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Patrick William Lord

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**The 5th Wall Project: Projection Design Applications for Transforming Education
and Medical Spaces for Youth Communities**

**APPROVED BY
SUPERVISING COMMITTEE:**

Supervisors:

Megan Alrutz, Supervisor

Sven Ortel, Co-Supervisor

**The 5th Wall Project: Projection Design Applications for Transforming Education
and Medical Spaces for Youth Communities**

by

Patrick William Lord, B.F.A.

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Dedication

This thesis and the project connected to it are dedicated to my parents for their support,
and to my brother for his generosity and work he does helping others.
This project is also for all those who work for the care and education of children in need,
and to any artist who uses their talent or success to improve the world around them.

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Abstract

The 5th Wall Project: Projection Design Applications for Transforming Education and Medical Spaces for Youth Communities

Patrick William Lord, MFA

The University of Texas at Austin, 2015

Supervisors: Megan Alrutz and Sven Ortel

This paper and project explore how creative applications of existing design and technology can provide a unique service for children anywhere. This project fuses that technology with a belief that youth communities in education and medical spaces deserve access to artistic experiences. By devising original, immersive story performances with two classes from local Austin schools, The 5th Wall Project has begun to develop a process that facilitates educational engagement, and exposes students to design and art where they live and learn. The intention of this project is to continue beyond the performances and residencies completed and documented in this paper. Future applications, such as the installation of this model into pediatric patient rooms is a primary goal of the project that has yet to be explored, but is an integral motivator in the aforementioned investigation of our process.

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1- Introduction

a) Defining Existing Projection Applications and Concepts

Innovation in any field stems from either a breakthrough in technology, or through a shift in the dynamics of how work is done. This may grow out of accidental discovery, or a conscious investigation into new applications.

This thesis is an exploration into how the idea of innovation applies to the field of projection design. Within the context of theatre, concerts, and live events, projections' role usually falls into what I consider two categories: spectacle or "liveness." Spectacle is when their function is to create large, flashy effects to evoke a sense of awe and wonder. Scale is also usually a factor in spectacle, whether referring to the physical size of the space or surface that is projected upon, or the degree to which the projections themselves create bold visual impacts. Liveness is a term that comes from Philip Auslander, who discusses "live performance in a mediatized culture," and the role of projections on stage I use the term when referring to projections that create animation and movement in imagery on stage. Whether or not projections are used often depends on if they can fill a necessary gap that other design elements, such as scenery, lighting, or costumes, cannot. Additionally, they are usually discussed in relation to other design elements, and their effectiveness and impact is often measured by how successfully they are "integrated." This is further evidenced at the University of Texas at Austin where our program is titled Integrated Media Design for Live Performance (referred to as UTiM), as opposed to Projection Design.

As a designer, working underneath the umbrella of “integrated media,” the credit of “projection designer” is most commonly the best descriptor for my theatrical work. However, I have learned that potential applications for my skill and work extend beyond the stage.

b) Motivation and Reapplication of Projections for The 5th Wall Project

The 5th Wall Project has grown out my belief that projections represent an exciting and unique tool for creating and sharing artwork. It is a design initiative inspired by the progress and development in the field of projection design, and motivated by my own rethinking of the responsibilities and workflow of theatrical designers. As an artist, I am most motivated and engaged by the opportunity to reinvigorate stories with new ideas through my craft.

The role of the designer is to refine and investigate narrative ideas as both an expert in their field and a collaborative artist. This is a proven and effective way of working, but The 5th Wall Project proposes that the tools and training of designers extends to more generative applications. The 5th Wall Project places projection design and technology at the heart of its mission, namely, to bring art into accessible spaces, and allow for the creation of work through various communities’ own creative contributions.

More specifically, I will focus on working with young audiences, in schools and hospital settings, due to my belief that one of the greatest strengths of working with projection is the ability to transform preexisting locations in dramatic and powerful ways. Historically, original projectors were referred to as “magic lanterns” due to the sense of wonder and awe they were able to inspire in audiences with their transformative

application of light and image. I believe that it is a worthwhile endeavor to bring any of that “magic” to young audiences and communities today, through the use of modern projection technology.

The scope of this thesis documents and analyzes the pilot projects performed with two local schools in Austin, Texas. In addition to discussing the inspiration behind the project, this paper provides a detailed account of two processes that were implemented in the aforementioned schools. Documenting the methods and products of our residencies at the schools remains a critical component of the creative process so The 5th Wall Project can continue to develop. Instead of culminating in a single performance, I will create a facilitation and production model that can continuously evolve to benefit the fields of both education, and pediatric medical care. With this work, my ultimate aim is to create an innovative arts service project that will shine a light on the potential for projection design, when applied creatively, to create engaging and enriching experiences for youth in a number of environments.

2: Technology and Technique

a) Projection Integration into Scenery and Architecture

The integration and use of projection as an extension to scenery and architecture is one of the most common applications for the technology. This chapter explores my own experience with incorporating projections into production, and the insights and understanding I have gained from such work. Understanding how projections are used to provide environmental and locational information, as well as their unique ability to animate space and objects is essential to the work of The 5th Wall Project as we work to bring this technology into unique and varied locations.

My personal research into the practice of projection design at the University of Texas at Austin has included a number of productions that each provided opportunities to investigate the application of numerous techniques in varying circumstances. For example, during a production of *Esperanza Rising* at the University of Texas at Austin, projections served as a digital, painted backdrop that became animated and transformed to convey time of day and location (See Figure 1).



Figure 1. *Esperanza Rising*. Directed by Natalie Novacek, Set Design by Yong-Min Lee, Lighting Design by Sam Zuckerman, Costume Design by Andie Day, Projection Design by Patrick Lord

My projection design demonstrates how in live performance, even when the surface is a screen, the imagery and content still occupy space and have a relationship with both the physical scenery and actors on stage. I have also used this arrangement of imagery to performers on a dance piece, *Quiver*, also designed at the University of Texas (See Figure 2).



Figure 2. *Quiver*. Choreographed by David Justin, Lighting Design by Andrew Carson, Costume Design by Luxiao Wang, Projection Design by Patrick Lord

Even without the presence of scenery, projecting upon a screen still has a profoundly different effect than the same arrangement in a cinema due to the relationship imagery has with the stage and performers. This distinction around how projected imagery lives and relates to space and performers is important to identify and keep in mind, as it speaks to a misconception that a projection designer's primary responsibility is in the creation of the imagery and content itself. The aforementioned examples demonstrate that spatial composition is an equally important task, even within a straightforward and simple surface arrangement.

Designers also employ projections that use physical scenery itself as a surface. Currently, one of the most popular uses of projection technology is in projection, or 3-D mapping. The online resource, www.projectn.com, curated by Sven Ortel, defines 3-D Mapping as:

3D mapping is the concept of matching projected imagery to the proportions and shape of the surface it is projected on. The pre-fix “3D” is used to draw emphasis to the fact that the surfaces are three dimensional as opposed to flat. (Ortel)

Projection mapping is popularly associated with large-scale architecture shows, where buildings are transformed and brought to life in imaginative and surprising ways. The UTiM department designed projections that covered the front façade of the F. Loren Winship building, with moving imagery that travelled around corners and around windows and other architectural detail (See Figure 4).



Figure 4. 75th Anniversary of The University of Texas at Austin's Theatre & Dance Department. Pictured Projections Designed by Patrick Lord.

And yet, the concept is not exclusive to any scale. The principle is that projectors are used to cover more physical space, and imagery and content is animated and placed in relation to specific architecture, transforming the surfaces without physically altering them. The key to understanding projection mapping is that it not only highlights physical

detail but moves projections from a presentational role to an environmental one. I designed a production of *Dead Man's Cell Phone* wherein the surfaces I used were flat, but made up the entirety of the playing space. Projections were used on a wall, and on the floor, with a slight curve creating one continuous surface (See Figure 5 and 6).



Figure 5.



Figure 6

Dead Man's Cell Phone. Directed by Jess Hutchinson, Set Design by Yong-Min Lee, Lighting Design by Dawn Witke, Costumes Design by Kelly Ruiz, Projection Design by Patrick Lord

This production is relevant to understanding the role of projections for their unique ability to take static spaces, and completely transform them into entirely new locations. My work as a designer is an ongoing investigation into the symbiotic relationship that projections have with the physical spaces in which they exist. It is not enough to project an image; a designer must also understand what the image will be seen on, how the imagery will affect and change the object, and why the transformation and activation of that surface is necessary in relation to the intended narrative.

A strong understanding for how projections can be integrated into a variety of surfaces is important for my work in The 5th Wall Project, where the design of intended surfaces is inherently out of my control. By bringing projected imagery into interior, established spaces and transforming the walls with new and original artwork. This is only possible due to my understanding of, and experience with, how projections and

surfaces interact, and what is necessary to achieve a successful transformation of the space to engage audiences in a meaningful and unique way.

b) Inspirational Aesthetic and Techniques: The Influence of Abelardo Morell's *The Universe Next Door* and *Written by a Kid*

This project began before I had any training in the field of projection design, or passion for education and working with young audiences. Instead, it was inspired by a collection of funny videos on YouTube entitled *Written by a Kid*¹, by the group Geek & Sundry. The premise was simple: facilitators would have kids make up and tell them a story. Professional animators then faithfully animated the youth's audio narrative. The end result is a collection of predictably entertaining, short videos. The goal of the group was to create funny and enjoyable videos, but for me it raised a question of how that model might be applied in a way that helps students and educators. I assembled a team of collaborators and soon refined a facilitation process and model designed to engage groups of elementary school students in story creation that, through the use of projection, includes the added element of being displayed at a large scale into the spaces familiar to the young participants, transforming classroom walls, windows, and doors into settings not yet imagined.

How we projected and designed the imagery came from a similarly unexpected source of inspiration in the form of a photography exhibit at the Art Institute of Chicago. Abelardo Morell's *The Universe Next Door* series uses overlaid photography that combined images in a way that creates a completely transformative final product. In

¹ *Written by a Kid*. Web series by Geek & Sundry. <http://geekandsundry.com/?s=written+by+a+kid>

particular, the *Camera Obscura* series provided the key inspiration for the aesthetic of this project as entire rooms were transformed into cameras to capture landscapes on their walls. Morell's work is significant in this context because of how it does not "map" and utilize the specific details of the space, but thoughtfully imposes imagery and compositions on top of décor. Instead of activating the architecture of a space, he transforms it by overpowering it with images that bring the larger world outside into interior, private spaces. An example of this series is seen in Figure 6, and more can be found in Appendix A.



