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Methods and Practices of Teaching Online Theatrical Scenic Painting Curricula

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**METHODS AND PRACTICES OF TEACHING ONLINE
THEATRICAL SCENIC PAINTING CURRICULA**

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Fine Arts in Theatre

in

School of Theatre

by
Madison Elaine Stinemetz
B.S., Northwest Missouri State University, 2017
May 2022

For my mom, Heather Tyler Benson,
Who fed my creative spirit and taught me to go after my dreams.
Thanks for supporting me through all of life's adventures.

“The greatest promise of learning technology is not doing what we have always done better, faster, or more cheaply but rather in providing the kind of learning experiences that would be impossible without technology” (Means, Bakia and Murphy 24).

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LIST OF TERMS

| | |
|---------------|--|
| Asynchronous | is a term in online education that means instruction and learning do not happen in the same place and at the same time. |
| Basing | is “the first coat of paint (after the painting surface has been prepared) in scene painting” (Veaner 193). |
| Budget | is the “amount of a resource needed or available for a purpose. Usually relating to money, labor or time” (Ivey 234). |
| Charge artist | is the person who is often the head of the scenic painting department. This person is “responsible for organizing and managing the painting on a production” (Crabtree and Beudert 25). |
| Color mixing | is a process that takes place when one color is added and mixed with another color to create a different color. |
| Color theory | is a logical structure for using and mixing color. |
| Detailing | is the process of artistically adding decorative details to a painting. |
| Digital media | is digital content “of video, audio, graphical, or textual objects for transmission and playback over computer systems” (Dabbagh and Bannan-Ritland, <i>Online Learning: Concepts, Strategies, and Application</i> 327). |
| Faux finish | a technique is combining paint and varnishes to imitate a surface or material such as wood grain, marble, stone, brick, and others. |
| Fitch brush | a specialty scenic paintbrush made from hog-hair. “The five types are round, filbert, long, short, and herkomer. Used in many techniques and sometimes as an alternative to a household brush” (Skinner 252). |
| Flats | are a wood or metal framework of theatrical scenery that can be covered with a hard-surfaced material such as plywood or with a soft-surfaced material like muslin. |

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| Grid-transfer | is “the process of transferring an image by using an in-scale grid over a drawing and a scaled-up version on a larger surface” (Ivey 236). |
| House paint | a latex-based paint with an acrylic binder that a lower concentration of pigment than scenic paint. |
| Hybrid | is a term in online education that means instruction and learning are sometimes asynchronous and sometimes synchronous. |
| Information age | a historical period that began in 1975 and is continuing in the present. This current era is characterized by the idea that access and control of information is easily available through the use of computer technology as a resource and commodity. |
| Kelvin | a unit for measuring temperature. |
| Keystoning | is “the linear distortion created when a projector is placed on some angle other than perpendicular to the projection surface” (Gillette 585). |
| Kit | is a “package of tools or supplies of specialized equipment for a specific purpose” (Ivey 236). |
| Lay-in brush | a paintbrush that is used for a broad range of scenic painting tasks on large areas of scenery. |
| Layout | is when one “draws the design onto scenery” (Veaner 195). |
| Learning communities | is a “group of people engaging in a collective sociocultural learning experience in which participation is transformed into a new experience of learning” (Dabbagh and Bannan-Ritland 330). |
| Learning management system (LMS) | allows instructors to customize their courses in various ways. These software applications allow instructors to create and deliver their course content, monitor the participation of their students, and assess their students’ performance in the class. |
| Lining stick | is a “guide for drawing or painting straight lines. Lining sticks can be short or very long and are used for painting up or down. They are made from wood that has been |

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| | beveled on the bottom edges” (Crabtree and Beudert 244). |
| Paint bible | is also referred to as a show bible or a show binder. This is a collection of paperwork for the scenic process of a production so that anyone working in the shop has access to the information that they need. |
| Paint elevation | Is an elevation of the scenery for a production that is either painted by hand or digitally rendered to show the color palette and painting styles to be used on the scenery. This elevation is created by the scenic designer and a physical copy is passed onto the charge artist of a production. |
| Pedagogy | is the study of teaching theory and practice. |
| Pounce | is a method of transferring an image by poking holes around the outline of an image, placing over a surface and using dust powder through the holes. These holes will give you a copied outline of the image onto the new surface. |
| Priming | is “the process of preparing a surface to accept paint” (Ivey 237). |
| Sash brush | A flat paintbrush with angled bristles used for fine line work. |
| Scale | a unit of measurement on a scenic designer’s drawing or model that is equal to a unit of measurement in a full-sized finished piece. |
| Scenic art studio | is a specialized theatrical area where scenics finish scenery for productions. Sometimes called the paint shop. |
| Scene shop | is a specialized theatrical workshop where scenery is built or repaired for productions. |
| Scenic artist | is a specialty trained painter who specializes in paint treatments for scenery and properties for the theatre. |
| Scenics | is “a shortened name and general title given to scenic artists/painters” (Ivey 237). |

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| Scenic paint | is a specialty water-resistant paint with a high concentration of pigment and a vinyl acrylic binder. This is a matte paint is created specifically for the intensity of being under stage lighting. |
| Scenic painter | A scenic artist doing simple work, such as laying down a single coat of paint, rather than more complicated painting effects. |
| Set designer | is the person who is responsible for designing the physical environment of a performance. |
| Synchronous | is a term in online education that means instruction and learning does happen at the same place and at the same time. |
| Texture | is “the name for any irregular application of paint or physical application of a three dimensional structure” (Ivey 238). |
| Touch-up | is a quick restoration of a damaged surface. |
| Trompe l’oeil | is a French term that means “to trick the eye”. This paint technique creates “an illusion of three-dimensionality” (Gillette 593). |
| Ventilation | is the exchange and circulation of gasses between a space and someone’s lungs. |
| Video conferencing | is “technology used to connect multiple parties simultaneously in a conference in which participants can see and hear one another and, depending on the software used, share documents or share a whiteboard space” (Dabbagh and Bannan-Ritland, <i>Online Learning: Concepts, Strategies, and Application</i> 334). |
| Virtual classroom | is “a formal online learning environment that mimics a classroom learning environment, without face-to-face interaction. Students in the virtual classroom use Internet and Web-based technologies to interact with professors, classmates, and learning content” (Dabbagh and Bannan-Ritland, <i>Online Learning: Concepts, Strategies, and Application</i> 334) |

ABSTRACT

This research investigates, at the time of writing, the methods and practices that have proven successful or not for teaching online scenic painting courses. Through the grounding offered by the data collected in this survey, this paper seeks to establish a baseline of common methods and practices currently utilized for scenic painting courses in the online learning environment. The purpose of this work is to offer a strong framework for future online versions of scenic painting curricula. The methodology for the data collection of this work included analyzing published topical documents, the examination and data analysis of results from an anonymous surveying of individuals who have taught these types of courses in this format before as well as drawing from personal experience teaching and learning in online environments.

CHAPTER 1. INTRODUCTION

The increased integration of technology in education has led to significant changes to how information is accessed and presented and how learning can take place. It has also led to accelerated growth in online course creations. A modern learner in the information age will learn differently with multi-media models than one who is taught using only traditional teaching models without the assistance of technology. This progressive development and changing pedagogy is transforming the field of education.

Technological progress and technology integration into the education sector occur almost daily. However, the conditions and the need for online course creation were at an all-time high in the spring of 2020. During this time, instructors of in-person learning had to rapidly scramble together online versions of their courses as schools were shutting down due to the pandemic spread of the COVID-19 virus. When schools reopened in a remote setting after the shutdown, instructors faced unique challenges “such as high uncertainty on teaching modality changes, the need to abruptly adapt their lesson plans and teaching methods to remote-learning environments, and rapidly having to adopt new technologies to do so. In addition, teachers have seen their students struggle academically, socially, and/or emotionally with the added frustration of lacking the ability to provide them adequate support due to the pandemic-related disruptions” (Ferdig, Baumgartner and Hartshorne). These things primarily resulted in a poor user experience that did not conclude in expected learning outcomes (Li and Lalani).

However, this was not the only semester where schools were shut down and remote during the global pandemic. As the pandemic continued, instructors were given more time to research and prepare better methods and practices for online course content in the subsequent

online semesters during the global pandemic, resulting in online education serving as the primary method delivery method of the field of education during that time.

While some courses may adapt to an online format more easily than others, skills-based lab classes can sometimes require more brainstorming and problem solving than knowledge-based lecture classes do. This time was particularly challenging for learners and educators in the arts and entertainment field of education. The training programs serving the arts and entertainment industry suffered greatly during the pandemic and its subsequent forced shutdown. The classes of all these various arts are often practical, hands-on teaching models with a mix of theory and lecture, which made the challenge of serving the learning outcomes of these courses while everyone was remote from one another.

The transition to online teaching was particularly trying on design and technical theater classes like scenic painting. Drawing from personal experience of being a teacher and learner of this specific coursework during the pandemic, there are evident existing research gaps for adapting and developing a framework for teaching methods and practices of theatrical scenic painting in an online environment. These existing research gaps are the rationale for creating this study. This paper aims to create a robust pedagogical framework for teaching this kind of online work.

The structure of this thesis begins with pertinent writing regarding the baseline outcomes and course requirements of scenic painting courses. Following is a review of online teaching and learning. To conclude the literature review is a chapter about integrating scenic painting with technology and how that has resulted in the online creations of online scenic painting courses. Finally, these findings are contextualized in the lens of creating a strong framework for this study. Together this trio of work will lead into the methodology of this paper.

The methodology used in this thesis research includes analyzing published topical documents, collecting and analyzing data from a survey, and drawing from personal experience teaching and learning in online environments. For the questionnaire, qualitative and quantitative data was collected through anonymous surveying of theatrical scenic painting instructors who have experience teaching this curriculum online. The knowledge gained from these participants' personal experience will give validity to the study by establishing a baseline of where methods and practices are at during the time of writing and how we can create a more robust framework for this work.

The conclusion of this work will be a direction for further research, implications on this research, a summary of limitations in this study, and a summary of how this thesis research can lead to creating a framework for the future of online teaching of scenic painting curricula.

CHAPTER 2. LITERATURE REVIEW

Baseline Outcomes and Requirements of Scenic Painting Courses

Introduction

Scenics working in the academic world have had to boil their classes down to their core essence to adapt and create manageable online formats for their scenic painting curricula. This work begins with exploring what course objectives, student learning outcomes, and course organization from standard in-person versions of these classes are fundamental to be converted into an online setting.

Course Objectives

The primary course objective for theatrical scenic painting curricula is to provide students with an understanding and practical application of scenic painting used in live theatre performances. These objectives include but are not limited to “developing manual skills in drawing, painting, research, surface treatments, production process, costing and finishes” (*Teaching Remotely: Scenic painting class offers support to students working apart*). In an interview with Diane Fargo, a scenic art instructor, she describes that her teaching philosophy is to “critically improve a student’s visual sensibility with a strong ability to breakdown tasks into doable steps. I also like to engage them in problem solving with the goal of coming up with creative and artistic solutions as a fully engaged collaborator in the process” (Gilda). The course objectives in her statement are to produce versatile students who are adept in breaking down problems into feasible steps to resolve it, students who are adept in collaboration, and students who can tell a story as to how they created something or came up with solutions to a problem in either a group setting or individually. These practical skills are just as important as the manual skills developed from painting in this course.

Student Learning Outcomes

Common student learning outcomes for scenic painting curricula are that students will clearly understand and articulate the vernacular, concepts, and principles used in theatrical scenic painting by the end of the course. Susan Crabtree and Peter Beudert advise that "scenic art class projects should be designed to give the students as wide of learning opportunities in each project as possible" (342). For this reason, projects should include a demonstration and understanding of the approach and processes used in scenic artwork, including multiple layout methods, priming, basing, texturing, and detailing. Students should show evidence of knowledge of health and safety requirements for the materials and processes used in the shop and the work happening around them. Students should also respectfully receive and give productive critical feedback by the end of their course. Students will document basic management processes for costing a show and understand how the production process works for the scenic art department. They should demonstrate an understanding of basic color theory and mixing color. Finally, the student will build a portfolio of work that will aid their continuing education and professional development in theatrical scenic painting.

Standard Course Organization

Most theatrical scenic painting courses are "divided up among demonstration, independent work, and group activity" (Crabtree and Beudert 342). Content is primarily delivered in a mixed form of lecturing, demonstrations, and discussions. In addition, students are assessed with individual and group projects, papers, journals, oral presentations, visual presentations, and participatory class exercises.

