they’ve submitted during the game, as well as a few others. While the player explores, narration plays.

Narrator: Oliver could hardly believe it. So many years of work, hidden away right below his feet. So many of his creations abandoned. He didn’t know what to do, and so he did nothing at all.

A light above an unmarked door flickers on, and the door opens. The player walks through into another long hallway. Along the walls are posters in the same style as throughout the earlier gameplay. Here, they say things like, “you are selfish,” “I do not have the answers for you,” and “is there meaning in self-indulgence?” At the end of the hall is a door labeled “supply closet.”

Narrator: The supply closet. Maybe Oliver could find something here, something to help, something to make him feel right again. It certainly seemed to help his co-workers.

The door opens. Inside are mops, brooms, and miscellaneous office supplies. The door closes on the player, and the world starts to fade to black.

Narrator: “Does my job even matter?” Oliver thought. “All I do is come up with stories. I’m not saving any lives. I’m not building space ships or feeding the poor.” Oliver didn’t understand. He had always been so sure, so confident in his ideas. Now he felt nothing, truly nothing. He felt empty, and alone, and disappointed. “How do they do it?” he thought, “how do these people show up every single day and make and make and make and just keep fucking up without hating themselves? How can I stop hating myself?”
On-screen Text: DAY SIX

The player is in Oliver's office. It is in the same condition as the previous day. The red light blinks. The door to the office is open, and the player can leave during the narration.

Narrator: “I can’t do this anymore,” Oliver thought. He didn’t have it in him to keep showing up to work. He honestly wasn’t even sure why he was here. What else did he have to give? “Nothing,” he thought to himself. “Nothing.” He just wanted to be told that his work was good, that he was good, that things were going to be okay.

A slight pause in narration.

Narrator: He kept thinking about the warehouse. He couldn’t help it. He felt like there was something there, something calling him. Maybe one of his good ideas wound up down there accidentally. Maybe that’s just where he belonged.

The player returns to the warehouse. It appears the same from the top level, but as the player takes the lift down, it becomes apparent that the shelves are almost three times as tall as they were the last time. There are no tubes. The warehouse has become massive. The lift reaches the floor, and the player navigates the box maze. As they do, some of the notes from the game can be found stuck to some of the boxes. New notes are found.

Narrator: If he could just find one idea, one concept that was good, he could start over. He could fix this.

The maze ends with one box on the ground in an open area. A piece of paper sits on top. The player picks it up, and reads it. On it is written: keep going.

On-screen Text: DAY SEVEN

The player is in Oliver’s office. It is tidy again, but a few things are still out of order. Some of the notes from the warehouse have been brought to the office. One option appears on the screen. (Something to summarize the gameplay without it being too obnoxiously obvious). The player selects it, and it is sent through the tube. After a moment, the green light glows.

Narrator: Splendid.

END
Appendix II

Thesis Proposal
Submitted October 17, 2016
ITERATIONS
A Short Video Game About Failure

Thesis Proposal
Shaemus Spencer
October 18, 2016
Thesis Proposal for the Master of Fine Arts Degree

Rochester Institute of Technology  
College of Imaging Arts and Sciences  
School of Design  
MFA Visual Communication Design

Title  
Iterations: A Short Video Game About Failure

Submitted by  
Shaemus Spencer

Submission Date  
October 18, 2016

Thesis Committee Approval

Chief Adviser: Daniel DeLuna, MFA Visual Communication Design

Signature of Chief Thesis Adviser  
Date

Associate Adviser: Chris Jackson, MFA Visual Communication Design

Signature of Associate Thesis Adviser  
Date

Associate Adviser: Shaun Foster, 3D Digital Design

Signature of Associate Thesis Adviser  
Date

MFA Thesis Candidate: Shaemus Spencer

Signature of MFA Thesis Candidate  
Date
ABSTRACT

Summary
Whether students or professionals, designers and artists are expected to produce strong "outside-the-box" concepts very quickly. At the same time, risk-taking is sometimes discouraged; a company might not have the overhead to explore wild ideas, or a student might not have time or resources to explore new and exciting concepts or methods of execution. What remains is a cross-road: designers are rewarded for taking risks, but often unable to do so for fear of failure and a loss of resources.

By accepting and incorporating failure into the beginning stages of a creative project, designers and artists lose less time, money, and quality than if that failure happens in the later design stages. For some designers, this early failure is still daunting. Sometimes this failure is avoided by pursuing weaker concepts, or it can result in a project being abandoned.

At the same time, the video game industry is rapidly expanding to include more experimental titles which allow contemplative gameplay. These new games often tackle complicated themes, and can offer players a space in which to experience trauma, struggle, and moral dilemmas without real-world consequences.

This thesis project aims to combine visual design principles with simple gameplay into an interactive experience which provides players an environment to experience failure without real-world consequences. The goal of this experience is to provide a cathartic experience for the player, with the game acting as a reminder that failure and iteration are common in design and that they can be useful for creating stronger end results.

Keywords
Design, game design, failure, creative process, iteration, iterative design, interactivity, experimental game design
PROBLEM STATEMENT

Failure is extraordinarily common in art and design. In a field which requires creativity on-demand, nearly all creators experience failure at some point in their careers. Students and professionals alike sometimes deal with weak concepts, harsh criticism, and a fundamental lack of ideas. Failure can be extremely painful, to the point where in some cases those who experience it simply do not admit to having failed (Sitkin, 1992). Some research suggests that regular failure, if not coped with properly, can lead to poor confidence and a reliance on old ideas or work-flows which had previously led to success (Foumberg, 2016; Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Stadd; Wolfe, 2015). In educational settings, if students see failure as insurmountable there becomes no incentive to try again (Blanco-Herrera, 2015). In some cases, repeated failure can even ruin a career or an entire organization (Sitkin).

At the same time designers and artists are sometimes rewarded for a safe creative process. Without taking risks, artists and designers can still get good grades, jobs, and feedback on work. What has resulted is an environment where the design process can be rigid and structured with very little room for taking risks or failing, unless there is explicit allowance or funding for risk taking. (Foumberg, 2016; Petroski; Popova; Stillman, 2012). This thesis argues that creators must allow themselves the room and time for failure. However, in an industry driven by deadlines and great ideas, it can be difficult to argue for “strategic failure,” when a route that is perceived as faster and safer is available.

Within the past thirty years, several studies have looked at the value of failure in multiple fields. Some researchers theorize that repetitive trial and error leads to better overall results (Burkeman, 2016; Foumberg, 2016; Grant Halvorson; Petroski; Shepherd, 2011; Sitkin, 1992; Syed, 2015; Wolfe, 2015; Young, 1968). In cases where those who fail see it as a positive or are able to try again, the end product tended to be stronger. These employees and students had a better relationship with adversity in their work than those who have a negative perception of failure (Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Wolfe, 2015). When iteration on failed ideas is encouraged and treated as a learning opportunity, students and professionals tend to feel less negative emotion toward failure, and feel it for shorter periods of time (Blanco-Herrera, 2015; Shepherd, 2011; Wolfe, 2015). In creative fields especially, being able to rapidly produce ideas or iterate on weak designs can be the difference between a successful career and one which falls flat. If designers and artists can be taught to cope with failure and adjust to it accordingly, they may be able to internalize the habit and move beyond that step faster in each future project they tackle. The challenge then comes in teaching that failure is an acceptable step in the design process.
SITUATIONAL ANALYSIS

The expressive power of interactive technologies makes them great tools for teaching, learning, and creating meaningful emotional experiences. The last decade has seen an explosion of mobile applications, games, virtual reality, and interactive experiences meant to instruct users or influence them toward a cause or issue (Brown, 2008; Green, 2015; Manny, 2008; Pavlovic, 2013; Perron, 2016). Some of these new technologies allow users to experience hardship in an attempt to explore empathy (Mahood, 2015; Manney, 2008), some are used as coping mechanisms for traumatic experiences (Manney, 2008), and others still can improve attention and focus (Boot, 2008; Clark, 2011; Dye, 2009). Creators have taken full advantage of the emotive power of some of these tools, especially in the realm of video games and experiential gameplay.

Video games are a somewhat unique creation in that they are meant to be experienced, not just observed (Perron, 2016). Players actively choose to spend time and money in order to play them, and often do so because of the unique enjoyment and personal experiences video games offer (Brown, 2008). Developers and researchers are also better understanding the role that emotion and narrative play in gaming. Some even argue that video games should be considered a “serious art form” (Adams, 2006; Brown, 2008; Clarke, 2007; Schrank, 2014). Others defend that combining strong visual design with nuanced and complex narrative can grow video games into a medium which consistently leaves players with more informed perspectives on social, ethical, and interpersonal issues (Bergström, 2011; Bogost, 2007; Brown, 2008; Christou, 2014; Collins, 2013; Flanagan, 2015; Geslin, 2016; Green, 2015; Isbister, 2016; Juul, 2012; Juul, 2013; Koenitz, 2014; Mahood, 2015; Perron, 2016). More and more, video games are being understood as a medium which can, “provide strong emotional experiences, which may guide how we process information” (Nacke, 106).

In the past decade, this concept of games as an experience has become a driving force for many design firms, especially independent developers. As these “indie” game companies gain notoriety, there has been a push to challenge the typical game format and experience (Brown, 2008). These new game experiences move beyond the expected first-person shooter or role-playing aspects found in some early and contemporary games, and instead provide players with unique stories that often challenge the player’s ideas of what a game can be fundamentally, while also imparting a complex narrative or theme. Some of these games deal with themes of anxiety, loss, and human nature.
SITUATIONAL ANALYSIS

Despite straying from typical gameplay format, these experimental games are finding popularity among players looking for unique gameplay content. Games including *Journey* (Thatgamecompany, 2012), *Inside* (Playdead, 2016), *Firewatch* (Campo Santo, 2016), *Papers, Please* (3909, 2013), *The Beginner’s Guide* (Everything Unlimited Ltd., 2015), *The Stanley Parable* (Galactic Cafe, 2013), and *Dr. Langeskov* (Crows Crows Crows, 2015) have pushed the medium to more extreme experimental places in just the last few years alone (see competitive analysis for details on specific titles). The success of these more experimental games has opened the door for independent game developers to create visually-driven, compelling narrative experiences which tackle unconventional themes. One theme that is somewhat unexplored in current video games is failure.

Many games require the player to fail in order to eventually “win.” Titles like *Bloodborne* (FromSoftware, 2015) and *Dark Souls* (FromSoftware, 2011) are notorious for their incredible difficulty. When players fail in-game as it relates to game progression, they make adjustments in order to succeed in another attempt. This is called the “paradox of gameplay;” video games require failure in order to progress. People typically seek to avoid failure, but they play video games regardless, often because the result is deemed enjoyable or worthwhile (Juul, 2013). What results is an environment where failure is acceptable, expected, and tolerated as a means-to-an-end (Juul, 2013). There are also practical virtual environments created to simulate failure in order to ensure future success. Flight and surgical simulators are two common examples. In each, professionals are introduced to difficult problems in order to learn how to process them quickly in a safe environment with the hopes that those skills will then translate to real-world situations (Blanco-Herrera, 2015; Bogost, 2007). These experiences imply not that the user will become an expert in their profession simply through interactive environments, but that these experiences teach them the “system of rules that drive the function of [their] profession...They are learning about the kinds of tasks, problems, and solutions involved” in their professions (Bogost, 2007).

While many video games cause the player to fail repeatedly in order to succeed and others allow professionals to safely learn new skills, very few deal with the concept of failure on a personal and intimate level. By taking advantage of the emotional and narrative strengths of video games, it may be possible to create gameplay which allows players to experience personal failure without real-world consequences. This in-game experience might then translate to better real-world coping abilities when failure is experienced in professional and educational settings.
THESIS STATEMENT

This thesis project will explore failure as it relates to the creative process, and will attempt to create a cathartic gameplay experience which allows players to perform failure as part of the iterative design process.
COMPETITIVE ANALYSIS

Journey
Thatgamecompany
2012

*Journey* is a stunning experience, both visually and emotionally. The player assumes the role of a mysterious robed figure who travels across a desert attempting to reach a mountain far in the distance. With no dialogue or written narrative, *Journey* is told through player experience and interaction with other character players in Online mode. An independently developed game, *Journey* adds to a conversation on where video games are trending, and the ability they have to be visually engaging and emotionally fueled.

Mountain
David O'Reilly
2014

*Mountain* is an extreme example of “avant-garde” gaming. In this example, the player spawns a randomly generated mountain which floats in space and rotates slowly. The player cannot affect the mountain, but can zoom in, zoom out, and watch as time passes and events take place on the mountain. This game is both highly acclaimed as a unique production, and also heavily criticized for being called a “game” by its creator. Both responses provide a look into the changing perspectives on what constitutes a “game,” and what consumers want in an interactive experience.

Papers, Please
Lucas Pope
2014

*Papers, Please* is a game set in a country reminiscent of the Cold-War era Soviet Union. The player assumes the role of a government official responsible for checking people’s papers as they enter the country through a border checkpoint. Creating a commentary on safety, gender, and the role of the game player, *Papers, Please* was one of the first examples of “avant-garde” games to gain critical acclaim from a mainstream audience.

The Beginner’s Guide
Davey Wreden
2015

Creator Davey Wreden gives players a look into the relationship between game creator and game player, while attempting to describe the difficult process of regularly creating high quality work. This game, roughly one hour in length, walks players through a linear narrative which is highly emotional. *The Beginner’s Guide* acts in some ways as a coping mechanism for Wreden and his quest to balance producing strong work while also staying happy with the work he produces. This game gives creative types a reminder that their experiences are shared by others, and can give non-creative types a look into the struggles of the game design world.

Dr. Langeskov,
The Tiger, and the Terribly Cursed Emerald: A Whirlwind Heist
William Pugh
2016

William Pugh presents a twist on the typical game narrative. In this twenty-minute game, the player acts “behind the scenes,” pulling levers and pressing buttons to provide the game experience to a player who cannot be seen (and who does not exist). *Dr. Langeskov* ends with the player attempting to access the full game, but discovering that it does not exist. *Dr. Langeskov* provides a unique and clever perspective into game design, challenges what a “game” can be.
COMPETITIVE ANALYSIS

Firewatch
Campo Santo
2016

Camino Santo, a team of ten developers and artists, released Firewatch to
critical acclaim. Stunning in its visual style, and with an incredibly moving
narrative, Firewatch sets a new standard for storytelling depth and graphics
for independent game developers.

That Dragon, Cancer
Numinous Games
2016

Developed by a small team including Ryan and Amy Green, That Dragon, Cancer focuses on the experiences of the Green family and their young son
Joel. At twelve months old, Joel Green was diagnosed with terminal cancer. That Dragon, Cancer was developed as a means for the Greens to deal with
the loss of their son and tell his story at the same time. Color, value, and
shape play important roles in the visual style of That Dragon, Cancer, and
work together to create an emotional family portrait that the game player
must navigate. Challenging the notion of a game, That Dragon, Cancer
explores narrative and design as a means to tell an interactive story.

The Witness
Thekla, Inc.
2016

The small development team at Thekla, Inc. released The Witness, a game
bordering more on visual experience than traditional video game. Using an
engine designed specifically for the game’s graphic requirements, Thekla, Inc. is a puzzle based game which encourages user exploration through a
vivid and diverse island landscape. The Witness combines a strong visual
style with experimental narrative elements to create a game which adds to
the growing realm of experimental gaming.
REVIEW OF LITERATURE

Video Games, Art, and Design

**Will computer games ever be a legitimate art form?**  
Ernest Adams, a well-recognized voice in the game design community, discusses the perception of art and whether video games will ever be perceived as a legitimate art form. By analyzing the fundamentals of art, Adams looks at the current state of game design and where he feels games need to go if the developers seek to produce games as “art.”