Figure 6. Abelardo Morell's *Camera Obscura*

Morell's *Camera Obscura* series exemplifies a unique aesthetic in his photography that inspires to the visual language that The 5th Wall Project uses for its projection design work. It addresses the question and misconception that a screen is necessary for projections to be visible, and that imagery, if bright and clear enough, can be seen on objects inside of a surface such as furniture, monitors, or picture frames. It is my belief that the presence of those objects, in fact, enhances the transformative effect of the imagery. For example, the wall, bookshelf, and photos in Figure 6 are still visible, yet they also begin to blend into the image of the overlaid hill, bringing a beautiful, wide landscape into a small, interior wall. Projecting on blank or empty walls is the equivalent

of installing a monitor to view imagery on, whereas our aesthetic and method of working overtakes the physical space to transform the room, and objects within it, into something entirely new.

3: Digital Storytelling

a) Digital Storytelling Model

Fundamental to the success and development of the mission of The 5th Wall Project is the relationship with the Drama and Theatre for Youth and Communities (DTYC) department at the University of Texas at Austin. The 5th Wall Project was able to launch its inaugural immersive-story-performance as part of a project in Dr. Megan Alrutz's class, *Digital Storytelling for Youth and Communities*. Dr. Alrutz's class not only provided a platform for our first residency, but a digital storytelling model that inspired our team's approach to creating and effectively scaffolding how we would work with young people. The term "digital storytelling" refers to a specific process for engaging communities in the creation of personal narratives through the creation of video compilations using audio tracks and visual content.

Through the class, I was introduced to a digital storytelling model described by Joe Lambert of the Center for Digital Storytelling, which has been utilized and further developed by Alrutz. My understanding of the (digital storytelling) model is that its goal is to give communities access to ways to tell stories using accessible digital tools and expert facilitation². There are seven steps in Lambert's model for creating digital stories³, as listed below:

² This understanding comes from Dr. Alrutz's *Digital Storytelling for Youth and Communities* class at the University of Texas at Austin, Fall 2014.

³ Seven Steps to Digital Storytelling: Core Methodology of the Center for Digital Storytelling. Lambert, Joe. April 2010.

- 1) “Owning Your Insight.” To begin creating a story, one must recognize their own experiences, biases, and perspective, so that they can acknowledge that in the process. This story belongs to the storyteller.
- 2) “Owning Your Emotions.” Another component to identifying what an individual brings to the story includes one’s own emotional history, and emotional relationship with the story being told.
- 3) “Finding the Moment.” One of the most important steps in the entire process is when one can identify the “moment of change.” There is always a turning point, or moment of revelation and transformation, that is the heart of each story. Finding and knowing that you have found it is often the breakthrough of the story.
- 4) “Seeing Your Story.” At this point, communities work with facilitators to gather images, either pictures or short video clips that will help to visually communicate their story. These can be thought of as the **visual assets** of the story.
- 5) “Hearing Your Story.” As in step four, this is when **audio assets** are collected for the story. These can be recordings of voices telling the story, ambient sounds, sound effects, or the use of music.
- 6) “Assembling Your Story.” Using the **visual** and **audio assets** gathered in the previous steps, participants piece together their stories. Common tools for this include programs such as iMovie, due to its simple user interface that is not as complex or intimidating as more robust editing software. Storytellers bring together the various components and shape their story, layering and composing with help and advice to arrive at a short video that expresses what they hope to express.

7) “Sharing Your Story.” This final step is the culmination and purpose of the process, allowing participants and communities to see and hear their own stories fully completed. Cathartic release, or the vocalizing of important and personal issues are simply some of the potential goals. (Lambert⁴)

We were able to adapt these steps to develop a new process for working with younger communities and creating fictional stories. Lambert’s steps and Alrutz’s approach to facilitating community-based digital storytelling work provided the foundation for our pilot projects. Using a digital storytelling model derived from the aforementioned steps allows for more reciprocal engagement with communities, as opposed to the original concept of the project that was more of a design service. Opening The 5th Wall Project up into a responsive arts service, as opposed to a deliverable product was a revelatory change to our mission and methodology. We would use the same technology and design elements but the development of process for their creation creates a meaningful foundation for the project that was not present initially. This process clarified our product by putting it in direct conversation with the communities being served, as they became the generative source for the content.

⁴ The text for these “Seven Steps” was taken from a slideshow presentation given by Joe Lambert. <https://prezi.com/j0ag7l5pr0yl/seven-steps-of-digital-storytelling/>

4: Dawson Elementary School

a) Our Adapted Digital Storytelling Model and Session Plans

My original goal for The 5th Wall Project was to work with pediatric patients in hospitals in order to use my experience to create unique and dynamic visual art for those I felt would benefit from it. However, that proved to be an overly ambitious reach for our first project. Institutions such as hospitals would be more easily approached if the project had “proof of concept” examples of work, an idea which then sparked a new application altogether for our work. Alrutz’s class and the connections that the DTYC department has with local schools inspired me to locate this project first in a kindergarten classroom, which allowed me to still work with young people in an educational component of the project.

Our initial team for this project was composed of Briana Bower⁵, Melinda Wright, and myself. Each of us agreed upon responsibilities to serve as facilitators during the residency, which meant that we would each lead students in the different exercises described in our lesson plans (See Appendix C). These exercises aimed to provide students with fundamental understanding of story and artwork creation. Additionally, the task of audio asset management was decided to be under Bower and Wright’s purview, while animation and visual asset management would be my responsibility. Bower had previously worked with Mrs. Martinez, a local kindergarten teacher in at Dawson Elementary School in Austin, Texas, and we worked with her and created a plan to bring

⁵ Briana Bower, M.F.A. Candidate in Drama and Theatre for Youth and Communities, Class of 2016, also serves as the Education Director for The 5th Wall Project.

our art and technology project to her kindergarten students. The mission of the project, in this specific immersive-story-performance was to further the children's understanding of story structure, and explore the concept of "world building" that is a core goal in the new art we develop with youth communities. I view world build as a way to allow narratives to extend beyond the story being told. For example, one might design and create a history and story for a fictional city, even if the narrative they are telling only takes place on one street, so that the world has an existence beyond what is explored. Unlike in Lambert's aforementioned model, our end goal was not the creation of personal stories of the participants, but to get the children to group-tell a new and original creative narrative or story. We developed the project as a series of session plans. The specifics of each session plan were written by Bower, who was instrumental in providing the facilitation structure and progression for our work with the class. Bower's training and experience in devising stories with youth helped us imagine a model for creating and capturing all of the assets necessary for building an animated digital story with a group of twenty-four kindergarteners. The plans also took into consideration the classroom within which they were created for, particularly in regards to the acquiring and assembly of **assets**, as defined under the aforementioned Digital Storytelling model.

With goals and facilitation plans in place, we began our work with twenty-four kindergarteners. For the next week, it would be my experience as a facilitator, and not my expertise as a designer, that I would be relying on to guide students through the inaugural residency and development of The 5th Wall Project.

b) Day One: Introductions and *Giraffes Can't Dance*

Prior to working with this class, my experience as an educator was primarily with college aged students and some high school classes. It is important in the development of this project that I remain as self aware as I can; or to put it more simply, nothing could have prepared me for the enthusiasm, energy, and creative minds in that kindergarten classroom.

Our first session focused on outlining our week with the students so that they would have an idea of what to expect, particularly discussing how we create stories. Bower began by reading *Giraffes Can't Dance* by Giles Andreae and Guy Parker-Rees, focusing and uniting the class, while laying the groundwork for the discussion that followed. Using "Story Sheets" (See Appendix C), the students were asked about the setting, characters, problems, and solutions of the story. After we completed the sheet as a class, we were divided into four groups, which Mrs. Martinez had previously determined, as she was familiar with those of her students who would work well together. From there, each group began the journey to creating their very own story, not knowing that these would eventually become animations that they would watch on the wall of their own classroom.

At this point, I was placed in charge of my own group of six students, and we claimed spots sitting on the carpet in the corner of the room so as to begin creating our own story. The process was intentionally very freeform to get at the most original ideas possible, with guidance and refinement exercised at the reasonable discretion of the facilitators. I led the six students through the brainstorm portion where they just named places that could serve as settings. From there, I dialogued with them to try and develop their ideas further, my group's list included: the beach, a castle, the city, Korea, a

farmer's market, the library, and home. From this session, I asked if they thought any of these could be combined in a creative way, in addition to steering them away from real locations such as Korea to encourage a richer and more imaginative and visually dynamic world building, and we eventually arrived at our location for our group-story: a city of sandcastles.

With a setting agreed upon, the process was repeated to generate a list of characters, although the influence of our setting helped to guide their choice this to some degree. Eventually, it became clear that our cast of characters would primarily be a royal family of lobsters (unfortunately, the "lobster dog" and "turtle guards" did not make the final edit in the storytelling).

In the problem and solution phase of our brainstorming, students had to begin thinking about the aforementioned pieces in a way that created a narrative. Just as with the setting and characters, the group was asked to create a list of potential problems that might arise in the city of sandcastles, for the royal family of lobsters. This step ended up as more of a discussion of story, resulting in a very specific problem and solution, as opposed to a list that we then collectively narrowed down. While not asked to explain their story in a linear way yet, it was clear when listing problems and solutions that the story was nevertheless taking shape from the increased focus. There was a negotiation of ideas once our principal problem was agreed upon: an evil lobster king was going to destroy the city with a giant hot glue gun. Some students wanted a violent ending, while others wanted the royal families to become united with a wedding. The wedding was agreed upon without much convincing, and both the lobster royalty and tiny villages survived. Steering the students away from the violent ending was done out of respect for

the wishes of the school. We discussed with Mrs. Martinez what subject matter might be considered off-limits. Before the project, and she had mentioned wanting to avoid violence related to firearms. This was due to the sensitive political climate schools are currently facing due to the rise in tragic shootings. It was agreed that other violent actions, such as sword fighting, were acceptable as we collectively acknowledged that violence has a role in storytelling and the development of children's understanding of conflict when appropriate and properly addressed. This discussion further ingrained in me the importance of maintaining an awareness and sensitivity to the communities we work with in terms of the artwork and subjects we explore with them.

With the outline of our story established, I asked if the students would be able to take all of their ideas, and tell it to me as a story with a beginning, middle, and end. At this point, facilitation became even more delicate. The eventual goal on our part was to develop cohesive and clear audio recordings of the kids' voices, but the class still needed a lot of guidance and encouragement for this early draft. We reviewed how stories begin, and ended, for example "once upon a time..." or "and they all lived happily ever after." By the end of the session, the group managed to tell me the story that would become "The Lobster's Gold." Each student contributed by telling sections of the story and allow others to tell different sections, or adding detail and expanding upon one another's ideas. While there were still some disagreements, and information that had not been agreed upon by the group was occasionally added by an enthusiastic student here and there, they were able to successfully tell a story that had a clear beginning, middle, and end.