Most of the content for in-person versions of this course, outside of theory and research-based student assessments, must be conducted in the classroom because the projects are large in

scale. Often projects are around 3'0" by 6'0" in size or 4'-0" by 8'0" in size, but this will vary by class and institution. Projects of this size with multiple students can be challenging to do in smaller spaces. As this is a specialty lab course that cannot be held in a traditional lecture classroom, students will most often need to use a specifically designed classroom for the kind of work they will be doing.

Standard Requirements: Classroom and Supplies

Standard requirements for in-person scenic painting curricula include the classroom space and environment where an instructor and their students will be painting. This section will describe the ideal components of a theatrical paint shop that scenic instructors would want for their classroom if they were teaching in person. Though this section will discuss an ideal paint shop, things are conditional and different on a case-by-case basis. It is essential to go over the safety guidelines, shop regulations, and course required tools and materials, to figure out how instructors can adapt the coursework to offer the students the best possible practical experience most equitably and safely in their homes.

Space and Storage. The function of a scenics workspace is that it needs to “facilitate efficient painting in safe working conditions” (Crabtree and Beudert 39). Every scenic studio or theatrical paint shop has a different arrangement for its scenic painting space. Daniel Veaner advises that "the location and setup of the painting space greatly affect the scene painter's ability to work quickly and efficiently" (20). A space's layout, storage situation, lighting, electrics, sink, disposal, ventilation, temperature, and airflow are all factors that determine how efficient a space is.

Emma Troubridge and Tim Blaikie propose that an ideal scenic paint shop is a “large, smooth, wooden-floor space devoid of any obstructions such as pillars and low ceilings” (26).

These are physical obstacles that affect the ability of scenic pieces to fit into the shop for painting and the quality of pieces being painted. The most desirable location for a scenics workplace is near a scene shop and the stage. Ideally, the painting area is not inside a scene shop, on the stage, or in a separate building from the theatre itself. Though not ideal, all these situations are commonly found in the industry.

If scene shop workers and painters share the same space, they need to have designated areas for both shops to work effectively, safely, and simultaneously. However, most shops will have severe space limitations, so department heads will likely have to work together to schedule the scenery movement through both shops (Crabtree and Beudert 39-40).

The safest spaces that will create the most efficient work from painters will be in a shop designed explicitly for them. One that is hopefully large enough to fit a full-sized stage drop on the floor with no issues and has space for a painted frame to hang a full-sized stage drop with no issues. Scenics ideally want space for offices, mixing area, storage for finished scenery, spray booths, sink and drying area, hazardous and flammable material, health and safety equipment, and various other storage areas for the tools and materials. If a shop has not been designed explicitly for them, which is often the case, a provided space for the painters needs to be adapted by them to create the safest and most efficient work environment.

When considering storage areas, the characteristics of the stored materials must be taken into account. For example, Hazardous and flammable substances cannot be left out on a shelf in an open area. Shops will need an OSHA (Occupational Safety and Health Administration) and COSHH (Control of Substances Hazardous to Health Regulations) regulated metal cupboard where scenics can store these dangerous substances. Scenics will also need to consider things like premixed paints can be adversely affected by extreme temperatures and should not be put in

direct sunlight. All products used in the shop will have a specific shelf life, and scenics will need to be upkeep when products need to be disposed of.

One must also consider the orientation of storage to specific areas in the shop. For example, scenics will want the washing and the drying storage areas to be in the exact location. In addition, it would be helpful to have a storage rack around the sink for containers, texture tools, and more can dry off after being cleaned. Scenics will also want a space for brushes to hang in the proper orientation as they dry and drip into an area that will not become a slipping hazard.

Scenics will also want to orient the designated paint-mixing area, which should have a large tabletop surface around the shop's open shelving units to store paint and ideally near the paint sink. This area should have access to clean containers and lids, mixing and stir sticks, measuring tools, electric mixing attachments, and whatever else scenics will need to mix their colors for the shop. The mixing area should have good lighting, airflow, regulated temperatures, and be out of direct sunlight.

Hopefully, the paint storage shelving unit is separate from the textures area. Working with textures tends to be messier than mixing paint. Like paint, the textures area wants to be around the sink or an area with access to drainage. Make sure that the drains are clear at all times. Never allow excess textures, plasters, powders, and miscellaneous goops to be drained without capturing excess materials that should not be flushed down the drain. The storage for textures needs to have separate space for wet textures and dry textures. A removable floor surface in the textures area can be helpful when excess textures build upon the floor and it needs replacing.

The United States Environmental Protection Agency, abbreviated as US EPA, requires shops to properly label everything in storage and keep an inventory of items in stock, noting both when it was received and when it was opened. Ensure that if there is a container with a lid, it has a label on both the container and the lid itself so that it always gets sealed with the proper lid. All items need to be appropriately sealed after an individual uses them. Make sure to use a rubber mallet to seal cans and buckets of paint. Suppose scenics find themselves in a particular storage area using specific colors or materials more often than others. In that case, it is good practice to keep those materials on a level where they can easily be seen and accessed, and those rarely used can be higher up. For other questions on bookkeeping a classroom space for scenic painting class, please consult US EPA requirements.

Dress Code. Instructors and students should wear special work designated clothing when they are in a scene shop or paint shop for the classroom space. This clothing should not be loose or anything that an individual does not want to get dirty. The standard attire recommended is a long or short-sleeve shirt (preferably a cotton fabric) and full-length pants (preferably a natural fiber). The workplace can be dusty, and the paint and materials used for this class do not come easily out of clothing, if at all. Monona Rossol, an industrial hygienist, recommends that one washes “these clothes frequently and separate from other clothing – especially separate from children’s clothing” (*The Health and Safety Guide for Film, TV, and Theater* 122).

Individuals should always wear substantial footwear with socks in the shop area. It is recommended that people wear closed-toed, non-slip work shoes or boots. A steel-toed shoe or boot made of leather or a manufactured leather covering the entire foot and a quarter-inch sole is best. In most theatrical shops, individuals will be prohibited from entering with any open-toed shoe, sandal, or dress shoe. People should plan their proper footwear accordingly and replace

their shoes over time. If one gets enough dried paint on the bottom of their soles or wears them out enough, the shoes will have no more traction, and it will be slippery and unsafe to work on shop floors.

If someone has long hair, they should wear it tied back. A ponytail is recommended if that person's hair is above their shoulders. If that person's hair goes past their shoulders, they should wear it in a bun. These hairstyles will keep their hair out of their face, their projects, and from any power equipment they may be nearby.

Working in a paint shop or studio for a classroom is about serviceability, not style. Make sure to leave jewelry, watches, and other accessories at home or put them away after class. People in the shop work around power equipment and do not want to risk getting caught and harming themselves or others.

Some optional dress code items that painters will add to their workwear apparel are pairs of work overalls, coveralls, and aprons. These items can help protect their clothes from getting too dirty with paint splatters but cannot guarantee that they will be protected from the messes that come from working in and around others in a shop.

Personal Protective Equipment (PPE). Personal Protective Equipment, abbreviated as PPE, includes all equipment used to maintain personal safety while performing or while individuals are around someone performing potentially hazardous tasks. Using PPE is essential, but unless properly trained, one could be using it wrong and harm themselves. Therefore, instructors should adequately train their students on general shop safety guidelines and how to use PPE correctly at the start of their class. Training for health and safety is constantly evolving, so instructors and students expect to learn about safety equipment and procedures throughout their entire time working in the classroom. Precautions like PPE are taken in a shop because

accidents, no matter how minor, can result in lifelong and irreversible consequences, including death. The most critical and irreplaceable tool anyone will use in a paint shop is themselves; therefore, everyone must care for is themselves. Therefore, PPE and the health and safety of all individuals in the classroom space should be taken seriously.

One of the PPE provisions that people will often see used in a paint shop is masks being used to breathe safely. These masks include particulate filters and respirator masks for gasses, aerosols, and vapors. Many dusts and chemicals are used in a paint shop that can severely injure a person's lungs, especially after repeated exposure. For this reason, people should always mask up with the appropriate safety device when using hazardous chemicals or around flying particulates. If a person enters an area and sees someone wearing a mask, that person will need to be wearing that same type of mask. That person is not personally using a substance does not mean that they are not at risk of exposure to that substance in that area. There will be more information on breathing safety later in this chapter in the ventilation section.

Everyone will need access to hearing protection when working in an area around noise-producing machinery. Overexposure to loud noises can cause permanent hearing damage. Some recognizable early signs of hearing loss are ringing in a person's ears or trouble hearing after working in a loud environment. However, the signs of hearing loss are not always recognizable or minor. Monona Rossol, an industrial hygienist, warns that loud noise can lead to "increased blood pressure and stress-related illness" (*The Artist's Complete Health and Safety Guide* 35). Two hearing protection PPE that shops should have in stock if people are around noise-producing machinery is earplugs and earmuffs. If anyone must raise their voice during class to be heard over a loud tool, this is a good indicator that everyone in the vicinity should be wearing hearing protection.

Along with hearing protection, all people in the shop will also need access to eye and face protection. Rossol states that "protection in the form of goggles and face shields will guard against various hazards, including impact, radiation, and chemical splash" (*The Health and Safety Guide for Film, TV, and Theater* 52). First, make sure that the goggles and face shields in the shop are rated to "meet the standards of the American National Standards Institute's Practice for Occupational and Educational Eye and Face Protection" (Rossol, *The Health and Safety Guide for Film, TV, and Theater* 52-55). Then, such as the case with most PPE, select the eye and face protection that is appropriate for the hazard in question. For example, scenic painters often need goggles that seal the face. The protection scenics need is usually from chemical splash, dust, and potential impacts. People should look for the marking for ratings on their goggles are MfgZ87 + D3D4.

Individuals will need access to protective work gloves in the paint shop. If a person needs protection from mild irritants, they will need to wear disposable or surgical gloves. If a student has a latex allergy, ensure that the shop is stocked with latex-free disposable or surgical glove options. These types of gloves should never be used for chemical protection. A person will need to wear chemical-resistant gloves when handling chemicals. These gloves are usually made from natural rubber or a synthetic polymer. It is important to consult the glove company's "manufacturer's "permeation data chart" on which type will protect users from specific oils, solvents, corrosives, etc." (*The Health and Safety Guide for Film, TV, and Theater* 52-54). Instructors should consult their students on their allergies before handing out gloves. Many rubber gloves contain latex and other molding products that may irritate the skin. Also, be warned that chemicals can permeate gloves without altering their appearance. People should note if gloves start to deteriorate or change, including observing if the gloves are heating up. If any of

this happens, that individual needs to remove the gloves immediately and dispose of them properly.

Depending on the class scenario, it is not a bad idea for individuals to get a pair of tactical or neoprene kneepads. Sometimes painters run into scenarios where they must work on the floor for an extended time. In these cases, it is helpful for individuals to protect their knees by giving them an extra layer of padding.

Personal protective equipment is obligatory, not optional, when working with hazardous materials in potentially hazardous environments. Emma Troubridge warns that "every process and product to be used must be fully risk assessed, and the correct measures taken to ensure potential risks are reduced as far as reasonably possible" (59). Troubridge does a good job defining risk assessment used in theatrical shops. Institutions are legally required to provide PPE to their workers. If an instructor is unable to provide PPE to their students, they will need to tell their class of any PPE that they will be required to purchase themselves.

Lighting. Seeing and using proper lighting is essential to create safe lighting conditions in the classroom. Inadequate lighting can cause glares and shadowing, which can cause eye strain and accidents (Rossol, *The Artist's Complete Health and Safety Guide* 38).

Apart from the health concerns, it is essential to pay attention to lighting for scenic painting classes because it is integral to the painting process. To produce good work, painters need to be aware of color temperature and light intensity.

Crabtree and Beudert explain color temperature as "the relative whiteness of light measured in degrees Kelvin" (47). The color of light coming from natural lightings such as sunlight will be a higher color temperature than the low color temperatures from the average home incandescent lighting. Sunlight runs at about 6,500 degrees Kelvin, and incandescent

lighting runs at around 2,700 degrees Kelvin (Crabtree and Beudert 47). Stage lighting itself has a particular color temperature range (around 2,800 to 3,200 degrees Kelvin) that may not be equal to the color temperature being used in the paint shop. LED lights run between 2,000 and 3,000 degrees Kelvin and might be the best bet for lighting in your shop in the absence of stage lighting. Altogether, painters need to be aware of color perception inconsistencies created if the lighting conditions and color temperature of the lights used in the shop are different from those used on the finished scenery under stage lighting.