**A Torch in the Dark:**  
Using Creative Direction to Light *The Darkest Dungeon*  
In this lecture, Chris Bourassa of Red Hook Studios discusses the importance of a strong visual direction when developing a game. Bourassa argues that a strong visual direction should be the bedrock of all game design, as it can inform the game at several steps along the way, and is often part of what makes a game memorable.

**Videogames and Art**  
*Videogames and Art* provides readers a look at the complicated relationship between video games as a medium and the art world. Clarke and Mitchell attempt to provide answers to questions about the nature of game playing and whether video games will ever be considered art. Through case studies and interviews, the authors of *Videogames and Art* look at gaming from a perspective outside of the mainstream, and propose the future of gaming lies more in art and design, and less in traditional game design conventions.

**Game Art: Art from 40 video games and interviews with their creators**  
*Game Art* provides looks into the creative end of video games from 40 unique perspectives. Some artists interviewed worked on multiple AAA titles, while others are independent artists. Featuring artists from around the world, *Game Art* provides all artists practical advice for character development, world building, art direction, and more.

**Avant-garde Videogames: Playing with Technoculture**  
Schrank and Bolter look at the fundamentals of avant-garde theory, and describes examples of video games which follow in the avant-garde tradition. Arguing that there are opportunities for game design to address political and social issues, Schrank and Bolter question whether games can be an avant-garde art form, and if they are, propose ways to discuss and critique them.
REVIEW OF LITERATURE

Video Game Design and Development

Joel Burgess
Lecture, 2014

Level Design in a Day:
How We Used Iterative Level Design to Ship Skyrim and Fallout 3
In this lecture, Joel Burgess discusses the method for producing hundreds of unique locations inside of two triple-A games. Burgess describes the process from concept to completion, and explains how iterative design has become a staple in Bethesda's design process.

Karen Collins
Book, 2013

Playing with Sound:
A Theory of Interacting with Sound and Music in Video Games
In Playing with Sound, Collins addresses sound in video games from music to sound effects and dialogue. Collins looks at how these sounds impact the player, add to or detract from immersion, and add to the interactive player experience.

Dan Cox
Lecture, 2014

What Modern Interior Design Teaches Us About Environment Art
In this talk, Dan Cox explains the vital relationship between game level design and interior design. Cox argues that by studying fundamentals of interior and architectural design, level artists can make better game spaces which guide the player through light, scale, and color.

Mary Flanagan
Book, 2015

Critical Play: Radical Game Design
In Critical Play, Mary Flanagan provides a needed discussion on the state of non-traditional games. Encompassing a wide variety in types of games, Flanagan looks at the role of serious games and their roles in social and political issues. Flanagan also discusses the need for more mainstream "critical" gaming, and proposes an updated method of development for this style of game creation.

Michael Garber-Barron
and Mei Si
Journal Article, 2013

The Role of Gender and Age on User Preference in Narrative Experiences
Garber-Barron and Si provide a case study of their research into a storytelling program which uses numerical assignments to tag narrative elements and determine how a user reacts to them. This program assigns data to user responses and adjust the method of storytelling according to an algorithm, and seeks to determine whether there is a preference for story progression based on age or gender. The goal of the paper is to describe this methodology and investigate the balance between introducing novel topics in storytelling and user reaction.
REVIEW OF LITERATURE

Gavin Goulden
Lecture, 2014
Change is Good: 
The Importance of Iteration Within a Character Art Pipeline
Artist Gavin Goulden, part of the team responsible for Bioshock: Infinite, discusses the importance of embracing iteration in design for games. Breaking down his team’s artistic and technological approaches, Goulden emphasizes that as an artist, work is always going to be made that nobody will see, and this should be embraced for its potential in better overall product instead of being avoided.

Richard Hall-Whittall
Book, 2015
The Art of Game Design: A Book of Lenses
In this text, Hill-Whittall provides a look at the process of creating, marketing, and shipping a game for independent developers. Complete with interviews from independent game companies, proper dissemination practices, and marketing strategies, Hill-Whittall provides new developers a starting point for making and shipping their creations.

Jesper Juul
Book, 2012
A Casual Revolution: Reinventing Video Games and Their Players
Jesper Juul, an icon in academic research on video games and game culture, looks at the growing world of “casual gaming” and its ability to attract non-traditional gamers. A Casual Revolution discusses the history of “casual” gaming and where the industry is headed, or should head, in order to continue fulfilling the needs of game consumers while producing high quality work.

Jesper Juul
Book, 2013
The Art of Failure: An Essay on the Pain of Playing Video Games
In this book, Jesper Juul looks at the importance of failure in game design and the effect failure has on the player. Juul also explains some of the psychology behind failure, its usefulness in learning mechanics or design elements, and how failure as a game design has changed in the past three decades. Juul argues that video game design is a fine art of allowing the player to fail in order to learn and improve skills which can be used to further progression, and failure in games can help players overcome failure in other disciplines.

Jane Ng
Lecture, 2016
Making the World of Firewatch
Environment artist Jane Ng provides a complete postmortem style dissection of the art direction, level design, and construction of the game Firewatch. Ng discusses tips and tricks for small game design teams, and provides creators a look at working on a game design with a heavy focus on visual style and environmental narrative elements.
## REVIEW OF LITERATURE

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Rogers</td>
<td>Level Up: The guide to great video game design</td>
<td>Regarded as one of the required texts for all game developers and designers, <em>Level Up</em> provides information on virtually every aspect of game design. Looking in depth at the brainstorming process, character creation, level design, and a breakdown of a proper Game Design Document, <em>Level Up</em> is an invaluable book for any designer who needs a starting point when creating a game.</td>
</tr>
<tr>
<td>Jesse Schell</td>
<td>The Art of Game Design: A Book of Lenses</td>
<td>In <em>The Art of Game Design</em>, Schell provides a comprehensive look at what makes a good game. Schell discusses the use of iteration, level planning, visual design, and much more. Jesse Schell is hoping to provide readers an understanding of the psychology and elements that are universal across games, from board games to virtual reality simulators.</td>
</tr>
<tr>
<td>Christopher Totten</td>
<td>An Architectural Approach to Level Design</td>
<td>In his text, Totten provides an in-depth examination on level design in games. Discussing design from the lens of historical architecture, Totten gives real-world examples of narrative elements, emotional design in spaces, sightlines, and more. Providing studies of countless games and their level designs or floor plans, this text becomes an invaluable resource for designing game levels and worlds with real impact.</td>
</tr>
<tr>
<td>Chun-Tsai Wu et al.</td>
<td>Designing an Interactive Storytelling Game</td>
<td>This article describes the process of creating a 3D interactive storytelling game. Guided by the authors, two students created a 3D game about Jack the Ripper wherein players had agency, and the game had multiple outcomes. The article describes the process the students took from planning branching paths, to art direction, and ultimately to the programming and execution of the game. The dissemination of this article provides a look at one method of developing a game with a basic level of player agency.</td>
</tr>
<tr>
<td>Oliver Burkeman</td>
<td>You Don't Need New Ideas, You Need a New Perspective</td>
<td>In this article, Burkeman addresses methods for problem solving and working through creative block. Burkeman discusses examples including writers and artists and how they combat feeling “stuck” in a design or creative process, and describes how those methods can be applied to multiple disciplines.</td>
</tr>
</tbody>
</table>
REVIEW OF LITERATURE

Angela Duckworth  
*Grit: The power of passion and perseverance*  
Psychologist Angela Duckworth provides an in-depth dissection of her work on why some people fail when faced with adversity while others succeed. Arguing that everyone has some level of “grit,” Duckworth says the amount of “grit” someone has can predict how likely they are to stick with a project or career path. Duckworth also discusses the psychology of failure, how some people cope with failure, and the impact failure can have on our lives. Duckworth argues that “grit” is not set in stone - everyone can become someone like Steve Jobs or Einstein, it just takes passion and perseverance.

Jason Foumberg  
*Why Failure is Being Taught in Art Schools*  
Foumberg addresses the increasing popularity of teaching failure in beginning art courses. Citing professors and classes in Chicago’s top art schools, Foumberg uncovers why faculty and students alike find the new approach beneficial, arguing that the opportunity to fail allows students to become more experimental and focus on iteration over production of only one undeveloped idea.

Heidi Grant Halvorson  
*Iteration: Why You Should Give Yourself Permission to Screw Up*  
Grant Halvorson looks at two methods of creation, the “be-good” method and the “get-better” method, and argues that the “get-better” method allows for greater learning and ultimately more success in the long run. Grant Halvorson argues that the anxiety and frustration that come from the desire to “be-good” disrupts the ability to think and create affectively. On the other hand, the “get-better” method allows room for mistakes, and argues that these mistakes lead to greater iteration and a stronger end product.

Henry Petroski  
*The Value of Failure*  
In this question-and-answer format article, professor and engineer Henry Petroski discusses the value of failure, and how he invites his students to see the inherent value in iterative processes. Looking specifically at failures in bridge design, Petroski invites the reader to consider the importance of a process which allows room for failure in the name of learning, and challenges the assumption that there is no place for failure in leadership, design, or thought.

Maria Popova  
*How Creativity in Humor, Art, and Science Works: Arthur Koestler’s Theory of Bisociation*  
In this short article, Popova discusses Arthur Koestler’s work The Act of Creation. Popova discusses his major theories of bisociation, the importance of the “ripeness” of an idea, and generational amnesia. By examining these psychological phenomena, Popova hopes that readers can better understand their own creativity and the creative process.
REVIEW OF LITERATURE

**Moving Forward from Project Failure: Negative Emotions, Affective Commitment, and Learning from the Experience**
Shepherd, Patzelt, and Wolfe conducted an experiment on failure, emotional responses to failure, and coping mechanisms. Their research reveals that in situations where failure is seen as a negative, people tend to have poor emotional responses to failure, and those emotions last for a long period of time after the failure has occurred. On the contrary, people who perceive failure as useful (or who work in environments where failure is acceptable in a process) tend to harbor negative emotions for less time after failure has occurred and learn more from the failure in the long run.

**Learning Through Failure: The strategy of small losses**
Sim B. Sitkin discusses the virtues of failure and iteration, explaining how "strategic failure" can be used in many disciplines to overcome adversity and create strong end results. Sitkin argues that failure can be embraced as long as it is seen as a means-to-an-end, and not just a final result.

**How to Deal When You’re Disappointed in Yourself**
Allison Stadd looks at Zen practice and psychology to give readers a method for dealing with failure. Stadd argues that failure is useful for growth, especially in design, and the ability to recover from that disappointment might be more useful than the failure itself.

**Design Process Kills Creativity/Design Process Creates Creativity**
In this short article, Daniel Stillman discusses the strengths and faults of using a design process. Stillman suggests that while some designers and artists feel that a process can be rigid and limiting, using the design process which fits for each individual can allow for a more iterative process and ultimately a better overall product.

**Viewpoint: How Creativity Is Helped by Failure**
Matthew Syed
This article discusses why iterative attempts at a design and failing at them is far more useful in the long-term than taking one long, invested attempt. Citing examples including the Dyson Vacuum, Disney Pixar, and experimental teaching techniques, Syed points out how failure in design should be embraced, and being public about that failure can help dispel the idea that creativity and innovation come from a magical, unseen source.

**Bouncing Back’ from a Loss: Entrepreneurial Orientation, Emotions, and Failure Narratives**
Marin T. Wolfe and Dean A. Shepherd
Wolfe and Shepherd expand on prior research on failure and explore the ability of people to cope with and overcome failure in a professional setting. In this text, Wolfe and Shepherd describe methods for dealing with failure and ways to ensure organizational success.
REVIEW OF LITERATURE

A Technique for Producing Ideas
James Webb Young
1968

In A Technique for Producing Ideas, James Webb Young outlines five steps that he finds useful in problem solving. Arguing that this technique is usable across disciplines, Young does not focus on any one profession, but simply describes his approach to critical ideation and iteration.

Storytelling and Narrative

Framing Storytelling with Games
Karl Bergström
2011

Professor Karl Bergström provides multiple frames to view storytelling for tabletop and digital games. Bergström discusses seven frames and poses which describe methods in storytelling and the overall effects they have on player immersion and agency. Bergström’s article provides useful terminology to describe several methods of storytelling and their impact on game players.

The Elements of a Narrative Environment:
Exploring User Reactions in Relation to Game Elements
Anne Grinder-Hansen and Henrik Schoenau-Fog
2013

Grinder-Hansen and Schoenau-Fog look at how environment design, asset location, and NPC presence in digital games affect a player’s perception of both the space that the game occupies and the level of immersion the player experiences. The authors created a study where players play one of two games, each with unique assets and NPCs, and a metric was created to judge their immersion and flow. The article intends to discuss the results of the study, and provide means for improved storytelling in interactive media.

Five Theses for Interactive Digital Narrative
Hartmut Koenitz
2014

Professor Hartmut Koenitz seeks to address current language regarding interactive digital narrative while at the same time providing foundations for successful future research. Koenitz describes five areas where language and research needs to be addressed in order to better serve creators and players of interactive storytelling. Koenitz is attempting to identify issues in IDN research and provide places for future researchers to delve in and address.

Player Perspectives to Unexplained Agency-Related Incoherence
Miika Pirtola et al.
2013

With their research, Pirtola et al. seek to determine whether changes in timeline in a game narrative which result from a player’s choices (Unexplained Agency-Related Incoherence or UARI) negatively impacts the player experience, or if it is something that should be included more frequently in game design. The article hopes to present this information and dispel the long-held assumption that UARI in game design should be avoided, when in reality many players responded positively to the UARI.
REVIEW OF LITERATURE

Sercan Sengün
Journal Article, 2013

Silent Hill 2 and the Curious Case of Invisible Agency
Sercan Sengün, a Professor at Istanbul Bilgi University, examines the method of player choice in Silent Hill 2, and assesses whether it is successful in creating true player agency, while also discussing its emotional impact on the player. By describing the method that Silent Hill 2 uses as “invisible agency,” Sengün proposes that this unique and underdeveloped method of subconscious choice allows the player to become immersed in a way not seen in other video games - the choices made are never intentionally made, and Sengün argues that this allows players to remain identified as the character for longer periods of time. This paper identifies invisible agency as an underutilized tool in game design, and seeks to suggest why it should be used, and the potential payoffs for the player.

Evan Skolnick
Book, 2014

In Video Game Storytelling, Evan Skolnick examines common tropes in game narrative design and discusses essentials for creating believable, well-paced game stories.

Ekber Servet Ulas
Journal Article, 2004

Virtual environment design and storytelling in video games
Ekber Servet Ulas argues that narrative and interaction can be combined in a video game setting by informing the user of a story through setting, set dressing, and a non-linear pathway. Writings by Manovich and Pearce are used to describe video games as a spatial medium, one where the nature of user-input glues together the story and the space it occupies. Ulas is attempting to argue against the common sentiment that video games allow too much user input to allow for a proper narrative, in order to shed light on the value of interactive games as storytelling vessels.

Jorge A. Blanco-Herrera et al.
Journal Article, 2015

Teaching Creativity: Theoretical Models and Applications
Blanco-Herrera, Groves, Lewis, and Gentile discuss the nature of video games as teaching tools and the power they have as instructional vehicles. Blanco-Herrera et al. describe the potential of video games as environments for exploring complex themes and issues in a “safe” way, where choices and outcomes do not have real-world consequences. However, the authors argue that this experience could translate to better preparation for real-world problem solving.
**REVIEW OF LITERATURE**

**Persuasive Games: The Expressive Power of Videogames**

Ian Bogost breaks down the power of video games in political, advertising, and educational settings. Bogost argues that video games are intensely powerful with the ability to persuade and teach with a high level of nuance. Bogost defends the argument that video games can provide a place for players to experience complex emotions, and that they can have the power to change a player’s perspective on difficult moral subjects.

