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## An Examination of the Myriad of Skills Properties Artisans Utilize and How They Are Attained

Crystal L. Hayner

*Louisiana State University and Agricultural and Mechanical College*

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**AN EXAMINATION OF THE MYRIAD OF SKILLS  
PROPERTIES ARTISANS UTILIZE AND HOW THEY ARE  
ATTAINED**

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

The School of Theatre

by  
Crystal L. Hayner  
B.A., Utica College, 2019  
May 2022

To my parents, Rich and Debby Hayner,  
who always loved and believed in me no matter what.

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## **ABSTRACT**

This study is intended to provide resources for those looking at becoming a prop artisan in the theatre industry. It is meant to provide aspiring artists with everything they need on their journey to becoming a competitive hire in the field, to aid in increasing one's chances of finding work in the theatre industry, and to have a successful career as a prop artisan by compiling the multiple types of skills that prop artisans use and how they attain those different types of skills. The central research question of this study examines the myriad of skills prop artisans utilize and how they are attained. Previous research has shown routes people can take in order to gain these skills; however, the research is limited to a few credible sources. The goal for this thesis is to provide resources and to review data that suggests what skills are and are not being used in the theatre industry and how those skills were attained with the help of an anonymous survey.

The anonymous survey in this study collected data from those already in the props field, questioning how those who have been in this career for years or decades have attained the skills they utilize in their day-to-day work. The methods used for this survey were a Likert scale, a multiple-choice question, and a few short answer questions. The main results showed that skills such as carpentry, furniture construction, furniture repair, reupholstery, fabric manipulation, MIG welding, soldering, faux painting, distressing & aging, faux fine art, foam carving, drafting/sketching/rendering, puppetry, faux food, molding/casting, the various sewing skills, and paper props are frequently being used in the industry. The data suggests that the most common way to attain these skills are through academics, through a professional setting, through books, self-learning, and the internet. The significance of the data and the results suggests that there are a number of confounding variables as to why these skills and attainment of skills are used in the industry today

## PREFACE: THE PIANO ‘LESSON’

One of my favorite personal stories to tell is the one that started my love for theatre, and little would I know, is the reason I would fall in love with becoming a properties artisan.

I was in my senior year of high school, and my English teacher at the time, Mr. Michael Foor-Pessin, was teaching us about the famous playwright, August Wilson. As a class, we had read *Fences*, which is one of Wilson’s famous plays. Mr. Foor-Pessin decided to take the class to see *The Piano Lesson* at Syracuse Stage. This was my first time seeing a professional show.

I will never forget sitting in my seat, staring up at the set, in awe of how it looked. It was like an actual interior of a two-story home. The famous piano sat stage left, up against a wall next to the front door. I could see the detail quite well from my seat and was curious as to how they got a piano that unique. Did they buy it from someone? Did they buy it from an antique shop? These were the type of questions running through my mind before the start of the show.

As I watched the show, I was mesmerized. But my favorite part of the play is this: it was near the end of the show, when, in the blink of an eye, there was so much chaos on stage. The piano began to play by itself, characters were screaming, lights flashed, and a woman was magically dragged across the second floor of the set. I remember screaming because it was scary, exhilarating, and *real*. As the scene—and I—calmed down, I looked over at Mr. Foor-Pessin. I was somewhat embarrassed for screaming and I wanted to apologize. I could see him looking down the row towards me with the biggest grin. He knew something sparked in me and I would not realize it until years later.

I tell this story because of the way the whole experience made me feel. At that moment, I was fascinated by it all, especially the self-playing piano. It was spooky but magical. Looking back, I realize my love for props came from this show. I wanted to learn how to make a piano play

by itself. And it turned out my assumptions were all wrong—the piano was not bought or found in an antique store. It had been built, *from scratch*. Even thinking of it now, it blows me away. Years later I found out that it took their prop shop sixty hours to build the whole piece and it took around forty hours to carve the human figures in the panels of the piano. I learned about the research and how much time they put into finding that research for this piece. There were different skills that helped this prop come to life. But I always wondered how they could have skills like that to build a prop piece so beautifully. All I could think was, “*That* is what I want to do. I want to create a prop just like that one day.”

## INTRODUCTION

The purpose of this research is to help those that are looking at starting a career in this field to understand the several ways that skills can be attained, and the wide variety of skills prop artisans utilize in their work. The research includes an anonymous survey taken by those who are currently working in the props field, to provide context to the resources provided throughout this text. The current study will dive in on the various ways skills can be attained by looking at different theatre programs that have prop-related studies, the professional theatres around the country, what internships and apprenticeships are and how they are important, the different conferences one can attend (regionally and around the nation, as well as the workshops these conferences provide), YouTube sources, and books that can be used to learn a new skill.

This research is important as there are few credible sources on this topic, with most of the existing resources coming from prop artisans like Eric Hart and Sandra Strawn. Eric Hart is well-known in the industry for his prop-related books as well as his work in the industry itself and Sandra Strawn is a strong advocate and leader for women in the prop industry. Their books talk about the different types of props, the titles for our specific department in the industry, techniques, how to maintain a prop shop, and much more. They also write about skills that are used in the industry and the attainment of these skills. While these resources are invaluable to an aspiring artisan, the research and data collected through this study's anonymous survey will provide more detail about skills people in the prop industry are utilizing daily and how those skills were attained.

This thesis will cover what props are and the differences between the types of props. Readers will learn about the position of a prop artisan, the skills of the position, and why they are important to the collaborative process, as well as why skill development is important to the role. The thesis will then cover the different resources to attain the multiple skills a prop artisan can

learn for the industry. In the following chapter, the anonymous survey will present data of what skills are being used in the industry and how those artisans attained those skills. It will also provide information on skills and attainment abilities that I may have missed, and what are the best ways to stay efficient in the industry. In the concluding chapter, there will be a summary of the findings, any future research needed for this topic, and why this topic is important to the theatre industry.

## **1. LITERATURE REVIEW: PROPS IN THEATRE**

In the theatre industry, there are a group of artists that come together to collaborate on a production and to help tell the story of the show. There are the performers, the director, the stage managers, and the production design team. The production design team is made up of many departments that help create the show. There are departments for scenic design, sound, costumes, lighting, projections, and props. Each department is important in its own individual way in order to tell the story. But what makes theatre so amazing is how collaborative the process can be.

In the realm of props, we collaborate with every single department. If a radio is needed on stage and needs to play music, we collaborate with sound to make that happen. If there needs to be an exit sign that will hang above a door and will need to light up, props provides the sign and lighting helps wire and light the sign. Or suppose the script calls for a character's bloody nose on stage. While that is props' responsibility, we must have a talk with the costume designer about how that blood will interact with the costumes and what we can do to prevent any staining. Any set dressing and furniture that is needed for the space requires collaboration with the scenic designer and the director.

Props people are "unique artisan[s]" in theatre (Gillette 15). The props department is unique because of the work we do. The work is based on craftsmanship and attention to detail when it comes to any prop project or item for the show. Even though we have the ability to buy or rent items, we also have the possibility to learn skills to build and make things for the show. The items that can be made or built all depend on the show, what the director and scenic designer may want, and how the prop needs to function.

## 1.1. DEFINE “PROPS”

Props can be crucially important to a show. Props are the vital final pieces that help complete the image of a collaborative process. However, how do we even define what a prop is? In the words of Amy Mussman, who wrote *The Prop Master: A Guidebook for Successful Theatrical Prop Management*:

Stage properties, or props, help with telling the story of the play. Props are tangible items—things that enhance and create the location of the setting. Props play an important role in helping to define the personality of every character while assisting with the action in the play (5).

Props help connect the story as a whole. The details of the props are important because they are a small portion of what drives the story; they have a specific objective and help make the production believable. They are written into the script for a reason—whether it is to help strengthen the setting and the world of the production or to help a character tell the story that they are telling. Props act as “the bridge between the characters on stage and reality” (Strawn 1). The props department is creating a certain look, just like everyone else is on the production team.

In order to clarify what a prop is, I will use a simple analogy called “look around the room you are in” method. You will see the walls, doors, or the windows. These are all a part of the scenic elements designed by the scenic designer. However, the items in the room are the props. This could be the chair you are sitting in, the desk you are writing at, the laptop you are writing on, and even the drink you are drinking while you write. On top of the desk is an antique lamp, pens in a cup holder, a few magazines, and a journal. Next to the desk is a corkboard mounted to the wall and it has two calendars pinned on it. On the other side of the desk, there are two sets of keys hanging from command strip hooks. The more detailed it is, the more it contributes to helping tell the story because every object and item says something about the character who owns it (Strawn 1). For

example, as I write this thesis, I have an energy drink next to me. What does this tell you about *my* character? Do I drink the energy drink because I need the caffeine to keep me awake? I might drink it because I just like the taste. One calendar on the corkboard has the month of February up and it has a picture of pheasants. Do I just like birds? Or is it something my mom gave me to hang in my space? The more precise you can get with each item for the story, the better the story will be told. It is all about the details.

To be clear, none of the design departments—whether it is props, set, or costume—work in isolation; in fact, each department is an important part of a whole, and often the roles may overlap (Govier 8). As the scenic designer gives the rest of the team the basic layout of the design and research of what the space looks like, props will then work closely with the director and scenic designer to meet those needs. When a project becomes specific to another area, let us say sound for example, props will then work with them on that project to figure out how that prop needs to function.

Every prop artisan—indeed, every artisan regardless of department—begins their work at the same place: the script. One must read the script several times to understand the play itself, understand what is happening, and collect all information that is important to the props department. Props may be listed in the stage notes, or they may be listed in the dialogue of the script itself. It all depends on how the playwright writes the script.