An ideal paint shop will have stage lighting fixtures that best replicate show lighting conditions that will complement the existing light in the shop. There should be intense general overhead lighting. Lights with a natural color filter will "best represent what you see on stage and prioritize your mixing area" (Ivey 75). This filter will allow for a more faithful representation of the scenery under stage conditions. The presence of sunlight and natural lighting in a shop can be unpleasant and distracting. Sunlight makes subtle shifts in color, creates shadowing, bleaches out specific colors, reflects into the eyes of the painter, and causes temperature changes that create varying drying times. Consider diffusing the light coming from windows with translucent shutters or curtains to prevent the sunlight from affecting a person's work.

Sink and Disposal. A good-sized utility sink is one of the essential items necessary for a paint shop. Ideally, the sink should be deep enough to clean large tools, five-gallon buckets, and a backlog of things to clean at the sink that pile up by the end of the day.

The sink should have a tap with hot and cold water. Ideally, it should have a tall faucet that a person can connect a hose to or a commercial kitchen sink pre-rinse faucet with a sprayer. These types of faucets and attachments are helpful when filling and rinsing containers. If

possible, make sure that these faucets can move so that it is easier to handle large containers in the sink.

Most paint used for scenery is made with water-based vinyl acrylic, which can stick to surfaces, clog pipes, and harm the sink. For this reason, it is helpful to add a screen or a filter to prevent the drain from getting clogged up with paint or other materials that should not go down the drain. If the straining material is clogged up with large objects, it can prevent water from draining quickly. This screen or filter will need to be cleaned out and replaced as needed. It is a good idea to get into the habit of emptying the filter and rinsing out the sink after every use. A filter will prevent the backsplash of paint in the sink from drying and caking up on surfaces and ensure that whoever uses the sink next is not cleaning up a mess they did not create themselves. In best practice, paint of any kind should never be dumped and disposed of down the sink.

In addition to storing materials, as discussed earlier, the scenic artist's responsibility is to dispose of paint and all materials properly. Scenics need to be vigilant to dispose of materials correctly because some products are dangerous and harmful to the environment and themselves. Scenics need to pay attention to the safety data sheets that come with a product for instructions on how to dispose of a product and check if their institution already has systems and regulations for disposal. In some instances, a scenic's responsibility is to get a material to a professional waste handler to dispose of it properly. Scenics also need to pay attention to where they are located and if there are any rules and regulations for disposal according to the area they are working in.

Ventilation. Sufficient industrial ventilation is necessary for a working paint shop because people should not be breathing anything in but air. If a person smells something, they are breathing something in that is not air. There are very few substances other than air that are

healthy or neutral to breathe into one's lungs. If a person sees dust particles floating in the air or distortion waves from heat or fumes, they are breathing in chemicals. In some instances, there are no smell or sight indicators that someone is breathing in hazardous chemicals. Individuals need to watch out for their health the best they can, including being aware of any substance that someone is opening or using around them.

If the paint shop classroom is near a scene shop area, people are at risk of breathing in dust particles. Hopefully, there are measures in place to reduce dust particles, such as a dust collection system hooked up to the power tools. This system essentially acts as a vacuum cleaner and collects dust from the air around the tool as it is created. Ensure that the dust collectors in the shop are being emptied regularly and as needed so that it continues to suck up the dust. Dust is bad for people's lungs and will stick to the painting projects. Keep the painting area, the projects, and people's bodies clean from those particulates.

Eric Hart, a theatrical properties artisan, explains that “the extraction of fumes works on the same as the principle of dust collection” (32). Hart refers to how fume collectors, such as spray booths or fume hoods, act similar to the dust collectors mentioned above. Fume hoods and spray booths are considered local exhaust ventilation. This type of ventilation contains fumes, vapors, and gasses, by exhausting them away from the shop and expelling them into the outside air. Careful consideration must be made with the placement of extractors because the dust and fumes must be dispersed somewhere outdoors. Extractors should not be placed in areas where bystanders could be exposed to harmful fumes and where air pollution does not meet national environmental standards.

Dust and fume extractors are not enough protection to completely ventilate a space for an individual's lungs. If the shop does not have access to local exhaust ventilation or a person is

using products that should not be used in an indoor ventilated space, the next bet is to work outdoors. The most prominent ventilator people have access to is the outside because the hazard can be dispersed into a considerable quantity of air. Like the indoors, an individual will still want to wear an appropriate mask when using products, even in an outdoor space. The outdoors does not make a hazard safer; it reduces individual exposure by disseminating it into a larger body of air. People will need to be aware of any bystanders who could come near them while working in an outdoor area and be aware that some chemicals are highly toxic to the environment.

Whether a person is working with hazardous chemicals in an indoor space with local exhaust ventilation or outdoors, they will still need to wear proper PPE, such as dust masks and respirators. It is the best way to fully protect oneself from harm.

Temperature and Airflow. Both temperature and airflow are not always in a person's control. Whether in an interior environment or working outside, one needs to pay attention to unpredictable factors that could control drying time and affect paint mixtures. Pay careful consideration to the conditions and whether the environment is hot, cold, dry, or wet. These factors will all affect working conditions for the physical labor, the products an individual is working with, and the projects they are working on.

Tools and Materials. Like many art and design courses, the tools and materials necessary to take theatrical scenic painting courses can be costly relative to the person. The cost is especially high if instructors and institutions do not have the resources to provide students with any tools and materials. Whether institutions and instructors have the resources to provide students with resources or not is entirely conditional. Some courses have kits that can be purchased or borrowed at the start of class that will have a sum of all materials necessary to take the course. Educators should be upfront about the cost necessary to take the class at the

beginning of their course. This section will break down all the tools and materials necessary to take a class as if the instructors could not supply their classes with anything themselves.

The most significant expense of taking a scenic painting course is purchasing the paint brushes. Paint brushes are the most used tools in scene painting, and each person should have their own set of these tools. Typical suggested brushes for scene painting classes are a 7-piece fitch brush set, a couple of 3-inch or 4-inch lay-in brushes, and a 1-inch sash brush. The fitch brushes are specialty scenic brushes that will need to be purchased from online technical theatre supply stores, while the other brushes can be found at hardware stores. These brushes can add up to about two hundred dollars, depending on the supply chain and the individual's brand. Please make sure all students label or personalize their brushes so that they do not get mixed up. For example, students can purchase many kinds of colored and decorated tape that could be put on the ends of their brush handles to personalize their brushes.

The class participants may also need to purchase scenic paint. Those material costs may be passed on to students for programs that do not have materials budgets or class fees. It is quite expensive for a student to purchase a full palette of scenic paint, even in limited quantities. The paint kits from Rosco are around forty dollars for four 6-ounce jars of paint. A gallon of scenic paint from online technical theatre supply stores can range from forty dollars to ninety dollars depending on the supply chain and the color of paint needed. To help reduce costs for the students, it is recommended that instructors have them either purchase small paint kits from the company Rosco's online store or have each student purchase a different color gallon of scenic paint. If every student purchases a different color of scenic paint, then all of those colors can be added to a class stockpile, and everyone can have access to the colors they need for their projects. Though using scenic paint is ideal for a scenic painting class, many instructors opt to

use flat interior house paint for their classes. This will be a cheaper option for students if instructors have them each purchase a gallon of paint for a class stockpile.

It would be helpful if instructors could get the scene shop department to build lining sticks and project flats for their class. Lining sticks are a “guide for drawing or painting straight lines. Lining sticks can be short or very long and are used for painting up or down. They are made from wood that has been beveled on the bottom edges” (Crabtree and Beudert 244). If the option of the shop building lining sticks is not available to the class, measuring sticks can be used as a cheap alternative. Flats are a wood or metal framework of theatrical scenery that can be covered with a hard-surfaced material such as plywood or with a soft-surfaced material like muslin. Flats are one option that classes use to serve as the painting surfaces for the class projects. If that option is not available for painting surfaces, canvases, small pieces of hardboard Masonite surfaces, and Bristol board pieces of paper are alternatives. These smaller alternatives can vary in size as needed and as available to your students. These options can also be used for both in-person and online instruction of the course.

Another aspect of the tools and materials needed for these courses is texture tools. These could be purchased items like feathers, sea sponges, wood grain rocker tools, and other miscellaneous tools. Not all texture tools that scenics use can be purchased. Scenics are renowned for making up and repurposing products. When the item they need to create a texture cannot be bought, they make them. Instructors should let their students know if there are any objects they would like them to collect to make unconventional texture tools during their class.

Individuals will need containers with sealed lids for the paint mixing in the course. These do not have to be fancy containers purchased from the store. Any containers will work. This is an

excellent opportunity to reuse plastic food containers. Each student is responsible for cleaning, storing, and maintaining their paint and tools in many classes.

Other miscellaneous tools and materials that round out a scenics tool kit are painter's tape, stir sticks, yardsticks, measuring tape, chalk lines, vine charcoal, markers, and more. Instructors should be clear with their students if any of the materials previously mentioned can be provided and borrowed from the paint shop. Instructors and institutions may not be able to provide big-ticket items like brushes and paint, but if there are any lab kits that instructors could put together for students to check out, that would be helpful to them.

Conclusion

It is important to understand how these classes operate in-person in order to convert it to an online model and class environment to best mimic the pedagogical goals of in-person versions of the class. Online course design is more than transferring content to an online setting and attempting to replicate in-person classroom sessions. This design involves redesigning content for an online environment and integrating technology intentionally. It also includes developing structure and support to promote self-directed learning, rethinking course goals, learning outcomes, class organization, and considering the required class tools and materials that students have in their at-home space for classwork.

Online Teaching and Learning

Introduction

Scenic painting courses are part lecture work and part lab work, meaning that this is both a skills-based class and a knowledge-based class. This subchapter will explore what it takes to teach a course online. It will also explore practical barriers teachers face when teaching

online, the technology it takes to teach distance learning, and do a deep dive specifically in teaching practical, skills-based classes online.

Technology of Distance Learning

Technology should be used purposefully in distance learning, not as a novelty. The driving force for an instructor's media and technology choices should be pedagogical, not whatever is most convenient. To use media wisely, one must decide how they would like to design their coursework and facilitate their student's learning. This course design can be affected by whether instructors are doing synchronous or asynchronous activities, the institutions learning management system, whether instructors choose to use one of these systems, and how instructors present and build course content such as videos, slideshows, and documents. This section will break down course management systems and technology options for the online classroom and give tips on utilizing them best to promote accessibility and assist instructors in structuring their courses.

When instructors begin their research on technology options for distance learning, they should try not to stretch themselves too thin by trying to master multiple online platforms all at once. First, consider what support the institution offers both instructor and the students, and then spend a little bit of time and test out the options. Next, instructors should figure out what they do or do not like about the program and whether it is helpful to them and worth their time or not. Once they figure out what they like and what is worthwhile, they should invest their time in learning only one or two at a time. Instructors will burden and overwhelm themselves if they try to teach themselves Zoom, YouTube, Microsoft Teams, Microsoft Office, Google Slides, Google Classroom, and more, all at once. Instead, instructors should focus their time and energy on finding what is best for them and work on improving their abilities with that program.

Learning Management Systems (LMS). Most institutions subscribe to specific learning management systems that allow instructors to customize their courses in various ways. These software applications allow instructors to create and deliver their course content, monitor the participation of their students and assess their performance in the class. Examples of learning management systems institutions and instructors may use are Moodle, Canvas, Google Classroom, and Blackboard. Each of these software applications lends itself to planning, implementing, and assessing a student's learning process.

How educators interact with learning management systems depends on their level of technical literacy and their academic discipline. Institutional training sessions and school-sponsored workshops play a role in determining an instructor's willingness to adopt an LMS and their comfort level with the technology. To ensure successful integration of an LMS in the classroom, instructors must be given the time to learn, familiarize, and practice using the educational technology.

Students are more likely to engage with their courses if instructors are active participants in their learning process and if they create meaningful and efficient course content and delivery. An LMS offers various features and tools that grant instructors opportunities for content delivery, course organization, and instructional support. These features serve as an educational and interactive aid for both instructors and their students. Some examples of features that LMS offer is assessment measures such as the ability for students to submit work and instructors to grade it and offer feedback. They also offer content development and delivery options such as learning resources and links to internet resources. Multiple communication features support both asynchronous and synchronous instruction, such as announcement areas, email and instant messaging capabilities, and discussion forums. These features are only some of LMS's tools to

enhance the learner experience. The frequency, organization, and use of these features and resources will affect student participation and success in the LMS virtual classroom.

Learning management systems are used for fully online instruction and to create blended learning with in-person courses. For online education, LMS systems serve as the platform for how instructors will create and deliver a course and manage the learning in their virtual classroom. Online instructors should do their research to create the most user-friendly, web-based environment for their classroom, which often includes adopting an LMS system. Instructors should start their investigation of learning management systems by checking out the resources, training, and programs offered to them by the institution that they work at. Then, they should look at their syllabi and figure out how to build the most efficient versions of their class in an online setting with the resources available to them.