**The effects of video game playing on attention, memory, and executive control**

Boot et al., researchers at Florida State University and the University of Illinois, propose that people who play video games regularly perform better in areas of attention, memory, and movement tracking than those who play video games less regularly or not at all (387). The authors developed an experiment in which participants were divided into one of three groups, each group playing a different game designed to test one particular area of improvement (attention, memory, or executive control), and tested throughout the multi-week experiment in these areas. The authors’ goal is to reinforce the accepted notion that even casual gaming can improve a number of “visual and attentional skills” (387). This research adds to and informs the works of Clark et al. (2011), Dye et al. (2009), and Karle et al. (2010) and their exploration of skills gained from regular gaming.

**History, the Humanities, and New Technology: Videogames and Education**

In *History, the Humanities, and New Technology,* Brown presents a series of discussions on the history and nature of video games and what roles the might play in the near future. Discussing storytelling, aesthetics, ethics, and identity in video games, Brown establishes a strong reference point for readers interested in discussing the academic and social values of video games.

**Enhanced change detection performance reveals improved strategy use in avid action game players**

Clark, Fleck, and Mitroff, researchers at Duke University, investigate why video game players perform better in areas of attention, memory, and change detection than non-video game players. The authors’ purpose is to understand why regular gamers perform at higher levels in certain areas than non-gamers, so that those areas can be better understood and exploited.
## REVIEW OF LITERATURE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgios Christou</td>
<td>The interplay between immersion and appeal in video games</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>Researcher Georgios Christou provides some of the first concrete evidence connecting the visual appeal of a game and the level of immersion a player experiences. Prior to his research, much of the writing done on game immersion implied the role appeal had on immersion; here, Christou establishes an expansive set of quantitative data which shows a direct correlation between a game’s level of appeal and its ability to immerse players.</td>
<td></td>
</tr>
<tr>
<td>M.W.G. Dye et al.</td>
<td>The development of attention skills in action video game players</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Dye, Green, and Bavelier, researchers in the Department of Cognitive Sciences and Center for Visual Science at the University of Rochester, propose an experiment to further test regular video game players' attention allocation in three areas: alerting, orienting, and executive control (1780). The goal of the experiment is to add to data on skill improvement and video games, especially in youth. This research reinforces previously held ideas that video game players receive a benefit in attention and focus, but also provides new data in the accuracy of a change in focus, and gives researchers data for a group of participants which had not been previously studied (youth).</td>
<td></td>
</tr>
<tr>
<td>Erik Geslin et al.</td>
<td>How Color Properties Can Be Used to Elicit Emotions in Video Games</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>Geslin et al., researchers at universities across France, propose that color intensity, brightness, and density are key components to producing an emotional response in video game players. The authors set up an experiment in which they showed eighty-five participants twenty-four randomly selected frames from video games, each with different levels of chromatic intensity, saturation, and brightness, and analyzed the responses each viewer reported. The authors’ purpose is to attempt to provide game designers a tool for color scripting, and to propose a method for creating the intended emotional response in games through color design.</td>
<td></td>
</tr>
<tr>
<td>Paulo Gomes et al.</td>
<td>Metrics for Character Believability in Interactive Narrative</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Gomes et al. present a set of metrics by which characters in games can be judged to be “believable” as existing in a space by players. The authors look to historical examples of literature and character traits which are believed to provide more substance to artificial intelligence. The paper sets out to explain in detail how content creators can provide believable characters, and ultimately how they can ask users for feedback to assess that believability.</td>
<td></td>
</tr>
</tbody>
</table>
REVIEW OF LITERATURE

Katherine Isbister
Book, 2016

*How Games Move Us: Emotion by Design*

Arguing that game design is seeing a renaissance in style, approach, and visual design, Katherine Isbister seeks to describe the methods by which designers and writers instill emotion in their game. By looking at recent contemporary examples of games, primarily independent games, Isbister uncovers the nuanced approach many games are taking to create more emotionally moving experiences.

Chad Mahood and Michael Hanus
Journal Article, 2015

*Role-Playing Video Games and Emotion: How Transporting Into the Narrative Mediates the Relationship Between Immoral Actions and Feelings of Guilt*

Mahood and Hanus, researchers from The University of Texas at San Antonio and The Ohio State University respectively, aim to explain how immoral actions of a player-controlled character in an RPG impact complex player emotions, specifically guilt. The research done by Mahood and Hanus is extremely useful for game designers and developers who may be interested in creating dynamic and engaging narratives which help impact the emotional response of the player.

PJ Manney
Journal Article, 2008

*Empathy in the Time of Technology: How Storytelling Is the Key to Empathy*

PJ Manney asserts that our growing attachment to technology is making us less empathetic, and theorizes that storytelling is the key to reviving our connections to one another, and possibly the key to saving humanity. Looking at the science behind how and why we feel empathy and invoking the writings of researchers in the field of literature, Manney argues that storytelling allows us to experience traumatic and difficult things safely, providing a broadened sense of compassion for others and for ourselves.

Stacey Mason
Journal Article, 2013

*On Games and Links: Extending the Vocabulary of Agency and Immersion in Interactive Narratives*

In her article, Professor Stacey Mason dissects concepts of immersion, agency, and how the two are employed in narratives in conjunction with each other and separately. Mason unpacks two kinds of immersion, mechanical and narrative, and describes two types of agency, diegetic and extra-diegetic. Mason then proceeds to discuss their complicated relationship in narratives. Mason is attempting to define specific terms that can be used to explain methods for creating immersion in narrative so that creators and researchers might be able to better understand how readers and players react to narrative texts and games.
REVIEW OF LITERATURE

Lennart E. Nacke et al.
Journal Article, 2016

Games of the Heart and Mind: Affective Ludology and the Development of Emotionally Aware Player Experiences
Nacke, Wehbe, Stahlke, and Noguiera provide an in-depth look at the effect emotionally charged gameplay can have on the game player. This article adds to the depth of research describing the ability of video games to be used as persuasive tools. Nacke et al. also describe how these emotional experiences might translate to real-world implementation of ideas and concepts by game players.

Sunni Pavlovic
Lecture, 2013

An Experimental Approach to Interactive Entertainment
In this lecture, the studio director of Thatgamecompany (responsible for games including Journey and Flower) provides an in-depth look at what made Thatgamecompany a pioneer of experimental game design.

Bernard Perron and Felix Schröter
Book, 2016

Video Games and the Mind: Essays on Cognition, Affect and Emotion
This collection of essays and research articles presents readers with several looks at cognition, affect, and emotion in video games. Focusing on the power of gameplay as an emotive tool, this book provides current, cutting-edge research on player experience and the effect of highly emotional video games.

David Weibel and Barthomäus Wissmath
Journal Article, 2011

Immersion in Computer Games: The Role of Spatial Presence and Flow
David Weibel and Barthomäus Wissmath seek to fill a gap in research which addresses the relationship between presence (a sense of immersion in a game space) and flow (immersion caused by being involved in an action). The researchers developed an expansive study which sought to uncover how these concepts are related in game design, and whether they also impact enjoyment. The paper provides empirical data on flow, presence, and how those are interpreted by a game player in multiple settings.

Video Games

Jenova Chen
Thatgamecompany
Video Game, 2012

Journey
Thatgamecompany's most successful game draws heavily on emotional themes, exploration, and visual design to create a game that is moving and immersive. With no written text, dialogue, or instruction, Journey allows players to learn through exploration and uses design principles to create focal points and visual interest which move the player forward.
REVIEW OF LITERATURE

Jonathan Blow
Thekla, Inc.
Video Game, 2016

The Witness
The small development team at Thekla, Inc. released The Witness, a game bordering more on visual experience than traditional video game. The Witness is a puzzle based game which encourages user exploration through a vivid and diverse island landscape while uncovering the secret behind where the island’s inhabitants have gone. The Witness combines a strong visual style with experimental narrative elements to create a game which adds to the growing realm of experimental gaming.

Arnt Jensen
Playdead
Video Game, 2016

Inside
Playdead’s most recent game and spiritual successor to Limbo, Inside is a short game which focuses on the concept of choice, abandonment, and freedom. Strong visual design allows players to stay immersed for long periods of time as there is no text or dialogue in-game. Inside also challenges the typical game format as the end-state can be interpreted as player failure, as both of the endings require the player character’s death.

Hidetaka Miyazaki
FromSoftware
Video Game, 2011

Dark Souls
Often thought of as a return to vintage difficulty in gameplay, Dark Souls is a game which relies almost exclusively on player failure as a learning mechanism. In Dark Souls, failure is an expectation. Players learn enemy weaknesses and level pathways by repeated attempts, and the game is known for being very unforgiving.

Hidetaka Miyazaki
FromSoftware
Video Game, 2015

Bloodborne
Another exploration in difficult gameplay, Bloodborne retains many of the game mechanics found in Dark Souls while improving graphics and incorporating strong narrative elements.

Lucas Pope
3909
Video Game, 2013

Papers Please
From indie developer Lucas Pope, Papers Please is a game set in a Soviet-inspired country. The player assumes the role of a government official responsible for checking immigration papers as people enter the country through a border checkpoint. Creating a commentary on complex relationships of power, societal norms, and the nature of video games, Papers Please quickly gained critical acclaim from both academic and mainstream audiences.
REVIEW OF LITERATURE

Dr. Langeskov, the Tiger, and the Terribly Cursed Emerald: A Whirlwind Heist

William Pugh presents a twist on the typical game narrative. In this twenty-minute game, the player acts “behind the scenes,” pulling levers and pressing buttons to provide the game experience to a player who cannot be seen. The game ends with the player attempting to access the full game, but discovering that it does not exist, the “game” instead is what they just experienced. Dr. Langeskov provides a unique and clever perspective into game design, challenges what a “game” can be.

Firewatch

Campo Santo, a team of ten developers, released Firewatch to critical acclaim. Stunning in its visual style, and with an incredibly moving narrative, Firewatch sets a new standard for storytelling depth and graphics for independent game developers. Dealing with themes of sickness, abandonment, and shame, Firewatch presents players with a highly-nuanced gameplay experience that challenges the player to make several personal moral decision in-game.

The Beginner’s Guide

Creator Davey Wreden gives players a look into the relationship between game creator and game player, while attempting to describe the difficult process of regularly creating high quality work. This short game, roughly one hour in length, walks players through a linear narrative which is highly emotional. The Beginner’s Guide acts primarily as a catharsis for Wreden as he attempts to describe the difficulty of constantly outputting high-quality work.

The Stanley Parable

The Stanley Parable is a game about the choices players make in-game, and the nature of choice in the real-world. Presented as nineteen playable “loops” each lasting approximately ten minutes, the game allows players to alter their path with each iterative loop and affect the outcome of the game dramatically. The Stanley Parable was one of the first independent “experimental” games to reach critical success, selling over 1 million copies in just one year.
IDEATION

This thesis project started as many lists of topics, themes, and media. Ultimately, concepts that were more heavily considered included strong storytelling and user interaction.

As lists became more focused, the concept that stuck was “failure.” Many forms of media deal with the concept of “failure” as a core mechanic or message, but few place the user or viewer as a responsible party which must be held accountable for that failure.

After the first round of ideation, research was done to be sure that:
1. Similar concepts or media did not exist or could be expanded on
2. There was a space in visual design for the concept, and
3. To explore the viability of playable failure experiences.

At the same time, ideation was done on core design principles which should be included in the thesis project. These included:
1. Keeping the story or experience short, with little superfluous information
2. Consideration of core concept through gameplay repeatedly
3. Consideration of the role of the player, and
4. Flow and immersion should be high priorities.

After research and preliminary ideation was complete, a set of goals was created, which included:
1. Make something people enjoy and can relate to
2. Challenge the typical game format
3. Challenge the typical design process
4. Create storytelling which encourages introspection, and
5. Have a voice visually and conceptually.

Next, in-depth planning began. This included simple plot concept, overall mood and tone, and relating design to the spaces in-game.

After simple planning began, in-depth plot and dialogue planning was started. This saw several iterations. Consideration was given to who the player would assume the role of, if narration was necessary, and how narration would be included.
IDEATION

Early concepts included more open-world environments with very little narration. However, because the end game would be short, a lack of narration or direction might confuse the player or expand gameplay expectations.

As ideation concluded, the setting and narrative style were settled. An office space was chosen to be sure that the player would instantly recognize the space they occupied and the role they played.

Narrative tone will be in a third-person tone, with the narrator talking about the player's actions. Early iterations explored having a narrator talk to the player, or having the narrator be the player's inner monologue. However, because of the short play-time and limited game mechanics, these were not selected.

Style ideation was also conducted. The short work time for the thesis project demands that the visual style be cohesive, direct, and easy to interpret by the player. The visuals for the thesis project will focus on simple, low-poly models with lighting, color, and repetition playing large roles in creating space and mood.

This short game will follow a man named Oliver through a day at work. Oliver is a long-time employee at an office responsible for coming up with good ideas. On a typical day, Oliver succeeds without major interruptions. One day, however, Oliver comes to work and fails repeatedly to come up with good ideas. This experience causes him to doubt himself and the work he produces.

The player will follow Oliver through several failures, receiving negative feedback each time. Prompts will lead the player through several rooms of the office space, leading them through areas which mirror parts of the creative process. Spaces will change slightly each time to add interest while also creating confusion and a sensation of becoming wayward.

Near the end of the game, Oliver finds a solution, and is rewarded. When he attempts again to solve the problem with the same solution, the solution is missing, and he must start again.

The plot of the game will attempt to reinforce ideas of failure, iteration, and the typical design process. Spaces included will have notes from other "employees" to add interest for the player who will be interacting with some rooms multiple times during the game.
IDEATION

Overhead Maps

Offices

desk
trash can
chair
side table

file cabinet
tube, buttons

plant
door
window

10'

12'

Hallway

Shaemus Spencer

Iterations: A Short Video Game About Failure

Shaemus Spencer
IDEATION

Warehouse

Break Room

counter top
sink
chairs
table
plant

12’

door

12’

fridge
trash can
IDEATION

“Somewhere Else”

Stairwell
IDEATION

Upstairs

Supply Closet

shelves with supplies
mops, brooms
hanging light
8'
door
IDEATION

Interior Sketches

Offices

Hallway

Warehouse Entry
IDEATION

Warehouse

Break Room
IDEATION

“Somewhere Else”

Stairwell
IDEATION

Supply Closet

Door Room
IDEATION

Asset List: Shared Assets

Door
Door frame
Door knob
Walls
Floor
Decals
Ceiling tiles
Lights
Molding

Railing
Boxes
Papers
Chair
Plant
Trash can
Mugs
Window
Shelf

Asset List: Unique Assets

<table>
<thead>
<tr>
<th>Offices</th>
<th>Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decals</td>
<td>Decals</td>
</tr>
<tr>
<td>Chair</td>
<td>Ceiling tiles</td>
</tr>
<tr>
<td>Desk chair</td>
<td>Ceiling lights</td>
</tr>
<tr>
<td>Side table</td>
<td>Tubes</td>
</tr>
<tr>
<td>Desk</td>
<td>Railing</td>
</tr>
<tr>
<td>Computer</td>
<td>Walkway</td>
</tr>
<tr>
<td>Bookshelf</td>
<td>Button</td>
</tr>
<tr>
<td>Books</td>
<td>Cage</td>
</tr>
<tr>
<td>Mug</td>
<td>Fence opening</td>
</tr>
<tr>
<td>Supplies</td>
<td>Shelving units</td>
</tr>
<tr>
<td>Paper</td>
<td>Ceiling parts</td>
</tr>
<tr>
<td>Buttons</td>
<td>Clutter</td>
</tr>
<tr>
<td>Tube</td>
<td>Cart</td>
</tr>
<tr>
<td>File cabinet</td>
<td>Pages</td>
</tr>
<tr>
<td></td>
<td>Misc set dressings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hallway</th>
<th>Break Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decals</td>
<td>Cupboards</td>
</tr>
<tr>
<td>Copy machine</td>
<td>Cupboard knobs</td>
</tr>
<tr>
<td>Table</td>
<td>Sink</td>
</tr>
<tr>
<td>Misc set dressings</td>
<td>Table</td>
</tr>
<tr>
<td></td>
<td>Fridge</td>
</tr>
<tr>
<td></td>
<td>Pushpin board</td>
</tr>
<tr>
<td></td>
<td>Notes</td>
</tr>
<tr>
<td></td>
<td>Toaster</td>
</tr>
<tr>
<td></td>
<td>Soap</td>
</tr>
<tr>
<td></td>
<td>Sponge</td>
</tr>
<tr>
<td></td>
<td>Misc set dressings</td>
</tr>
</tbody>
</table>

| Warehouse Entry | |
|-----------------| Floor tiles |
| Decals          | |

Shaemus Spencer
Iterations: A Short Video Game About Failure
IDEATION

Asset List: Unique Assets

<table>
<thead>
<tr>
<th>Somewhere Else</th>
<th>Cutouts:</th>
<th>Door Room</th>
<th>Decals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mountains</td>
<td></td>
<td>Hanging light</td>
</tr>
<tr>
<td></td>
<td>Trees</td>
<td>Supply Closet</td>
<td>Mop</td>
</tr>
<tr>
<td></td>
<td>Bushes</td>
<td></td>
<td>Broom</td>
</tr>
<tr>
<td></td>
<td>Birds</td>
<td></td>
<td>Bucket</td>
</tr>
<tr>
<td></td>
<td>Clouds</td>
<td></td>
<td>Old posters</td>
</tr>
<tr>
<td></td>
<td>Rocks</td>
<td></td>
<td>Supplies</td>
</tr>
<tr>
<td></td>
<td>Logs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fire</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strings</td>
<td>Stairwell</td>
<td>Decals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stairs</td>
</tr>
</tbody>
</table>

Color Palette

- Highlights
- Midtones
- Shadows
- Neutrals
IDEATION

Script

Start on black screen. As the narration continues, the world fades in.