Because of the varied nature of props, to understand what the script is even calling for, you must understand the different types of props that can be in a show. Props are split into different categories and knowing where a prop is categorized allows you to better communicate with other departments on the production team of what you need from them and vice versa. The category of

prop will also provide an idea of what skills one may need to have in order to build or make the prop.

In particular, there are three categories that we pay close attention to: hand props, set props, and stage dressing. There are also other sub-categories, which sometimes cross lines between other departments which props may fall into, such as consumable props, costume props, dummy and rehearsal props, special effects props and stunt props.

#### Hand Props:

These are the items that are picked up and used by performers during a scene and could play an important role for a specific character. In the rehearsal process, hand props are known to be the props that could be added or cut at any time. A hand prop could be a 1920's newspaper, a glass with water that is then broken later on in the show, a specific book that needs a book cover designed for it, even a puppet!

#### Set Props:

Set props reinforce the time period, the economic status of the story and its characters, and the setting of where the show takes place. These objects are normally furniture like desks, tables, chairs, couches, sofas, armchairs, a bookcase, a coffee table, and so on. But items like rugs, a woodstove, and a barista counter are also known as set props. There are differences between a set prop and a set piece. Set pieces are physically attached to the set while set props are non-stationary items.

#### Set Dressing:

Set dressing, also known as trim props, are considered to be the final touches to the scenic look. This also helps reinforce the time period, the economic status, the setting of the show, and any other major or minor details that help portray character detail. Set dressing is the books and knickknacks you find on your bookshelf, the pictures or posters that are hanging on the wall, even the curtains or blinds that are placed over the window. The script can either give us what we need to set dress the scene, or the scenic designer can tell us what they envision. The props department may have some freedom to add set dressing where it is needed, but the scenic designer and director will make the final call.

#### Consumable Props:

Consumable props, also known as perishables, are the props that can be broken or torn every night during a show that needs to be replaced before the next one. They are props that are beaten and used in a rough manner that will need care and possible replacement. When making these props, make sure to make enough to account for tech week, dress rehearsal, and the run of the show. They are also props that are consumed during the show, such as food, water, gum, and so on. The food must be fresh, whether it is hot or cold. Blood, E-Vape cigarettes, running props (batteries), and break-away props (props that are rigged a certain way so they can be reusable), also fall under consumables as well. Consumables can be a good portion of your budget, so when you are reading through the script, make sure to take note, research, and set enough of the budget aside to cover the costs.

#### Costume Props:

Costume props are the items that can be considered both a prop and a costume piece, like glasses, a wallet, or a purse. These are the items that help complete the character through the style of the costume. They could also be swords in sword sheaths, gun holsters that hold prop firearms, masks, and more. Always consult with the costume designer to figure out who is in charge of each item.

#### Dummy, and Rehearsal Props:

Dummy props (also known as static props) are the ones that stand in during the rehearsal process until the actual show prop is ready for use. These are the props that are known as “do-fer” props because they will “do for now.” These props will be in the space once blocking starts. It allows performers and the director to see what they have to work with. Rehearsal props are closer in design to the actual show prop that needs to be used during the show. These will come into the space after a few weeks of rehearsal. Items like hand props (mugs, books, etc.) set pieces (furniture like chairs, tables), and even rehearsal cubes are considered to be dummy and rehearsal props.

#### Special Effect Props and Stunt Props:

Special effect props are objects that have a trick to them. They require a lot of care and can be considered as anything that may need to be cleaned at the end of the show or after it is used—for example, a rat that oozes blood. Stunt props are the objects that will need to be locked up after the show. These props may have special safety requirements when using them; for example, a prop that looks like a real firearm but is actually fake and is used for combat.

The various types of props mentioned all play an important role in any show that is produced. While knowing the different kind of props are important, knowing the skills that go with these specific items are important too. I will further elaborate on this in the next section when I talk about the role of a prop artisan and the skills they can possess. I will also briefly talk about why skill development is important to this role and why a prop artisan is essential to the production team.

In the prop department, working closely with other departments is a crucial aspect of the job. We collaborate and make sure the items we are putting on stage help tell the story in the best ways possible. Being collaborative and communicative with your production team as well as the others who share the same space is something to be extremely mindful of when making decisions on all props.

## 1.2. PROP ARTISANS & THE SKILLS

It is only in the last few decades that theatres have adopted a dedicated position for someone directly responsible for the props in a show (Strawn & Schlenker 9). Before there was a department specifically for props, other departments, and even the stage manager, would be the ones to collect the props needed for the show. In a noteworthy explanation of what it is like to work as someone in the props department:

You are a visual storyteller. You work right alongside the director and the designer to tell the story of the play to the audience. You are a partner with an equally vested interest in the success of the design. It is your skills and talents that are displayed as the story's physical narrators (Mussman 16).

This also carries over into the process of the work we do. As a visual storyteller, using visuals whenever possible (like pictures or videos) helps to explain ideas and thoughts that we as a department are trying to portray to the director, the scenic designer, and the rest of the team when it comes to a specific prop. This process happens regardless of how the final prop is attained, whether props built from scratch, those props that are already existing and transformed into what the director and scenic designer envision, and with props that we buy to fulfill the needs of the show.

When it comes to working in the props department, there are multiple titles that are used in the theatre industry. These titles include Properties/Prop Master, Properties/Prop Manager, Props Mistress, Prop Supervisor, Prop Director, Properties/Prop Designer, Prop Shop Manager, Props Coordinator, and Properties/Prop Artisan. The title of Prop Master is popular, well known, and the one that has been used throughout the industry since the mid-19<sup>th</sup> century (Strawn 14). The different titles will vary depending on the job (the theatre/company that has the title listed) and its description, including the different levels of responsibilities that the job offers. It will also differ

when it comes to different industries like film and television, but that is beyond the scope of the study. The takeaway is to understand that there is a distinction when it comes to the different positions, the titles themselves, and what that job entails under a specific title.

However, over the last few years, there has been talk about changing the title ‘prop master’ because the industry wants to disregard the term ‘master’ due to all of the responsibilities that are in the area of props itself. They want to divide the responsibilities and with that, they want to divvy up the titles. For example, we have always known that the prop shop has been run by the prop master and the prop master is the one that handles all props for the show. I think it is because the prop department has always been run by one person and as shops grow larger, more people are interested in working in props. However, with the newer title, prop director, they are splitting the responsibilities where the prop director is overseeing the other prop shop employees and is in charge of the prop shop itself while the prop master is exclusively in charge of working on the props for the show. Again, it all has to deal with the different titles, the responsibilities of the specific titles, and the type of theatre/company you are working for. But sometimes the job and the description are sometimes similar, no matter what title might be used.

Someone who works in props may either work alone or with a group of talented artists; however, in an ideal world, a prop department would consist of several artisans with varying skill sets (Mussman 17). The several artisans are called prop artisans. Prop artisans are the cream filling between the two Oreo cookies. They are the ones who connect the prop department as a whole. Prop artisans are those who have a wide range of skillsets and are hired based on the skills or skill they possess. They are known for their creativity and talent with the skills they utilize to complete the projects that are given to them.

These folks can be hired as full-time staff to the theatre/company, depending on the size of it, or they are hired as freelance artisans—such as those who just come in to make one specific prop object. The flexibility of skillsets prop artisans bring is important because if they have more artisans with a wide range of skills and expertise in an area, there is more room for collaboration. While the prop department takes on a wide variety of responsibilities, the role of prop artisan focuses on the projects that need to be built or made, and they will require either the use of skills they already know or possibly new ones.

A prop artisan can have multiple skills, or they can focus on a specific area. All of the unique niches are important to the prop department because of how distinct each area is and because of the specific skillsets they offer. The different areas or roles a prop artisan can specialize in are a prop carpenter, soft goods artisan, prop craftsperson/prop crafts artisan, and shopper/buyer.

#### Prop Carpenter:

Prop carpenters are the artisans that build props with the materials of wood and metal. They are known to build, repair, or modify props like set pieces or other structural objects. They can use techniques learned through traditional woodworking or theatrical scenic construction to build these props. Also, if given a specific design for a furniture piece, they can make furniture from scratch instead of going out and buying certain pieces that resemble the design.

A prop carpenter should be familiar in using the skills of basic, intermediate, and advanced joinery, cabinetry, furniture construction, furniture repair, and wood carving (both hand and by lathe). Cabinetry and furniture construction may land in the world of scenic design; however, it could be a good idea to get yourself familiarized with both areas as well. If you plan on working with furniture construction, it may be good to familiarize yourself with upholstery. This will lead

to more skills that you can learn about under the position of soft goods artisan. As a prop carpenter, you will learn about the importance of the different types of lumber—for example, what lumber is best for structural use. The hand tools, power tools, and digital tools that one should learn include but are not limited to: a table saw, miter saw, band saw, scroll saw, standard hand tools like a drill, hammer, etc., a drill press, a lathe, a CNC router (computer numerical control router), and others.

With metalworking, you are able to learn the skills of steel and aluminum metalworking, stick welding, MIG and TIG welding, soldering, spot welding, using an oxyacetylene torch and plasma cutter, and other tools. In metalworking, you will learn about the importance of the different materials and their thicknesses, grinding metal, drilling, cutting, and bending it, and the techniques of welding.

Blacksmithing is a type of metalworking, but it is the type of skill in which you specialize. This sort of skill takes time to learn, just like welding and metalworking. Patience is a virtue. With blacksmithing, you are creating things like swords, knives, and more.