Video Conferencing. If instructors are searching for a video conferencing option that can host synchronous class discussions, lectures, and demonstrations, they can opt for a program like Zoom. According to the company's website, when this paper was written, if one does not have a subscription to Zoom, it costs \$149.90 for a license to the basic plan (*Choose a Plan*). However, an institution may have an educational license for instructors with administrative privileges for this web-conferencing program. If not, instructors can hold meetings up to forty minutes long with three to one hundred people on zoom for free. Once the time limit is reached, everyone will be kicked out of the call. If none of those options for Zoom are feasible for the instructor, there are other video conferencing programs such as Kaltura, Google Meet, Microsoft Teams, Skype, and more. When researching video conferencing programs, instructors should know that not all options are free and vary in their features.

The nice thing about video conferencing programs like Zoom is that instructors have the option to record meeting sessions and upload the recording to the Cloud. This digital server will store an instructor's files. In addition, the server will allow their students to playback recordings and catch things they may have missed live. Instructors can also record themselves creating lectures or demonstrations for asynchronous activities. Once an instructor has finished their recording, there are features within the program that allow editing on the file, and that can provide an audio transcript of the file.

Video conferencing will also let the instructor, or others, if they permit them, share their screens so that they can share content such as documents, videos, or slideshows that they may have made for the class. Screen-sharing is a valuable tool for collaboration, and sharing by the instructor and student alike helps one communicate quickly and efficiently.

Another helpful tool that video conferencing offers is various non-verbal communication methods. For example, there usually are instant messaging features where individuals can have private or public chats. This tool is often used to ask questions during lectures without interrupting the speaker, have side conversations if needed, share files with individuals or groups, and can be used to take attendance at the start of each class.

To take attendance, some professors start the class with a question, and if students are present, they can answer in the chat and get credit for attending the class that day. It is good to have a method like this to take attendance if instructors use a video-conferencing app because it allows students to turn their cameras off. There will still be a black box with their name underneath indicating that they are on the call, but it is possible if instructors have a camera optional policy that they may not see their students' faces during class. Suppose a student does not show their face during class and does not participate or engage in class that day. In that case,

instructors may miss them while they are taking attendance, especially if many students have their cameras off. Instructors are lecturing in front of a black void instead of a collection of their student's faces.

Before instructors start teaching with a conferencing app, it is important that they make decisions and create policies for attendance, what to do if a student has internet connection issues, whether they are going to record calls or not, and whether the cameras need to be on and so forth. It would be helpful for the students if all these policies were listed in the syllabus at the beginning of an instructor's class. These policies will directly affect an instructor's online teaching experience and how their students learn, perceive, and participate in the class.

Slideshows, Documents, and Videos. Sharing slideshows, documents, and videos are all tools that can support diverse learning styles and abilities in the classroom, depending on the accessibility levels of the design. This section will briefly go over some slide etiquette for creating and using this content to improve the accessibility factor in a course. Make sure to check with ADA and instructional requirements before posting any of this media in a classroom.

The purpose of using a slideshow in the classroom is to serve as a visual aid for an instructor's verbal lecture. This visual aid should contain multiple slides of pertinent material for lectures and lesson plans. This material can consist of text information, graphs, images, videos, sound clips, and music. Slideshows are beneficial to use in both in-person and online formats because it gives students an alternative way to access course content and follow along in the class. If instructors are going to build slideshows for their class, they can use programs such as Microsoft PowerPoint, Google Slides, Keynote, Prezi, Canva, to name a few.

There are basic design principles for building a slideshow that will help instructors improve the accessibility of their courses. For example, instructors should choose a slide design

with simple fonts and organization to create clear readability. The design should also have a strong contrast between text and background. There are often prebuilt placeholders to enter text information on these slideshow programs (Nilson and Goodson 199-200). Make sure that the title area for each slide clearly articulates the content of a said slide. This practice will help focus a student's attention. Be careful not to overload the slides with too many words and lines of text. Slides should be kept short and to the point so that the audience does not feel overwhelmed. If instructors use images, photos, tables, graphs, and other non-narrative elements on their slides, they will need to have alternate tags or text (Nilson and Goodson 188). Alternate tags or text means that instructors will need to add a long description for an image if it cannot be viewed. If an image file does not load or a student turns off image viewing, this alternate text will appear in its place. Alternate tags and text also allow image content to be accessed by people who are blind or have a visual impairment. Instructors should also avoid using animations or auto-timers on their slides. These will disrupt the flow of the presentation, be dangerous for students with seizures, and the pace that the presenter sets may not match students' paces for processing information. After completing the presentation, convert it to a PDF file if the program allows. This file will allow both instructors and students to create a physical copy of the presentation for their notes.

The purpose of scanning or creating documents for the classroom is to serve as a readable structure for course material and assessments. This visual aid can consist of text information, images, graphs, and more. It is beneficial to use online because instructors cannot hand out document forms physically to hand out to their class. If instructors are going to build documents for their class, they can use programs such as Microsoft Office, Google Docs, and Dropbox Paper. Whether created or scanned, these documents should be exported and saved as a PDF

before being sent out to students. A PDF file is generally faster and easier to open. Some instructors send their students both a document in the original file and as a PDF because students may be able to take notes easier in an original file than they can a PDF.

There are basic design principles for building a document that will help instructors improve the accessibility of their courses. For example, to create clear readability, instructors should choose a simple, black font such as Times New Roman, Arial, and Helvetica (*Typefaces and Fonts*). These “fonts are easier on the eyes in computer displays because of their simplicity and clean lines” (Nilson and Goodson 187). Also, when considering fonts, make sure to use a limited number of typefaces, fonts, and font variations. This means limiting the boldface, italics, capitalizations, color changes, and highlighted text because the font variation requires cognitive effort and time to decipher, creating accessibility barriers for readers. All documents should be built with clear organization, emphasizing critical information, and including only necessary content. Just like slideshow design, if instructors use images, photos, tables, graphs, and other non-narrative elements on their slides, they will need to have alternate tags or text (Nilson and Goodson 188).

It is important to note that some scanners produce images when scanning documents rather than readable text. Therefore, screen readers cannot read the scanned images. However, some steps can be taken to increase the accessibility of the scanned document if the scanner being used does not have settings to produce readable text. The program Adobe Acrobat Pro DC has a tool called Accessibility Check that makes this a quick process (*Create and verify PDF accessibility (Acrobat Pro)*).

Creating videos is a way instructors can add a personal touch to their online course, but there are also plenty of good instructional videos posted online through a web search (Nilson and

Goodson 200). Instructors should reserve longer videos that they create or select for something critical to the course material and engaging to their students. Provide captions for all of the audio elements. If there is no way to provide captioning for a video, instructors should provide a transcript to their students.

Whether an instructor is using slideshows, documents, or videos for their course content, they will need to make sure that they are using media wisely and considering how to create equitability in the classroom with a medley of students of various abilities. Media enhances an instructor's presence, course content, and learning activities and should not hamper a student's access and ability to participate in the course successfully.

Practical Barriers to Online Teaching

Pedagogy and Technology. To have good pedagogy online, instructors must “addresses the needs of a changing population with diverse learning needs in an environment with multiple means of connecting learners and instructors” (McGee, Carmean and Jafari xi). New learning interactions that were not perceived as possible before now can now be facilitated because of technological advancements and increased competency with using technology (Dabbagh, *Pushing the Envelope: Designing Authentic Learning Activities Using Course Management Systems* 172). In an article, Mabel CPO Okojie, Anthony A. Olinzock, and Tinukwa Okojie-Boulder describe that “Technology used for teaching and learning should be considered an integral part of instruction and not as an object exclusive to itself. Viewing technology integration from a wide perspective will provide teachers with the necessary foundation to implement technology into the classroom more successfully” (66-71).

Teaching today requires the knowledge of how technology is being integrated in education and how that knowledge integrates with an instructors course content. Essentially, an

instructor must know the content they are teaching and how they want to present that content. This pedagogy forms the foundation to integrate technology purposefully and effectively into the virtual classroom.

Time Commitment. Online teaching is labor-intensive and can take more time than a face-to-face class (White and Weight 77). The more experience an individual has teaching online, the less time it will take to create and teach a class, but a learning curve is associated with teaching in a digital format that takes a big-time investment when starting out. This time commitment will vary depending on the kind of teaching that one wants to do. It will be challenging and rewarding if one embraces it and puts in the work to teach a practical online course. When individuals are ready to commit, they should do the research they would typically do with in-person learning and adapt what they need to for their virtual classroom. The next time that an instructor teaches an online course that they have created, it will not have as long of a time commitment as it did the first time that they taught it. However, they will be responsible for taking the time to modify the course that they created in order to stay up to date with the latest materials and technologies.

It is important to note that managing time is a decision-making process. It is an individual's responsibility to establish reasonable expectations for their abilities and then fulfill them. Instructors should use their course syllabus to indicate basic classroom expectations and the time commitment required for their students to pass the class successfully. For example, students need to know how many times a class needs to meet online if it has synchronous instruction, how often they need to respond to discussion forums, and when due dates are for assignments. They also need to know when the instructor's digital office hours are, when the instructor's email hours are, and when they should expect to hear back from their instructors.

These things can all be outlined in the syllabus and will set appropriate and clearly defined expectations for the students.

The time required to provide effective feedback to students is substantial. If instructors are having a written exchange with a student, they need to take the time to write to them as clearly and non-ambiguously as they can. They need to be careful to avoid misunderstandings or confusion that can affect a student's readiness, retention, and perception of online learning in their class.

Student Readiness, Retention, and the Perception of Online Learning. Adaptable learning environments will enable students to engage with the course material. Julie Williams suggests that all students will vary in their "personal, idiosyncratic learning styles, so the use of a variety of formats that store information and enable its processing – alone or in groups – is essential" (36). Adaptable learning environments is a flexible "learning process in which the content is taught or adapted based on the responses of the students' learning styles or preferences" (El-Sabagh). This customizable content and adaptable environment are used to improve the quality of online learning (El-Sabagh). Online courses with student-centered approaches to learning have led to a perception of flexible learning as "a movement away from a situation in which key decisions about learning dimensions are made in advance by the instructor or institution, towards a situation where the learner has a range of options from which to choose" (Collis and Moonen 218).

A student's perception of online learning will shift if they lack technical support. Therefore, the first thing that an instructor should do in an online course is to assess their student's computer competence and prerequisite skills. This surveying will establish a baseline for where their students are in their technical abilities and how much assistance the students

might need throughout the semester. Nada Dabbagh and Brenda Bannan-Ritland warn that it is never safe "to assume that a student who enrolls in an online course understands how to use any form of technology to support their learning" (55). For students to have a meaningful learning experience with the course matter, they need to have clear instructions for navigating and operating the virtual classroom. Students also need instruction on any other technical programs instructors use for the learning in their class, including making sure that students know how to use email. Technical support outside of the primary teaching intercession can be offered in technical support offered by the institution, digital office hours, digital one-on-one supplemental instruction, a teaching assistant the students can reach out to, and more.

Accessibility and Accommodations. The Office for Civil Rights (OCR) in the US Department of Education (UD) states that under "the Americans with Disability Act (ADA) of 1990, Section 504 of the 1973 Rehabilitation Act, all individuals should have equal accessibility -- including online instructional opportunities" (*Protecting Students With Disabilities*). In addition, the "ADA requires that all online sources be fully compliant from the start of the course" (*Protecting Students With Disabilities*). On top of ADA requirements, many institutions have developed specific accessibility requirements for quality online learning and teaching. However, it is an instructor's responsibility to be fully compliant and ensure that all their students can participate equally in their online courses. Students who do not require accommodations will also benefit from accessible design practices. Therefore, instructors should put in advanced preparation to raise the accessibility value of their courses and make sure that the materials are maximally usable for all learners regardless of their abilities and experiences.

Unless a student does not have access to it, technology itself does not inherently present barriers to access in education, but the choices instructors make can. Therefore, instructors need

to make informed choices for their course content. As educators, Nilson and Goodson recommend that to "make a clear path for access, you need to present course materials in ways that students can perceive them, typically allowing them to see and hear the context" (187). This recommendation may not sound complex in theory, but there is more to consider when addressing multiple accessibility barriers one may face when designing their course materials.