Narrator:  
Oliver was a simple man with a simple job: to come up with great ideas. Every day he went to work and thought up great things. His co-workers liked him, and he liked them. Most days were wonderful, and Oliver went home with a smile on his face. This was not one of those days.

The player is in an office. It is small, cozy, and well furnished. There is a desk, some filing cabinets, some bookshelves, a small potted plant, and other miscellaneous office supplies. On the desk are a stack of papers and a pneumatic tube with the number “12” on it. On either side of the tube are two large lights: one is red, and one is green. Both are off.

Narrator:  
Oliver thought for a moment. And then he thought a little more. Eventually he had a few ideas, and he even thought they were pretty good. He wrote one down, and sent it to his boss.

The player is given a choice of three options, or “ideas.” After selecting one, the “idea” is put into the pneumatic tube. The red light turns on.

Narrator:  
“Of course, what a silly idea,” Oliver thought. Even on his best days, Oliver sent a few silly ideas to his boss. He thought some more, and tried again.

The player is given a second set of ideas. The player selects an idea, and puts it into the pneumatic tube. The red light turns on again.

Narrator:  
Oliver could hardly believe it. He couldn’t remember the last time he had two bad ideas in a row. He had been up late the night before, maybe he was just tired. Perhaps he would try to talk to some of his co-workers to get some ideas.

The player is directed into the hallway. Along the walls are a series of posters with quotes and images on them. The player can access the offices of other employees where they find small notes. Some notes reference why the employees are absent (calendars with days off circled, notes about appointments, etc). There are also a few notes and memos referencing a “supply closet.”

Narrator:  
All of his co-workers were out for the morning. “Well,” thought Oliver, “I’ll just have to try again. I can’t possibly come up with three terrible ideas in a row.”
IDEATION

At the end of the hallway is a door marked “8.” The player enters the “8” door, and is back in their office. Again they are given three idea options. Again the red light glows.

Narrator: A truly, stupendously terrible idea. Of course it was. “IDEA?” “What was I thinking?” As he stood staring at the awful red light, a horrible thought began to creep into Oliver’s mind. “What if I never come up with another good idea again?” “What if all of my ideas have always been this terrible?” He stared blankly at his office for a moment, and decided he needed to go for a walk.

The player re-enters the hallway. This time, some of the lights are dim. A few of the posters have changed. At the end of the hall is a door marked “warehouse.”

Narrator: “No,” Oliver thought. “My ideas are great. They’ve always been great. Why should today be any different? This is my job, and I am good at it. I have good ideas.”

The player enters the warehouse on the second floor, overlooking rows of shelving. There are cardboard boxes from floor to ceiling. The lights are dim. In the back of the room on the first floor are a set of pneumatic tubes, and there are pages scattered around the floor. The pneumatic tubes are numbered. If the player approaches the pneumatic tube with their number on it, they will be able to pick up their rejected ideas. The door for the supply closet is lit brightly, and is located high above the warehouse floor, but it is not accessible.

Narrator: It couldn’t be. His ideas from weeks ago, months ago. All of them here, on the floor of the warehouse. This is where they kept the terrible ideas, he knew that. He had always thought Jan’s ideas were here, and maybe Brad’s, but never his. And yet, there they were, a pile of terrible ideas, abandoned.

The player is directed to a door in the back of the warehouse. When they go through the door, they are back in their office. Things are a mess. The stack of papers is on the floor. Posters have changed. New notes are stuck around the office. The red light won’t stop glowing. The player is directed to close their eyes. A beautiful landscape is described, and simple assets appear in front of the player. They linger, and disappear.
IDEATION

Narrator: “Yes,” Oliver thought. “My ideas are terrible.” He wondered if the green light even worked. And when it did, was it just a sham? Oliver looked around. How long had his office been like this? He couldn’t remember. Maybe a vacation would help. Yes, I just need to go somewhere else, he thought. Oliver closed his eyes and imagined what it would be like. He thought about a nice cabin on a lake. He pictured the trees blowing, and mountains in the distance, the sun setting, the birds flying close overhead. And then Oliver thought about the pile of papers, the years of ideas and work and effort for nothing.

The player does not input an idea. Instead, they walk back into the hallway. The door leading to the supply closet is on the ceiling. All of the other employee offices have their doors closed and lights off. At the end of the hall is a door labeled “break room.” The player enters. In the break room, there is no narration at first. The player has a short time to explore, read notes, and wait.

Narrator: Did his co-workers know? Did they all think of him as a joke? “I bet they have a nickname for me,” he thought. “Oliver-the-terrible-idea-guy.” I have never had a good idea, “Oliver” decided. And he sat quietly, very aware of how alone and disappointed he was.

The break room fades to black slowly, leaving only a door.

Narrator: “Maybe if I can’t come up with a good idea, I can find one,” Oliver thought. There must be a good idea somewhere. That’s what this whole building is for. Yes, that’s it. I just need to find a good idea, and then I can make my own.

The door opens. A thin red line leads out. The player is back in the hallway. The red line goes into and out of some of the employee offices. Posters have changed again. The line leads the player to a door at the end of the hall that is unmarked. The new room is small and square. It is filled with doors labeled “supply closet.” All are either locked, open into walls, or are unreachable.

Narrator: None of this made any sense. Oliver just wanted to go back to making great ideas. He didn’t want to keep wandering around, and he certainly did not want to go back to the warehouse. He just wanted to feel okay.
IDEATION

The red line moves around the room and under a door marked “warehouse.” Here, the red line starts on the floor, and moves the player deep into the warehouse. It goes over boxes, through shelves, and onto the walls. The player is led by the red line into a stairwell.

Narrator: *Upstairs. Oliver had never been upstairs before. Only management went upstairs. But, maybe that’s where they kept the really amazing ideas. He hesitated, and began climbing.*

The stairs lead the player up several flights, still following the red line. At the top of the stairs, a door opens into a large, well-lit and spacious room. Desks are lined up neatly, everything seems to be in place. The red line stops. At the back of the room is a door labeled, “supply closet.”

Narrator: *This must be it! Oliver thought. This is where fantastic ideas come from! Oliver could feel his heart pounding, he was so close to everything being back to normal. Oliver crossed the room, hopeful.*

The player slowly approaches the door, and opens it. White light pours out from inside the closet, and bright, cheerful music plays.

Narrator: *Yes! Oh, yes! He had done it! He had found it! A great idea, a truly wonderful and spectacular idea! His boss would be proud, and his co-workers would give him a new nickname! “Oliver-with-the-truly-wonderful-and-spectacular-ideas!” He sprinted back to his office, confident and joyful.*

The player walks back through the spacious office, down the stairwell, and back into their office. The lights are bright, everything is in order, and one idea is on the desk. The player selects it, it is sent through the pneumatic tube, and after a short pause, the green light glows.

Narrator: *Finally. A great idea. Oliver knew he could do it. “And now,” he thought, “I can do it again. Now I know where they are, it’s so simple.” Oliver could hardly contain himself. “I must go back to the supply closet,” he thought.*

The door to the office opens. The player walks through the hallway, into a stairwell, into the spacious office, and back to the supply closet. The door opens, but nothing happens.
IDEATION

Narrator: *What? How could it be? They were just here. All the ideas he could hope for had been right here moments ago. “They must be in here somewhere,” Oliver thought, and he went inside.*

The lights around the player dim. The player walks into the supply closet. The door closes. End.

Mechanics

User Input
- Clicking on objects for small interactions
- Object inspection and closeup
- Click to open doors
- Click to open gates
- Button push to lower elevator

Ambient Mechanics
- Floating objects
- Level streaming
- Dynamic materials (changing colors)
- Dynamic lighting
- Object pop-in, object pop-out

Miscellaneous
- Ambient office sound
- Ambient music for emotional cues
- Footstep sounds
- Object interaction sounds
METHODOLOGY

Deliverables

The finished product of this thesis will be a playable video game developed in the Unreal Engine. The game will be a 3D, first-person format. The runtime will be fifteen minutes, not including player exploration.

Target Audience

The game will be aimed primarily at two groups.

**Group One** Students and young professional in creative fields

**Group Two** People interested in experimental video games

Personas

<table>
<thead>
<tr>
<th>Name</th>
<th>Professional Information</th>
<th>Demographics</th>
<th>Technical Knowledge</th>
<th>Environment</th>
<th>Personal Goals</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Ito</td>
<td>Freshman at Rhode Island School of Design, enrolled in the Furniture Design BFA program</td>
<td>18 years old, female, born and raised in Flushing, Michigan.</td>
<td>Casual gamer; primarily plays for fun during free-time and occasionally with friends, is familiar with multiple gaming platforms, and typically prefers to play games on consoles. Has a personal computer and is somewhat versed in new technologies.</td>
<td>Lives in on-campus dorms with limited space.</td>
<td>Came to art school to learn more about design and craft. Enjoys her classes but is struggling some with new pressures of college. Heard about the game from a friend. Is interested in the game story and concept, and likes that the game is casual and does not require a large investment of time.</td>
<td>&quot;Just let me finish my drawing homework and we can go grab some food.&quot;</td>
</tr>
<tr>
<td>Robert McCleary</td>
<td>Assistant Professor at UC San Diego, classes he teaches focus primarily on creative writing and experimental fiction. Has an MFA in Creative Writing.</td>
<td>40 years old, male, born in North Carolina. Lives with his long-time partner and two cats.</td>
<td>Does not regularly play video games. Will occasionally play a game if the content or format are interesting or relevant to his research. Somewhat familiar with new technologies.</td>
<td>Owns a small home outside of San Diego. Spends the majority of his time teaching, writing, or researching.</td>
<td>Currently working on a book about new forms of storytelling. Came across the game while researching similar games. Is playing the game to experience a wider variety of storytelling formats.</td>
<td>&quot;Have you read Danielewski’s newest short story collection?&quot;</td>
</tr>
</tbody>
</table>
## METHODOLOGY

<table>
<thead>
<tr>
<th>Name</th>
<th>Olly Andersen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Information</td>
<td>Junior environment designer at Campo Santo, a small game design company in California. Holds a BFA in 3D Digital Graphics.</td>
</tr>
<tr>
<td>Demographics</td>
<td>28 years old, male, recently moved from Chicago to California.</td>
</tr>
<tr>
<td>Technical Knowledge</td>
<td>Regular gamer. Built a computer specific for gaming, and is interested in indie games and art-driven games. Very comfortable with computers.</td>
</tr>
<tr>
<td>Environment</td>
<td>Lives in a medium-sized apartment with two roommates. Spends the majority of his day at work.</td>
</tr>
<tr>
<td>Personal Goals</td>
<td>Wants to play many different types of games to inform his own work. Heard about the game through someone at work, and decided to play it because of its content and focus on visual design.</td>
</tr>
<tr>
<td>Quote</td>
<td>“I'll have this level greyboxed and ready for testing by this afternoon.”</td>
</tr>
</tbody>
</table>
IMPLEMENTATION STRATEGIES

Technical

All 3D modeling, texturing, and lighting will be done between Autodesk Maya 2017, Autodesk Mudbox 2017, Substance Painter, Adobe Creative Cloud, and Unreal Engine 4. In order to produce the finished project in a timely and efficient manner, a typical game pipeline will be implemented which includes overhead level design, greyboxing, and regular play-testing. Any necessary scripting or software skills will be learned in fall semester through the “Real Time Design” course and several 3D modeling courses.

The implementation process will follow the plan described by Joel Burgess in his Game Design Conference lecture, “Level Design in a Day” (2014), which implements several iterative passes over the entire game. This plan allows for a logical completion process, and allows the entire game to be built together as opposed to levels or sections being built separately. This helps maintain cohesiveness and consistency across the game. Testing is done after each pass which allows for frequent feedback and improvement.

Iterative Passes

Structural Iteration

**Pass Zero: Planning**
Concept, story development, asset lists, level design sketches, color script

**Pass One: Layout**
Complete overhead design, plan and establish basic rhythm and flow, greyboxed levels, script development and recording, visual development

**Pass Two: Gameplay**
Develop mechanics, player pathing, create meshes, start inserting meshes into game engine

**Pass Three: Content Complete**
All meshes in engine, gameplay is detailed and refined, user testing for gameplay goals and desired outcomes

Qualitative Iteration

**Beauty Pass**
Optimization and polish, add clutter and small detail, add sound effects

**Final Pass**
Complete final polish, identify opportunities to improve
IMPLEMENTATION STRATEGIES

Scope

The result of this thesis project will be a linear playable experience. Each player will progress and complete the game in the same fashion, aside from their own exploration. This game model follows the method of some recent games including Dr. Langeskov (Pugh, 2015), The Beginner’s Guide (Wreden, 2015), and Journey (Thatgamecompany, 2012). Considering the time in which this thesis project must be completed, only one “path” through the game will be created. After the thesis defense, the game can be expanded to include multiple outcomes.

Issues

Should technical issues develop, there are vast amounts of documentation on the Unreal Engine website and forums. Thesis committee members have also been secured who can offer assistance if the situation requires.
DISSEMINATION

Upon completion, this thesis project will be submitted to:

2018 Independent Games Festival
This competition is part of the Game Developers Conference, and finalists will attend the annual Independent Games Summit. Submissions for 2018 must be entered in fall of 2017.

Adobe Design Achievement Awards
The completed thesis project will be submitted to the Game Design Category.

Steam Greenlight
Steam Greenlight is an online resource for independent game designers and developers. Creators submit their games to the Steam platform, and players vote on whether the game receives a full release. Greenlight requires a branding image, a trailer video, and four screenshots of gameplay. Upon being “greenlit,” developers have the opportunity to monetize their games.
EVALUATION PLAN

User testing will be implemented at several stages of the thesis execution, including:
- Review of the **overhead design**
- Review of the **narrator’s script**
- Playtest of **greyboxed level**
- Playtest of **game mechanics**
- Playtest of **in-process** game level
- Playtest of **complete game**

Player-testers will include regular game-players, occasional game-players, and infrequent game-players. After each round of play-testing, feedback will be used to improve and edit the gameplay where necessary.