Ending the first day by regrouping with the other facilitators confirmed that this project was off to an encouraging start; as I learned that apple-headed characters, dragon

princesses, and a space-exploring butterfly were just a few things to look forward to from the other groups. In one short session, we were able to develop four narratives that each held unique and evocative visual languages, and my experience as a designer made me feel confident that the stories would translate well to projected imagery and animation.

c) Day Two: Group Story Creation, Audio Asset Recording

The second session of our residency, which took place on November 20, 2014, after three days off due to scheduling conflicts, was about further telling of the stories with the group. Using an omnidirectional microphone, Bower and Wright set up a station just outside the classroom where they could record one group at a time in order to get quality audio assets that could be effectively edited. In addition to asking students to tell them the story, they facilitated further exploration of the stories in order to get more details and clarity from the students. It was recognized by all facilitators that no story would ever be told the same way twice, and that it was common for significant details to change depending on which child was describing their story, or if the children just felt like making up new things on the spot. Both Bower and I are familiar with how time-consuming editing can be, and our awareness of the technology and design of the eventual product was critical in considering the session planning. Therefore, our plan was always to get multiple recordings, and to continually review our outlines thoroughly, so that we would have plenty of raw audio to work with later.

While Bower and Wright worked with the students outside of the classroom, Mrs. Martinez and I stayed with the groups in the classroom. The structure of her class allowed students to work on curricular activities for her when they were not working with

one of us from the project, which allowed us to work more effectively. It was my task to facilitate a storytelling in the same way as the group outside of the classroom. Working with each group in rotation, I prepared students for their recording session with Bower and Wright. The students came and told me their stories, and I asked questions and encouraged them to flesh out details. After the first round, it was easy to develop a simple rotation pattern where the group I worked with then went outside for their more formal recording, and I repeated the process with the following group, until all four groups were recorded.

Additional audio recording continued the following, final session, but in an even further controlled way. Bower spent the next class working with individual students from each group to give each one an opportunity to share and be heard, while also ensuring we collected specific audio samples that we knew we needed. Meanwhile, I worked in the class leading students in the creation of the visual artwork, collecting the final pieces from the students that would let us move on to our final production stage.

d) Day Three: Art Introduction and Asset Creation, Audio Asset Recording (cont'd)

The last day of our residency focused on the collection of pictures for us to use in the animations. The session's goal were introduced to the class by informing the students that we would be turning the stories they had worked on all week into original cartoons, and wanted to use their own artwork to do so. For this age group, I also walked the class through a short discussion on how to draw and make art. Touching on color and shape, and exploring detail through demonstrating the drawing of a stick figure, we were able to give them a solid starting point for the day, creating artwork for their stories.

Additionally, we created lists before the session of the visual elements important to each story that we would need to have them draw. As in the storytelling, the goal was to facilitate the students to use their originality and creativity as much as possible, providing only a minimal amount of guidance. Mrs. Martinez and I rotated around the groups, asking students to draw different images and checking off assets from our list.

The group that created the story *The Lobster's Gold*, discussed earlier in this paper, struggled with certain parts of the exercise, primarily because they were unfamiliar with how to draw (things like) lobsters. I provided one, intentionally simple, example, and they were able to easily continue, excited at having learned how to draw something new. Select examples of the artwork generated by the class, such as green lobsters and rainbow colored castles, can be found in Appendix A. Unfortunately, not all of artwork was be used in the final product due to time allowed to create the animations and clarity of narrative or image. After approximately thirty minutes, each group had finished their drawings, and we said our goodbyes to the class, promising to return three weeks later and show them their stories projected onto the classroom environment.

e) Day Four: Projection Integration and Classroom Sharing

During the final production stage, the audio and visual assets from the students were combined with original artwork I generated, particularly the background artwork for each piece, and animated to produce the four, original stories invented by the class. Within approximately a seven-day window, we generated four animations running under three minutes each. The animation turnaround time was approximately a day and a half for each, and then a final day was spent refining each one. Bower and Wright were

concurrently working on editing audio together, trying to represent as many student voices as possible, and edit out tangential commentary, as the animation was about adapting the stories as faithfully as possible to the kids' stories. On occasion, new visual assets needed to be generated, such as the "big dog with antlers" (See Figure 7) because we were unable to gather this asset from a student during our time.



Figure 7. "Big, scary dog with antlers."
Created by Patrick Lord for "Jimjim's Victory"

When these cases arose, I was careful to try and keep the artwork I had to create of a similar aesthetic to the students so as to not be distractingly inconsistent with the drawings by the children. Additional challenges came from an inability to fully convey to the students how artwork should ideally be created to aid the animation process, as that is an advanced and specific conversation about workflow and art that is beyond the comprehension of the age group we were working with. As a result, the animations embraced the qualities of the drawing, and the storytelling, in all of its kindergartener charm. Between the audio of the young voices, the simplicity of both the drawings and the animation, the final videos retained the "artist's hand," which in this case referred more to our twenty-four storytellers, rather than myself as a trained artist.

Another task was the creation of background artwork for these animations, which was always planned to be my responsibility. This process was about taking reference

imagery, and digitally painting and modifying it, through filters, rendering, and color manipulation so that it would create a strong visual landscape that could locate the stories, while also providing a frame that would intentionally overpower architecture present on the surface of the classroom wall. This aesthetic, inspired by the previously mentioned *Camera Obscura* series, was achieved with relative success. The goal of the project is to be able to survey and considerately compose the environment we will be working in, so that even though our imagery is not “mapped” in the sense of the previously cited definition, the arrangement maintains an artful awareness of the space. The short production period and external obligations of the team provided some limitations that will be expanded on in a later chapter of this thesis.

The “sharing,” to use the Digital Storytelling terminology was a rewarding culmination to our residency. Two 6000 lumen Optoma projectors were rented and converged for the occasion, and my personal laptop was used for playback (Figure 53 Q Lab 3). Situated in a far corner of the classroom, the entire technology system took up relatively little real estate. This proved that a set up like this for schools is practical and easy to transport and remount in different configurations. A small Bluetooth speaker was used to play sound across the room, next to the wall that served as the projection surface. With the students seated on the floor, looking at a wall of their classroom that had vocabulary words, a clock, and large blackboard, we began, and brought their stories to life (See Figure 8).



Figure 8. “Jimjim’s Victory.” Final product, projected on the wall of the classroom.

Students were able to almost instantly see past the objects and wall details they were used to, and become immersed in the projected stories they wrote. We were able to take a classroom wall and transform it into a forest, distant space, a fantastic supermarket, and a magical city of sandcastles. The bright colors and high contrast imagery allowed characters and settings to pop, even against décor left on the wall. Ten minutes later, we were done. The children laughed, and screamed as they enjoyed seeing their own artwork move across the wall as their own voices narrated the original stories they had developed. The pride that each took in pointing out what they had drawn, or what idea they had come up with for their stories, was some of the main feedback we were able to gather. Within another five minutes, we were packed up and loading the car, having completed the sharing. While the event itself was something that could only be appreciated in the room, one benefit of working in a digital medium is that the stories also exist outside, as they can be enjoyed individually through viewing them on The 5th Wall Project website⁶. We learned a great deal of lessons about facilitation and the art/animation process (which will be discussed further in Chapter 7), both minor and

⁶ The 5th Wall Project website. www.5thwallproject.com

significant, all of which are exciting as we have the benefit of continuing and refining this project. Above all, this first residency taught me what working in a generative process with young people was like, illuminating some of the challenges, but also showing me how their enthusiasm, and honest fascination with the work added both a reward and a motivation for The 5th Wall Project moving ahead.

5: Trinity Episcopal School

a) Revised Residency Model

Our residency with Ms. Alexander's fifth grade class at Trinity Episcopal School was very different than our time at Dawson Elementary School. Not only were we working with a different age group, but we set new goals for the project in order to continue to develop and investigate the facilitation and artwork-generation processes involved in our work. There were three important differences in this residency: (1) a shorter facilitation residency (two fifty-minute sessions) where students create a single story, (2) artwork would be inspired by work done by students, but would actually be created by members of The 5th Wall Project team and (3) the story would be projected on multiple surfaces. These decisions were made when we were able to specifically name The 5th Wall Project's services into the areas mentioned above as: facilitation, artwork/animation, and technology. I was curious to see what changed as we adjusted these areas along a spectrum. In the context of our time at Trinity, we would be doing less facilitation, but spending more time and energy on the art/animation, and aiming to create a more involved technological design, activating and composing imagery for two joining walls instead of one.

The other benefit to this exploration is that it allowed us to examine a model that may be more similar to one that we might implement in a hospital setting. I planned for a shorter facilitation process and a more involved production process because I wanted to explore a model that might be similar to a process with a pediatric patient. This comes from my anticipation that we may focus more on creating work for pediatric patients

based on their interests, as opposed to workshops and facilitation exercises that they might only be able to have limited engagement with, depending on their condition. For example, a patient might be given a more personal interview, instead of participating in classroom exercises, and our work may focus more on creating environments for them based on our interview, instead of a story (i.e. a patient or patient's family may just want us to create a magical forest in their room, because they love fantasy stories). In this way, this residency attempted to move closer to that more direct approach to our work.

From a facilitation perspective, although the facilitation process was shorter, the Trinity model remained consistent with the established session plans from our previous residency.

b) Day One: Creating a Single Story as a Class

The first day working with Ms. Alexander's students at Trinity Episcopal School immediately demonstrated the difference between working with kindergarteners and fifth graders. We were able to jump immediately into the project, and they remained focused, engaged, and interested in the entire process. One profound difference is that we were able to openly explain to the class some of the larger goals of this project, such as our hope to connect with hospitals (as will be further discussed in the following chapter). Additionally, we discussed the animation process and told them from the start that we would be creating a short movie based on their work that they would be able to see on the walls of their classroom. Being able to convey all of this information at the beginning of the project seemed to help the students to engage since they knew that they were working towards a particular goal.

The facilitation itself was very successful and followed the model we had established from our previous residency. On this residency, our team included Bower and myself, and we were joined by Rebecca Drew Emmerich, another graduate student in the DTYC department, who acted as a facilitator, and later aided in the animation and art creation process.