To organize an online course, include all the major course components directly on the home page. This page is where instructors hope to create a positive first impression with their students. The course site should be built with a consistent, legible structure and organized in a logical order. Only meaningful content should be presented in the course. It is helpful when designing course content that instructors do not show the entire course at once. Instead, present the content of the course "in digestible, manageable, and accessible chunks" (Nilson and Goodson 185). When a new piece of content is revealed, the students will know that the newly presented content was purposeful and essential to pay attention to. A solid way to enhance a student's learning is to "use images and other visual elements to support learning" (Nilson and Goodson 185) . All visuals should be designed with clarity and simplicity. Later in this chapter, there are guidelines for specifics visuals and course content in the technology section.

The above includes only a few basic recommendations and strategies for designing a course with accessibility. Instructors need to make sure to do the research and take the time to raise the accessibility value of their online course materials so that every learner in their virtual classroom has an equitable education and experience (Baule 50-56).

Online Visibility and Feedback. Although online classes can be self-directed, students still want the guidance of their instructor. Frequent and consistent feedback to the students in the class as a whole and individually is crucial. A prompt response time is essential to guide students

and teach them the course material in depth. Timely feedback reassures students that the instructor focuses on them and invests in their learning. Feedback, however, is not the only thing that students require to feel their instructor is visible in their learning.

The visibility of an instructor in in-person classes is easy to measure because students can "see" their instructor in the classroom. They "see" and hear their professor engaging in the class, acknowledging their students, providing feedback, and actively reassuring them that they are progressing appropriately. This visibility is harder to measure in an online setting where students cannot necessarily "see" their instructor. For example, if students only hear input or discussions from their instructor once a week for synchronous or asynchronous instruction, they will not perceive their instructor as "visible". The sparseness of instructors interacting with their students discourages them and will affect their learning process (White and Weight 59). Instructors should have multiple points of interaction with their students throughout the week. Instructor active online engagement with the course will have a positive resolution on the class and will make the class more interactive and rewarding for their students.

Reducing Isolation. There is a social context to learning, and individuals' isolation in an online format can hinder a student's performance in the classroom. Most students benefit from meaningful interactions with their classmates. Students need the reassuring presence of their peers whom they can exchange ideas and discuss coursework with through the progression of the class.

One-way instructors can help their students develop a sense of belonging in the online classroom is to design their courses with collaborative activities and tasks. These collaborative projects will help foster learning communities where students can get to know one another and

develop relationships. These communities can help manifest self-confidence, motivate individuals, and create collective pride being in a community.

Another way to reduce isolation in the classroom is to have regular synchronous content delivery such as live lectures, live demonstrations, and live discussions. Realized interactions like this are another way to assist in forming learning communities with the students.

Along with these regular synchronous chats, proactive and reactive tutoring from the instructor will help support their students throughout their training and help reduce the isolation between the individual students and the instructor.

Reframing Thinking. Online instruction presents the opportunity to reach a broader audience who may not have had access to this course before. This type of instruction takes a different method of planning than in-person instruction requires. Therefore, instructors need to adjust their rigor and expectations for training in an online environment. This means adjusting students' learning outcomes and goals with what is possible to teach them in the course in an online format. Learning theory is not a replacement for hands-on training. Figure out what adjustments to the course are possible and what can still be taught and brought to the table of value for the students so that they can still experience a worthwhile course.

There are some specific tasks and learning that cannot be done in a distant environment. The inability to teach specific skills is a significant issue that is still being investigated and troubleshoot. This issue is hugely frustrating for instructors who teach practical courses that require hands-on training. Above figuring out how to teach a practical course material, an instructor needs to ensure that projects in online environments are equitable and that students are working with the same materials and rigor.

Another limitation of online teaching is that it is hard for teachers to assess students' understanding during live lectures because there is less visual cue available to measure a lack of attentiveness when lecturing online (White and Weight 57-72). Even if instructors record lectures and provide them to the students for later, students may not listen to the lecture closely in a recording. As a result, there is no sense of continuity of lecture, and one cannot tell if their students are concentrating and paying attention.

Online Teaching Practical and Skills-Based Classes

There is no exact formulated process for teaching practical and skills-based courses online. This section aims to briefly provide options to instructors for organizing a course and considerations instructors should take when adapting coursework to a home-friendly setting.

The first step that instructors of online instructors need to figure out how they are going to organize their course. Online courses can be done with synchronous, asynchronous, or hybrid instruction using a mix of both teaching options. Each method of instruction will come with its own sets of benefits and challenges in an online setting. Instructors may choose to engage their students with any of these three options “depending on the course content or material that needs to be taught” (*Protecting Students With Disabilities*).

Synchronous instruction is a way to form “immediate personal engagement between students and instructors, which may create greater feelings of community and lessen feelings of isolation” (Cohn and Seltzer). With synchronous instruction, instructors can have more responsive exchanges with their students, which can help in preventing miscommunication and misunderstanding. Online synchronous instruction will mimic in-person instruction the most. Content delivery for synchronous online instruction, like in-person instruction, can include a

mixed form of live lecturing, demonstrations, and discussions. If instructors are going to do live demonstrations of skills, it would be helpful to have multiple cameras that can show their students multiple angles of the demonstration. A single-camera may not get the full image of something an instructor is trying to teach.

Asynchronous online learning means that the instructor and the students engage with the course at different times and in different spaces. This form of student-centered learning requires a high level of commitment and independent learning skills. Students can watch recorded lectures and demonstrations that the instructor will need to prepare ahead of time. Recorded sessions require increased cognitive engagement because students have time to digest the session content and can rewatch sessions as needed. Discussions can be held on online forums, and group work can happen outside of instruction when it best suits their group's schedules.

A hybrid of synchronous and asynchronous instruction might be the strongest option for practical and skills-based teaching and learning. If instructors record live demonstrations from synchronous instructions, the students can reference them later. Students may not be able to do the work instructors teach in class after a live demonstration, so a recording would be an excellent way to reference the instruction when working on the practical application of the teaching outside of class sessions. Another option is that the class could be asynchronous but have routine synchronous meetings where the instructor and students can check in with one another. The purpose of this check-in could meet for oral presentations and visual presentations or meet to respectfully receive and give productive critical feedback on projects upon completion.

Once an instructor figures out which option of organizing their course will work best for their class, they can start to adapt their projects. For this step, instructors will need to consider the space their students will be learning and the materials they will have access to from their online learning spaces. These factors will show how instructors will have to adapt the coursework to offer the students the best possible practical experience in the most equitable and safe manner in their online learning spaces.

Conclusion

There is no simple system for teaching an online class. This subchapter aimed to offer instructors insight on online teaching and learning and how to build an overview of general information about online learning. Designing a course online is an opportunity for educators to get creative with the course content, activities, and student assessment measures they are choosing and how to structure the most efficient pathway to learning they can for their students.

Integrating Scenic Painting with Online Teaching

Introduction

To understand how to teach scenic painting online, scenic instructors need to first learn how the theatrical scenic painting industry has transformed during the information age and how those transformations have led to the beginning creations of online courses. It is also important for scenic instructors to study new technology used in the industry because some technical items that scenics use eventually become difficult to obtain and procure. When this happens, instructors need to look for new technology and methods for their instruction.

Brief History of Scenic Painting in the Information Age

There have been astonishing technological leaps forward with stage design in the twentieth and twenty-first centuries. Some of these innovations include introducing cameras and cinematography, computer-aided drafting and software, digital media, photo editing software, graphic design software, the creation of the internet, and more. These new technologies allow the scenic designer to evolve ways of visually communicating the world of their play to their scenic artists to recreate for the stage.

Once a scenic designer is finished with their research and paint renderings, they will send these items to print from an inkjet printer or a plotter printer. Once they create a print that matches their expectations for color, they will send the physical copies to the scenic art department to use. The physical copies of the paint renderings will be used as a reference to create a full-scale painted replica of the design for a show. In academia, the instructor will take the place of the scenic designer and produce copies of physical paint renderings for their students. Paint renderings for productions and the research gathered from the scenic designer will be stored in the information section of a show binder.

Jennifer Rose Ivey, a scenic instructor, defines that a show binder, often called the paint bible or show bible, is where “all of the documentation of processes has a single home to be easily referenced and understood” (185). The purpose of a paint bible is to make sure that every artist on the scenic team, including the team that does touch-ups, has access to the information they need. The information section usually starts with a contact list, a shop build calendar from the technical director, a deadline list created by the head of the paint shop, often referred to as the charge artist and production meeting notes. Next, it will have the research, drafting, and

renderings from the scenic designer and any further research that the charge artist has done on enhancing the surface treatments. Finally, all the previously listed paperwork should be printed.

The next section of the paint bible is the planning section. Here a charge artist will create a standard document for to-do lists, swatch sheets, and texture sheets. To-do lists include a collection of tasks for that day that is organized by prioritization. These lists will keep charge artists on track and help organize tasks for various scenics in the shop. A swatch sheet shows the formula used to mix colors for a production. This document will include a swatch of the color, the title for the mixed color, and the recipe used to make that color. Some shops will create a swatch sheet on index cards while mixing and experimenting, called color swatch cards, and then transfer the final information to the swatch sheet for the shop's documentation. A texture sheet is similar to a swatch sheet because it documents the formula to mix textures in a show. Having a standard digital template used for each of these documents that can be printed out and then filled out by hand by various artists in the shop will help the flow of organization in the bible.

The next part of the planning section is created with another helpful information age innovation, a spreadsheet program such as Microsoft Excel. This program has made it easier for managers of theatrical paint shops to catalog the costing of shows. When creating a workbook to cost a show, scenarios should have sheets for the budget, process list, material list, and schedules.

Start with making a comprehensive list of all the scenic components of the show that will need to be painted. Next, figure out the amount of surface area that will need to be covered. This will give a good grasp of the amount of material that will need to be purchased. Then figure out the paint and surface treatment process. Once one knows the process needed to paint the scenic

components, one can budget how much material they need to cover those units. Spreadsheet programs can calculate values of mathematical formulas and input those calculations into cells. This function can assist scenics when they are crunching numbers for their budgets. Once they budget the materials and the process, they can start calculating the labor hours necessary to complete the treatments for the show. Labor budgets need to factor in breaks, dry time, prep, clean up, and how long it will take to paint all surfaces. Once the labor hours are figured out, scenics will know if they have enough labor to put up the show in time or if they will need to hire more people. Figuring out labor hours will affect the labor budget and scheduling. This calculation is why one should factor in the labor hours first. Once that is done, it is time to block out the scheduling. The labor schedule is where one can factor in what each day's work will look like, including how many people the charge artist will need as well as when they are needed when breaks are needed, what the dry time for projects is, how much time for prep is needed, what the clean-up time is, and more. Remember to use the spreadsheet calculating abilities to assist in the estimation.

Any time one budgets labor and materials for a show, they will need to add in a contingency just in case something goes off the rails and is not estimated correctly. This calculation can be added to the spreadsheet, and it will factor the contingency in time and materials for an individual. Once the spreadsheets are done, they can be printed, and a copy can be added to the paint bible.

The invention of the printer for the paint shop goes beyond printing out documents and spreadsheets for the paint bible. An inkjet printer or a plotter printer allows paint renderings to be printed out to scale so that artists can mount them to a board and put a protective layer of clear

plastic over them. If the rendering is small enough, it does not need to be mounted. Instead, it can be placed in binder page protectors. The artist will use the protected rendering for reference when color mixing, drawing an image and painting the project.

A plotter can also print out a digital drawing that scenic artists can use to create a pounce. A pounce is an ancient technique where a drawing, or a printed image, is drawn out on paper, and then the paper is perforated with tiny holes along the lines of the image with a tool called a pounce wheel. Once this image has been poked with holes, the drawing should be taped and secured onto the surface that is going to be painted. Next, a piece of cheesecloth is filled in the center with charcoal, chalk, or a snap line powder. The powder in the center is then secured with a rubber band, creating a pounce bag. Finally, that pounce bag is dabbed along the tiny, perforated holes creating a dotted line transfer of the image. Printing an image or a drawing is a quick innovation to create a pounce to transfer an image.

An inkjet projector can print out a small drawing or image to scale that scenic artists can use a grid transfer technique to transfer an image. The grid transfer technique is another ancient technique where a drawing, or a printed image, can be drawn to scale. This process begins with covering the printed reference photo in plastic for protection and marking out a grid of an equal ratio of squares. A person will then draw out the grid squares or use a chalk line to snap a gridded line of squares onto the surface one wants to transfer the images. These lines should be done with something that can be easily erased or covered up later. Once the boxes are created on the reference photo and the surface a person wants to transfer the image on, they can begin copying the reference drawing squares one at a time to the corresponding box in the new grid drawing. One will have a full finished grid drawing by carefully continuing this coping box by

box. Once done, carefully erase the lines or cover them up with the painting. Printing a small-scale image is a quick innovation to use a grid technique to transfer an image.