However, as a prop carpenter, you may also need to know how to sketch and render to allow others to see what you are thinking when it comes to what the project will look like and how it will be built. These sketches may not be pretty but should be able to tell the story you will be communicating to others in the shop. You may also learn how to use computer software skills like Vectorworks, AutoCAD (computer-aided design), SketchUp, and more to help you visualize what you need to build. You will draft your ideas through these programs to help others in the prop shop and other departments understand what you are trying to do and how you plan on building the object.

Soft Goods Artisan:

Soft goods artisans are the people that work mostly with fabric related props and the skill of sewing. They work with hand props, set pieces, and set dressing. With the skills of sewing, you learn how to hand sew and machine sew, you learn the different levels of stitching (basic, intermediate, advanced), the different kinds of seams, the different type of thread to use for projects. Projects can consist of pillowcases, pillows, curtains, bed covers, drapes, a tablecloth, and more. A soft goods artisan will know skills of patterning, draping, tailoring, distressing, fabric dyeing, knowing how to estimate yardage, create fullness, know the different types of fabric and their manipulation, and sergering. They may also work with the skill of leatherworking.

Soft goods artisans can also have skills that are used in upholstery which are cording, tufting, pleating, tucking, pipping, the use of batting, the use of upholstery tacks, and more. They need to know about fabric manipulation and the tools for the skill—pliers, staple pullers, ripping hammer, tack pullers, flat nose pliers, webbing stretcher, pneumatic staple-gun, etc.. They sometimes use hand stitching for the fabric on the chair. Knowing the type of hand stitching that will make the fabric look flawless in your upholstery work will show your craftsmanship and that is important in the industry.

#### Prop Craftsperson / Crafts Artisan:

A prop craftsperson/crafts artisan are the ones that have a wide variety of skills. They work closely with hand props, set pieces, set dressing, costume pieces, special effect props, and more. The skills these artisans use include but are not limited to molding and casting (like body parts or an item that may need replicas for the run of the show), faux and fine art painting (including faux finishes like wood, stone, marble, brick, etc., glazes, stains, dyes, or other techniques), faux food, special effects, foam carving, and sculpture work. They are also savvy with computer software

programs like Procreate, Photoshop, SketchUp, Illustrator, Affinity Photo, and others to create paper goods like period newspapers, posters, letters, handbills, or magazines. They will use Microsoft Word, Excel, and PowerPoint for certain projects as well. Under the prop crafts person/crafts artisan position, they are rapidly learning the newer technology of the industry, like a 3D printer, a laser cutter, and more. These artisans may also specialize in puppeteering; they not only build the puppet but get to teach the performers and crew how to operate the puppet. With puppetry, you learn the skills of fabric manipulation, some foam carving, and sewing. They also learn skills like electrical wiring and circuitry, vacuumforming, motorized props, pneumatics, and more.

#### Shopper/Buyer:

This position is just as important as the rest of the prop artisans. They are the ones that go out to find and obtain any specific prop item whether it is buying materials or renting items for the show. They can do this through local resources or resources that may be out of state, whether it is someone they know or someone that is simply trying to sell or rent the said item or material. Most would say that they find these items over the internet but having in-person connections with other shoppers/buyers is also a good option. They use skills like Microsoft Word and Excel to keep track of the items they buy or rent. These artisans have good visualization skills, strong interpersonal skills, have strong research capabilities, computer skills, and know how to budget well.

Within these roles comes a variety of skills. The skills listed for each position are just a starting point. All of these distinct artisans are important, no matter what expertise they fall under:

What all these people have in common... is that they rely on materials and techniques they are familiar with and equipped for to

meet all the different challenges that arise. Knowledge of materials, how they behave, and how to manipulate them is crucial to success in prop making; without it, you cannot decide how to make something, calculate costs, plan your time, or predict how things will work (Wilson 7).

As an artist, you will not know it all, and that is *okay*. What makes a props artisan stand out is not allowing weaknesses keep you from accomplishing tasks (Mussman 20). For example, a project for a show requires you to know a skill you do not know. You may go ahead and try to learn the skill or outsource the job to someone else. However, the skillset to being a prop artisan is an endless list. As artists, we always have room to grow, especially when it comes to learning a skill. The most important quality of an artisan is the dedication to keep learning.

To be successful in theatre, especially in the role of a prop artisan, you should always be looking to further develop and improve your skills. As an artist looking for a position in the theatre industry, the company that you may apply for and will be interviewing with will want to know the type of skills you possess and how those skills will make you stand out from the rest of the other candidates. Once you have the job, the goal is to keep improving what you already know and learn more about the things you do not. Continue to improve and learn. Remember, if there is a project that requires you to learn a new skill, it will necessarily take much longer to do because learning and experimentation takes extra time (Wilson 11). Experimenting can be a vital part of figuring out a tricky or elaborate prop. That extra time allows for you to fully figure out the prop, how it is supposed to work, any issues that may occur, and if needed, it allows you to learn new skills during that time period. Over time, if you keep using newer skills in different projects, or use them consistently, the skills will become second nature.

When you start working with different materials and tools, it opens you up to a number of possibilities of hard-set skills you can learn. New materials and tools may be scary at first. Do

some research on them. Read the manual of the machine you want to learn. Look up different ways you can use the material. It is all about knowing what you have and how you can use them to your advantage:

Want to learn woodworking? Build a birdhouse...Want to learn sculpting? Grab a bar of soap and a pocketknife and carve a polar bear. Sewing? Making a pillowcase. Upholstery? Find a drop seat and recover it in new fabric. Casting? Grab a slab of clay, press some objects into it, pour plaster on top. You don't need fancy equipment or expensive materials if you are just trying to grasp the basics (Hart 9).

Prop artisans are important to the production team because they are more than just builders, they are problem solvers—learning to fix and repair items that break. They are trained to recognize the potential of all kinds of waste materials and not waste anything by learning to utilize every resource to its fullest (Govier 8-9). However, with there being a variety of skills that you can learn, you do not have to learn them all. There are skills that you will have to learn and use consistently, and there are skills you may use a couple of times and that is it. There will be times when you have a project that needs to be built but have no time to learn the skill to build that item, and so, the item will then be outsourced to someone who specializes in that skill.

Developing, improving, and learning skills in the position of a prop artisan is crucial. The skills will vary and with the process of making the prop, you learn how to decipher what skills you will need. You will learn the process of how that prop needs to work and by knowing those needs, you will be able to break the process down and begin to understand how the prop needs to be built or made. However, where can these skills be attained? In the next chapter, I will explain the various routes one could take to learn the skills of a prop artisan.

## 2. ATTAINMENT OF THE SKILLS

Determining what skills to use for a project will always be the toughest decision because of the various options available to the artisan. After all, there is not a single way to make any prop, and choosing what is “right” depends on the context and the particular prop (Wilson 7). The decisions you make all depend on your circumstances. Do you have the budget? Do you have the equipment to make this piece? Do you have enough expertise to go about making this item? Some projects may need more tools or investment than others. For example, with molding and casting, you just need the material and the object you need to mold and cast; however, with welding, you need the safety gear, the equipment that allows you to weld, and the material. With certain tools, they only have one purpose, and with others, they can be used for multiple tasks. For example, the biscuit joiner can *only* make biscuit joinery, and that is it. With a router, you can use it for carve detail, to soften the edge of wood, and so on.

As an important note, when it comes to training with new tools or machines to learn a new skill, it is always important to know the safety of the equipment. It is okay to not know how to use something and to ask for help. Personal safety is crucial. Use protective gear when working with any tool and make sure you are aware of your surroundings. Never work alone. Safety is a number one priority when in the shop with others and for yourself.

As I have stated before, there are an abundant number of skills you can learn in the prop realm. As recently discussed in the first chapter, a prop artisan can specialize in an area if they choose to and learn those specific skills only, or they can learn a variety of skills. However, regardless of whether an artisan specializes in an area or if they choose to learn many skills, the attainment of those skills is remarkably similar.

## 2.1. THE RESOURCES

As a successful prop artisan, you must have the hard skills, the experience in the industry, and the right people that know you, your work, and will look out for you when it comes to jobs and furthering your career. When jobs are not advertised well, having connections with others in the industry allows you to gain experience and have opportunities (Hart 369). Learning from others in the field allows you to create connections and make yourself known.

Learning from others in the industry allows you to make connections that can help you further your career later on down the road. It is about the people you know and the connections you make along the way. The theatre world, just like the arts in general, is a small community. When you know the right people, your career can be really successful. If you do not, you will have to work your way up the ladder, building a reputation for yourself and make those connections with others along the way.

The skills that you can learn in the industry can be acquired through theatrical training/hands-on experiences or practices like internships, apprenticeships, seminars or workshops, work experience, and education/academics, like college, trade/vocational school. Or, if you rather, you can learn them through books and the internet, which is more self-taught. There are instances where a prop builder does not have any theatrical background at all. They would focus in another area like fine arts or woodworking.

Most prop artisans have gained their skills on the job and through trial and error, and every one of them has their strengths and weaknesses (Mussman 20). However, self-learning has the drawback of never receiving feedback which can lead to bad habits or dangerous practices (Hart 369). With this said, when you are learning a new skill on your own, make sure you are using different resources. For example, you found a technique on YouTube you would like to use while

constructing a furniture piece. You watch the video with attention to detail and think, “Oh, that’s not that hard. If they can do it, so can I.” Although that may be the case, make sure you look at other resources and ask someone with that expertise, if you can, to make sure it is the safest technique possible.