The fundamental difference in this iteration of the project was creating a single story with the class, as opposed to several from small groups. Where previously we had used the “Story Sheets” (Appendix B), we instead used a facilitated “poster dialogue” with the entire class in which Bower and Emmerich led the brainstorming and recorded the responses on a large sheet of butcher paper. This sheet also contained a visual diagram for story structure, so that we could collectively plot the rising action, climax, falling action, and resolution of our story (See Figure 8-10).

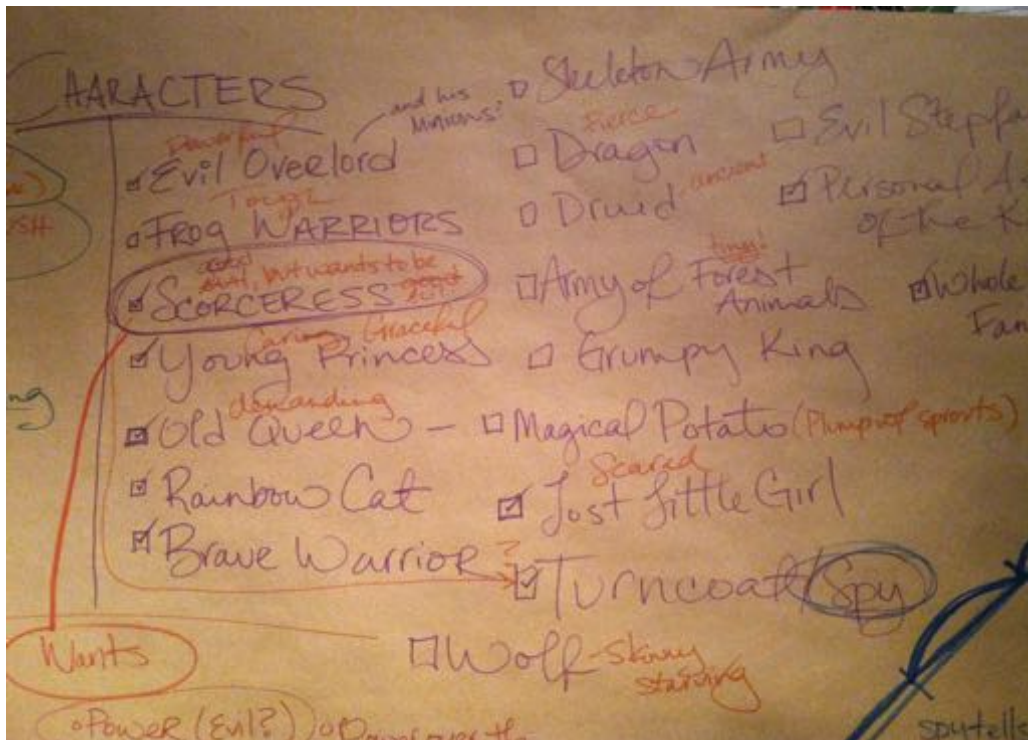


Figure 8. Character Brainstorming at Trinity Episcopal School.

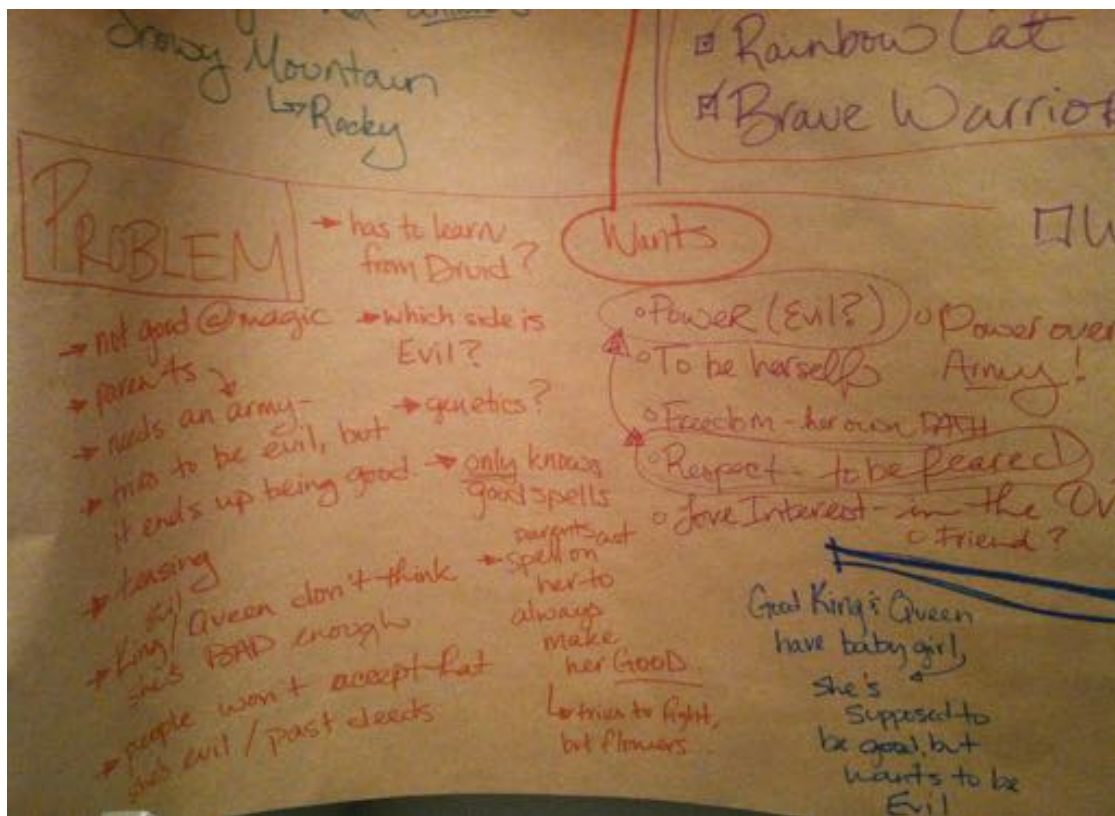


Figure 9. “Problem” brainstorming at Trinity Episcopal School

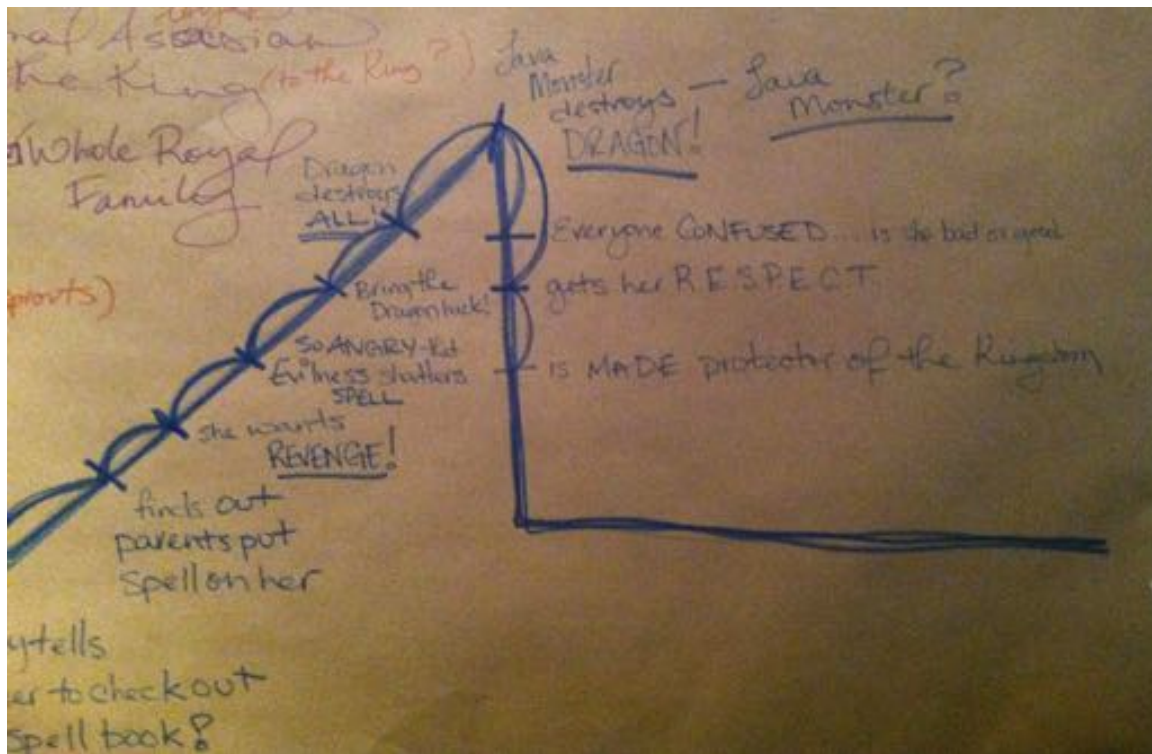


Figure 10. Story plot at Trinity Episcopal School

The class was respectful of one another's opinions and ideas, and we were able to easily move from brainstorming to narrowing the elements of the story by an anonymous vote of hands ("heads down, eyes closed"). Excitement built as the story took form, and they continued to build on each other's ideas, creating a story that is truly unique. One of the most rewarding parts of the day came from investigating the problem and solution of this particular story. The class agreed that the main character, the Sorceress, wanted to be evil, but her parents would not allow it. Interestingly enough, the eventual solution is that she was able to break free and achieve her goal, as opposed to the students creating an ending that resulted in good overcoming evil. The openness and originality that they displayed was humbling, and gratifying as it demonstrated the potential for non-traditional narrative building and an honest exploration of different perspectives, while still full of wonder that manifested in magical potatoes and frog warriors.

Inside of our 50 minute window, we were able to introduce ourselves, the project, and create an original story from start to finish. We ended the day by explaining that we would return for one more day, and the class would be divided into two groups- artists and actors, who would create the concept art and voice recordings for the characters that would eventually all come together in a final production for the piece, that the students titled *EVIL(ish)*.

c) Day Two: Collecting Audio and Visual Assets

On our second day, Bower took the students who Ms. Alexander had cast into roles, which she was able to do thanks to how familiar she was with her students, into an adjacent room and began recording audio. Bower worked off of a list of scenes that were

generated from the general story we devised as a class, and so she led the students in improving and creating the dialogue for the specific characters. Using the same list, Emmerich and myself worked in the original classroom facilitating the creation of artwork.

A key difference working with these students was that the final animation would be inspired by the original student artwork. We were able to show them storyboard examples from animated films they were familiar with, such as Disney's *The Lion King*, so they had an understanding of how their drawings would be used as the base reference, and just polished and edited to bring all their ideas together more cohesively.