Players will be asked a series of questions after play-testing, including:
1. On a scale of 1-10, with 1 being low and 10 being high, how engaging was the gameplay?
2. Was anything confusing or unclear?
3. What do you think is the message of the game?
4. What were some of the emotions you experienced as you played the game?
5. If you could change something about the game, what would it be? Why?
6. Would you recommend this game to a friend? Why or why not?
7. Does the visual design enhance your experience? How so? If not, why?
PRAGMATIC CONSIDERATIONS

Costs
Entry into the 2018 Independent Games Festival ($25)
Enter into Steam Greenlight ($100)

Time
For the remainder of the fall semester, approximately ten hours a week will be dedicated to work on the production of the thesis, not including class time.

During the spring semester, approximately twenty hours a week will be dedicated to work on the production of the thesis, not including class time. More hours will be allocated as needed to complete the thesis project on time.
TIMELINE

Fall Semester

Week 9-10  Proposal Defense
Week 11-15  Pre-production wrap-up, complete Pass One
    Week 11  Complete any necessary sketching, color palette selection, script clean-up, overhead design edits
    Week 12  Begin greyboxing rooms
    Week 13  Begin lighting design
    Week 14  Continue lighting design, greyboxing, start preparing Progress Update
    Week 15  Develop greyboxed layout, play-test levels, output video for Progress Update
    Week 16-17  Progress Update presentation, meet with thesis committee members

Winter Break  Begin Pass Two

Spring Semester

Week 1  Meet with thesis committee, continue Pass Two
    Week 2  Begin adding sound cues
    Week 3  Play-test in-progress level
    Week 4  Begin Pass Three, start developing level streaming
    Week 5-10  Continue Pass Three
    Week 5  Continue texturing, lighting, visual development, meet with committee members
        Week 6  Finish textures
        Week 7  Add final meshes to game
        Week 8  Finish lighting design, meet with committee members
        Week 9  Color grading, loading screen and start screen design
        Week 10  Play-test game, meet with committee members
        Week 11  Revise based on play-test feedback, begin final documentation
        Week 12-15  Begin Beauty Pass, small revisions for polish, continue documentation
        Week 15  Prepare for Imagine RIT, continue documentation
    May 6, 2017  Imagine RIT
    Week 16  Final revisions, prepare for Thesis Defense, finish documentation

Thesis Defense
    May 19, 2017  Commencement ceremonies
REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


ITERATIONS
A Short Video Game About Failure

Thesis Proposal
Shaemus Spencer
October 18, 2016
Title: Iterations: A Short Video Game About Failure

Submitted by: Shaemus Spencer

Submission Date: October 18, 2016

Thesis Committee Approval

Chief Adviser: Daniel DeLuna, MFA Visual Communication Design

Signature of Chief Thesis Adviser

Date

Associate Adviser: Chris Jackson, MFA Visual Communication Design

Signature of Associate Thesis Adviser

Date

Associate Adviser: Shaun Foster, 3D Digital Design

Signature of Associate Thesis Adviser

Date

MFA Thesis Candidate: Shaemus Spencer

Signature of MFA Thesis Candidate

Date
ABSTRACT

Summary Whether students or professionals, designers and artists are expected to produce strong "outside-the-box" concepts very quickly. At the same time, risk-taking is sometimes discouraged; a company might not have the overhead to explore wild ideas, or a student might not have time or resources to explore new and exciting concepts or methods of execution. What remains is a cross-road: designers are rewarded for taking risks, but often unable to do so for fear of failure and a loss of resources.

By accepting and incorporating failure into the beginning stages of a creative project, designers and artists lose less time, money, and quality than if that failure happens in the later design stages. For some designers, this early failure is still daunting. Sometimes this failure is avoided by pursuing weaker concepts, or it can result in a project being abandoned.

At the same time, the video game industry is rapidly expanding to include more experimental titles which allow contemplative gameplay. These new games often tackle complicated themes, and can offer players a space in which to experience trauma, struggle, and moral dilemmas without real-world consequences.

This thesis project aims to combine visual design principles with simple gameplay into an interactive experience which provides players an environment to experience failure without real-world consequences. The goal of this experience is to provide a cathartic experience for the player, with the game acting as a reminder that failure and iteration are common in design and that they can be useful for creating stronger end results.

Keywords Design, game design, failure, creative process, iteration, iterative design, interactivity, experimental game design
PROBLEM STATEMENT

Failure is extraordinarily common in art and design. In a field which requires creativity on-demand, nearly all creators experience failure at some point in their careers. Students and professionals alike sometimes deal with weak concepts, harsh criticism, and a fundamental lack of ideas. Failure can be extremely painful, to the point where in some cases those who experience it simply do not admit to having failed (Sitkin, 1992). Some research suggests that regular failure, if not coped with properly, can lead to poor confidence and a reliance on old ideas or work-flows which had previously led to success (Foumberg, 2016; Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Stadd; Wolfe, 2015). In educational settings, if students see failure as insurmountable there becomes no incentive to try again (Blanco-Herrera, 2015). In some cases, repeated failure can even ruin a career or an entire organization (Sitkin).

At the same time designers and artists are sometimes rewarded for a safe creative process. Without taking risks, artists and designers can still get good grades, jobs, and feedback on work. What has resulted is an environment where the design process can be rigid and structured with very little room for taking risks or failing, unless there is explicit allowance or funding for risk taking. (Foumberg, 2016; Petroski; Popova; Stillman, 2012). This thesis argues that creators must allow themselves the room and time for failure. However, in an industry driven by deadlines and great ideas, it can be difficult to argue for “strategic failure,” when a route that is perceived as faster and safer is available.

Within the past thirty years, several studies have looked at the value of failure in multiple fields. Some researchers theorize that repetitive trial and error leads to better overall results (Burkeman, 2016; Foumberg, 2016; Grant Halvorson; Petroski; Shepherd, 2011; Sitkin, 1992; Syed, 2015; Wolfe, 2015; Young, 1968). In cases where those who fail see it as a positive or are able to try again, the end product tended to be stronger. These employees and students had a better relationship with adversity in their work than those who have a negative perception of failure (Grant Halvorson; Shepherd, 2011; Sitkin, 1992; Wolfe, 2015). When iteration on failed ideas is encouraged and treated as a learning opportunity, students and professionals tend to feel less negative emotion toward failure, and feel it for shorter periods of time (Blanco-Herrera, 2015; Shepherd, 2011; Wolfe, 2015). In creative fields especially, being able to rapidly produce ideas or iterate on weak designs can be the difference between a successful career and one which falls flat. If designers and artists can be taught to cope with failure and adjust to it accordingly, they may be able to internalize the habit and move beyond that step faster in each future project they tackle. The challenge then comes in teaching that failure is an acceptable step in the design process.
SITUATIONAL ANALYSIS

The expressive power of interactive technologies makes them great tools for teaching, learning, and creating meaningful emotional experiences. The last decade has seen an explosion of mobile applications, games, virtual reality, and interactive experiences meant to instruct users or influence them toward a cause or issue (Brown, 2008; Green, 2015; Manny, 2008; Pavlovic, 2013; Perron, 2016). Some of these new technologies allow users to experience hardship in an attempt to explore empathy (Mahood, 2015; Manney, 2008), some are used as coping mechanisms for traumatic experiences (Manney, 2008), and others still can improve attention and focus (Boot, 2008; Clark, 2011; Dye, 2009). Creators have taken full advantage of the emotive power of some of these tools, especially in the realm of video games and experiential gameplay.

Video games are a somewhat unique creation in that they are meant to be experienced, not just observed (Perron, 2016). Players actively choose to spend time and money in order to play them, and often do so because of the unique enjoyment and personal experiences video games offer (Brown, 2008). Developers and researchers are also better understanding the role that emotion and narrative play in gaming. Some even argue that video games should be considered a “serious art form” (Adams, 2006; Brown, 2008; Clarke, 2007; Schrank, 2014). Others defend that combining strong visual design with nuanced and complex narrative can grow video games into a medium which consistently leaves players with more informed perspectives on social, ethical, and interpersonal issues (Bergström, 2011; Bogost, 2007; Brown, 2008; Christou, 2014; Collins, 2013; Flanagan, 2015; Geslin, 2016; Green, 2015; Isbister, 2016; Juul, 2012; Juul, 2013; Koenitz, 2014; Mahood, 2015; Perron, 2016). More and more, video games are being understood as a medium which can, “provide strong emotional experiences, which may guide how we process information” (Nacke, 106).

In the past decade, this concept of games as an experience has become a driving force for many design firms, especially independent developers. As these “indie” game companies gain notoriety, there has been a push to challenge the typical game format and experience (Brown, 2008). These new game experiences move beyond the expected first-person shooter or role-playing aspects found in some early and contemporary games, and instead provide players with unique stories that often challenge the player’s ideas of what a game can be fundamentally, while also imparting a complex narrative or theme. Some of these games deal with themes of anxiety, loss, and human nature.
SITUATIONAL ANALYSIS

Despite straying from typical gameplay format, these experimental games are finding popularity among players looking for unique gameplay content. Games including *Journey* (Thatgamecompany, 2012), *Inside* (Playdead, 2016), *Firewatch* (Campo Santo, 2016), *Papers, Please* (3909, 2013), *The Beginner’s Guide* (Everything Unlimited Ltd., 2015), *The Stanley Parable* (Galactic Cafe, 2013), and *Dr. Langeskov* (Crows Crows Crows, 2015) have pushed the medium to more extreme experimental places in just the last few years alone (see competitive analysis for details on specific titles). The success of these more experimental games has opened the door for independent game developers to create visually-driven, compelling narrative experiences which tackle unconventional themes. One theme that is somewhat unexplored in current video games is failure.

Many games require the player to fail in order to eventually “win.” Titles like *Bloodborne* (FromSoftware, 2015) and *Dark Souls* (FromSoftware, 2011) are notorious for their incredible difficulty. When players fail in-game as it relates to game progression, they make adjustments in order to succeed in another attempt. This is called the “paradox of gameplay;” video games require failure in order to progress. People typically seek to avoid failure, but they play video games regardless, often because the result is deemed enjoyable or worthwhile (Juul, 2013). What results is an environment where failure is acceptable, expected, and tolerated as a means-to-an-end (Juul, 2013). There are also practical virtual environments created to simulate failure in order to ensure future success. Flight and surgical simulators are two common examples. In each, professionals are introduced to difficult problems in order to learn how to process them quickly in a safe environment with the hopes that those skills will then translate to real-world situations (Blanco-Herrera, 2015; Bogost, 2007). These experiences imply not that the user will become an expert in their profession simply through interactive environments, but that these experiences teach them the “system of rules that drive the function of [their] profession...They are learning about the kinds of tasks, problems, and solutions involved” in their professions (Bogost, 2007).

While many video games cause the player to fail repeatedly in order to succeed and others allow professionals to safely learn new skills, very few deal with the concept of failure on a personal and intimate level. By taking advantage of the emotional and narrative strengths of video games, it may be possible to create gameplay which allows players to experience personal failure without real-world consequences. This in-game experience might then translate to better real-world coping abilities when failure is experienced in professional and educational settings.
THESIS STATEMENT

This thesis project will explore failure as it relates to the creative process, and will attempt to create a cathartic gameplay experience which allows players to perform failure as part of the iterative design process.
COMPETITIVE ANALYSIS

**Journey**
*Thatgamecompany*
2012

*Journey* is a stunning experience, both visually and emotionally. The player assumes the role of a mysterious robed figure who travels across a desert attempting to reach a mountain far in the distance. With no dialogue or written narrative, *Journey* is told through player experience and interaction with other character players in Online mode. An independently developed game, *Journey* adds to a conversation on where video games are trending, and the ability they have to be visually engaging and emotionally fueled.

**Mountain**
*David O’Reilly*
2014

*Mountain* is an extreme example of “avant-garde” gaming. In this example, the player spawns a randomly generated mountain which floats in space and rotates slowly. The player cannot affect the mountain, but can zoom in, zoom out, and watch as time passes and events take place on the mountain. This game is both highly acclaimed as a unique production, and also heavily criticized for being called a “game” by its creator. Both responses provide a look into the changing perspectives on what constitutes a “game,” and what consumers want in an interactive experience.

**Papers, Please**
*Lucas Pope*
2014

*Papers, Please* is a game set in a country reminiscent of the Cold-War era Soviet Union. The player assumes the role of a government official responsible for checking people’s papers as they enter the country through a border checkpoint. Creating a commentary on safety, gender, and the role of the game player, *Papers, Please* was one of the first examples of “avant-garde” games to gain critical acclaim from a mainstream audience.

**The Beginner’s Guide**
*Davey Wreden*
2015

Creator Davey Wreden gives players a look into the relationship between game creator and game player, while attempting to describe the difficult process of regularly creating high quality work. This game, roughly one hour in length, walks players through a linear narrative which is highly emotional. *The Beginner’s Guide* acts in some ways as a coping mechanism for Wreden and his quest to balance producing strong work while also staying happy with the work he produces. This game gives creative types a reminder that their experiences are shared by others, and can give non-creative types a look into the struggles of the game design world.

**Dr. Langeskov, The Tiger, and the Terribly Cursed Emerald: A Whirlwind Heist**
*William Pugh*
2016

William Pugh presents a twist on the typical game narrative. In this twenty-minute game, the player acts “behind the scenes,” pulling levers and pressing buttons to provide the game experience to a player who cannot be seen (and who does not exist). *Dr. Langeskov* ends with the player attempting to access the full game, but discovering that it does not exist. *Dr. Langeskov* provides a unique and clever perspective into game design, challenges what a “game” can be.
**COMPETITIVE ANALYSIS**

<table>
<thead>
<tr>
<th>Game</th>
<th>Developer</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firewatch</td>
<td>Campo Santo</td>
<td>2016</td>
</tr>
<tr>
<td>That Dragon, Cancer</td>
<td>Numinous Games</td>
<td>2016</td>
</tr>
<tr>
<td>The Witness</td>
<td>Thekla, Inc.</td>
<td>2016</td>
</tr>
</tbody>
</table>

**Firewatch**
Campo Santo, a team of ten developers and artists, released *Firewatch* to critical acclaim. Stunning in its visual style, and with an incredibly moving narrative, *Firewatch* sets a new standard for storytelling depth and graphics for independent game developers.

**That Dragon, Cancer**
Developed by a small team including Ryan and Amy Green, *That Dragon, Cancer* focuses on the experiences of the Green family and their young son Joel. At twelve months old, Joel Green was diagnosed with terminal cancer. *That Dragon, Cancer* was developed as a means for the Greens to deal with the loss of their son and tell his story at the same time. Color, value, and shape play important roles in the visual style of *That Dragon, Cancer*, and work together to create an emotional family portrait that the game player must navigate. Challenging the notion of a game, *That Dragon, Cancer* explores narrative and design as a means to tell an interactive story.

**The Witness**
The small development team at Thekla, Inc. released *The Witness*, a game bordering more on visual experience than traditional video game. Using an engine designed specifically for the game’s graphic requirements, Thekla, Inc. is a puzzle based game which encourages user exploration through a vivid and diverse island landscape. *The Witness* combines a strong visual style with experimental narrative elements to create a game which adds to the growing realm of experimental gaming.
REVIEW OF LITERATURE

Video Games, Art, and Design

Ernest Adams
Journal Article, 2006

**Will computer games ever be a legitimate art form?**
Ernest Adams, a well-recognized voice in the game design community, discusses the perception of art and whether video games will ever be perceived as a legitimate art form. By analyzing the fundamentals of art, Adams looks at the current state of game design and where he feels games need to go if the developers seek to produce games as “art.”

Chris Bourassa
Lecture, 2016

**A Torch in the Dark:**
Using Creative Direction to Light *The Darkest Dungeon*
In this lecture, Chris Bourassa of Red Hook Studios discusses the importance of a strong visual direction when developing a game. Bourassa argues that a strong visual direction should be the bedrock of all game design, as it can inform the game at several steps along the way, and is often part of what makes a game memorable.