Years ago, in order to become a prop master, one would normally become an apprentice and follow in the footsteps of their parent (Hart 369). However, that has changed. The internet has been a great resource for people especially because the internet provides easy access to knowledge that previously took an individual a lifetime to accumulate (Margolies 99). At the click of a button, you can search what you are looking for on Google and it will pop up with “how-to” videos on YouTube, recommended books, blogs, articles, and so much more. People who want to become a part of the props industry may have a background of theatre, meaning they studied only theatre in college, or they may have a background of just woodworking, or the fine arts, and even architecture, which means a person focused on that area during their time of studies instead of theatre (Strawn 26). Working during the summer, attending college, taking weekend classes, doing personal projects, and other activities all help to improve skills and learn skills you may never know that you needed. There are an endless number of options. You could get into a four-year college program or dive right into the professional setting. It all depends on the route you want to take and the way that you learn best. I will now talk about the various ways one can attain the skills of a prop artisan.

## 2.2. ACADEMICS

Academics is one of the best ways of learning new skills. Through academics, you begin to learn the skills, listed within the positions in chapter 1, at a basic level and possibly through intermediate. Any of the skills listed may be learned at any of these levels, as long as the institution which you are attending has the capabilities and tools to teach you, and if you have the drive to want to learn more.

### HIGH SCHOOL:

If you are a high school student who wants to pursue props as a career, start looking into classes that your high school may offer. There are high schools that offer classes like carpentry, drafting, art classes that teach things like sewing or patterning, or even sculpting and painting courses (Hart 370). Joining the theatre department in your high school and working on a show is a great start. If you cannot find opportunities like this, you can find opportunities through your local/community theatre(s). Contact those who are in charge and ask to see if you can volunteer, shadow, or work with the prop person on the production team. Any type of summer classes or theatre camps can get you a great start in the field as a prop artisan as well.

### UNDERGRADUATE DEGREES:

If you are a reader that is near the end of their high school career, start looking for a college/university and a theatre program that is right for you. Skills are taught at a basic level and sometimes intermediately, depending on the courses you take. Both Strawn and Hart discussed a recent survey where 116 U.S. universities and colleges that have a theatre department were asked if they offered props classes to their undergraduate students. Only half of those 116 universities

and colleges offered a class in props (Hart 370). In my research, I have found that there are a few universities that have prop programs dedicated for their undergraduate students. With that said, make sure you research, research, research! Compare and contrast programs and see what they all have to offer. If one program offers a class that you really want to take, take note of it!

There is a catalogue of classes that the college/university has that you can then look into to see what classes are being offered during the separate semesters or during the academic year(s). When you are doing this, look into classes that offer skills like dyeing and painting, millinery, sewing skills, carpentry skills, welding and metalworking, drafting, rendering techniques, design and décor, costume crafts, and others (Strawn 27). Both Hart and Strawn say that there might be times where you want to learn a certain skill and you will have to travel outside of the program and look into classes being offered through different departments—both in the theatre program or outside of it. For example, some prop skills can be learned courses outside of props, like statecraft or costume craft classes (Hart 370). I have personally taken a mask-making class with the costume shop supervisor while in graduate school and I have taken a drawing class through the fine arts program while in undergrad. Taking a look at the course catalogue can open up a wide range of opportunities for a student (Strawn 27). Take electives you find interesting—whether they are a part of the theatre program or are through another department. Find ways to work on the productions being done through the semesters. Doing this will round out your education (Hart 371).

When you are ready, reach out to the faculty in the program. This can be the start of making connections. Email them with any and all questions you may have, whether it is about the program, the college or university, classes they do or do not offer, the shows they do, and whatever else you are curious about. When deciding on a program, make sure you try and visit the college in person.

This allows you to see the spaces you would work in, see the classrooms, see the campus environment, as well as meet the faculty in person to see how well you may “jive” with them. With that said, any form of education, whether it is through a community college, a private college, or a university, has “equal merit” and from those educational opportunities, you are able to build a “network base” (Hart 369).

A Bachelor of Arts in Theatre (BA) or a Bachelor of Fine Arts in Theatrical Production (BFA) are the type of degrees you would be getting from any theatrical undergraduate program. The BA degree is a general degree while the BFA degree is more professional. When looking at colleges/universities, you will want to look at programs that are theatre production and design-based but concentrate in technology. That is where you will find focus in props. There are a ton of colleges and universities that have that sort of degree, you just have to research and see what is best for you. You may ask, but if I want to specify in props what schools are those? The University of North Carolina School of Arts, which is where Eric Hart teaches props, and the University of Wisconsin-Milwaukee, are known to be the best programs (Hart 371). Strawn mentions those colleges as well as Webster University, which is located in Missouri, Syracuse University, which is in central NY, and Ohio University (26). As I have stated before, it is all about researching the programs themselves and seeing what they have to offer. Your undergraduate program is the next step to narrowing your focus on what you want to do in your future. While going to a program that may have a props-specific program which may be more beneficial, going to any program may allow you to learn more outside of the realm of props itself, which is just as beneficial—as long as you do the research.

**GRADUATE DEGREES:**

The option of getting your graduate degree, a masters, in props is a possibility after your undergraduate program, but it is not required. In my case, I continued with my education by getting a graduate degree to further enhance my skills and knowledge about props. Skills that are taught at this level are taught at a more intermediate level. In my own experience, I ended up learning new skills while in my graduate program. It may seem like a great idea in order to further your career in the field, but you would want to get this degree if you were thinking about teaching in an academic setting, like college. However, a prospective student should be aware that the props professors are not full-time and are not required to have a master's degree. Colleges and universities normally hire props folk at a "staff level" (Hart 373). There are many pros to getting a graduate degree nonetheless. For one, in an educational setting, you may build more props than in a professional one (Hart 373). This means that you are able to have more hands-on skill gaining experiences. Thus, while getting a graduate degree, you are more likely to better build your portfolio, and you will have the chance to use tools and materials you may never get to work with within the industry (Hart 373).

When looking into getting a graduate degree, the colleges/universities that have a graduate properties degree program are University of Illinois (Urbana-Champaign), North Carolina School of the Arts, the University of Delaware, California Institute of the Arts, and Louisiana State University (Strawn 28). The College-Conservatory of Music at the University of Cincinnati, Ohio University, and Virginia Tech also have graduate degrees geared towards props. Some of these programs may or may not fund you through a fellowship or assistantship while attending their program. An assistantship is when the student works a certain number of hours a week for the program and or college/university in order to have the tuition waived and given a monthly stipend. A fellowship is full financial support from the school to the student. You are getting paid to go to

school, essentially. However, make sure you research and talk with the head of the program to see if the program is right for you.

When it comes to comparing graduate school versus undergraduate school, graduate school is completely different. In graduate school, you are taking classes and are studying a more specific area. In a graduate prop program, your prop projects will train you to learn more about time management, how to accomplish the project in the most efficient way possible, and so much more. These projects will become more and more complex and intricate over the three-year period. You will use the skills you learn from different classes to help with these projects. For example, I took a few classes on drafting and because of this, it allowed me to draft certain projects to visualize how I was going to build it before going on to the building process. Graduate school can and will be exhausting; but in the end, it can be worth it, as long as you use that program to its fullest.

With everything said, a prop artisan does not need a license, certification, or a degree in work in the industry. You could get hired at any form of theatre based on your skills and work your way up the ladder. You will have to prove yourself through your work but that should not be hard if you are dedicated to the job. But these theatre programs have connections with people in the industry that you would not want to lose. As I mentioned previously, the most important attribute of a props artisan, no matter what path one takes to get there, is to remember to never stop learning (Hart 372).

#### VOCATIONAL TRAINING/TRADE SCHOOL:

Vocational training, or trade school, is another option for an individual interested in props. This route is about hands-on experiences and the hands-on skills you can learn. “Vocational training are instructional programs or courses that focus on the skills required for a particular job

function or trade” (Indeed Editorial Team). Skills in this sort of academic environment can be taught from a basic level up to an advanced level, depending on the program you choose. The type of skills you may not normally learn in a college/university setting, like cosmetology, auto mechanics, carpentry, or welding can be attained in trade school. However, this sort of education is intended for careers outside of theatre like cabinetry making or welding for automotives. There are different types of programs: CTE (Career and Technical Education) programs, tech prep programs to post-secondary education, and more. Vocational trade school can either be in person or online and the education can vary from six months to two years or for four to five years.

These programs can offer certifications or even associate degrees. They can offer just regular classes on a day-to-day bases through the weekday, weekends, and even through night classes. It is all about what is available to you and your budget, but also what will fit in your schedule. If you want to learn a specific skill like upholstery, try and find someone who does upholstery for a living and shadow them. Going directly to those who are doing that specific skill often is the best bet. Just remember that this route is a tad different because it is not teaching skills that are intended for the theatre.

There are a vast number of trade schools around the country. When looking for the right school, make sure you research! See what options there are, see what classes they offer, ask around in the community to hear feedback about the specific program or classes, find how long you will be in the program, and make sure you can afford it. When trying to find a school/program, you can go to Google and type the specific skill you want to learn and add ‘trade school’ after. Skills like carpentry, cabinetry, furniture construction, blacksmithing, carving (both wood and foam), sewing, and electricians are available within trade schools. You can use websites in Appendix A to help you in your search.

No matter the academic route you may possibly take, any of the skills a prop artisan may want to learn can be learned through any of these programs. Of course, look into what they can offer you when it comes to skill-based classes. There are many factors that come into play when making the decision of what program to attend. At the end of the day, it is all about what is best for you—the path you want to take, the specific program you are interested in, how you interact with those people in that program, your budget, time, and what you want to learn.