As an educator, this day presented many moments for engaged facilitation from truly interested students that was incredibly rewarding. The class was so motivated to do good work, that they asked frequent questions of Emmerich and myself about how to draw certain elements or how to improve their work. The session resulted in several discussions about the use of line, and I modeled multiple times for students who wanted to learn how to draw hands, asking them to draw what they saw, as opposed to giving them a more straightforward answer. Having Emmerich join us was also hugely beneficial as she is a skilled facilitator and artist, and was able to support both spaces, and help to document the day. It was a very engaging day for students and facilitators thanks to the responsive and enthusiasm from the students for the project, which gave us great character design drawings, and audio recordings of narration and voice acting scenes to work with for production.

c) Advances in Production

While the model for facilitation and our time at the school remained similar to our first residency, the production period underwent significant growth and refinement. As discussed above, instead of using the original artwork, I created settings, and character art based off of the student work, but still generated by my hand so as to unify the overall aesthetic. This was done to bring cohesion to the storytelling, and to aid myself in the animation process by controlling how and what visuals were generated. Additionally, our production team also grew, as we were joined by a composer, Daniel Townsend, who provided us with an original score for the piece. Bower once again edited the audio recordings, which she was able to do quickly due to the straightforward, and focused performances of the students.

The initial challenge for me was respectfully interpreting all of the artwork and honoring the designs and good work that the students had done. The students themselves had, for the most part, divided up the elements and so there was very little repetition that would need to be consolidated. For example, we only had one drawing of the Sorceress and the Dragon, so that adaptation was very straightforward (See Figure 11-13). Other characters, such as the Lava Monster, had multiple, different interpretations, so we worked to pull elements from each to create a combined representation of all designs.



Figure 11. The Sorceress, student drawing.



Figure 12. Sorceress, Version 1.



Figure 13. Sorceress, Final Version.

As can be seen in the change between Figure 12 and Figure 13, another significant discovery arose in discussion amongst Bower, Emmerich, and myself, regarding the ethnicities represented in the story. It was quickly decided that, since the nature of the story lent itself to an element of fantasy, the characters skin color would be changed to that of a fictional race. We would address that change with the students in an attempt to encourage them to consider all of the choices they make when creating characters and inventing new stories.

Aside from interpreting the artwork, the creation process was also much more involved, as I created each character in sections, creating paper doll-like assemblages that would aid in the animation process later. This work was very detail oriented, but also limiting due to its simplicity. It was in this part of the creation and animation process that I began to form a clearer picture of an eventual goal for The 5th Wall Project's aesthetic. Although we work from artwork developed by children, my hope is to eventually establish our own style and look for the animations and art we produce that provides us with a unique and recognizable quality. I think that beyond a branding or marketing perspective, the benefit of a distinct style will result in a mastery and comfort with it. By creating a visual language that those involved in the project are familiar with, we can spend more energy on honoring the stories, instead of inventing entirely new aesthetics with every residency. Every image has a semiotic message, and the medium of our immersive-story-performances bridges several forms of storytelling, and we must always be mindful of those implications, and I look forward to continuing to develop what The 5th Wall Project's visual personality becomes.

The animation process for our current iteration took me approximately 120 hours, from design and rendering, to animation and editing. Beginning with the aforementioned interpretation process, each character was digitally painted by hand, in layers and sections that were planned out to best support eventual compositing (i.e. ‘head’ was rendered separate from ‘neck’ and ‘body,’ and ‘upper arm,’ from ‘lower arm’ to ‘hand.’). This animating style involved articulating each joint and movement of every character, and creating a lip-syncing rig that animated characters mouths automatically in response to audio so their expressions would match the audio assets of the voice acting. The editing also marked an exciting move forward for the project, as I was able to access the space the evening before the final sharing for a short time to set up the technology, and test.

The extra time in the space allowed us to create a template and more effectively map and compose to the physical space. One of the significant stumbling blocks in these pilot immersive-story-performances has been access to a projection system I could use off campus. For each performance, we have had to rent projectors, for a 24 hour period, from a company that does not allow for reserving equipment, or allowing access to key technical information, such as lens ratios, that are necessary for developing a proper plan. This has limited the pre-production work to relate content to the space, until this last residency. The evening before in the space allowed me to use the projectors to generate a simple, color map of the space, and compose how imagery would be used as it related to objects such as whiteboards and bulletin boards (See Figure 14, 15).

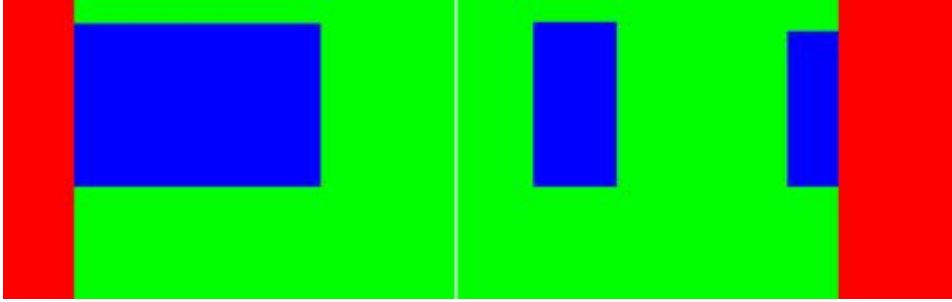


Figure 14. Wall Template



Figure 15. Space template projected in space, marking the black bulletin boards and seam where walls meet.

As a result of this process, I was able to render the entire animation as a single movie, using the resolution and layout that the Color Map provided as a template. This way I was able to anticipate when characters would not be as visible, or when they would cross between walls. As with Morell's work, and our first residency, the intention was still not to activate and map the architecture and detail of the room, but to create a composition that was conscious of the space. We still projected imagery on the blackboards, but it was useful to know where important moments of the story needed to take place and be visible. Another benefit of this was a more effective use of two walls, so that characters

could be in conversation across surfaces, speaking to one another from opposite walls. With the goal of immersive and transformational projections that reshape whole rooms, I am grateful that as we continue we develop, we were able to literally move from one to two walls between our first and second residency.

With the animation pieces and wall template of the space in hand, the final editing process went quickly. The editing was also aided immensely by storyboarding out the narrative, which Emmerich and myself did collaboratively. She and I sat and listened to the finished audio track, and began to pencil sketch and discuss what wall characters should be on, how they should face one another, and how the characters and environments would fit compositionally. Additionally, the students from the class actually contributed their own original storyboards as worksheets they completed on a day we were not with them, adding even more of their hand and ownership of the project back into the process (See Appendix C). As mentioned earlier, we also had a sound score, which was provided remotely by Townsend, who left clear instructions for how to insert his work into the product (See Appendix D). All of these new elements came together to move the production value of this project to a more cohesive place where our team's expertise was more apparent. As we increase the complexity of the stories, and continue to build more immersive environments with more surfaces, the artistic and technical demands will likely require a larger team, and longer production periods. For me, it was important to learn my limits and the demands of each project so as to deliver the best possible final product. While the aesthetic and process of our Dawson School residency has its place in the project, our work at Trinity showed me how artwork

produced by trained artists added a level of surprise and transformation for students that was apparent when we shared the final immersive-story-performance.

d) Final Sharing and Discussion

On April 10, 2015, The 5th Wall Project returned to Trinity Episcopal School in Austin to complete their last residency tied to this graduate thesis. Instead of summarizing the event itself, which was met with laughter, joy, and so much appreciation, I want to instead reflect upon the opportunity we had to connect with students about the project itself. As described in the previous section, we were able to show the final animation on two walls of the classroom, and the students asked to watch it twice (it runs under 6 minutes). After each viewing, we discussed the work in a conversation that yielded more insights than one can ever plan for.

Following the first viewing, Bower, Emmerich, and myself were able to lead the class in a discussion about process, and ask them to respond to what they experienced. The students were surprised to learn the hours and labor that go into producing work such as this, especially as we compared it to popular productions, like Pixar or Walt Disney movies, and explained the difference in size and scale of the teams involved. Much like the kindergarten class, they responded strongly, enthusiastically and proudly identifying their personal contributions, whether it was design or voice work. Beyond claiming ownership, they expressed fascination by how their work was translated to what they saw in the final production.

Personally, however, the last five minutes of our residency were the most gratifying, particularly as we close this first chapter of the project. Bower led them in a

conversation wherein they were reminded of how one of our goals is to bring stories like theirs into hospitals, and what they thought about that idea. The level of empathy in the room, and genuine excitement at the idea of being able to provide other children with an escape, and a performance that really changes the walls around them was very much in-line with the mission and aspirations for this project, that it is difficult to document how meaningful such a response was from a technical and artistic perspective. The growth from the first project was notable and necessary, but the ability to hear well articulated responses from a class of children that could comprehend the scope of our work, more than the kindergarten class at Dawson Elementary, was the true success of our second residency.

6: Future Applications: Revising Interactivity

a) Defining Interactivity

In the field of media design and technology, the term “interactivity” is commonly used when referring to creating live, real-time, responsive technology. I will be discussing interactivity in a different way, examining how technology can foster interaction between communities and people, as opposed to people and machines. My motivation for this project comes from a desire to re-imagine applications of technology that we have, instead of inventing that which does not exist. It is because of this method of working that every application described in this chapter, although we may not have explored them yet (such as the pediatric installation discussed later in this chapter), can be implemented today with resources and technology that already exist. These are not promises of future invention, but plans grown from what is achievable today.