Andy Clarke and Grethe Mitchell
Book, 2007

**Videogames and Art**
*Videogames and Art* provides readers a look at the complicated relationship between video games as a medium and the art world. Clarke and Mitchell attempt to provide answers to questions about the nature of game playing and whether video games will ever be considered art. Through case studies and interviews, the authors of *Videogames and Art* look at gaming from a perspective outside of the mainstream, and propose the future of gaming lies more in art and design, and less in traditional game design conventions.

Matt Sainsbury
Book, 2015

**Game Art: Art from 40 video games and interviews with their creators**
*Game Art* provides looks into the creative end of video games from 40 unique perspectives. Some artists interviewed worked on multiple AAA titles, while others are independent artists. Featuring artists from around the world, Game Art provides all artists practical advice for character development, world building, art direction, and more.

Brian Schrank and Jay David Bolter
Book, 2014

**Avant-garde Videogames: Playing with Technoculture**
Schrank and Bolter look at the fundamentals of avant-garde theory, and describes examples of video games which follow in the avant-garde tradition. Arguing that there are opportunities for game design to address political and social issues, Schrank and Bolter question whether games can be an avant-garde art form, and if they are, propose ways to discuss and critique them.
REVIEW OF LITERATURE

Video Game Design and Development

Joel Burgess
Lecture, 2014

Level Design in a Day:
How We Used Iterative Level Design to Ship Skyrim and Fallout 3
In this lecture, Joel Burgess discusses the method for producing hundreds of unique locations inside of two triple-A games. Burgess describes the process from concept to completion, and explains how iterative design has become a staple in Bethesda’s design process.

Karen Collins
Book, 2013

Playing with Sound:
A Theory of Interacting with Sound and Music in Video Games
In Playing with Sound, Collins addresses sound in video games from music to sound effects and dialogue. Collins looks at how these sounds impact the player, add to or detract from immersion, and add to the interactive player experience.

Dan Cox
Lecture, 2014

What Modern Interior Design Teaches Us About Environment Art
In this talk, Dan Cox explains the vital relationship between game level design and interior design. Cox argues that by studying fundamentals of interior and architectural design, level artists can make better game spaces which guide the player through light, scale, and color.

Mary Flanagan
Book, 2015

Critical Play: Radical Game Design
In Critical Play, Mary Flanagan provides a needed discussion on the state of non-traditional games. Encompassing a wide variety in types of games, Flanagan looks at the role of serious games and their roles in social and political issues. Flanagan also discusses the need for more mainstream “critical” gaming, and proposes an updated method of development for this style of game creation.

Michael Garber-Barron
and Mei Si
Journal Article, 2013

The Role of Gender and Age on User Preference in Narrative Experiences
Garber-Barron and Si provide a case study of their research into a storytelling program which uses numerical assignments to tag narrative elements and determine how a user reacts to them. This program assigns data to user responses and adjust the method of storytelling according to an algorithm, and seeks to determine whether there is a preference for story progression based on age or gender. The goal of the paper is to describe this methodology and investigate the balance between introducing novel topics in storytelling and user reaction.
**REVIEW OF LITERATURE**

**Gavin Goulden**  
*Lecture, 2014*  
**Change is Good:**  
*The Importance of Iteration Within a Character Art Pipeline*  
Artist Gavin Goulden, part of the team responsible for *BioShock: Infinite*, discusses the importance of embracing iteration in design for games.  
Breaking down his team’s artistic and technological approaches, Goulden emphasizes that as an artist, work is always going to be made that nobody will see, and this should be embraced for its potential in better overall product instead of being avoided.

**Richard Hall-Whittall**  
*Book, 2015*  
**The Art of Game Design: A Book of Lenses**  
In this text, Hill-Whittall provides a look at the process of creating, marketing, and shipping a game for independent developers. Complete with interviews from independent game companies, proper dissemination practices, and marketing strategies, Hill-Whittall provides new developers a starting point for making and shipping their creations.

**Jesper Juul**  
*Book, 2012*  
**A Casual Revolution: Reinventing Video Games and Their Players**  
Jesper Juul, an icon in academic research on video games and game culture, looks at the growing world of “casual gaming” and its ability to attract non-traditional gamers. *A Casual Revolution* discusses the history of “casual” gaming and where the industry is headed, or should head, in order to continue fulfilling the needs of game consumers while producing high quality work.

**Jesper Juul**  
*Book, 2013*  
**The Art of Failure: An Essay on the Pain of Playing Video Games**  
In this book, Jesper Juul looks at the importance of failure in game design and the effect failure has on the player. Juul also explains some of the psychology behind failure, its usefulness in learning mechanics or design elements, and how failure as a game design has changed in the past three decades. Juul argues that video game design is a fine art of allowing the player to fail in order to learn and improve skills which can be used to further progression, and failure in games can help players overcome failure in other disciplines.

**Jane Ng**  
*Lecture, 2016*  
**Making the World of *Firewatch***  
Environment artist Jane Ng provides a complete postmortem style dissection of the art direction, level design, and construction of the game *Firewatch*. Ng discusses tips and tricks for small game design teams, and provides creators a look at working on a game design with a heavy focus on visual style and environmental narrative elements.
# REVIEW OF LITERATURE

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Rogers</td>
<td>Level Up: The guide to great video game design</td>
<td>Regarded as one of the required texts for all game developers and designers, <em>Level Up</em> provides information on virtually every aspect of game design. Looking in depth at the brainstorming process, character creation, level design, and a breakdown of a proper Game Design Document, <em>Level Up</em> is an invaluable book for any designer who needs a starting point when creating a game.</td>
</tr>
<tr>
<td>Jesse Schell</td>
<td>The Art of Game Design: A Book of Lenses</td>
<td>In <em>The Art of Game Design</em>, Schell provides a comprehensive look at what makes a good game. Schell discusses the use of iteration, level planning, visual design, and much more. Jesse Schell is hoping to provide readers an understanding of the psychology and elements that are universal across games, from board games to virtual reality simulators.</td>
</tr>
<tr>
<td>Christopher Totten</td>
<td>An Architectural Approach to Level Design</td>
<td>In his text, Totten provides an in-depth examination on level design in games. Discussing design from the lens of historical architecture, Totten gives real-world examples of narrative elements, emotional design in spaces, sightlines, and more. Providing studies of countless games and their level designs or floor plans, this text becomes an invaluable resource for designing game levels and worlds with real impact.</td>
</tr>
<tr>
<td>Chun-Tsai Wu et al.</td>
<td>Designing an Interactive Storytelling Game</td>
<td>This article describes the process of creating a 3D interactive storytelling game. Guided by the authors, two students created a 3D game about Jack the Ripper wherein players had agency, and the game had multiple outcomes. The article describes the process the students took from planning branching paths, to art direction, and ultimately to the programming and execution of the game. The dissemination of this article provides a look at one method of developing a game with a basic level of player agency.</td>
</tr>
<tr>
<td>Oliver Burkeman</td>
<td>You Don’t Need New Ideas, You Need a New Perspective</td>
<td>In this article, Burkeman addresses methods for problem solving and working through creative block. Burkeman discusses examples including writers and artists and how they combat feeling “stuck” in a design or creative process, and describes how those methods can be applied to multiple disciplines.</td>
</tr>
</tbody>
</table>
REVIEW OF LITERATURE

Angela Duckworth
Book, 2016

Grit: The power of passion and perseverance
Psychologist Angela Duckworth provides an in-depth dissection of her work on why some people fail when faced with adversity while others succeed. Arguing that everyone has some level of “grit,” Duckworth says the amount of “grit” someone has can predict how likely they are to stick with a project or career path. Duckworth also discusses the psychology of failure, how some people cope with failure, and the impact failure can have on our lives. Duckworth argues that “grit” is not set in stone - everyone can become someone like Steve Jobs or Einstein, it just takes passion and perseverance.

Jason Foumberg
Web Article, 2016

Why Failure is Being Taught in Art Schools
Foumberg addresses the increasing popularity of teaching failure in beginning art courses. Citing professors and classes in Chicago’s top art schools, Foumberg uncovers why faculty and students alike find the new approach beneficial, arguing that the opportunity to fail allows students to become more experimental and focus on iteration over production of only one undeveloped idea.

Heidi Grant Halvorson
Web Article

Iteration: Why You Should Give Yourself Permission to Screw Up
Grant Halvorson looks at two methods of creation, the “be-good” method and the “get-better” method, and argues that the “get-better” method allows for greater learning and ultimately more success in the long run. Grant Halvorson argues that the anxiety and frustration that come from the desire to “be-good” disrupts the ability to think and create affectively. On the other hand, the “get-better” method allows room for mistakes, and argues that these mistakes lead to greater iteration and a stronger end product.

Henry Petroski
Web Article

The Value of Failure
In this question-and-answer format article, professor and engineer Henry Petroski discusses the value of failure, and how he invites his students to see the inherent value in iterative processes. Looking specifically at failures in bridge design, Petroski invites the reader to consider the importance of a process which allows room for failure in the name of learning, and challenges the assumption that there is no place for failure in leadership, design, or thought.

Maria Popova
Web Article

How Creativity in Humor, Art, and Science Works: Arthur Koestler’s Theory of Bisociation
In this short article, Popova discusses Arthur Koestler’s work The Act of Creation. Popova discusses his major theories of bisociation, the importance of the “ripeness” of an idea, and generational amnesia. By examining these psychological phenomena, Popova hopes that readers can better understand their own creativity and the creative process.
REVIEW OF LITERATURE

Sim B. Sitkin
Journal Article, 1992

Learning Through Failure: The strategy of small losses
Sitkin discusses the virtues of failure and iteration, explaining how "strategic failure" can be used in many disciplines to overcome adversity and create strong end results. Sitkin argues that failure can be embraced as long as it is seen as a means-to-an-end, and not just a final result.

Allison Stadd
Web Article

How to Deal When You’re Disappointed in Yourself
Allison Stadd looks at Zen practice and psychology to give readers a method for dealing with failure. Stadd argues that failure is useful for growth, especially in design, and the ability to recover from that disappointment might be more useful than the failure itself.

Daniel Stillman
Web Article, 2012

Design Process Kills Creativity/Design Process Creates Creativity
In this short article, Daniel Stillman discusses the strengths and faults of using a design process. Stillman suggests that while some designers and artists feel that a process can be rigid and limiting, using the design process which fits for each individual can allow for a more iterative process and ultimately a better overall product.

Matthew Syed
Web Article, 2015

Viewpoint: How Creativity Is Helped by Failure
This article discusses why iterative attempts at a design and failing at them is far more useful in the long-term than taking one long, invested attempt. Citing examples including the Dyson Vacuum, Disney Pixar, and experimental teaching techniques, Syed points out how failure in design should be embraced, and being public about that failure can help dispel the idea that creativity and innovation come from a magical, unseen source.

Marcus T. Wolfe and Dean A. Shepherd
Journal Article, 2015

Bouncing Back’ from a Loss: Entrepreneurial Orientation, Emotions, and Failure Narratives
Wolfe and Shepherd expand on prior research on failure and explore the ability of people to cope with and overcome failure in a professional setting. In this text, Wolfe and Shepherd describe methods for dealing with failure and ways to ensure organizational success.
REVIEW OF LITERATURE

James Webb Young
Book, 1968

A Technique for Producing Ideas
In A Technique for Producing Ideas, James Webb Young outlines five steps that he finds useful in problem solving. Arguing that this technique is usable across disciplines, Young does not focus on any one profession, but simply describes his approach to critical ideation and iteration.

Karl Bergström
Journal Article, 2011

Framing Storytelling with Games
Professor Karl Bergström provides multiple frames to view storytelling for tabletop and digital games. Bergström discusses seven frames and poses which describe methods in storytelling and the overall effects they have on player immersion and agency. Bergström’s article provides useful terminology to describe several methods of storytelling and their impact on game players.

Anne Grinder-Hansen and Henrik Schoenau-Fog
Journal Article, 2013

The Elements of a Narrative Environment:
Exploring User Reactions in Relation to Game Elements
Grinder-Hansen and Schoenau-Fog look at how environment design, asset location, and NPC presence in digital games affect a player’s perception of both the space that the game occupies and the level of immersion the player experiences. The authors created a study where players play one of two games, each with unique assets and NPCs, and a metric was created to judge their immersion and flow. The article intends to discuss the results of the study, and provide means for improved storytelling in interactive media.

Hartmut Koenitz
Journal Article, 2014

Five Theses for Interactive Digital Narrative
Professor Hartmut Koenitz seeks to address current language regarding interactive digital narrative while at the same time providing foundations for successful future research. Koenitz describes five areas where language and research needs to be addressed in order to better serve creators and players of interactive storytelling. Koenitz is attempting to identify issues in IDN research and provide places for future researchers to delve in and address.

Miika Pirtola et al.
Journal Article, 2013

Player Perspectives to Unexplained Agency-Related Incoherence
With their research, Pirtola et al. seek to determine whether changes in timeline in a game narrative which result from a player’s choices (Unexplained Agency-Related Incoherence or UARI) negatively impacts the player experience, or if it is something that should be included more frequently in game design. The article hopes to present this information and dispel the long-held assumption that UARI in game design should be avoided, when in reality many players responded positively to the UARI.
REVIEW OF LITERATURE

Sercan Sengün
Journal Article, 2013

Silent Hill 2 and the Curious Case of Invisible Agency
Sercan Sengün, a Professor at Istanbul Bilgi University, examines the method of player choice in Silent Hill 2, and assesses whether it is successful in creating true player agency, while also discussing its emotional impact on the player. By describing the method that Silent Hill 2 uses as “invisible agency,” Sengün proposes that this unique and underdeveloped method of subconscious choice allows the player to become immersed in a way not seen in other video games - the choices made are never intentionally made, and Sengün argues that this allows players to remain identified as the character for longer periods of time. This paper identifies invisible agency as an underutilized tool in game design, and seeks to suggest why it should be used, and the potential payoffs for the player.

Evan Skolnick
Book, 2014

In Video Game Storytelling, Evan Skolnick examines common tropes in game narrative design and discusses essentials for creating believable, well-paced game stories.

Ekber Servet Ulas
Journal Article, 2004

Virtual environment design and storytelling in video games
Ekber Servet Ulas argues that narrative and interaction can be combined in a video game setting by informing the user of a story through setting, set dressing, and a non-linear pathway. Writings by Manovich and Pearce are used to describe video games as a spatial medium, one where the nature of user-input glues together the story and the space it occupies. Ulas is attempting to argue against the common sentiment that video games allow too much user input to allow for a proper narrative, in order to shed light on the value of interactive games as storytelling vessels.

Jorge A. Blanco-Herrera et al.
Journal Article, 2015

Teaching Creativity: Theoretical Models and Applications
Blanco-Herrera, Groves, Lewis, and Gentile discuss the nature of video games as teaching tools and the power they have as instructional vehicles. Blanco-Herrera et al. describe the potential of video games as environments for exploring complex themes and issues in a “safe” way, where choices and outcomes do not have real-world consequences. However, the authors argue that this experience could translate to better preparation for real-world problem solving.
REVIEW OF LITERATURE

Ian Bogost
Book, 2007

Persuasive Games: The Expressive Power of Videogames
Ian Bogost breaks down the power of video games in political, advertising, and educational settings. Bogost argues that video games are intensely powerful with the ability to persuade and teach with a high level of nuance. Bogost defends the argument that video games can provide a place for players to experience complex emotions, and that they can have the power to change a player’s perspective on difficult moral subjects.