### 2.3. PROFESSIONAL SETTING (ON-THE-JOB)

On the job training can be the step after schooling or it can be what you jump right into. The industry is mighty, vast, and has a lot to offer. In a professional setting, you may work in any sort of theatre—community, regional, professional, summer stock, touring, Broadway, off-Broadway, off-off-Broadway, dinner theatre, opera, free-lance, and more. The caveat is that in a professional setting you will be hired for the skills you know and not about what you want to learn. However, on the job, you might not know how to do something and will have to learn a skill at the snap of a finger. I believe that no matter the path you choose, you can and always will have the opportunity to learn more skills as a prop artisan.

Community or local theatres can offer you positions with their company, but you will most likely end up as the prop supervisor and not just an artisan. This means you would be in control of the whole props department. But this also means that it may just be you and only you in the department. Although that may be the case, you may also get hired into a larger company and that department will have two or three more people who help you (Hart 375). Community and or local theatre is based on the community and the people within it. Theatres like these are easier to get in with and could be a great start to your professional career. At this level you are able to learn an abundance of new skills, as long as you have the necessary tools, and are able to grow and improve them in your time with that company.

There are theatres that are considered to be LORT theatres—League of Resident Theatres. LORT is known to be the largest association in the theatre industry, with 78 members across the U.S. These types of theatres are equity-based, non-profit, and produce six to seven shows a season. Most of these theatres are based on the east coast, and some are out in California. There are four categories of these types of theatres: A, B, C, D. A is the highest level and D is the lowest, with

ranks determined by how much money the company brings into its box office on a yearly basis. If you take a look at the website for LORT theatres, select the tab “Member Theatres,” click on “Member Map,” then you will be able to see the member map of where theatres are located, including the name of the company and what state they are in (LORT, League of Resident Theatres).

If you wish to see theatres that are non-LORT but associated with AEA (Actors Equity Association), CAT (Chicago Area Theatre), SPT (Small Professional Theatre), NEAT (New England Area Theatre), or URTA (University Resident Theatre Association), you can access Cengage’s materials on theatres to find more information (Cengage). The website shares theatres all across the U.S., providing information such as the name of the theatre and in what city and state the theatre is located in, the type of theatre it is, and the theatre’s website.

If this resource is utilized, there are a number of factors of which to be mindful. First, theatres may have unionized spaces. Second, many of these theatres normally have “in-house prop shops,” so artisans would be hired under their direct company to work in their shop (Hart 374). Finally, regional theatres may give you the ability to work on your skills as a prop artisan through the projects that shows provide but will most likely focus on what you already know. Skills may need to be at an intermediate level depending on theatre/company.

If you want to work on Broadway as a prop artisan, you would be working in specialty warehouses or prop shops that outsource the projects that Broadway shows need. This goes for touring shows as well. These props can also be built by individual prop builders. Usually, the props are from a specific shop or a combination of prop shops in the NYC/New Jersey region and sometimes out of state or the country that are then contracted through the company of the show (Hart 374). The shops/companies and the projects they receive can vary on the type and they can

be asked to make rehearsal props or be asked to make a specific show prop. When a prop your shop/company makes gets damaged and needs repair, they will first try to be fixed by the prop master on call for the show and if it is not an easy fix, it will come back to your shop. These sorts of shops are hired based on what they can do and what they are known for—some may be carpentry based, some might be crafts based. This work may be hard to get into, and if you specialize in a specific type of props, like soft goods, the chances of working on other skills that do not revolve around soft goods will be slim as you were hired for that specific skill. But if you want to work on skills that in that specific area, go for it.

The shops listed in Appendix B vary in their skill requirements but will most likely want you to be at an intermediate and possibly an advanced level with the skills you attain. By looking at the individual company's websites and looking at what they make, you can see what they mainly focus on when it comes to skills. There are plenty more companies like these and this list is just a starting point. There are also shops that are run by individual artisans. While doing my research, I was having trouble finding research on companies like those listed in Appendix B. When researching, I was finding rental shops and not commission shops (the ones who build the props). I ended up turning to the S\*P\*A\*M page that I am a part of on Facebook and I created a post asking for help. I had a number of people reach out, including Eric Hart himself. But, with companies like the ones listed, you can reach out to them, speak to them about their work process and the skills they focus on, and learn more about this portion of the industry.

What if I do not want to be contracted with a company and want to be my own boss? Well, that is considered a freelance prop artisan. If you have your own shops and tools to build props, you could do it (Hart 376). As a freelance prop artisan, you can either work on projects between larger gigs, work independently but hire others to help, or just work independently, going job to

job. The jobs a freelance props artisan may be hired for can vary, depending on the show, the needs of the show, and the theatre company. With this sort of position, it is all about the connections you make within the industry. Make sure to maintain your portfolio/resume so theatre companies looking to hire can see what you have been recently working on. This job has its perks because you can decide when and where to work, as well as the variety of projects you get to work on. Having that variety can allow you to learn different skills. You should have a basic or intermediate knowledge of most of the skills listed in chapter 1, or you may hone in on a specific skill and become an advanced artisan in that skill set. It all depends on what you want to do and who you want to be.

Summer stock is a whole other beast. Summer stock is about shows that get put on only in the summer and can be done through repertory—alternating and changing out shows in a singular space. In summer stock, the company you work for can put on a lot of shows. The summer stock season schedule can vary between the months of May-August. However, positions for summer work can be posted as early as January. You will want to start looking and researching early if you can. This sort of work is exhausting but it can be extremely rewarding, especially for your portfolio. When you are in college, summer stock is a great option because there are different places across the U.S. to learn various skills and techniques from different prop artisans. Any skill can be learned, as long as you have the right tools and someone to teach you. It is all about the situational experiences you are able to have while being with these companies or theatres. However, this sort of experience is recommended when you are of younger years just because of how exhaustive it can get.

If you are interested in working summer stock, you can look through the websites provided in the paragraph about apprenticeships/internships, or you can use the Entwork website, which

lists the regions (and states) where the companies are located, the name of the company, and the link to their company (Entwork).

Programs like regional theatres, community theatres, and summer stock companies can offer apprenticeships or internships for props. These opportunities should be taken when you are just starting out in your career—either when you are in the final years of high school or when you are in college—mostly at the undergraduate level. Apprenticeships and internships can have benefits like free housing and stipend meals. These positions open around the same time as summer stock does and can vary when it comes to the length of position, with some contracts starting in May and ending in July, and some starting in June and ending in August. Through apprenticeships and internships, you have the ability to work with artisans that are in the industry and they can teach you skills that they have learned in their time. Again, any skill can be learned, as long as you have the right tools and someone to teach you. You can learn new skills and train your skills to the intermediate level. This route is different from others because of the trainings and workshops the companies you work for can provide, as well as portfolio reviews at the end of your contract. If given the opportunity to be in an apprenticeship or internship, make sure to ask as many questions as you can. Learn everything that your boss or mentor has to offer. Pick their brain and do not be afraid to try and do things on your own. And if you have to, ask for help!

When it comes to looking for a job or an apprenticeship/internship, having connections or friends in the field is always a good option. Ask them who is hiring and what opportunities might be available in the summer. Conferences are also a good way to make connections, which I will talk more about in the next section of this chapter. Years ago, you would have to search the newspaper to see who was hiring. However, we now have the internet and social media. With social media, especially Facebook, it is a good idea to join groups that are dedicated to the props

industry. The biggest group that I know of is called S\*P\*A\*M, or the Society of Properties Artisan Managers. I belong to a Facebook group called 'Props for the Stage and Beyond; powered by S\*P\*A\*M.' This group has forums where people can ask questions about projects and ideas for props, they host webinars that bring in guest speakers that teach a variety of subjects, people in the industry post job postings and internships/apprenticeships, and people that are a part of this organization travel to conferences to speak with people in person and host workshops. Joining this group is a good resource to have, especially if you get stuck on a project and need help from other artisans. Other internet sources to use for finding jobs are located in Appendix C. While these are just a few websites that can help you, these websites offer all opportunities, from internships to summer work, academic positions, and touring. When researching, pay attention to the job descriptions and qualifications, the pay, the duration of the job and the job type (how long the position is contracted for), and any possible benefits the job may provide.

Regardless of what path you take, the prop projects and different shows you work on, seeking out ways to learn new skills or to improve the skills you have will be important, especially if you are on your own. The best way to ensure you continue to learn new skills and improve upon the ones you have is to take initiative, learn and practice new techniques, and work on your own personal projects (Hart 373). Different ways you can go about doing this is by turning to workshops/conferences, books, and the internet.

## 2.4. WORKSHOPS & CONFERENCES

Workshops and conferences are another great way to learn new skills when you get the chance. Conferences can happen at a national level as well as a regional level. They are typically once a year; they require a lot of planning and budgeting. Sometimes they happen in the same place, and most times they change locations/states. When planning, make sure you research the conference itself—for example, where it will be, where you can stay, and places to eat. Most importantly, make sure to research what the conference will be providing—like workshops, lectures/presentations, or competitions. You will find companies that are in the industry that are attending the conference and with certain opportunities, you can speak with them and do possible interviews for any job or internship/apprenticeship openings they may have. There are a variety of conferences that one can look into: those that are for theatre, those for specific skills, and even those that may be focused on something specific like Halloween. An in-depth dive into the different types and number of conferences available would be valuable, but is beyond the scope of this study. However, as a start, the following are a few theatre conferences you may want to look into: USITT (The United States Institute for Theatre Technology), SETC (Southeastern Theatre Conference), and KCACTF (Kennedy Center American College Theatre Festival). They will be addressed in turn.