I have previously described The 5th Wall Project as an arts initiative whose purpose is to transform space and to connect with communities. Another lesson that I have learned from exploring the process of Digital Storytelling with Dr. Alrutz is the potential telecommunication applications for artwork and stories that exist digitally. An earlier chapter of this thesis describes the process of Digital Storytelling, citing specific steps from Lambert’s model, and in expanding on the idea of the final step of “sharing,” I intend to create a bridge that extends past the community from which stories are generated. The 5th Wall Project is a unique amalgamation of live performance and filmic experience. Our immersive and transformative projected presentation allows the audience to become more engaged than sitting in a cinema or theatre due to how we

break the “fourth wall” that separates audience from performance. At the same time, the work that we show is prerecorded, and the characters are digital, just as in film, so each viewing is exactly the same each time. The final ingredient that generates glocal (a fusion of ‘global’ and ‘local’) community interactivity is the incorporation of telecommunication technology that is already widely used and readily available. Using applications and programs like Skype and FaceTime can take be used to extend the reach of our program. For example, project team members may be able to collaborate from abroad as facilitators and animators or artists could come from different place, as with our last collaboration with Townsend, who sent us work from Philadelphia. The 5th Wall Project evolved from professionals with backgrounds in theatre, but the digital nature of our productions opens up the potential for the work to travel via computer. The technological components of this project are always designed and utilized to further the goal of the human experience of every piece of work we generate.

b) Pediatric Care and Educational Interactivity Applications

With our two target audiences of pediatric patients and classrooms of students, there exists an exciting, reciprocal relationship that the project can use to create a connection between the two. Students in classrooms can create work, as they have in the aforementioned chapters, but they can also be incentivized and motivated to make stories for pediatric patients in their local communities. This process can further be enhanced if the two communities are able to schedule a time to more tangibly connect via telecommunication technology that is so readily available (i.e. Skype, Google Hangout, etc). This way, we can give students opportunities to create art that they know will have

a social impact, and children in hospitals will be able to experience unique work generated by a community of their peers. I believe that if it is possible to establish a link between the children in these two communities stemming from the artwork and experience we help facilitate and create, than we are obligated by the mission and motivation of the project to make such a connection a reality.

c) Pediatric Patient Care Installations

As previously mentioned, a primary goal of this project is to work with pediatric patient wards in hospitals. Specifically, it is my mission to create permanent installations of our custom projection systems and artwork to live inside the rooms of young patients. Previously, I have explained how projection design provides a unique medium for spatial transformation. Young patients suffering from chronic disease spend significant, if not most, of their lives in hospital rooms that, by necessity, are sterile and modular spaces. The priority of the design of these rooms is to ensure the most efficient and best care to the patient, as it should be. These considerations are not prohibitive when it comes to applying art and design, but stress the importance for intelligent and thoughtful consideration to the many functions that the rooms need to serve.

There are many benefits that projected artwork can provide in this environment, for this particular youth community. Digital projection is a way to paint the room with bright imagery and animations entirely through the use of light. Using light means that imagery takes up no physical space, and can be shut off immediately in cases where emergency care is needed. Additionally, the artwork is generated by the computer, which

allows it to change when new patients use the same room, allowing us to personalize each patient's surroundings and create personal murals through a series of keystrokes and clicks instead of paint. The digital nature of the work and system also means that it can be updated easily, and potentially remotely, to continue changing and evolving depending on the needs or desires of the patient and institution.

The strength of The 5th Wall Project is in the fluidity of its process and technology. It can be adapted to varying degrees, to suit the environment and audience it is working for. As we attempt to use technology to redefine "interactivity," the two residencies we have now completed revealed that young audiences want to, and appreciate the idea of connecting to other communities. I base this assessment off of how responsive and excited the students at Trinity became when considering what this work might do for children in hospitals. When we told students about our intention to work with pediatric patients, they began to name out why they thought it would be effective, from pointing out how nice it is for walls to change to commenting that patients might really appreciate having stories written for them by other kids. It is my goal to reach as many people, in as many different circumstances, as possible. For this reason, the technology we use will always change, technology will always be the vehicle, not the driving force, behind this project, and will remain flexible so we can remain accessible.

7: Reflections and Conclusions

As artists, we connect to our work by giving up part of ourselves to it, and allowing that vulnerability to inspire us to create meaningful work. For the work of The 5th Wall Project, I surrendered myself entirely, and allowed myself to be completely transformed by doing so. Working with children to create art and narrative shaped my perception of the generative process, and reminded me that my work is a privilege, not a source of entitlement. Being tasked to create work on shortened timelines taught me to hone the technical skills that are necessary to my design work. I was forced to consider the medium of projections as the sole source of lighting, scenery, and costumed performers- an opportunity that allowed me to understand the range and capabilities of the field itself. Yet, the most important impact of this project was how it showed me the untapped potential to apply my skills in a new way that provided a service to a community in a tangible and gratifying way.

I have always had a strong desire to teach, although I had never considered working with students younger than those in college. Through the 5th Wall Project, I was exposed to an entirely different spectrum of students, working with a class of kindergarteners and 5th graders. Although I still find facilitating in that environment to be difficult, the rewards and engagement are worth it. Children have such an intense interest in what is new, and are willing to dive in without self-conscious apprehension, if given an environment that feels safe and controlled. I am extremely grateful to Bower, and later Emmerich, for their contributions and skills in creating such an environment. Due to their talent and abilities, we were able to experience a process that was honest,

imaginative, and open. Working with children in the schools, it was incredible to step through the development process where ego did not exist, and there was honest gratitude for everyone's contributions. I do believe there is something to be learned from a process that is so open, and appreciative of ideas. This is a lesson, and a reminder, that I hope to become more aware of in my own practice, doing my best to mitigate any personal ego or agenda as I approach productions in the future, no matter the age of my collaborators.

One of the most exciting challenges of being a projection designer is the need to constantly learn new skills and techniques, based on the specific needs of productions as they arise. From cinematographer to digital painter, I have learned through experience that a projection designer's toolbox is ever expanding. In the context of this project, I was able to stretch myself technically, and develop new aesthetic and theoretical questions about my work. My technical skills were refined through an intense process that improved my understanding of animation and interfacing with software to establish an efficient workflow to work within a tight schedule. Additionally, I was able to refine my hand as a digital painter, a skill that is still a specialty among projection designers. What also proved interesting was also the constant investigation of how this project lives in a space between animated film and live performance.

At Dawson Elementary, the stories on one wall were able to follow more of a filmic format, using close ups and changing camera and editing techniques to tell a story on one wall. However, once we moved to Trinity, we discovered that characters had to inhabit the space in a way that was more consistent with their being on a stage. For example, their scale and movements remained constant, and we even treated the bottom

of the wall as the ground upon which they were standing, so as to further establish the idea that they existed inside the specific physical space of the classroom. One of the most distinct qualities of this work is how, as in a film, all of the collaborative elements become distilled into what can be reductively considered a single projection design. Within the design, the room was transformed scenically, with costumed characters that acted and moved, in lit and colored spaces. This demonstrates that it is possible to represent all of these elements in a performance using projections to create a unique artistic experience that is an amalgam of theatre and film.

An interesting question raised during production on *EVIL(ish)*, for which I still do not have an answer, is about the semiotic meaning and relationship of cartoon imagery that is presented in concert with live performance. The medium of animated film carries with it its own connotations and history, so I am curious about what animated characters and their unique abilities as storytellers can contribute to live performance. These choices all continued to inform my growing understanding of the capabilities of projection, and help me learn what happens when I set or break narrative rules. One of the most exciting realities of working as a projection designer is that there currently are no real rules, or comprehensive understanding of what is possible for the field to add to any given production. It is through projects such as this, in addition to working on other theatrical or entertainment productions, that I will continue working towards my own understanding of what is possible. More importantly, it is through these experiences that I will be able to show others what is possible.

Finally, the ultimate conclusion I, and hopefully others, take away from this project is an openness and motivation to actively apply the skills, training, and passion to

work outside of established models in any field they work in, not limited to the arts. The University of Texas at Austin’s design department is unique because graduate students are required to create a “generative performance,” instead of reflecting on their work on a particular production. These projects often serve to represent the culmination of what one has learned as an artist, both in technical proficiency, and their approach to work. I found by working on this project how important it is for me to use my training to contribute a tangible service to help others with my art.

I am extremely grateful for this project, for all that it has taught me about myself as an artist, and that it is an ongoing project that can continue as opposed to a single, cumulative performance of my work and education. We have created a model of working that continues to become clearer with every residency and conversation with collaborators and mentors. Reflecting on the residencies has given me enough clarity on our process that I can begin to chart and our process more specifically. For example, Figures 16 shows a graph that represents our services and how they differed in the two residencies discussed in this paper.

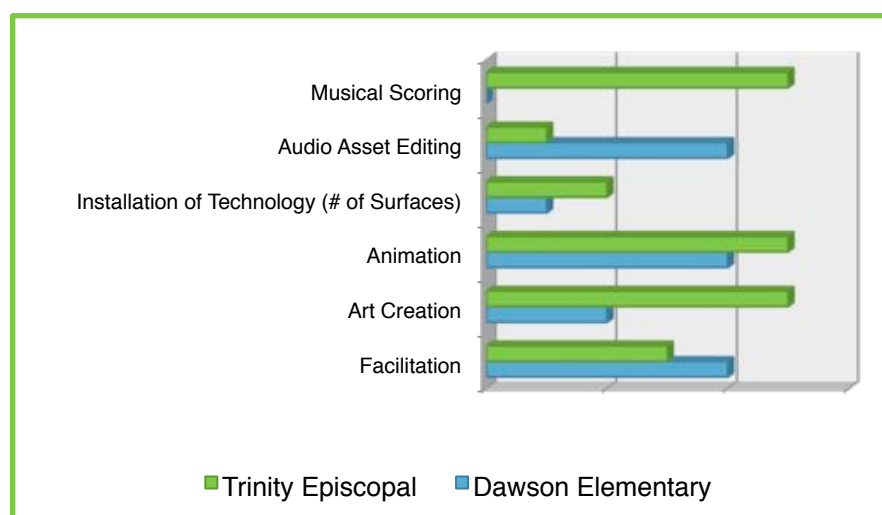


Figure 16. A comparative graph of our services between Dawson Elementary and Trinity Episcopal, on a scale of 1-5 of complexity and involvement (1 being less complex or involved, 5

being more involved). This is a personal scale as I begin to chart and record the progress of The 5th Wall Project.

Even this graph is an exciting step forward because it is the result of being able to distill this project into named, quantifiable pieces that can learn from. This information provides insight for future residencies and collaborations as it begins to identify areas of work, and level of difficulty that will help determine size and required skills for future team members. At the same time, these areas remain somewhat broad and general, which speaks to the adaptability of our work.

The 5th Wall Project was established on the idea that my skills can be applied to create a transformative experience and provide access to art for communities in need. Changes in technology and engagement should not only be applied to reinvigorate traditional performances, but should be an impetus to create new work, in new ways. The frame within which we view performance is referred to as the fourth wall, and it is the intention of this project to invite people to begin to look past those walls and see that imagination and performance can be made accessible wherever there is a need.

The seed for The 5th Wall Project was planted in my mind in 2011, before I attended The University of Texas at Austin, while discussing how projections had the potential to bring children's storybooks to life, as a way to make reading more fun for students. During my first year in Austin, it evolved into a scripted, original movie with characters that moved along the walls, targeted only for pediatric patient rooms. Finally, in Alrutz's class, and meeting Bower, the project became what has been documented and discussed in this thesis. When I look at how it evolved, I appreciate how even as audiences, objectives, and methods changed, it has always been a project with the goal of helping people and communities. I can only hope that the next four years and beyond

bring more passionate collaborators as I have been fortunate to have thus far, each of whom changed and expanded the potential of the project. While we currently have a focus on youth in schools and hospitals, this comes largely as a choice based on the interest of the current team, but nothing in our process inherently limits us to these communities. The true success of this project is not in the productions, but in establishing and naming a motivation for creating work that engages with and helps anyone we can—through story creation, performance, and projection. One quote that has always resonated with me comes from philosopher Edmund Burke, who said, “All that is necessary for evil to succeed, is for good men to do nothing,” and this project is my way of helping and serving communities in any way I am able through my art.