A modern technological advancement that scenic painters sometimes use is a short-throw projector or an ultra-short-throw projector to transfer and trace an image. The use of projectors can be a valuable tool for working both horizontally or vertically on scenery or backdrops. This technology is a quick method to transfer details, lettering, patterns, and full images. Once an individual gets an image that they want to project from a computer, they will need to set up the projector and keystone the image. Projectors can be set up on a batten, cart, easel, and more. Just make sure to secure the projector when it is set up where it needs to be. To keystone the image, one can edit the image as needed in a photo editing software program, or they can adjust the image on the projector itself. The cost of purchasing or renting a projector and the time it takes to set up a projector is often offset by the labor saved to quickly and efficiently scale images onto scenic elements. For those reasons, many theatres are starting to use projectors to transfer images versus the grid transfer technique or pounce technique that scenics traditionally use to transfer images.

A very important tool to scenic painters' work is spray guns. Spray guns have been around for more than one hundred and fifty years. These paint sprayers were manual, hand-pumped sprayers that have had some upgrades but still work the same today. However, in the past few decades, paint sprayers have been revolutionized by the creation of compressed air systems and pneumatics. These advanced spray guns achieve many of the traditional effects of manual spray guns and many new spray effects. Some of these new paint spray guns that scenics should know about are HVLP (High Volume/Low Pressure) compression and electric sprayers,

LVLP (Low Volume/Low Pressure) compression sprayers, airless sprayers, automotive sprayers, detail sprayers, and airbrushes.

HLVP sprayers come in electric versions or compressor versions. Sean O'Skea, a scenic painting instructor, describes HVLP sprayers as "better for the environment and your environment" because these sprayers have minimal overspray; therefore, scenics will be wasting less paint and contributing less particulate into the shop's air (67). LVLP compression sprayers work at lower air volumes than their HVLP counterpart. As a result, these guns do not produce paint as fast or as wide as HVLP does. The advantage of using LVLP spray gun technology is that it can atomize difficult coatings at higher viscosities and lay down better finishes than HVLP guns.

Automotive sprayers were not developed for scenic painters but were borrowed from the automotive painting industry because they allow scenics to move a massive amount of paint quickly. An airbrush and a detail sprayer are examples of compression sprayers that are easy for a scenic painter to handle and are used for very fine work. These are just some of the common spray gun inventions that have been integrated into the paint shop during the information age, thanks to the invention of the air compressor.

Some other miscellaneous tools that scenic painters have begun using if they have access to it is a fabric printer and a laser cutter. Some theatres have begun purchasing fabric printers if images need to be transferred directly to fabric. Fabric printers can print entire images, patterns, outlines, and more directly onto fabric. These printers are a new way that scenics can create banners, backdrops, and other soft-covered scenery. The invention of the laser cutter has been a

helpful addition for paint shops because it is a quick and precise way to cut out stencils for patterns and lettering.

Theatrical scenic painting is rooted in traditional techniques, but utilizing these newer technologies and programs to assist in our art can expand our opportunities and assist with speed and efficiency. Scenics should not look at these technological advancements as the downfall of their art form but as new tools for their toolkit. The more scenics can use technology to their advantage, the more control they have on the narrative of the future of their work.

Creation of Online Scenic Painting Courses

Teaching theatrical scenic painting online is a new practice that is just beginning to be explored. There was an uprise in higher ed instructors moving their in-person versions of these classes to an online format in mid-March 2020 during the first shutdown due to the spread of the COVID-19 virus. This sudden transition did not allow instructors the necessary time to learn the best methods and practices for adapting their course content to an online format. Many instructors even opted not to continue teaching their courses online during that semester. While the pandemic has continued to other semesters, instructors were given more time to figure out how to teach a full semester's worth of this curriculum online. However, the methods and practices they used are constantly in flux. There is no set way to teach this kind of work from home.

According to an interview with Karen Maness, a scenic painting instructor, "Online learning has enabled us to move deeply into a wider variety of information required for the scenic art industry, from history to product use, to costing scenic elements for productions, preparing our students with the knowledge to move out into the industry" (*Teaching Remotely:*

Scenic painting class offers support to students working apart). Here Maness makes some excellent points: online versions of these courses spend more time lecturing and less time on projects than in-person classes. This lecturing gives students a broader range of knowledge on the industry, the history of scenic painting, the paperwork necessary to manage a theatrical paint shop, and more. These are all topics that are typically briefly touched on during in-person classes. The ability to take a deeper look into all those elements creates stronger workers for our industry.

Crabtree and Beudert describe the goal of students learning mastery in scenic art as “learning how to put the skills and knowledge of scenic artistry together” thus emphasizing the importance of both theory and practical application of scenic art skills (341). To teach scenic painting online, the courses cannot solely be about lecturing for knowledge. Scenic instructors must integrate a way to teach the techniques and methods of scenic painting in a distance setting at a smaller scale and in a different environment. Figuring out how to teach scenic painting skill sets and techniques is the biggest challenge instructors face when creating an online version of this course.

Instructors need to integrate their course content with technology in order to teach their courses online. Like other online courses, scenic painting instructors will need to explore and figure out how they want to create and set up their digital classrooms. Instructors will need to figure out what technology and programs would be helpful for their course. They will need to decide whether they want to use an LMS or not. They will need to decide how they want to share information by creating slideshows, documents, videos, or other media. Instructors will also need to decide if they want to use video conferencing or not.

Instructors need to figure out how they are going to organize their courses. For example, scenic painting online is typically done with a hybrid mix of synchronous and asynchronous instruction. Instructors will either record live demonstrations from synchronous instructions so that the students can reference them later or pre-record demonstrations for asynchronous instruction. This recording aims to ensure that students can reference the instruction when they are working on the practical application of whatever an instructor is demonstrating outside of the primary class intercession. Class delivery itself could be mostly asynchronous but have routine synchronous meetings. The purpose of these synchronous meetings is to check in with one another. At this time, the instructor and students can meet for oral presentations and visual presentations or to respectfully receive and give productive critical feedback on projects upon completion.

Online instructors of these courses need to consider the environment their students will be working in when they are online. Even smaller, scaled-down scenic projects require a lot of space, yet most students will have to work on their projects from a kitchen table, a patio/deck, a dorm room, and more. A smaller interior space will not have the room, storage, sink, disposal, lighting, temperature, airflow, and ventilation that scenic studio classrooms for in-person instruction would have. Therefore, it is essential to study and get an excellent working knowledge of what the perfect space and environment is necessary to create an efficient and safe working environment so that instructors can adapt the projects to offer their students the best possible practical experience in the most equitable and safe manner in their homes.

Apart from the space that students will be working with, instructors need to consider the materials that students will have access to. Some students will have access to select technical

programs and select art supplies. Like with in-person versions of scenic painting classes, instructors should be upfront about the cost of purchasing materials at the beginning of their course. More on material considerations for at-home teaching in the next section about coursework.

Creation of Online Scenic Painting Coursework

Scenic educators have had to get creative in figuring out new versions of projects that offer something for every skill level and ability. Instructors are working with accessibility issues where some students have access to certain technical programs and possess art supplies at home, while others are working with much more limited resources. In some cases, instructors can put together kits for their students where they have been able to get materials to their online students working from home so that everyone is working with the same tools and materials. Sometimes, institutions offer programs like Microsoft Office and Adobe Creative Cloud for free to their students, offering more options for projects that instructors can construct for their classes. This section aims to offer ideas for at-home projects that instructors have created for their online classes that still teach fundamentals while possessing the ability to use easy and cheaper sourced materials. The resulting list of projects can be used to teach these types of courses online.

Some popular examples of projects that instructors have been using online are various excel projects for costing a show and interpreting paint elevations. Instructors start with teaching excel basics that are helpful for scenic art management. This project begins with instructors assigning their students a paint elevation where students will need to identify which colors they would need to mix and how much they would need of each color if they were to realize this design. Here students will create a material budget for the paint elevation. After creating a

materials budget, they can create a labor breakdown and schedule. For more information on creating one of these paint costing workbooks, please consult Jennifer Rose Ivey's book, *The Scenic Charge Artist's Toolkit* (172-194).

If the students do not have access to scenic paint, they can use other art mediums to study light and shadow and learn how to transfer images. If the students have access to butcher paper, black charcoal, and white chalk, they can start by drawing simple shapes and turning them into solid forms. When students start to get the hang of that, they can draw embossed appliques, ornaments, or cartouches. Using a small image as a reference, they can use a grid method to scale their image onto the butcher paper. Once students draw out their image, they can use charcoal to create shadows on the image and use white chalk to create highlights. This project gives the students experience with drawing, transferring an image, and using trompe l'oeil techniques used in scenic painting.

If students in the class have access to some sort of art supply, they could do a color wheel, color swatch, and value scale project. These projects would be easiest to accomplish with house or scenic paint, watercolor or gouache paint, or some other colored medium. These projects would give students experience with color theory, color mixing, drawing, and painting experience depending on the media used. The color wheel project would be a visual representation of colors that allow the color relationships between the primary, secondary and tertiary colors to be represented geometrically. A color swatch project would be an experimental project where the instructor would assign their students swatches of color, and the students would have to do their best to replicate that color. This project gives students hands-on experience mixing color and allows for conversations about documenting paint recipes for

record-keeping. The value scale project would start with the instructor assigning their students a simple landscape in greyscale that they will draw on paper. The students would then have to develop the greyscale numbers corresponding to the values on the assigned image. Then they would select a color as their main color and see where it falls on the greyscale so that they can number their reference image. Depending on where it falls, they will need to add white or black to their chosen color. Using a variation of tints and shades will create distance and depth, which teaches students about color mixing and perspective art techniques.

One of the biggest problems that instructors must solve for teaching scenic painting online is either how to get their students tools and materials, if their students can purchase tools and materials, or what their students have for materials on hand already. If instructors figure out a way to prepare and send paint kits and other supplies (such as large sheets of Bristol board, a small flat, to name a few) to their students, then they can teach the regular projects that they would in an in-person class in a scaled-down format. If an instructor can send materials, there may still be supplies that the instructor cannot provide the student. Instructors should be upfront with their students at the beginning of the course if there will be a cost associated with the ability to take this class and the measures that they would be willing to take to get their students the materials. Preparing and giving students a kit for class tools and materials would give students experience with multiple methods of layout, priming, basing, texturing, and detailing. This can include projects that incorporate drawing, faux finishing, trompe l'oeil, color mixing, transferring an image, and more. The possibilities for course content are expanded if instructors and students have access to items that best replicate the tools and materials used with in-person instruction of the course.

Conclusion

This subchapter aimed to establish how scenic painting is being integrated with technology. To understand how to teach scenic painting online, instructors must first learn how the theatrical scenic painting industry has transformed during the information age and how those transformations have led to the beginning creations of online courses. Along with exploring the creation of online scenic painting courses, this chapter explored some options for coursework that instructors have used in their teaching.

CHAPTER 3. RESEARCH METHODOLOGY

Study Context

For this research, data was collected through anonymous surveying, which featured the voices of theatrical scenic painting instructors who have experience teaching this curriculum in an online format. Analyzing answers from these practitioners gave insight into their knowledge gained by experience, which gave validity to the study. The justification for this research survey is the shortage of topical documents and published research for teaching online versions of this kind of curricula. Therefore, other than the topical documents that were examined in the literature review from the previous chapters, this research relies on the survey and draws on personal experience of learning and teaching in an online environment.

Participants

The sample of this study was educators in the United States who have taught theatrical scenic painting in an online format before. This survey extends to educators in the industry of higher education, specialty training programs, apprenticeships, specialty training seminars, and more. Of the fifty scenic painting instructors emailed an invitation to take this study, thirty-six chose not to participate in the survey. Overall, completed responses were collected for a final sample size of fourteen participants, with a response rate of 28%. Through the exploration of empirical research of response rate, the studies' response rate was influenced by multiple factors such as the number of instructors and institutions who have opted not to teach this kind of work online before.

Questionnaire

The questionnaire, found in Appendix A, was developed to help people understand specific information regarding what methods and practices instructors are using to teach online

theatrical scenic painting courses. The IRB Chair investigated the application of this study and determined that it did not require a formal review. This project received ethical approval because it has no manipulation of, nor intervention with, human subjects.

This questionnaire was created to allow anonymous completion so that participants can provide any amount of detail that they would like with their responses without identifying themselves. This self-administered questionnaire created using the platform Qualtrics, and participants could choose to complete it online anytime they would like during the three months that the survey was active. This flexible and anonymous survey utilized an approach that allowed participants to take their time to reflect and make informed decisions in their answers before submitting the survey.