The USITT is one of the biggest conferences of the industry and is held at the national level. This conference is for anyone in the industry, whether you are just starting as an undergraduate or have been in the industry for decades. USITT is all about technology in theatre and the entertainment industry, as well as design. They have competitions for theatre design, stage management, and technology and give out awards to those competing. This conference is well known, meaning artists and companies often come in and set up on the expo floor to showcase

their work and the technologies they are utilizing. USITT also has educational trainings and activities that can happen throughout the year and through the conference. In the most recent conference as of this writing, USITT had Labs (workshops) you could sign up for and attend. There were two workshops called Props Trash to Treasure and Props Chemistry. Other workshops included: Reusing, Repurposing and Recycled Materials; Working with Wood, Plastic, Metal, and Clay; Working with Paper; and Leather Basics and Simple Sword Frogs. While I believe those other workshops may have been for props people, they could have been for anyone who was interested. The conference has something called a ‘Walk Up Lab’ that does not require sign up in order to attend, with one for props called Props & Models Lab.

The SETC is another big conference that happens at a regional level. The region’s include Alabama, Florida, Georgia, Kentucky, Mississippi, North and South Carolina, Tennessee, Virginia, and West Virginia. However, anyone can attend these conferences. They have opportunities for trainings, a theatre job fair, workshops, competitions, applications for scholarships, mock interviews, and actual interviews, and much more. When looking at the conference schedule, they had over 200 workshops available that ranged from acting, design, lighting, sound, diversity and many other things. In the 2022 conference, though there were not any workshops that said “props,” there were workshops that would be useful for skill building. These workshops included Rust Dyeing 101; Fabric Modification with Found Objects; Knot Tying Terminology and Practice; Create a Shadow Puppet Play; Designer and Director Collaborative Communication Study and Practice; Juggling 101: The Return to Dropping; Paperwork! An Essential Tool for Communication; Theatre Mixology: Dye and Paint; Learn to Juggle! Three Ball Juggling Skill Primer; Custom Automated Effects: From Concept to Reality; and Pyrotechnics and Special Effects in Theatre.

The KCACTF is national conference hosted with the Kennedy Center in Washington D.C. However, there are eight regions across the U.S. that participate in this conference and smaller ones in state and regional conferences. A quick search to find out what region your particular state is would be beneficial for an aspiring artisan who wishes to attend this conference.

At the KCACTF, there are award competitions, playwrighting workshops, presentations of what each production region has been working on, master classes, other presentations, staged readings, activities, networking opportunities, professional development opportunities, workshops and symposiums, and most of all, the celebration of students' work. This year, the state and regional conferences took place virtually due to COVID-19. The national conference will be taking place in April of 2022; however, the schedule is only given to students who are attending this conference.

The USITT, SETC, and KCACTF are just a few of the extremely important conferences where you can learn about what is going on in the industry, make connections with people that are currently working in the industry, and being able to go to seminars, lectures, presentations, and workshops. Conferences like these are important because you can gain knowledge about the things that are changing within the industry and learn possible new skills as well.

## 2.5. BOOKS & THE INTERNET

There are plenty of books that you can use and the internet is just a click away when it comes to learning new skills. There are articles that have DIY (do it yourself) projects and we have YouTube to show us tricks and tips for making an array of things. Some people may have a preference with the way they want to learn, whether it is through reading something physical or by watching a video. Some might rather learn through being taught by someone or having a hands-on project. While both books and the internet have pros and cons, it is all about the way you learn best.

Books are a great resource to have and use, especially if you want to learn a new skill. While sometimes they may be a tad outdated, they can still be useful. I have provided books in Appendix D that are great selections to add to your own library. They consist of books that are specifically for props in theatre as well as books for specific skills you may want to learn as a prop artisan.

Because of the internet, we are able to access information quickly and whenever we want it. We can use it on computers, phones, tablets, or other electronic devices. YouTube has a great deal of educational value because you see an example right in front of you. When looking for videos, try to be as specific as possible. A lot of theatre channels like American Theatre Wing, National Theatre, and Alliance Theatre have good videos specifically regarding props. There are also artists that have their own individual channels as well, like Adam Savage. There is also Scott Prop and Roll. When you want to learn an individual skill—a specific kind of joinery, for example—you will type in that joinery in the YouTube search bar and all kinds of videos will come up. You may fall down a rabbit hole, so beware. There are a wide variety of YouTube videos that are available that could be great resources if you wish to learn more skills. In Appendix E, I

list a wide variety of links both of YouTube channels and of certain videos that are related to props and to the skills you may learn as a prop artisan. A warning, however: the inherent danger of the internet is that sometimes the things we save, like links to articles or videos on YouTube, do not always work and may no longer be available.

### 3. METHODOLOGY

The central research question of this study is the examination of the myriad of skills props artisans utilize and how they are attained. With this question, I conducted a completely anonymous survey to collect data about the area of work prop artisans are working in, how long they have been in the industry, the skills they have learned, how frequently they use these skills, and where they have attained the skills they have learned. I have also asked the questions of what the best way was to learn skills, and in order to be effective and efficient in the prop industry, what skills should be practiced consistently.

In the survey, I used multiple-choice, short answer, and a Likert scale to record the data. The instrument was made based on the skills that I have learned over my time as a prop artisan. It was created through Excel, which was then put through the cloud-based software, Qualtrics, powered by the Louisiana State University database for online academics. The limitations to the study were how many uncompleted survey responses there were as well as the select groups to whom I sent my survey. When researching I found that while there were a number of books related to the topic of props, there were not as many that related to prop artisans. The information used in this thesis mainly relied on a few credible sources.

The instrument was released to the public on December 3<sup>rd</sup>, 2021, and the last recorded response was March 16<sup>th</sup>, 2022. I recruited anonymous, nonverified participants through the use of social media, specifically Facebook. I used specific Facebook groups of which I am a part: Props for the Stage and Beyond; powered by S\*P\*A\*M; USITT Women in Theatre Network; USITT Queer Nation Network; Props Summit; Drama Set Pieces & Props Library; Scenic Arts Open Discussion; and New Orleans Technical Theatre. I used these Facebook groups because they are theatre related and while I could have just posted in the one that is specifically for props, I thought

it was a good idea to get it out to more groups that are in different parts of the industry. I thought it was best to use Facebook because it takes less time to receive responses on Facebook. However, one setback to doing this was, over time, the post got lost in the timeline as other things were posted to the page. Thus, I had to repost the survey to the groups to remind them to take the survey, though that only happened once.

Overall, 183 responses were received. However, I eliminated the use of 117 responses due to them being partially complete – the respondents of those 117 responses only answered the first two questions and not the following five. The number of responses used (n = valid participants) were 66, n = 66. To be considered complete, all of the questions had to have been answered.

### 3.1. QUESTIONNAIRE

The questions developed for the survey were created to collect data to inform readers about the outside perspectives regarding prop artisans in the industry. The first question, “What area of work are you in?” allows readers to understand the different types of theatre (professional, regional, academic, community, other) these folks are working in, and it shows to which area props artisans most commonly are drawn. The second question, “How long have you been working in the prop industry?” provides insight to readers that there have been people in the industry for a long time and some that may have just started, but it allows the reader to see the range of years that folks have been in the industry. The third question, “Rank your proficiency from 0-5 (0 being, not having the skill, 5 being, advanced in the skill), current frequency from 0-5 (0 being not used, 5 being used all the time), and primary attainment on the skills listed below” is to help the overall research by showing a list of skills these respondents may or may not have, how frequently they use those skills, and where they attained those skills. The fourth and fifth questions ask if there were other skills not listed to then list them and if the respondent answered other under the attainment portion for question three, to then list how they attained that skill. These are important because I may not have included a specific skill or way to attain skills. It helps close any gap in the research that I may have missed. Question six asks “From the way you have attained your skills, what way was the most useful? Why?” This question and any answers given are important because if there is a consistent answer, it gives the reader the idea of what they could be looking into when going into this career field. The last question, question seven, “Do you think there are specific skills that need to be practiced in order to be effective and efficient in the props industry?” allows the reader to gather information about the certain skills people in the industry think are

important to be efficient in, in order to be successful in the props industry. The full questionnaire can be found in Appendix F.

## 3.2 THE SURVEY DATA

Over the 3-month period, looking through the responses and the data was interesting and in some aspects eye opening due to the responses that were given to some of the questions in the survey. As stated in the methodology, I received 183 responses. Of those, 117 were not used as part of my research because the survey was not fully completed. The remaining 66 were my participants, as they fully completed the responses to the survey. The responses varied from different areas of theatre and there was a vast range of time that people have spent in the industry. Gathering the data for the skills under the categories of proficiency, frequency, and attainment allows not only the readers, but also myself, to see what skills are utilized in the industry and to understand what routes are popular in order to learn those skills. There were answers to questions that I had not thought of which helps with the research and knowledge of the study. The last two questions and their responses provides insight as to what people who are actively in the industry think, which is an invaluable resource.

## 4. FINDINGS AND ANALYSIS

As I looked over the survey results, I learned a great deal about what is happening in the industry through the skills being used as well as how those skills were attained. I learned that there are a number of other skills that I did not list and I learned about what it takes to be efficient and effective in the industry as a prop artisan. To see the questions asked, refer to Appendix F.

For the first question, the listed answers the respondents could choose from were Professional, Regional, Academic, Community, and Other. The data suggests that highest percentage was 38% of respondents worked in professional theatre. The next highest percentage was at 20% and that was under the answer of other. The respondents that answered other listed freelance, one person worked for the group I.A.T.S.E (International Alliance of Theatrical Stage Employees) 44, and the others said they have worked in all of the categories. I found it interesting that a small percentage of folks, only 9%, worked in regional theatre.