Appendix A: Example Images of Abelardo Morell's *Camera Obscura*

This Appendix contains images from Morell's *Camera Obscura* photography series, as reference for understanding his aesthetic influence, described in Chapter 2 of this thesis.



Morell, Abelardo. *Camera Obscura: View of Central Park Looking North- Winter*. 2013. Photography Print. The Universe Next Door collection.



Morell, Abelardo. *Camera Obscura: View of Central Park Looking North- Fall*. 2008. Photography Print. The Universe Next Door collection.



Morell, Abelardo. *Camera Obscura: Times Square in Hotel Room*. 2010. Photography Print. The Universe Next Door collection.



Morell, Abelardo. *Camera Obscura: Garden with Olive Tree inside Room with Plants, outside Florence, Italy*. 2009. Photography Print. The Universe Next Door collection.

Appendix B: Dawson Elementary School Artwork

This Appendix contains select examples of original artwork that were created during our residency with Mrs. Martinez's kindergarten class at Dawson Elementary School in Austin, TX. Images may be cropped or edited to preserve student identities. November 2014.

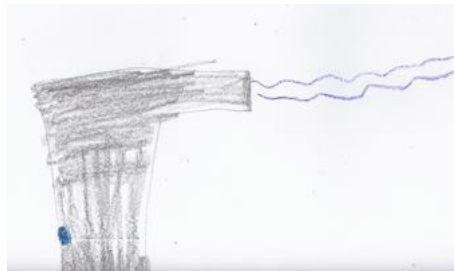
1. Butterflies vs. Aliens



2. Applehead Goes to the Store



3. The Lobster's Gold

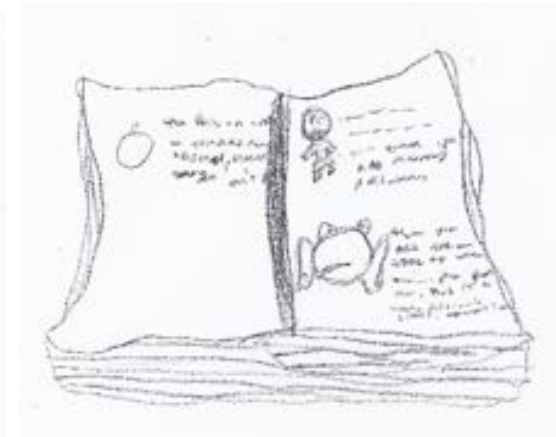


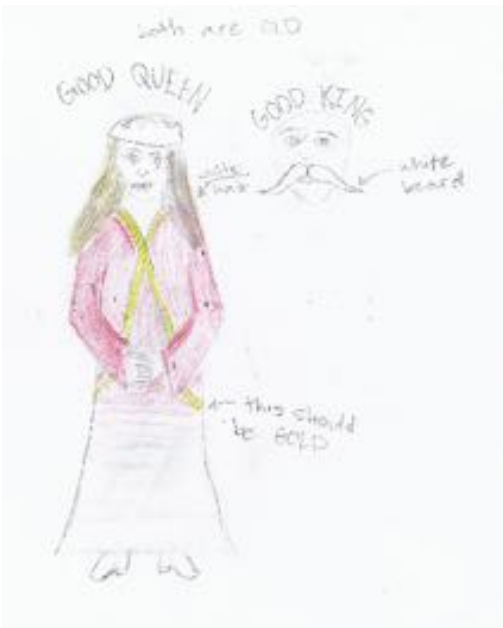
4. Jimjim's Victory



Appendix C: Trinity Episcopal School Artwork

This Appendix contains select examples of original artwork, and storyboards that were created as part of our residency with Ms. Alexander's kindergarten class at Trinity Episcopal School in Austin, TX. Images may be cropped or edited to protect student identities. March 2015.







STORY BOARDS—LIT ANTHIN PROJECT

Choose one of the scenes listed below from our Lit Story Projection Project. Create a scene using the story boards of what happens. Keep in mind the following: Who are the characters? What is the problem? How do they solve or not solve the problem? Every good scene has a clear beginning/mid/end.

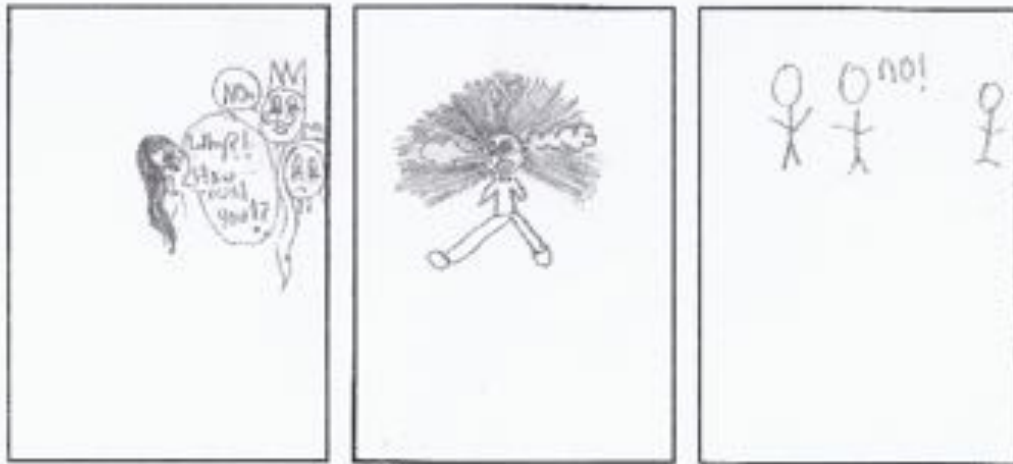
- Serenice and her friend "Soy" discussing her frustration.
- Serenice and Bull Diva talking about the drink.
- Confrontation between the Serenice and her parents – the good king and queen.
- Villagers/Peasants/Guards, dragon, chaos.
- Serenice summoning the Lava Monster.
- Lava Monster's Origin.



STORY BOARDS – UT ALUMNI PROJECT

Choose one of the stories from below from our UT Story Project Project. Create a comic using the story boards of what happens. Keep in mind the following: Who are the characters? What is the problem? How do they solve or not solve the problem? Every good comic has a clear beginning/middle/end.

- Sorcerer and her "son" discussing her invention.
- Sorcerer and Eli Overland learning about the comic.
- Confrontation between the Sorcerer and her parents – the good king and queen.
- Villagers/Police Guards, dragon, slayer.
- Sorcerer pursuing the Lava Monster.
- Lava Monster vs. Dragon.



Appendix D: Production/Process Paperwork

This Appendix contains examples of worksheets, lesson plans, and other documents that were generated to help our process. Both residencies are contained in this section.

1. "Story Sheet." Used at Dawson Elementary School.

Group #9

Setting	Characters
Forest	Super hero
Jungle	Elie the elephant
Underwater/ocean	Angela the Horse
<u>sky / outer space / clouds</u>	Panda
Bakery	Bamboo Body
At home / house	Crazy Nancy the Butterfly
School / classroom	Aliens
Zoo	Teacher
Ice cream shop	Students
	Dad / moms
	Birds

Title: Butterfly goes to space and her relationship with the aliens

get hurt (broken wing)
 Scared of aliens
 Space monster / space crabs
 steal the stars / wings
 Take the moon / night
 indicated to fly that high
 going to visit teachers
 written: cocoon as rocket ship

Problems

colorful journey
 Bella the butterfly
 mermaids
 shark / fish

trap the aliens
 steal back the moon / stars
 trade the stars for a lamp
 defeat the aliens
 make friends + share the stars
 change their minds, make them like the dark
 Friends w/ aliens

Solutions

2. Sample Lesson Plan from Dawson Elementary. Created by Briana Bower, during Dr. Megan Alrutz's Digital Storytelling class at the University of Texas at Austin.

Session 1 - Exploring Story Structure

November 17, 2014

GENERAL TOPIC: Elements of Story

FOCUS Question/s:

- What makes a good story?
- What are the defining characteristics/elements of stories?

STUDENT OUTCOMES/GOALS:

The Students Will...

- Identify the major elements of stories (characters, setting, plot (or "problem") and resolution (or "solution"))
- Create an original story as a group
- Identify what they like about particular stories
- Create general story structures/outlines for their digital stories (at least identify where the story is taking place, and perhaps the main characters)

TEKS:

§110.11. English Language Arts and Reading, Kindergarten

6) Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

- (A) identify elements of a story including setting, character, and key events;
- (B) discuss the big idea (theme) of a well-known folktale or fable and connect it to personal experience;
- (C) recognize sensory details; and
- (D) recognize recurring phrases and characters in traditional fairy tales, lullabies, and folktales from various cultures.

(8) Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

- (A) retell a main event from a story read aloud; and
- (B) describe characters in a story and the reasons for their actions.

MATERIALS NEEDED:

- Story Book (maybe *Giraffes Can't Dance*)
- Phones (for preliminary recording)
- Story Sheets

**1. ENGAGE (Hook): (15 min)
(BRIANA)**

Today we're going to work together to figure out what you need to make a story.

- What are some of your favorite stories?
- What do you like most about that story? Why is it your favorite?
- What do you think we need to tell a story? If we were going to tell a story right now, what would need to be in it?

Scribe the discussion so we can pull on these reasons later in our discussion.

Today we're going to share with you one of our favorite books. (If they are able to identify story structure in the first discussion...) As we read it, I want you to think about the different parts of the story (characters, setting, problem, solution).

Read *Giraffes Can't Dance*

(In our discussion earlier we talked about the different parts of the story). The four main parts of the story we're going to think about today are the Characters, (who is in the story), the Setting, (where the story takes place), what problems or challenges our characters face, and how the story ends (or the solution to those problems).

Take a moment to discuss and map out the different parts of the story

Characters: Gerald, Cricket, Other Animals

Setting: Jungle

Problem: Gerald can't dance

Solution: The Cricket teaches him to dance to his own rhythm, and Gerald is a great dancer

As we discuss the different story elements, record these elements onto a Story Sheet (the same one we will use when helping students build their stories)

Reflection:

- What did you like (or didn't like) about this story? Why?
- If you were going to tell this story to a friend or parent or grandparent, what parts would you definitely want to make sure to include?

Once Students have "mapped" the story...

Transition:

The reason we are talking about stories today is because we are going to be creating our own stories!