The survey is divided into four parts: course prep, during the class, assessment, and visioning. Course prep, the first section, was designed to understand how participants prepared to teach their courses online. During the class, the second section seeks to understand how participants set up their students for success during the semester and how they handle interactions with students. Assessment, the third section, asks participants to reflect on their successes or failures adapting their classes online and if they made any discoveries teaching in an online format that they will carry to in-person instruction. Visioning, the final section, was created to understand how participants envision the future of online teaching these courses and what barriers could prevent them from teaching this kind of work online again.

This research survey asked a mix of open-ended and closed-ended questions, which generated both qualitative and quantitative data. Data for this mixed-methods approach will be analyzed using thematic analysis. Thematic analysis "seeks to achieve three aims: examining commonality, examining differences and examining relationships" (Gibson and Brown 128-129).

Collected responses from this survey will help support the purpose of this paper, which is to develop a strong pedagogical framework for teaching methods and practices of online theatrical scenic painting curricula.

CHAPTER 4. PRESENTATION OF RESULTS

Quantitative Data Summary

The quantitative data of this survey was gathered using closed-ended questions. Through this data, general patterns were discovered among what type of online painting classes are being taught, how participants are prepping their courses, what assistance participants are offering their students, and whether participants are interested in teaching this course online in the future. The patterns explored in the quantitative analysis can be further explored with deeper explanations using the qualitative data generated by the open-ended questions that followed.

The very first question that was asked in the course prep section was a small demographical question that asked participants to select what type(s) of online painting course that they have taught before. As demonstrated in Table 5.1 below, most of the participants in this survey have experience instructing undergraduates and graduates in higher educational institutions.

Table 5.1. Survey Participants Select Type(s) of Online Painting Class Taught Before

| Variable | % |
|---|-----|
| Higher Education Instructing Undergraduates | 52% |
| Higher Education Instructing Graduates | 33% |
| Specialty Training Program | 4% |
| Apprenticeship | 0% |
| Specialty Training Seminar | 11% |

The next close-ended question asked in the course prep section of this survey asked participants to select the type of content delivery that they have used for their online classes. As demonstrated in Table 5.2 below, many instructors used the variables of live lecturing, live demonstrations, and discussions to teach their courses. From this data, it can be inferred that most instructors taught their classes with synchronous or hybrid delivery of instruction rather than asynchronous instruction.

This table also had a variable option titled other. If the participant selected other, they had the option to list what other course content delivery they applied for the class. Common variables of these answers included inviting guest artists to video conference into the class to speak, guided sketchbook assignments, and recorded demonstrations for the select group opting for an asynchronous or hybrid delivery method of teaching.

Table 5.2. Survey Participants Select Type(s) of Content Delivery Used for Their Online Class

| Variable | % |
|-------------------------------------|-----|
| Live Lectures | 27% |
| Live Demonstrations | 25% |
| Discussions | 21% |
| Group Assignments | 6% |
| Other (please list all that apply): | 21% |

The following closed-ended question for the course prep section asked participants to select the type(s) of assessment measures that they used for their online class. As demonstrated in Table 5.3 below, many participants used the variables of projects and visual presentations for their assessment measures.

This table also had a variable option titled other. If the participant selected other, they had the option to list what other student assessment measures were used for the class. Common variables of these answers included peer critiques, project management and sketchbooks.

Table 5.3. Survey Participants Select Type(s) of Student Assessment Measures Used for Their Online Class

| Variable | % |
|-------------------------------------|-----|
| Projects | 34% |
| Papers/Journals | 10% |
| Oral Presentations | 15% |
| Visual Presentations | 24% |
| Test/Quiz | 10% |
| Other (please list all that apply): | 7% |

The final closed-ended question for the course prep section asked participants to select the type of Learning Management System (LMS) that their institution uses. As demonstrated in Table 5.4 below, all participants are using LMS. Common variables of LMS platforms being used by the participants are Canvas and Blackboard.

This table also had a variable option titled other. If the participant selected other, they had the option to list what other LMS platforms were used for the class. Common answers given by participants who marked other were Zoom, Google Drive, Microsoft Teams and Panopto. These answers are not LMS platforms but rather programs that assist online learning.

Table 5.4. Survey Participants Select Type(s) of Learning Management System (LMS) That Their School Uses

| Variable | % |
|--|-----|
| Moodle | 0% |
| Canvas | 47% |
| Blackboard | 21% |
| Desire2Learn | 5% |
| Other (please list all that apply: | 26% |
| Not using a Learning Management System | 0% |

The only closed-ended question in the during the class section asked participants to select types of support that they offered their online students outside of the primary teaching intercession. As demonstrated in Table 5.5 below, nearly all participants used digital office hours and one-on-one supplemental instruction for their courses.

Table 5.5. Survey Participants Select Type(s) of Support that they Offered Online Students Outside of the Primary Teaching Intercession

| Variable | % |
|-------------------------------------|-----|
| Tech Support | 18% |
| Teacher's Assistant | 9% |
| Digital Office Hours | 39% |
| One on One Supplemental Instruction | 30% |
| Other (please list all that apply: | 4% |

The last closed-ended question, which is posted in the visioning section, asked participants to select if they are continuing to offer this class in an online environment. Out of thirteen participants who answered, eleven of them selected that they would not teach the course again. In the qualitative analysis of the visioning section, participants will explain why they selected the answers that they did.

The quantitative analysis of this survey identified general patterns with the variables that a large body of participants would select. From this data, one can get the sense of how these courses are being constructed and see that not a lot of instructors who test piloted these classes at the time of the research, are not willing to come back and teach the course again.

Qualitative Data Summary

The qualitative data of this survey was gathered using open-ended questions that complimented the quantitative data gathered used within this single survey. The greatest advantage that qualitative data provides the survey design of this research is the ability for participants to express their experiences, emotions and attitudes that were not able to be expressed in the quantitative section.

There were six open-ended questions used in the first section of the survey about course prep. The first two asked how much time a participant had for pre-semester planning and how much time they spent pre-semester planning. The average time that participants had for pre-semester planning was either a week or a semester. On average, anyone who answered less than two weeks had to shuffle an online version of the class together mid-semester in March 2020 during the shutdown. The participants who had an entire semester to prepare either taught the course prior to the pandemic shutdown in 2020 or taught their course during the subsequent semesters that followed the shutdown. The average time that participants spent pre-semester

planning varied due to the variables that affected the previous question. If the class had to suddenly be shifted to an online format mid-semester, then the participant had less than twenty hours on average to prepare their course. If the participant had an entire semester to prepare their course, then they had a lot more time to prepare their class. On average, if an instructor had a semester's worth of time to prepare their class, they would spend four times the amount of time preparing their online class than they would for an in-person version of the class.

The next set of open-ended questions for the course prep section asked how participants handled tool and material acquisition for their students and what tools and materials they were able to provide their students, if applicable. On average, instructors were able to provide and give some tools to their students, but it varied depending on the resources that their institutions provided. Most participants were able to provide some kind of paint media to their students, whether it be watercolor and gouache, acrylic, or scenic paint kits. For material to paint on, some instructors provided muslin, some Bristol board and some provided small hard-covered flats. There were also lots of miscellaneous tools for class provided by instructors such as pounce bags, measuring tools, painters tape, and small detail brushes. On average, instructors had the hand off for these tool kits done with shipping or had their students pick them up at their institutions.

The next open-ended question for the course prep section asked participants to elaborate on their LMS systems from the corresponding quantitative question. Participants were asked to elaborate on the pros and cons of the Learning Management System that they are using, if applicable. Most participants enjoyed having all their information in one place but felt that it was cumbersome to learn. On average, the participants agreed that it was difficult for them to figure out how to display visual demonstrations to their students to use LMS.

The final open-ended question in the course prep section asks what technology the participants are using or needed to learn in order to be successful teaching in an online environment. Every participant taught themselves how to use zoom and some sort of video editing software for their courses.

Section two, during the class, had three open-ended questions. The first one asked participants how their course took into consideration accessibility to students with disabilities in an online setting. Common responses from participants were that they adapt as needed, follow their institutions protocols, use captioning on videos, and use alternative text for photos.

The next question asked to what level a participants students engaged with the class in an online format and how that level of engagement compares to the student engagement in their in-person version of class. This question received mixed results. Some participants had strong engagement in their classes, some had poor engagement, and some had engagement that started off strong but dropped as the class went on.

The final question in the during the class section asked participants what kind of challenges they ran into when instructing a skills-based class like scenic painting in an online format. The biggest challenge that instructors faced was with feedback. Participants were not able to give feedback to students as they were working, and this sometimes led to a lack of efficiency and lack of understanding of a technique. Other instructors had difficulty broadcasting demos in real time and holding a student's attention during synchronous instruction.

Section three, assessments, had two open ended questions. The first one asks participants what content and assessments from their in-person instruction of the class were they not able to adapt to an online format. Most participants answered that they were not able to teach large scale painting and that they were not able to use as many traditional techniques.

The final open-ended question in the assessments section asked if participants have discovered any innovations or solutions in their online class that they carry with them into in-person instruction of that class. Many commented that they enjoyed teaching the budgeting projects, that they will carry with them the recorded videos of demonstrations that they made when working online to the in-person classes, and that they enjoyed making kits for their class to guide the process of their projects.

Section four, the visioning section, had only one open-ended question. Here participants were asked what barriers could keep them from teaching this course in an online environment again. Most either answered the space necessary for taking the course or the energy necessary for teaching the course online. Many were grateful to have had the experience to teach online because they now have material prepared for if a student is absent or needs to reference a recorded demonstration outside of the primary class intercession as a supplemental learning tool.

Limitations

This research was limited by the sample size. A majority of the participants were recruited through an email list related to scenics who work in education. The rest were recruited through scenic painting specific groups on social media websites. Therefore, these participants were more likely to possess experiences teaching scenic painting in an online format. Additionally, due to the fairly small size of the sample and niche group of people with this knowledge and experience, the results of this research could not be generalized to the wider population.

Summary

The aims of this study were to help educators in the scenic community develop a pedagogical framework to facilitate training in their online course creations. Building a mixed

methods survey for this research allowed for both qualitative and quantitative questions to be used together to support and reinforce one another. Through the grounding data collected in the thematic analysis of the questionnaire, a baseline of common methods and practices currently utilized for scenic painting courses in the online environment was established.

CHAPTER 5. CONCLUSION

The purpose of this study was to examine how instructors are teaching their online theatrical scenic painting curricula currently. The research investigated what methods and practices worked and did not work for the instructors with experience teaching this material in an online format. This research used an anonymous questionnaire that was divided into four sections to investigate. These four sections were: course prep, during the course, assessments, and visioning. A qualitative and quantitative approach was utilized to generate themes and categories to the data gathered from participants' responses.

A total of fourteen participants responded to the survey for inclusion in this research. Participants from across the United States were recruited through emailed invitations and social media. Many participants have experience teaching this content online in higher education, and some have experience teaching specialty training seminars and programs. Other than a question about the type of course that the participants had taught previously, no demographic information was collected from them.

The findings in this research revealed that most instructors who have experience teaching this kind of work online before only did so because the pandemic prevented them from meeting in-person for the class. Two of the sixteen participants had experience teaching this material online before March 2020 during the shutdown caused by the pandemic. This details how new creating these online courses are and explains why there are presently research gaps in teaching this specific content online.

A common, predominant theme for this survey was that participants found their classes most successful when they were taught with a hybrid of synchronous and asynchronous teaching. Synchronous teaching helped boost the morale of the student and instructor interactions and

established stronger learning communities with groups of students. Asynchronous instruction allowed for student-driven learning, which allowed them to work on the course when it was most convenient for them. It also allowed them the time that they needed to work on projects and review recorded lectures and demos as often as necessary for them to understand the material. Overall, this flexible, hybrid form of learning served the participants and their students best as they navigated this course online.

Another theme to emerge from this study was that participants found great success in their class by creating kits for their projects. One participant stated, "I liked the kit aspect and it taught me how to break down my projects into even simpler terms." This emergence of creating kits for projects is a commonality in the research. Many participants stated that they plan on carrying this into the in-person versions of these courses as well. Creating the kits for projects served instructors well because they learned to adapt their projects into simple terms that could help their students in their online learning spaces. The kits also create equity because everyone in the class is working from the same playing ground, with the same materials and rigor.