In the second question of the survey, the respondents had a wide range of work experience, some only being at 5 years and some answers saying that they have been in the industry for forty plus years. The data suggests that the highest percentages of this question were those working in the industry between 11 and 20 years, at 29%. At 26% were folks working 6-10 years in the industry. The data suggests that those who worked over forty years consisted of the smallest percentage of the respondents, at only 5%. I found that this information was important because these experiences and the skills they learn all differ due to how long each individual has been in the industry. Some may have more knowledge on specific skills than others, and some specialize while others maintain a wide range of skills.

The third question was arguably the most important question of the survey. The question contained a large chart that listed the skills I thought a prop artisan could or should learn. These

skills included: carpentry; basic, intermediate, and advanced joinery; cabinetry; furniture construction and repair; re-upholstery and upholstery; cording; tufting; fabric manipulation; steel working; aluminum metal working; stick welding; MIG welding; TIG welding; soldering; cutting with an oxyacetylene torch; cutting with a plasma cutter; blacksmithing; faux painting; distressing and aging; faux fine art; airbrush; wood carving by hand; wood carving with the lath; foam carving by hand; foam carving with a hotwire/hot knife; foam carving with a drill press or lathe; sculpting; hand drafting; software drafting; hand rendering; digital rendering; CNC; laser cutter; 3D printer; vacuumforming; puppetry; faux food; molding and casting; textures/goops; hand sewing; machine sewing; surging; basic, intermediate and advanced sewing; leatherwork; electronics; electrical wiring; special effects; motorized props; hand props; pneumatics; paper props; licensed pyrotechnician; licensed gunsmith; and plumbing.

When looking at the information as a whole, I was surprised to see what the data was suggested with the proficiency and frequency with some skills, but I also expected some of the percentages being the way that they were in other areas. The data suggests that skills and their attainment were mainly learned through academics and a professional setting (on the job); however, books and self-teaching landed third, and in some categories, it was close with the professional setting (on the job) or overpassing it.

Like it was mentioned in chapter 1, a person can specialize in the area of props carpentry if they so choose. The data for the area of woodworking—which includes carpentry, all proficiency levels of joinery, cabinetry, and furniture construction and repair—varied depending on the respondents' answers. In the categories of proficiency and frequency, I found it interesting that most of the skills under woodworking had high percentage results in the rankings of not being learned/used or at a beginner level. In my own experience, I was taught basic and some

intermediate joinery throughout my academic career; however, the data suggests that 25% of the respondents have 1 (beginner skills), 16% of respondents do not have the skill at all (0), and 14% varied between the scale of 2-4 of having the skill. The data also suggests that 35% of the respondents rarely use the skill of basic joinery and that 22% do not use it at all. Furniture construction and repair differed when it came to proficiency and frequency. The data for furniture construction suggests the skill is being used between a beginner and moderate level while furniture repair is ranked between moderate to advanced. As expected, cabinetry's data suggested that it is a skill that no one really has or they have beginner skills for it, and that 36% of respondents never even use the skill. Overall, the data suggests that the attainment of these skills ranked between academic, the professional setting, and through books / self-taught. For example, the data for carpentry suggest that 44% of respondents learned the skills through academics, 32% were taught through the professional setting, and 10% learned through books or were self-taught. The data for furniture repair had 49% of respondents learn through academics and 20% learned through books.

Metalworking and knowing how to weld will definitely make you stand out from fellow prop artisans. In the category of metalworking, we have the skills of steel metal working, aluminum metal working, stick welding, MIG welding, TIG welding, soldering, spot welding, cutting with an oxyacetylene torch, cutting with a plasma cutter, and blacksmithing. In my experience I have learned many of the skills listed through academics. However, the one piece of data that I thought was interesting suggests that stick welding is a skill that 40% of respondents do not have and 72% of respondents do not use it. In my experience, this was the first skill I learned when it came to welding. I first learned it in high school and then used it again in graduate school. The data suggests that out of the three ways to weld, 16% know how to MIG weld at an intermediate level and 14% know how to TIG weld at a beginner level. When it comes to using an oxyacetylene torch and a

plasma cutter, 58% of respondents did not have the skill of using an oxyacetylene torch and 60% did not know how to use a plasma cutter. However, the data suggests that a small percentage of respondents under both of these skills had a beginner's level of these tools. For the attainment of these skills, most of the data suggests that the attainment of these skills had a high percentage through academics; however, MIG welding had 21% of respondents learning the skill through apprenticeships.

Next is the category of painting, which is broken into faux painting, distressing, and aging, faux fine arts, and airbrush. Props, if not painted by you, will most likely be painted by the scenic artist. However, that is not always the case. The data for the skills of faux painting, distressing & aging, and faux fine art all suggested that the skills were ranked between 3 (intermediate) and 5 (advanced) and the response percentages of those skills being between 20-30%. The frequency data of these skills for faux painting and distressing and aging suggested that they were ranked a 5 (all the time) at a percentage of 43% and 44%. But, for faux fine art, the data suggests it ranked 0 (not being used at all). The data for the attainment of these skills ranked high in academics (near or above 50%), but were also learned through the professional setting, through books, and for faux painting, through the internet/YouTube (9%).

Carving is the next category, which is broken into carving wood by hand, carving wood with a lathe, carving foam by hand, carving foam with a hotwire and or hot knife, carving foam with a drill press/lathe, and sculpting. Foam carving with a hot wire had data suggesting that the skill is being used at numerous levels and that for frequency they were all ranked quite equally. The data for foam carving skills mainly ranked between 3 (intermediate) and 5 (advanced). Both categories of wood carving (hand and lathe) had data suggesting that most of the responses did not have the skill at all. The frequency data of foam carving with a hot wire ranked between 3

(sometimes) and 4, while foam carving by hand ranked between 2 and 5 (all the time). Again, both wood carving skills data suggests that no one ever uses this skill. The data suggests that the attainment of these skills is learned through academics (this being the highest percentage for wood carving), through the professional setting (this being the highest percentage for foam carving), and through books / self-learning. In my own experience, I learned the skills of hand and hot knife foam carving through a job and then I really honed the skill in my graduate program.

Under the category of drafting/rendering/sketching, we have the skills broken into hand drafting, software drafting (using Vectorworks, AutoCAD, etc.), hand rendering/sketching, digital rendering/sketching (using Photoshop, Affinity Photo, Procreate, Sketchup, Illustrator, Vectorworks, CAD, etc.), and paper props. I found it interesting that the data for hand drafting had been ranked between 2 and 3(intermediate). But the data for software drafting suggested that this skill was ranked between 0 and 1(beginner). Hand and digital rendering/sketching had data that suggested that they were both equally ranked between 3 (intermediate) and 5 (advanced). The data for frequency between the skills of hand and digital drafting suggests that hand drafting is being ranked between 0 (not at all) and 2, and digital drafting is being ranked either at 0 or at 5 (being used all the time). Hand and digital rendering/sketching both suggest that the data equaled when it came it how frequently they were being used. The data for the attainment of these skills suggests that they have a high response percentage mainly being attained through academics. Those percentages ranged from 75%, 63% 65%, and 34%. Through my experience I as well learned these skills through my education of graduate school.

Technology is the next category, which is broken down into CNC, Laser Cutter, 3D Printer, and Vacuumforming. These skills require expensive tools that may not be affordable to academic and professional settings, as well as if you are trying to buy one for your own use as a freelance

prop artisan. You may learn how to use them in a workshop/conference or apprenticeship setting one time, and then never use it again. It all depends on the type of work and setting you go into. The proficiency and frequency data of these skills suggest that the skill itself is not being learned above the level of a beginner or not at all, and the response percentages (63%, 68%, 62%, 51%) of how frequently they are being used are ranked at 0 (not at all). The attainment of these skills through this instrument suggests that the skills are mainly being learned through a professional setting, some academically, and a few through the internet/YouTube.

In chapter one, I explained how a prop artisan can specify in craft goods. In this category, crafts, I will break it down into puppetry, faux food, molding/casting, textures/goops, and special effects. In the category of proficiency, I found that the data suggests that the skill of puppetry is being used at all levels, ranking from 0 (not learned) and 5 (advanced); faux food ranks between 3 (intermediate) and 5 (advanced); molding and casting are ranked with high response percentages in 2, 3 (intermediate), and 5 (advanced); and special effects have a high response percentage to the rank of 4. However, the data suggests that the frequency between the listed skills vary greatly. For example, puppetry is being ranked between 0 (not at all) and 4, faux food is being used all the time (ranking between 4 and 5), and molding/casting as well as special effects is only being used sometimes (between 3 and 4). For the skills of puppetry, faux food, and molding/casting, the data suggests that these skills are being learned through academics, a professional setting, and through books / self-learning. For special effects, I found it interesting that respondents (15%) have turned to the internet/YouTube for them. I learned about puppetry, molding/casting, textures/goops in graduate school. Special effects and faux food I originally learned in undergrad, used them in a professional setting (on the job), but began to work on them more in graduate school.