Walter Boot et al.
Journal Article, 2008

The effects of video game playing on attention, memory, and executive control
Boot et al., researchers at Florida State University and the University of Illinois, propose that people who play video games regularly perform better in areas of attention, memory, and movement tracking than those who play video games less regularly or not at all (387). The authors developed an experiment in which participants were divided into one of three groups, each group playing a different game designed to test one particular area of improvement (attention, memory, or executive control), and tested throughout the multi-week experiment in these areas. The authors’ goal is to reinforce the accepted notion that even casual gaming can improve a number of “visual and attentional skills” (387). This research adds to and informs the works of Clark et al. (2011), Dye et al. (2009), and Karle et al. (2010) and their exploration of skills gained from regular gaming.

Harry J. Brown
Book, 2008

History, the Humanities, and New Technology:
Videogames and Education
In History, the Humanities, and New Technology, Brown presents a series of discussions on the history and nature of video games and what roles the might play in the near future. Discussing storytelling, aesthetics, ethics, and identity in video games, Brown establishes a strong reference point for readers interested in discussing the academic and social values of video games.

Kait Clark et al.
Journal Article, 2011

Enhanced change detection performance reveals improved strategy use in avid action game players
Clark, Fleck, and Mitroff, researchers at Duke University, investigate why video game players perform better in areas of attention, memory, and change detection than non-video game players. The authors’ purpose is to understand why regular gamers perform at higher levels in certain areas than non-gamers, so that those areas can be better understood and exploited.
REVIEW OF LITERATURE

Georgios Christou  
*Journal Article, 2014*

**The interplay between immersion and appeal in video games**
Researcher Georgios Christou provides some of the first concrete evidence connecting the visual appeal of a game and the level of immersion a player experiences. Prior to his research, much of the writing done on game immersion implied the role appeal had on immersion; here, Christou establishes an expansive set of quantitative data which shows a direct correlation between a game’s level of appeal and its ability to immerse players.

M.W.G. Dye *et al.*  
*Journal Article, 2009*

**The development of attention skills in action video game players**
Dye, Green, and Bavelier, researchers in the Department of Cognitive Sciences and Center for Visual Science at the University of Rochester, propose an experiment to further test regular video game players’ attention allocation in three areas: alerting, orienting, and executive control (1780). The goal of the experiment is to add to data on skill improvement and video games, especially in youth. This research reinforces previously held ideas that video game players receive a benefit in attention and focus, but also provides new data in the accuracy of a change in focus, and gives researchers data for a group of participants which had not been previously studied (youth).

Erik Geslin *et al.*  
*Journal Article, 2016*

**How Color Properties Can Be Used to Elicit Emotions in Video Games**
Geslin et al., researchers at universities across France, propose that color intensity, brightness, and density are key components to producing an emotional response in video game players. The authors set up an experiment in which they showed eighty-five participants twenty-four randomly selected frames from video games, each with different levels of chromatic intensity, saturation, and brightness, and analyzed the responses each viewer reported. The authors’ purpose is to attempt to provide game designers a tool for color scripting, and to propose a method for creating the intended emotional response in games through color design.

Paulo Gomes *et al.*  
*Journal Article, 2013*

**Metrics for Character Believability in Interactive Narrative**
Gomes et al. present a set of metrics by which characters in games can be judged to be “believable” as existing in a space by players. The authors look to historical examples of literature and character traits which are believed to provide more substance to artificial intelligence. The paper sets out to explain in detail how content creators can provide believable characters, and ultimately how they can ask users for feedback to assess that believability.
REVIEW OF LITERATURE

Katherine Isbister  
*How Games Move Us: Emotion by Design*  
Arguing that game design is seeing a renaissance in style, approach, and visual design, Katherine Isbister seeks to describe the methods by which designers and writers instill emotion in their game. By looking at recent contemporary examples of games, primarily independent games, Isbister uncovers the nuanced approach many games are taking to create more emotionally moving experiences.

Chad Mahood and Michael Hanus  
*Role-Playing Video Games and Emotion: How Transporting Into the Narrative Mediates the Relationship Between Immoral Actions and Feelings of Guilt*  
Mahood and Hanus, researchers from The University of Texas at San Antonio and The Ohio State University respectively, aim to explain how immoral actions of a player-controlled character in an RPG impact complex player emotions, specifically guilt. The research done by Mahood and Hanus is extremely useful for game designers and developers who may be interested in creating dynamic and engaging narratives which help impact the emotional response of the player.

PJ Manney  
*Empathy in the Time of Technology: How Storytelling Is the Key to Empathy*  
PJ Manney asserts that our growing attachment to technology is making us less empathetic, and theorizes that storytelling is the key to reviving our connections to one another, and possibly the key to saving humanity. Looking at the science behind how and why we feel empathy and invoking the writings of researchers in the field of literature, Manney argues that storytelling allows us to experience traumatic and difficult things safely, providing a broadened sense of compassion for others and for ourselves.

Stacey Mason  
*On Games and Links: Extending the Vocabulary of Agency and Immersion in Interactive Narratives*  
In her article, Professor Stacey Mason dissects concepts of immersion, agency, and how the two are employed in narratives in conjunction with each other and separately. Mason unpacks two kinds of immersion, mechanical and narrative, and describes two types of agency, diegetic and extra-diegetic. Mason then proceeds to discuss their complicated relationship in narratives. Mason is attempting to define specific terms that can be used to explain methods for creating immersion in narrative so that creators and researchers might be able to better understand how readers and players react to narrative texts and games.
REVIEW OF LITERATURE

Lennart E. Nacke et al.  
Journal Article, 2016

Games of the Heart and Mind: Affective Ludology and the Development of Emotionally Aware Player Experiences
Nacke, Wehbe, Stahlke, and Noguiera provide an in-depth look at the effect emotionally charged gameplay can have on the game player. This article adds to the depth of research describing the ability of video games to be used as persuasive tools. Nacke et al. also describe how these emotional experiences might translate to real-world implementation of ideas and concepts by game players.

Sunni Pavlovic  
Lecture, 2013

An Experimental Approach to Interactive Entertainment
In this lecture, the studio director of Thatgamecompany (responsible for games including Journey and Flower) provides an in-depth look at what made Thatgamecompany a pioneer of experimental game design.

Bernard Perron and Felix Schröter  
Book, 2016

Video Games and the Mind: Essays on Cognition, Affect and Emotion
This collection of essays and research articles presents readers with several looks at cognition, affect, and emotion in video games. Focusing on the power of gameplay as an emotive tool, this book provides current, cutting-edge research on player experience and the effect of highly emotional video games.

David Weibel and Barthomäus Wissmath  
Journal Article, 2011

Immersion in Computer Games: The Role of Spatial Presence and Flow
David Weibel and Barthomäus Wissmath seek to fill a gap in research which addresses the relationship between presence (a sense of immersion in a game space) and flow (immersion caused by being involved in an action). The researchers developed an expansive study which sought to uncover how these concepts are related in game design, and whether they also impact enjoyment. The paper provides empirical data on flow, presence, and how those are interpreted by a game player in multiple settings.

Jenova Chen  
Thatgamecompany  
Video Game, 2012

Video Games

Journey
Thatgamecompany’s most successful game draws heavily on emotional themes, exploration, and visual design to create a game that is moving and immersive. With no written text, dialogue, or instruction, Journey allows players to learn through exploration and uses design principles to create focal points and visual interest which move the player forward.
REVIEW OF LITERATURE

The Witness

The small development team at Thekla, Inc. released The Witness, a game bordering more on visual experience than traditional video game. The Witness is a puzzle based game which encourages user exploration through a vivid and diverse island landscape while uncovering the secret behind where the island’s inhabitants have gone. The Witness combines a strong visual style with experimental narrative elements to create a game which adds to the growing realm of experimental gaming.

Inside

Playdead’s most recent game and spiritual successor to Limbo, Inside is a short game which focuses on the concept of choice, abandonment, and freedom. Strong visual design allows players to stay immersed for long periods of time as there is no text or dialogue in-game. Inside also challenges the typical game format as the end-state can be interpreted as player failure, as both of the endings require the player character’s death.

Dark Souls

Often thought of as a return to vintage difficulty in gameplay, Dark Souls is a game which relies almost exclusively on player failure as a learning mechanism. In Dark Souls, failure is an expectation. Players learn enemy weaknesses and level pathways by repeated attempts, and the game is known for being very unforgiving.

Bloodborne

Another exploration in difficult gameplay, Bloodborne retains many of the game mechanics found in Dark Souls while improving graphics and incorporating strong narrative elements.

Papers Please

From indie developer Lucas Pope, Papers Please is a game set in a Soviet-inspired country. The player assumes the role of a government official responsible for checking immigration papers as people enter the country through a border checkpoint. Creating a commentary on complex relationships of power, societal norms, and the nature of video games, Papers Please quickly gained critical acclaim from both academic and mainstream audiences.
REVIEW OF LITERATURE

**Dr. Langeskov, the Tiger, and the Terribly Cursed Emerald: A Whirlwind Heist**

William Pugh presents a twist on the typical game narrative. In this twenty-minute game, the player acts “behind the scenes,” pulling levers and pressing buttons to provide the game experience to a player who cannot be seen. The game ends with the player attempting to access the full game, but discovering that it does not exist, the “game” instead is what they just experienced. *Dr. Langeskov* provides a unique and clever perspective into game design, challenges what a “game” can be.

**Firewatch**

Campo Santo, a team of ten developers, released *Firewatch* to critical acclaim. Stunning in its visual style, and with an incredibly moving narrative, *Firewatch* sets a new standard for storytelling depth and graphics for independent game developers. Dealing with themes of sickness, abandonment, and shame, *Firewatch* presents players with a highly-nuanced gameplay experience that challenges the player to make several personal moral decision in-game.

**The Beginner’s Guide**

Creator Davey Wreden gives players a look into the relationship between game creator and game player, while attempting to describe the difficult process of regularly creating high quality work. This short game, roughly one hour in length, walks players through a linear narrative which is highly emotional. *The Beginner’s Guide* acts primarily as a catharsis for Wreden as he attempts to describe the difficulty of constantly outputting high-quality work.

**The Stanley Parable**

*The Stanley Parable* is a game about the choices players make in-game, and the nature of choice in the real-world. Presented as nineteen playable “loops” each lasting approximately ten minutes, the game allows players to alter their path with each iterative loop and affect the outcome of the game dramatically. *The Stanley Parable* was one of the first independent “experimental” games to reach critical success, selling over 1 million copies in just one year.
IDEATION

This thesis project started as many lists of topics, themes, and media. Ultimately, concepts that were more heavily considered included strong storytelling and user interaction.

As lists became more focused, the concept that stuck was “failure.” Many forms of media deal with the concept of “failure” as a core mechanic or message, but few place the user or viewer as a responsible party which must be held accountable for that failure.

After the first round of ideation, research was done to be sure that:
1. Similar concepts or media did not exist or could be expanded on
2. There was a space in visual design for the concept, and
3. To explore the viability of playable failure experiences.

At the same time, ideation was done on core design principles which should be included in the thesis project. These included:
1. Keeping the story or experience short, with little superfluous information
2. Consideration of core concept through gameplay repeatedly
3. Consideration of the role of the player, and
4. Flow and immersion should be high priorities.

After research and preliminary ideation was complete, a set of goals was created, which included:
1. Make something people enjoy and can relate to
2. Challenge the typical game format
3. Challenge the typical design process
4. Create storytelling which encourages introspection, and
5. Have a voice visually and conceptually.

Next, in-depth planning began. This included simple plot concept, overall mood and tone, and relating design to the spaces in-game.

After simple planning began, in-depth plot and dialogue planning was started. This saw several iterations. Consideration was given to who the player would assume the role of, if narration was necessary, and how narration would be included.
IDEATION

Early concepts included more open-world environments with very little narration. However, because the end game would be short, a lack of narration or direction might confuse the player or expand gameplay expectations.

As ideation concluded, the setting and narrative style were settled. An office space was chosen to be sure that the player would instantly recognize the space they occupied and the role they played.

Narrative tone will be in a third-person tone, with the narrator talking about the player's actions. Early iterations explored having a narrator talk to the player, or having the narrator be the player's inner monologue. However, because of the short play-time and limited game mechanics, these were not selected.

Style ideation was also conducted. The short work time for the thesis project demands that the visual style be cohesive, direct, and easy to interpret by the player. The visuals for the thesis project will focus on simple, low-poly models with lighting, color, and repetition playing large roles in creating space and mood.

This short game will follow a man named Oliver through a day at work. Oliver is a long-time employee at an office responsible for coming up with good ideas. On a typical day, Oliver succeeds without major interruptions. One day, however, Oliver comes to work and fails repeatedly to come up with good ideas. This experience causes him to doubt himself and the work he produces.

The player will follow Oliver through several failures, receiving negative feedback each time. Prompts will lead the player through several rooms of the office space, leading them through areas which mirror parts of the creative process. Spaces will change slightly each time to add interest while also creating confusion and a sensation of becoming wayward.

Near the end of the game, Oliver finds a solution, and is rewarded. When he attempts again to solve the problem with the same solution, the solution is missing, and he must start again.

The plot of the game will attempt to reinforce ideas of failure, iteration, and the typical design process. Spaces included will have notes from other "employees" to add interest for the player who will be interacting with some rooms multiple times during the game.
IDEATION

Overhead Maps

Offices

Hallway
IDEATION

Warehouse

Break Room

counter top
sink
chairs
table
plant

fridge
trash can
door
IDEATION

“Somewhere Else”

Stairwell
IDEATION

Upstairs

Supply Closet

shelves with supplies
mops, brooms
hanging light
8'
door
IDEATION

Interior Sketches

Offices

Hallway

Warehouse Entry
IDEATION

Warehouse

Break Room
IDEATION

“Somewhere Else”

Stairwell
IDEATION

Supply Closet

Door Room
IDEATION

Asset List: Shared Assets

Door
Door frame
Door knob
Walls
Floor
Decals
Ceiling tiles
Lights
Molding
Railing
Boxes
Papers
Chair
Plant
Trash can
Mugs
Window
Shelf

Asset List: Unique Assets

Offices
Decals
Chair
Desk chair
Side table
Desk
Computer
Bookshelf
Books
Mug
Supplies
Paper
Buttons
Tube
File cabinet

Warehouse
Decals
Ceiling tiles
Ceiling lights
Tubes
Railing
Walkway
Button
Cage
Fence opening
Shelving units
 Ceiling parts
Clutter
Cart
Pages
Misc set dressings

Hallway
Decals
Copy machine
Table
Misc set dressings

Break Room
Cupboards
Cupboard knobs
Sink
Table
Fridge
Pushpin board
Notes
Toaster
Soap
Sponge
Misc set dressings

Warehouse Entry
Floor tiles
Decals
IDEATION

Asset List: Unique Assets

<table>
<thead>
<tr>
<th>Somewhere Else</th>
<th>Door Room</th>
<th>Supply Closet</th>
<th>Decals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountains</td>
<td></td>
<td></td>
<td>Hanging light</td>
</tr>
<tr>
<td>Trees</td>
<td>Supply Clo</td>
<td>Supply Closet</td>
<td>Mop</td>
</tr>
<tr>
<td>Bushes</td>
<td>Closet</td>
<td></td>
<td>Broom</td>
</tr>
<tr>
<td>Birds</td>
<td></td>
<td></td>
<td>Bucket</td>
</tr>
<tr>
<td>Clouds</td>
<td>Stairwell</td>
<td></td>
<td>Old posters</td>
</tr>
<tr>
<td>Rocks</td>
<td></td>
<td></td>
<td>Supplies</td>
</tr>
<tr>
<td>Logs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strings</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Color Palette

Highlights

Midtones

Shadows

Neutrals
IDEATION

Script

Start on black screen. As the narration continues, the world fades in.

Narrator: *Oliver was a simple man with a simple job: to come up with great ideas. Every day he went to work and thought up great things. His co-workers liked him, and he liked them. Most days were wonderful, and Oliver went home with a smile on his face. This was not one of those days.*

The player is in an office. It is small, cozy, and well furnished. There is a desk, some filing cabinets, some bookshelves, a small potted plant, and other miscellaneous office supplies. On the desk are a stack of papers and a pneumatic tube with the number “12” on it. On either side of the tube are two large lights: one is red, and one is green. Both are off.