The most predominant theme to emerge was how hard of a time most instructors had when they started to adapt their course content. There was not too much of a learning curve of technology for this group of participants outside of learning how to use video conferencing for class time and to record demonstrations and lectures. Many found that the separate online learning spaces were taxing because they could not replicate the same atmosphere as a scenic classroom. They also found it frustrating to work on projects together in real-time in this format. Instructors of this online work battle with the challenge that this class is not a seminar class. This is a practical class where projects need to be created equitably and have the same rigor, even at a distance. This can be difficult when all the learning spaces are spread out and the work needs to

be mimicked in an environment not built for the kind of work that scenics do. With the separate spaces, the visceral experience of the class was changed. Overall, the online experience that instructors took away at the end of the course is that the energy and impact of their work had a different feel to it and a different outcome than in-person versions of the class have.

Implications

Though past research has been published related to online learning and teaching miscellaneous courses separately, this research was the first study to specifically examine methods and practices of teaching online theatrical scenic painting curricula. Additionally, while past research has examined in-person teaching of these courses, specific research adapting this course material to an online format was not found. Due to the study's exploratory nature, the research shed a light on a sample of educators who have taught these courses in an online format before. Therefore, the findings in this research are significant in establishing the baseline of current methods and practices of teaching this work online.

This research also has theoretical implications for understanding the impact these online courses have had on educators and their students. Many of the participants of this research discussed the stresses and difficulties they had converting this work to an online format. They had little time frames and resources to put these courses together during the pandemic, resulting in them not wanting to teach this work online in the future. They also discussed that their students would burn out halfway through the semester and that it was challenging to get that attention and enthusiasm back for their work in the class. Across the board, most participants were grateful for the opportunity to teach the course online the one time because they now have recorded material prepared should a student not be able to attend an in-person class. In addition, creating an online version of this class opens the door to people who may not have had access to

this class previously. Thus, knowledge of methods and practices of teaching this kind of work can increase the perception and success of these courses from the sides of the instructor and their students.

Direction for Further Research

There are several areas in which future research could be conducted. First, the current study could be extended by analyzing and comparing methods and practices in which other skills-based technical and design theater classes are taught online. Since participants in the current study were limited to a very niche group with experience teaching this specific curriculum in an online format, future studies could expand to include individuals with similar experiences in the field of theatre design and technical courses.

The current study identifies how online learning and teaching addresses feedback, isolation, student readiness, accessibility, and other topics. Further research should investigate parallels of those topics to in-person training of these courses.

Another area that the current study identifies is how professional shops that in-person classes are held in operate. However, further research should specifically investigate a narrower view of the in-person class space and operation. For example, not all courses take place in professional scene shops or paint shops and further research should examine what those classroom studios are like. Focusing specifically on the needs of the classroom learning space, rather than the professional shop space, will give a more focused view on what the needs online learning spaces will need to be. Further research should expand on the safest method of creating online learning spaces for this work.

The survey created for this study was a good starting off point for investigating the educator's experiences teaching this content online. Further research would not be anonymous

like the survey done in study. Open research where participants and respondents can leave personal information will expand opportunities for this research. In the future, a new survey could be created that builds off questions asked in this research and does not have anonymity. It could also include interviews with people who have this experience. An open questionnaire and interview would allow for a relationship to be formed with the target audience of the research, who are instructors who have taught this work before and are looking to better their framework or for aspiring instructors of this specific online work. Another research method that would be helpful for the future of this research is collecting syllabi from instructors who have online versions of these courses. The syllabi would provide essential information for how the instructors run their courses. It would give insight into the technology and materials necessary to take the course, the content and expectations of the instructor, projects, and how the instructor organizes the course.

It is important for future research in this area that educators in scenic painting to continue to pilot test these types of online academic intercessions. The more testing these courses get, the more data there will be to analyze how this format can be adjusted and improved. The more experience an instructor can get with online teaching of this specific type of work, the more they can improve opportunities for collaboration and sharing among peer instructors. This can further influence how other areas of practical hands-on training courses can be incorporated into online offerings. More experience will also streamline instructions and functionality for the course, modify context, and the more feedback and support they can receive from student experiences from taking the course in this kind of format.

Concluding Statements

The findings of this thesis study will help educators in the scenic community better understand how to facilitate methods and practices of teaching online theatrical scenic painting curricula in the future. The grounding data collected in this research study established a baseline of common methods and practices currently utilized for online theatrical scenic painting. The methodology for the data collection of this work included a literature review of published topical documents, the examination and data analysis of results from the surveying of individuals who have taught these types of courses in this format before, as well as drawing from personal experience teaching and learning in online environments. The results of this thesis set up data to assist in the creation of a strong framework for future versions of teaching online scenic painting curricula.

APPENDIX A. QUESTIONNAIRE

This research aims to investigate methods and practices for teaching scenic painting courses and their level of success. The methodology of this research is data collection through researched published documents and through the anonymous surveying of individuals who have taught these types of courses in this format before. Through the data collected in this survey, I seek to establish a baseline of common methods and practices for online scenic painting courses used now. The overall purpose of this work is to create a strong framework for future online versions of scenic painting courses.

The questionnaire is divided into four sections: course prep, during the class, assessment, and visioning. This survey should take about 20 minutes to complete.

Section One – Course Prep

1. Check all that apply: What type of an online painting class have you taught before?
 - Higher Education Instructing Undergrads
 - Higher Education Instructing Graduates
 - Specialty Training Program
 - Apprenticeship
 - Specialty Training Seminar
 - Other (please list all that apply): _____
2. Short Answer: How much time did you have for pre-semester planning? (i.e: I knew I would teach the course in the spring so I prepped over winter break)
3. Short Answer: If possible, could you estimate the amount of time that you spent pre-semester planning?
4. Check all that apply: What types of content delivery do you use in an online format?

- Live lectures
- Live demonstrations
- Discussions
- Group Assignments
- Other (please list all that apply): _____

5. Check all that apply: What type of student assessment measures do you use in an online format?

- Projects
- Papers/Journals
- Oral Presentations
- Visual Presentations
- Test/Quiz
- Other (please list all that apply): _____

6. Short Answer: How did you manage tool and material acquisition for students?

7. Short Answer: What did you provide your students in terms of materials and tools for this course?

8. Check any that apply: What Learning Management System (LMS) does your school use?

- Moodle
- Canvas
- Blackboard
- Desire2Learn
- Other (please list all that apply): _____
- Not using a Learning Management System

9. Short Answer (if this applies to you): What are the pros and cons of the Learning Management System that you are using for this course?
10. Short Answer: What kinds of technology and programs are you using, or have you needed to learn in order to be successful teaching in an online environment?

Section Two – During the Semester

1. Check all that apply: What kind of support do you offer students in an online format outside of the primary teaching intercession?
 - Tech Support
 - Teacher’s Assistant
 - Digital Office Hours
 - One on One Supplemental Instruction
 - Other (please list all that apply): _____
2. Short Answer: How does your course take into consideration accessibility to students with disabilities?
3. Short Answer: To what level did your students engage with the class in an online format? How does this compare to the student engagement in your in-person version of class?
4. Short Answer: What kind of challenges do you run into instructing a skills-based class like scenic painting in an online format?

Section Three – Assessment

1. Short Answer: What content and assessments from your in-person instruction of the class were you not able to adapt to an online format?
2. Short Answer: Have there been any innovations or solutions that you’ve discovered in an online format that you will carry with you into in-person instruction of that class?

Section Four – Visioning

1. Yes or No: Are you continuing to offer this course in an online environment?
2. Short Answer: What are the barriers that could keep you from teaching this course in an online environment again?

BIBLIOGRAPHY

- Baule, Steven M. "Evaluating the Accessibility of Special Education Cooperative Websites for Individuals with Disabilities." *TechTrends: Linking Research and Practice to Improve Learning* A Publication of the Association for Educational Communications & Technology 64.1 (2020): 50-56.
- Choose a Plan*. n.d. February 2022. <<https://zoom.us/pricing>>.
- Cohn, Jenae and Beth Seltzer. "Teaching Effectively During Times of Disruption, for SIS and PWR." 17 March 2020. *Stanford Teaching Disruption*. March 2022.
- Collis, Betty and Jef Moonen. "Flexible Learning in a Digital World." *Open Learning* 17.3 (2002): 218.
- Crabtree, Susan and Peter Beudert. *Scenic Art for the Theatre*. Focal Press, 2012.
- Create and verify PDF accessibility (Acrobat Pro)*. 12 January 2022. February 2022. <<https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html>>.
- Dabbagh, Nada and Brenda Bannan-Ritland. *Online Learning: Concepts, Strategies, and Application*. Upper Saddle River: Pearson Education, Inc., 2005.
- Dabbagh, Nada. "Pushing the Envelope: Designing Authentic Learning Activities Using Course Management Systems." McGee, Patricia, Colleen Carmean and Ali Jafari. *Course Management Systems for Learning: Beyond Accidental Pedagogy*. Hershey: Information Science Publishing, 2005. 172-189.
- El-Sabagh, Hassan A. "Adaptive e-learning environment based on learning styles and its impact on development students' engagement." *International Journal of Education in Higher Technology* 53 (2021).
- Ferdig, Richard E., et al. *Teaching, Technology, and Teacher Education during the COVID-19 Pandemic: Stories from the Field*. AACE-Association for the Advancement of Computing in Education, 2020.
- Gibson, W. J. and A. Brown. *Working with Qualitative Data*. London: Sage, 2009.
- Gilda. *Spotlight on Education: Boston University*. 7 March 2018. March 2022. <<https://www.scenicguild.org/2018/03/spotlight-education-boston-university-2/>>.
- Gillette, J. Michael. *Theatrical Design and Production*. New York: McGraw-Hill, 2008.
- Hart, Eric. *The Prop Building Guidebook For Theatre, Film and TV*. New York and London: Focal Press Taylor & Francis Group, 2013.

- Ivey, Rose Jennifer. *The Scenic Charge Artist's Toolkit*. New York and London: Routledge Taylor and Francis Group, 2022.
- Li, Cathy and Farah Lalani. *The COVID-19 pandemic has changed education forever. This is how*. 29 April 2020. February 2022. <<https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>>.
- McGee, Patricia, Colleen Carmean and Ali Jafari. *Course Management Systems for Learning: Beyond Accidental Pedagogy*. Information Science Publishing, 2005.
- Means, Barbara, Marianne Bakia and Robert Murphy. *Learning online: What research tells us about whether, when and how*. New York: Routledge, 2014.
- Nilson, Linda B. and Ludwika A. Goodson. *Online Teaching at its Best Merging Instructional Design with Teaching and Learning Research*. Hoboken: Jossey-Bass, 2021.
- Okojie, Mabel CPO, Anthony A. Olinzock and Tinukwa C. Okojie-Boulder. "The Pedagogy of Technology Integration." *Journal of Technology Studies* 32.2 (2006): 66-71.
- O'Skea, Sean. *Painting for Performance A Beginner's Guide to Great Painted Scenery*. New York and London: Routledge, 2017.
- Protecting Students With Disabilities*. 10 January 2020. February 2022. <<https://www2.ed.gov/about/offices/list/ocr/504faq.html>>.
- Rossol, Monona. *The Artist's Complete Health and Safety Guide*. New York: Allworth Press, 1994.
- . *The Health and Safety Guide for Film, TV, and Theater*. New York: Allworth Press, 2011.
- Skinner, Kerry. *The Paint Effects Bible*. Firefly Books, 2012.
- Teaching Remotely: Scenic painting class offers support to students working apart*. 22 June 2020. February 2022. <<https://finearts.utexas.edu/news/teaching-remotely-scenic-painting-class-offers-support-students-working-apart>>.
- Troubridge, Emma and Tim Blaikie. *Scenic Art and Construction A Practical Guide*. Ramsbury: The Crowood Press Ltd, 2002.
- Troubridge, Emma. *Theatrical Scenic Art*. Ramsbury: Crowood Theatre Press, 2018.
- Typefaces and Fonts*. 27 October 2020. February 2022. <<https://webaim.org/techniques/fonts/>>.

Veaner, Daniel. *Scene Painting Tools and Techniques*. Englewood Cliffs: A Spectrum Book, 1984.

White, Ken W. and Bob H. Weight. *The Online Teaching Guide: A Handbook of Attitudes, Strategies, and Techniques for the Virtual Classroom*. Needham Heights: Allyn and Bacon, 2000.

Willems, Julie. "Students' Perceptions Flexing Pedagogy and Practice." Burge, Elizabeth, Chère Campbell Gibson and Terry Gibson. *Flexible Pedagogy, Flexible Practice Notes from the Trenches of Distance Education*. Ed. Elizabeth Burge, Chère Campbell Gibson and Terry Gibson. AU Press, 2011. 29-40.

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