2. **SHARING information: (2min)**
(BRIANA)

These will be totally original stories. Take a moment to define "original". *We're then going to tell these stories in groups and create artwork for our stories! Then we're going to bring these stories to life!* Depending on the class, we might share more information about the project at this point, but if they're losing focus, we can just move onto the next activity.

Transition:

Today, we're going to start making our stories together. Perhaps we put on our writer caps and then transition back to desks.

3. **EXPLORE: (20 - 30min)**
(ALL)

In this next section, we will create a story together as a class. We will fill out the story structure on the board (or on the doc cam) (Setting, Characters, Problem, Solution) together.

Melinda - will get suggestions for setting - and decide on a setting to pursue

Patrick - will get suggestions for characters - and have the conversation about who the main characters will be

Melinda - will brainstorm a list of possible problems with students (and choose one major problem)

Patrick - will brainstorm a list of possible solutions with students

During this brainstorm, we will decided on the number of characters (one character? a group of characters?) and decide on the problem. We may or may not decide on a solution (this may turn into a trial and error format during the group telling, i.e. try one thing, it doesn't work, try another thing, that doesn't work, etc.). We might pull on some of these settings later when dividing out into groups to write our stories.

Briana - Depending on the needs of the students, we tell that story or we act it out. In either option, we make sure to ask lots of questions to help them expand the story.

Questions about Setting:

- What do you see?
- What colors do you see?
- What does the weather feel like?
- What time of day is it?
- How do you describe it?

Questions about Characters:

- Who is our main character/main characters?
- What is that character like?
- What is their favorite thing?
- What is their least favorite thing?
- What is x character's relationship to y character?
- (Throughout the story) How does that make them feel?

Questions to move the plot forward:

- What happened next?
- How do you think he/she reacted to that?
- What did that make them want to do?
- How did he/she do that?
- How long did it take?

After students create the big class story, we will break into four groups (formed by Hayley and each paired with a facilitator) and begin the story creation process with the students. Each group will have a story planning sheet - and they start creating the story together. During this story creation, each facilitator will record the conversation on their phones.

4. **REFLECTING ON THE LESSON: (5min)** **(PATRICK)**

Describe:

- What happened today?

Analyze:

- What did we learn about stories?

- What was your favorite part?

Relate:

- What is something you excited about in the new story you're creating?

3. Complete Lesson Plan from Trinity Episcopal School. Created by Briana Bower.

Trinity Workshop Plans

Overarching Workshop Goals:

The Facilitators Will:

- Help students understand plot/story structure
- Create a process that fosters creativity and new Ideas
- Help students reflect on the visual transition from story to visual product
- To create an environment that fosters students' understanding of the creative process from idea, to story, to artistic product
- Facilitate a storytelling process
- Work with students and independently to create original artwork
- Encourage students to work together to create stories
- Help foster a creative collaborative environment in which we work together to create stories

Monday:

5 min - Introduction

Who we are - Introduce name

Why we're here - Introduce the 5th wall project

Who are you? - Go around and ask students for names

20 min - Let's make a story!

What is the setting of our story?/Where might our story take place?

- Brainstorm possible settings
- Encourage students to use adjectives to make the locations more specific
- *What words might you use to describe these settings?*
- Vote on a setting

What characters might we find in this setting?

- Brainstorm a list of possible characters
- Encourage students to use adjectives to describe the characters
- *What words might you use to describe these characters?*
- Pick a main character or group of main characters

What is the problem the character(s) faces in the story?

- Brainstorm a list of potential problems

- Think about what the main character might want and what might get in his/her way.
- Pick one!
- *What is the inciting incident?* (What starts the problem?)

What is a potential solution to that problem?

When mapping out the story, what is the most exciting moment of the story? What is the climax?

What happens after the problem is solved?

Getting Suggestions for Settings:

We will begin get suggestions for setting - and decide on a setting to pursue. This can be a shorter brainstorming session, considering we will only pick one setting. If the students want different things, see if you can combine the suggestions (i.e. one student wants a castle and the other wants the jungle, perhaps our setting is a castle in the jungle), or vote on the suggestions. After you decide on the setting, have them briefly describe it (just to get a feel for the atmosphere). The questions are really here to help them describe the quality of this place – is it a happy colorful jungle or a scary dark jungle.

Questions about Setting:

- What things might you find in _____?
- What do you see?
- What colors do you see?
- What does the weather feel like?
- What time of day is it?
- How do you describe it?

The answers to these questions will help you figure out...

Getting Suggestions for Characters:

What kind of characters exist in this setting? Brainstorm a list of characters. In this brainstorm, encourage variety (if you are getting “Vine Man, Leaf Man, and Tree Man” encourage students to brainstorm in a different direction, i.e. what kind of animals might we find in a jungle?). Once you brainstorm a list, pick one, two, or a group of main characters. Ideally, we are going for a small number of main characters, but if we can't decide, a group also works. Again, working to combine ideas or vote on characters will help us select a main character. Once you decide on a main character/characters, consider the following:

- What is that character like?
- How might you describe this character?
- What is that character good at?
- What are they bad at?
- What is their favorite thing?
- What is their least favorite thing?
- What is x character's relationship to y character?

The answers to these questions might help students think about possible problems in the story.

Getting Suggestions for Problems:

Depending on how the students generate answers in the character section there might already be some possible problems on the table, if not, ask students: “What is a problem that our main character/characters might encounter in the _____ (setting)?” Again, brainstorm a short list of problems, then as a group vote on/select a central problem. Think about how you might combine problems if there are a couple great ones – but one problem is probably good for clarity.

Getting Suggestions for Solutions:

Finally, ask the students “How might our main character/characters solve this problem? What could be the solution?” In this section, again brainstorm a long list of solutions. As a group you can either decide on the final solution, or there might be a series of failed attempts and then a solution (i.e. he tries three different ways to befriend a monster, but only the final one works). You can engage in the following questions during this section of the lesson, but at this point, the biggest goal is to establish the overarching problem and some possible solutions so that students

can then flesh out the stories in their tellings. If they are having a hard time coming up with Solutions, the following questions may be helpful.

Questions to move the plot forward:

- What happened next?
- How do you think he/she reacted to that?
- What did that make them want to do?
- How did he/she do that?
- How long did it take?

20 min - Let's storyboard that story!

Describe a storyboard - maybe show an example of what a storyboard looks like

Below the story structure, draw out possible moments from the story

5 min - Here's what we're doing on Wednesday

Wednesday:

Break into 2 group

Group A - Audio

Group 1 - Visual

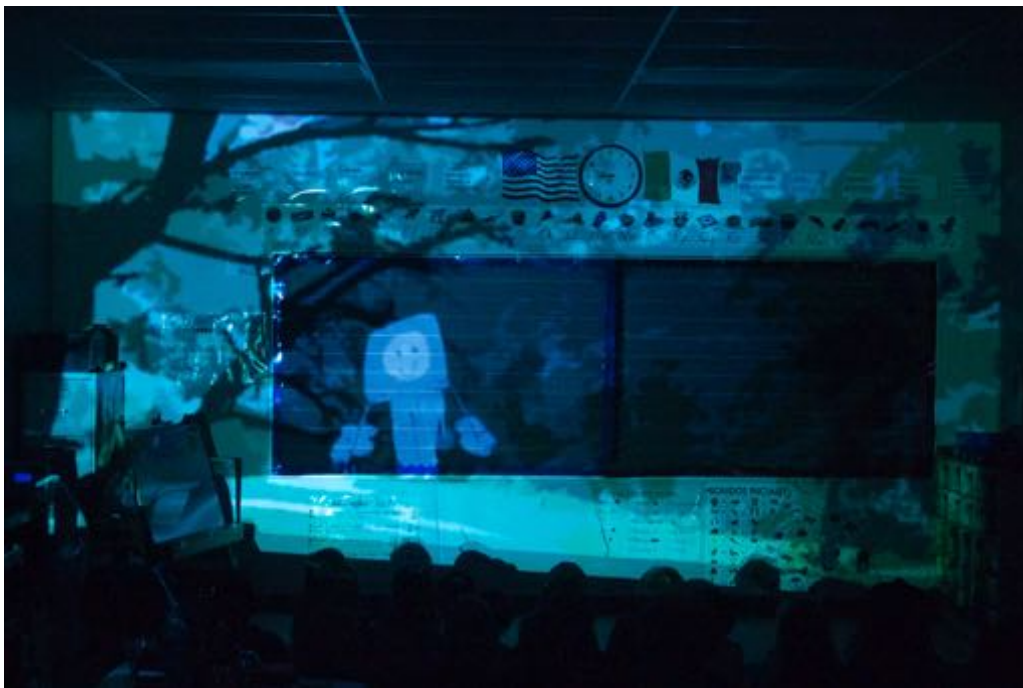
4. Instructions from Daniel Townsend for how to edit the musical store into *EVIL(ish)* at Trinity Episcopal School.

Also, as I mentioned before, in order to try and bring out what I'm hearing, you may have to put some time between kid voice-audio clips, or bring them closer together. Also, you may have fade out/in, or loop the audio tracks I've provided. Use your best judgment and I'm sure it'll be fine ☺

Intro/Narration ("Good king" - "Sweetie")	0'05" – 0'22"
Good Job ("...When the Dragon came")	0'28"
Good Job 2 ("...Protecting the kingdom")	0'32"
Womp Womp ("...this phase")	0'50"
Overlord ("Evil Overlord!....Will do")	0'56" – 1'21"
Spells ("Veechka!... Encino Dragon!... Lavincimo!")	1'29", 3'22, 4'17"
Spy Convo ("...Inform you on something...On p. 37")	1'41" – 2'09"
Royal Convo ("...AGH!")	2'30"
Royal Convo1 ("Yes! You!")	2'37"
Royal Convo2 ("Don't understand")	2'48"
Royal Convo3 ("Don't wanna be like you guys")	3'01"
Womp Womp1 ("Well, you should")	3'03"
I FEEL EVIL	3'10"
Dragon Theme ("...lay waste on this land... STOP HER!")	3'26" – 4'09"
Lava Monster ("Sweet!..." "Honey...")	4'18" – 4'30"
Intro/Narration ("Honey" ... "Okay, whatever you...")	4'31" – 4'55"
Overlord	5'01" – end

Appendix E: Immersive Story Performance Photos

This Appendix contains examples of the final sharing, Immersive Story Performances at Dawson Elementary and Trinity Episcopal School.



Jimjim's Victory. Dawson Elementary School.



The Lobster's Gold. Dawson Elementary



Butterflies vs. Aliens. Dawson Elementary School



EVIL(ish). Trinity Episcopal School.

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