Narrator: *Oliver thought for a moment. And then he thought a little more. Eventually he had a few ideas, and he even thought they were pretty good. He wrote one down, and sent it to his boss.*

The player is given a choice of three options, or “ideas.” After selecting one, the “idea” is put into the pneumatic tube. The red light turns on.

Narrator: *“Of course, what a silly idea,” Oliver thought. Even on his best days, Oliver sent a few silly ideas to his boss. He thought some more, and tried again.*

The player is given a second set of ideas. The player selects an idea, and puts it into the pneumatic tube. The red light turns on again.

Narrator: *Oliver could hardly believe it. He couldn’t remember the last time he had two bad ideas in a row. He had been up late the night before, maybe he was just tired. Perhaps he would try to talk to some of his co-workers to get some ideas.*

The player is directed into the hallway. Along the walls are a series of posters with quotes and images on them. The player can access the offices of other employees where they find small notes. Some notes reference why the employees are absent (calendars with days off circled, notes about appointments, etc). There are also a few notes and memos referencing a “supply closet.”

Narrator: *All of his co-workers were out for the morning. “Well,” thought Oliver, “I’ll just have to try again. I can’t possibly come up with three terrible ideas in a row.”*
IDEATION

At the end of the hallway is a door marked “8.” The player enters the “8” door, and is back in their office. Again they are given three idea options. Again the red light glows.

Narrator: *A truly, stupendously terrible idea. Of course it was. “IDEA?” “What was I thinking?” As he stood staring at the awful red light, a horrible thought began to creep into Oliver’s mind. “What if I never come up with another good idea again?” “What if all of my ideas have always been this terrible?” He stared blankly at his office for a moment, and decided he needed to go for a walk.*

The player re-enters the hallway. This time, some of the lights are dim. A few of the posters have changed. At the end of the hall is a door marked “warehouse.”

Narrator: *“No,” Oliver thought. “My ideas are great. They’ve always been great. Why should today be any different? This is my job, and I am good at it. I have good ideas.”*

The player enters the warehouse on the second floor, overlooking rows of shelving. There are cardboard boxes from floor to ceiling. The lights are dim. In the back of the room on the first floor are a set of pneumatic tubes, and there are pages scattered around the floor. The pneumatic tubes are numbered. If the player approaches the pneumatic tube with their number on it, they will be able to pick up their rejected ideas. The door for the supply closet is lit brightly, and is located high above the warehouse floor, but it is not accessible.

Narrator: *It couldn’t be. His ideas from weeks ago, months ago. All of them here, on the floor of the warehouse. This is where they kept the terrible ideas, he knew that. He had always thought Jan’s ideas were here, and maybe Brad’s, but never his. And yet, there they were, a pile of terrible ideas, abandoned.*

The player is directed to a door in the back of the warehouse. When they go through the door, they are back in their office. Things are a mess. The stack of papers is on the floor. Posters have changed. New notes are stuck around the office. The red light won’t stop glowing. The player is directed to close their eyes. A beautiful landscape is described, and simple assets appear in front of the player. They linger, and disappear.
IDEATION

Narrator: “Yes,” Oliver thought. “My ideas are terrible.” He wondered if the green light even worked. And when it did, was it just a sham? Oliver looked around. How long had his office been like this? He couldn’t remember. Maybe a vacation would help. Yes, I just need to go somewhere else, he thought. Oliver closed his eyes and imagined what it would be like. He thought about a nice cabin on a lake. He pictured the trees blowing, and mountains in the distance, the sun setting, the birds flying close overhead. And then Oliver thought about the pile of papers, the years of ideas and work and effort for nothing.

The player does not input an idea. Instead, they walk back into the hallway. The door leading to the supply closet is on the ceiling. All of the other employee offices have their doors closed and lights off. At the end of the hall is a door labeled “break room.” The player enters. In the break room, there is no narration at first. The player has a short time to explore, read notes, and wait.

Narrator: Did his co-workers know? Did they all think of him as a joke? “I bet they have a nickname for me,” he thought. “Oliver-the-terrible-idea-guy.” I have never had a good idea, “Oliver” decided. And he sat quietly, very aware of how alone and disappointed he was.

The break room fades to black slowly, leaving only a door.

Narrator: “Maybe if I can’t come up with a good idea, I can find one,” Oliver thought. There must be a good idea somewhere. That’s what this whole building is for. Yes, that’s it. I just need to find a good idea, and then I can make my own.

The door opens. A thin red line leads out. The player is back in the hallway. The red line goes into and out of some of the employee offices. Posters have changed again. The line leads the player to a door at the end of the hall that is unmarked. The new room is small and square. It is filled with doors labeled “supply closet.” All are either locked, open into walls, or are unreachable.

Narrator: None of this made any sense. Oliver just wanted to go back to making great ideas. He didn’t want to keep wandering around, and he certainly did not want to go back to the warehouse. He just wanted to feel okay.
IDEATION

The red line moves around the room and under a door marked “warehouse.” Here, the red line starts on the floor, and moves the player deep into the warehouse. It goes over boxes, through shelves, and onto the walls. The player is led by the red line into a stairwell.

Narrator: *Upstairs. Oliver had never been upstairs before. Only management went upstairs. But, maybe that’s where they kept the really amazing ideas. He hesitated, and began climbing.*

The stairs lead the player up several flights, still following the red line. At the top of the stairs, a door opens into a large, well-lit and spacious room. Desks are lined up neatly, everything seems to be in place. The red line stops. At the back of the room is a door labeled, “supply closet.”

Narrator: *This must be it! Oliver thought. This is where fantastic ideas come from! Oliver could feel his heart pounding, he was so close to everything being back to normal. Oliver crossed the room, hopeful.*

The player slowly approaches the door, and opens it. White light pours out from inside the closet, and bright, cheerful music plays.

Narrator: *Yes! Oh, yes! He had done it! He had found it! A great idea, a truly wonderful and spectacular idea! His boss would be proud, and his co-workers would give him a new nickname! “Oliver-with-the-truly-wonderful-and-spectacular-ideas!” He sprinted back to his office, confident and joyful.*

The player walks back through the spacious office, down the stairwell, and back into their office. The lights are bright, everything is in order, and one idea is on the desk. The player selects it, it is sent through the pneumatic tube, and after a short pause, the green light glows.

Narrator: *Finally. A great idea. Oliver knew he could do it. “And now,” he thought, “I can do it again. Now I know where they are, it’s so simple.” Oliver could hardly contain himself. “I must go back to the supply closet,” he thought.*

The door to the office opens. The player walks through the hallway, into a stairwell, into the spacious office, and back to the supply closet. The door opens, but nothing happens.
IDEATION

Narrator: What? How could it be? They were just here. All the ideas he could hope for had been right here moments ago. “They must be in here somewhere,” Oliver thought, and he went inside.

The lights around the player dim. The player walks into the supply closet. The door closes.
End.

Mechanics

User Input
Clicking on objects for small interactions
Object inspection and closeup
Click to open doors
Click to open gates
Button push to lower elevator

Ambient Mechanics
Floating objects
Level streaming
Dynamic materials (changing colors)
Dynamic lighting
Object pop-in, object pop-out

Miscellaneous

Ambient office sound
Ambient music for emotional cues
Footstep sounds
Object interaction sounds
METHODOLOGY

Deliverables

The finished product of this thesis will be a playable video game developed in the Unreal Engine. The game will be a 3D, first-person format. The run time will be fifteen minutes, not including player exploration.

Target Audience

The game will be aimed primarily at two groups.

Group One Students and young professional in creative fields

Group Two People interested in experimental video games

Personas

<table>
<thead>
<tr>
<th>Name</th>
<th>Professional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Ito</td>
<td>Freshman at Rhode Island School of Design, enrolled in the Furniture Design BFA program</td>
</tr>
<tr>
<td>Robert McCleary</td>
<td>Assistant Professor at UC San Diego, classes he teaches focus primarily on creative writing and experimental fiction. Has an MFA in Creative Writing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18 years old, female, born and raised in Flushing, Michigan.</td>
</tr>
<tr>
<td>Birthplace</td>
<td>40 years old, male, born in North Carolina.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Knowledge</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaming habits</td>
<td>Casual gamer; primarily plays for fun during free-time and occasionally with friends. Is familiar with multiple gaming platforms, and typically prefers to play games on consoles. Has a personal computer and is somewhat versed in new technologies. Does not regularly play video games. Will occasionally play a game if the content or format are interesting or relevant to his research. Somewhat familiar with new technologies.</td>
</tr>
<tr>
<td>Environment</td>
<td>Lives in on-campus dorms with limited space.</td>
</tr>
<tr>
<td>Personal Goals</td>
<td>Came to art school to learn more about design and craft. Enjoyed her classes but is struggling some with new pressures of college. Heard about the game from a friend. Is interested in the game story and concept, and likes that the game is casual and does not require a large investment of time. Currently working on a book about new forms of storytelling. Came across the game while researching similar games. Is playing the game to experience a wider variety of storytelling formats.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quote</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Ito</td>
<td>“Just let me finish my drawing homework and we can go grab some food.”</td>
</tr>
<tr>
<td>Robert McCleary</td>
<td>“Have you read Danielewski’s newest short story collection?”</td>
</tr>
</tbody>
</table>
## METHODOLOGY

<table>
<thead>
<tr>
<th>Name</th>
<th>Olly Andersen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Information</td>
<td>Junior environment designer at Campo Santo, a small game design company in California. Holds a BFA in 3D Digital Graphics.</td>
</tr>
<tr>
<td>Demographics</td>
<td>28 years old, male, recently moved from Chicago to California.</td>
</tr>
<tr>
<td>Technical Knowledge</td>
<td>Regular gamer. Built a computer specific for gaming, and is interested in indie games and art-driven games. Very comfortable with computers.</td>
</tr>
<tr>
<td>Environment</td>
<td>Lives in a medium-sized apartment with two roommates. Spends the majority of his day at work.</td>
</tr>
<tr>
<td>Personal Goals</td>
<td>Wants to play many different types of games to inform his own work. Heard about the game through someone at work, and decided to play it because of its content and focus on visual design.</td>
</tr>
<tr>
<td>Quote</td>
<td>“I'll have this level greyboxed and ready for testing by this afternoon.”</td>
</tr>
</tbody>
</table>
IMPLEMENTATION STRATEGIES

Technical

All 3D modeling, texturing, and lighting will be done between Autodesk Maya 2017, Autodesk Mudbox 2017, Substance Painter, Adobe Creative Cloud, and Unreal Engine 4. In order to produce the finished project in a timely and efficient manner, a typical game pipeline will be implemented which includes overhead level design, greyboxing, and regular play-testing. Any necessary scripting or software skills will be learned in fall semester through the “Real Time Design” course and several 3D modeling courses.

The implementation process will follow the plan described by Joel Burgess in his Game Design Conference lecture, “Level Design in a Day” (2014), which implements several iterative passes over the entire game. This plan allows for a logical completion process, and allows the entire game to be built together as opposed to levels or sections being built separately. This helps maintain cohesiveness and consistency across the game. Testing is done after each pass which allows for frequent feedback and improvement.

Iterative Passes

**Structural Iteration**

Pass Zero: Planning
Concept, story development, asset lists, level design sketches, color script

Pass One: Layout
Complete overhead design, plan and establish basic rhythm and flow, greyboxed levels, script development and recording, visual development

Pass Two: Gameplay
Develop mechanics, player pathing, create meshes, start inserting meshes into game engine

Pass Three: Content Complete
All meshes in engine, gameplay is detailed and refined, user testing for gameplay goals and desired outcomes

**Beauty Pass**
Optimization and polish, add clutter and small detail, add sound effects

**Final Pass**
Complete final polish, identify opportunities to improve
IMPLEMENTATION STRATEGIES

Scope

The result of this thesis project will be a linear playable experience. Each player will progress and complete the game in the same fashion, aside from their own exploration. This game model follows the method of some recent games including Dr. Langeskov (Pugh, 2015), The Beginner’s Guide (Wreden, 2015), and Journey (Thatgamecompany, 2012). Considering the time in which this thesis project must be completed, only one “path” through the game will be created. After the thesis defense, the game can be expanded to include multiple outcomes.

Issues

Should technical issues develop, there are vast amounts of documentation on the Unreal Engine website and forums. Thesis committee members have also been secured who can offer assistance if the situation requires.
DISSEMINATION

Upon completion, this thesis project will be submitted to:

2018 Independent Games Festival
This competition is part of the Game Developers Conference, and finalists will attend the annual Independent Games Summit. Submissions for 2018 must be entered in fall of 2017.

Adobe Design Achievement Awards
The completed thesis project will be submitted to the Game Design Category.

Steam Greenlight
Steam Greenlight is an online resource for independent game designers and developers. Creators submit their games to the Steam platform, and players vote on whether the game receives a full release. Greenlight requires a branding image, a trailer video, and four screenshots of gameplay. Upon being “greenlit,” developers have the opportunity to monetize their games.
EVALUATION PLAN

User testing will be implemented at several stages of the thesis execution, including:

- Review of the overhead design
- Review of the narrator's script
- Playtest of greyboxed level
- Playtest of game mechanics
- Playtest of in-process game level
- Playtest of complete game

Player-testers will include regular game-players, occasional game-players, and infrequent game-players. After each round of play-testing, feedback will be used to improve and edit the gameplay where necessary.

Players will be asked a series of questions after play-testing, including:

1. On a scale of 1-10, with 1 being low and 10 being high, how engaging was the gameplay?
2. Was anything confusing or unclear?
3. What do you think is the message of the game?
4. What were some of the emotions you experienced as you played the game?
5. If you could change something about the game, what would it be? Why?
6. Would you recommend this game to a friend? Why or why not?
7. Does the visual design enhance your experience? How so? If not, why?
PRAGMATIC CONSIDERATIONS

Costs
Entry into the 2018 Independent Games Festival ($25)
Entry into Steam Greenlight ($100)

Time
For the remainder of the fall semester, approximately ten hours a week will be dedicated to work on the production of the thesis, not including class time.

During the spring semester, approximately twenty hours a week will be dedicated to work on the production of the thesis, not including class time. More hours will be allocated as needed to complete the thesis project on time.
TIMELINE

Fall Semester
Week 9-10  Proposal Defense
Week 11-15  Pre-production wrap-up, complete Pass One
Week 11  Complete any necessary sketching, color palette selection, script clean-up, overhead design edits
Week 12  Begin greyboxing rooms
Week 13  Begin lighting design
Week 14  Continue lighting design, greyboxing, start preparing Progress Update
Week 15  Develop greyboxed layout, play-test levels, output video for Progress Update
Week 16-17  Progress Update presentation, meet with thesis committee members

Winter Break  Begin Pass Two

Create models, layout UVs, begin texturing, record narration, create advertising illustration

Spring Semester
Week 1  Meet with thesis committee, continue Pass Two
Week 2  Begin adding sound cues
Week 3  Play-test in-progress level
Week 4  Begin Pass Three, start developing level streaming
Week 5-10  Continue Pass Three
Week 5  Continue texturing, lighting, visual development, meet with committee members
Week 6  Finish textures
Week 7  Add final meshes to game
Week 8  Finish lighting design, meet with committee members
Week 9  Color grading, loading screen and start screen design
Week 10  Play-test game, meet with committee members
Week 11  Revise based on play-test feedback, begin final documentation
Week 12-15  Begin Beauty Pass, small revisions for polish, continue documentation
Week 15  Prepare for Imagine RIT, continue documentation
May 6, 2017  Imagine RIT
Week 16  Final revisions, prepare for Thesis Defense, finish documentation

Thesis Defense
May 19, 2017  Commencement ceremonies
REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