Next, we have sewing, which is broken down into hand sewing, machine sewing, serging, basic, intermediate, and advanced stitching, upholstery, fabric manipulation, and leatherworking. In the first chapter, I stated that the skill of sewing is extremely important to the specific role of a soft goods artisan. In the data of the survey, it suggests that both hand and machine sewing are ranked high when it comes to proficiency (ranking between 4 and 5 (advanced)) and that the frequency of these skills are also between 4 and 5 (being used all the time). When it comes to the data of the different levels of stitching, basic is used at an advanced level and intermediate ranges between the scale of 0 (not at all) and 5 (advanced). With how frequently those stitches are being used, the data suggests that they both rank at 5 (all the time). The advanced stitching data suggests that it is not a skill that is being learned or is being utilized in the field. With the skill of upholstery, I found that the data suggests that the skill is being used at all levels, mainly at 1, 3, and 5, and how frequently it is being used is only between 1 (rarely) - 2. The data suggests that the attainment of these skills is being learned through a high percentage of academics and books, but they are also being learned in other ways, like through family members. I learned the basic skill of sewing in high school in a class called home economics and then in graduate school I learned more about how to use those skills for different projects.

The last category is electrics and other components. This category is broken down into electronics, electrical wiring, motorized props, hand props, and pneumatics. These skills are more about the electrical and or automation side of the props area. Knowing these skills and knowing these skills well will allow you to stand out from others in our field. The skills and their data that stood out the most were electronics and electrical wiring; I found the data interesting for proficiency and frequency. The data suggested that it had a high response rate for the rank of 0 (not knowing the skill at all) and then they both had rankings of 1 (beginner) and 2. The frequency

of these skills through the data suggests that they are ranked between 0 (not at all) and 1, meaning that they are not being used all that often in the industry. I mainly learned the basics of these skills in graduate school.

Question four and five are follow-up questions to the third question. The answers to this question talk about both physical and mental/verbal skills. However, the data suggests that the skills which were repeated were EVA foam, floral arrangement, and calligraphy/hand lettering. But other skills that were suggested, and I thought were important, were rigging hardware, carpet installation, instruments, resin, mask making, and cardboard construction. The answers to question five varied between family members, some mentioned online forums, classes from high school, and from other team members in the department. These answers are relevant because they show the wide range of ways an aspiring artisan can learn the skills necessary to be successful. You do not necessarily have to learn them in school, but if you do, you can learn them through different classes and different types of teachers. Because of the internet, we can talk to people all over the world, and so online forums and groups on social media are important if you want to ask questions about a certain prop or if you want advice on how to make a prop.

Question six had answers which varied but also had quite a few similarities in the answers. People had responded with the answers of trial and error, work experience/on the job experience, academics, books, YouTube, the internet, and more. However, the answers that stuck out to me were, "...willingness to just go for it;" "Out of failure comes success;" and "It's all useful." All of the ways to learn skills are useful, but it all depends on how you learn best. I know for me, I am a hands-on, in-person, physical learner. I would rather learn from someone, in person first and then go off and do it on my own. In my final semester of graduate school, I have been learning how to do it on my own because I may not always have someone there to teach me. I research online, read

books, watch YouTube videos. I also look at social media groups that I am a part of to see if they have discussed a certain topic before.

The final question asked in the survey was meant to collect data on the physical skills people could work on while working in the industry. Consistently practicing your skills to grow and improve them are important to becoming a better artist in the prop industry. Responses to this question had answers that talked a lot about keeping up with computer skills and the latest technology—especially the gap between hands-on and digital skills. Painting, carving, crafty skills, and repair skills were also mentioned. Responses also talked about keeping up by regularly practicing the skill, find time to learn from others, exercise the brain, continue learning, and adapting to what you know and how you can use those skills you know to your advantage. As the industry changes and evolves, it is important to grow and learn those newer “skills” or technology, even if you are learning them to understand them and not to actually use them. The basics are important to consistently work on but also working on skills you may use every once in a while is important too.

With the findings and analysis of my survey, I have concluded that there are a number variables that determine what skills are being learned and used in the industry, and how those skills are being attained. I concluded that the rankings and percentages of these skills and their attainments could be based on the fact of how long a prop artisan has been in the industry. For example, someone who has been in the industry for forty plus years will learn a lot of skills, but the skills that require new technology may not be learned because the skills they have now could work just as well as the new technology. However, for those that are just starting in the industry, they may learn those new skills and technologies and not learn about the skills the forty plus year

workers know. It also depends on the projects that come into your shop and those projects are based on the type of shows you work on.

I understand that it all depends on where you are learning the skill, what tools you do and do not have wherever you learn the skills, and whether or not you have someone who can teach you the skill safely and correctly before you try to teach yourself. The data suggests that skills of carpentry, furniture construction, furniture repair, reupholstery, fabric manipulation, MIG welding, soldering, faux painting, distressing & aging, faux fine art, foam carving, drafting/sketching/rendering, puppetry, faux food, molding/casting, the various sewing skills, and paper props are the ones that are frequently being used in the industry. However, any of the skills that were spoken for in this thesis could be used for any project for a show. If there is a skill that you want to learn, go and learn it. If you would rather specialize in a skill instead of learning a multitude of them, do it. Over time, learning skills allows you to understand different methods of making props, allows for quick thinking, it allows you to be adaptable, and will allow you to be more efficient as a prop artisan. When attaining skills, it is about the experiences the prop projects give you and the possibility to make connections with others in our department.

## 5. FINAL THOUGHTS

Figuring out what you want to do as a career can be intimidating, especially a career in the arts, like theatre. As a prop artisan, getting your foot in the door relies heavily on experience, the skills you have and are willing to learn, and who you know in the industry. The skills I have listed are only the beginning; the list is endless. You as an individual have the ability to improve on them, as long as you make the effort to do so. In my research, I have concluded that there is an abundant way to learn skills, those being through academics, on the job, through apprenticeships and internships, through workshops/conferences, and through books and the internet. But the way you want to learn and attain those skills is up to you and the way you learn best. As artists, I will always believe that we have room to grow. Taking the opportunities given to us and taking on challenging prop projects allows us to grow and improve, especially with skills you have and skills that you can learn.

The topic itself needs more time for research. I wish I had more time to go in-depth and add more information on the different theatre programs in colleges and universities, as well as the different trade schools, so I could give readers an understanding of which educational routes are the best ones to take. I would want to do more research on the different skills to thoroughly explain them and the tools/materials they would use with the specific skills. In the future, I would possibly like to create a YouTube channel that would help explain the skills and tools and to show others what the skills can be used for when it comes to theatre. As someone who wants to be a prop artisan for their career, I hope to go through the different paths and take on different jobs and opportunities that will allow me to grow and improve my own skills as well as be able to learn new skills in the professional setting. I know that I will continuously talk to others in the field to find out what skills are being used and the different routes that can be taken to learn those skills.

In my concluding thoughts, there is a lot more to learn when it comes to being a prop artisan. As we grow and improve as artists, we gain knowledge and values through the different aspects of attaining skills. As time goes on, things will change in the theatre industry, and we will have to adapt to the newest technological advances and continue to learn more skills. Theatre is always evolving. Prop artisans should never stop learning; we must remember why we are a part of the collaborative process, and we must remember the importance of what we do. We help tell the story. The smallest of details make a world of a difference.

## **APPENDIX A. TRADESCHOOL WEBSITES**

Trade Schools, Colleges and Universities - <https://www.trade-schools.net/> (Accessed Mar. 26, 2022)

Best Accredited Colleges - <https://bestaccreditedcolleges.org/> (Accessed Mar. 26, 2022)

Top Trade Schools - <https://toptrade.school/> (Accessed Mar. 26, 2022)

Universities.com - <https://www.universities.com/> (Accessed Mar. 26, 2022)

Find My Trade School - <https://www.findmytradeschool.com/> (Accessed Mar. 26, 2022)

## **APPENDIX B. PROP ARTISAN SHOPS**

BNG Industries/Everything Props – Harrison, NJ

Jerard Studio – Brooklyn, NY

Costume Armour – Cornwall, NY

Hat Rabbit Studio – Brooklyn, NY

Prop and Paint Creative Studio – Newburgh, NY

Bad Monkey Props LLC – Brooklyn, NY

Behind the Mule Studio – Brooklyn, NY

BrenBri (BB) Properties – Little Falls, NJ

Paper Mache Monkey Art and Design Studio – Brooklyn, NY

Daddy-O Productions – Brooklyn, NY

Prop N Spoon – Queens, NY

John Creech Design and Production – Brooklyn, NY

Propstar – NY, NY

Stonedog Studios – Freehold, NJ

Czinkota Studios LTD – Gardiner, NY

Paragon Innovation Group – Oakville, ON, Canada

The Rabbit's Choice – Toronto, ON, Canada

Moonboots Productions – Tappan, NY

F&D Scene Changes – Calgary, Canada

Great Lake Scenic Studio – Burlington, ON, Canada

ISS (Independent Studio Services) Props – Sunland, CA, Lancaster, CA, East Point, GA,

Albuquerque, NM, New Orleans, LA

## APPENDIX C. JOB WEBSITES

OffStage Jobs (this source is HIGHLY useful when it works) – <https://offstagejobs.com> (Last accessed Mar. 26, 2022)

ArtSEARCH (haven't used yet but was recommended) - <https://artsearch.tcg.org/home> (Last accessed Mar. 26, 2022)

Playbill - <https://www.playbill.com/jobs> (Last accessed Mar. 26, 2022)

BACKSTAGE (this may require some 'digging') - <https://www.backstage.com/> (Last accessed Mar. 26, 2022)

Theatre JOB BOARD - <https://theatrejobboard.setc.org/> (Last accessed Mar. 26, 2022)

Jobs USITT - <https://www.usitt.org/jobs> (Last accessed Mar. 26, 2022)

Indeed (this isn't a theatre-related website but is still useful) - <https://www.indeed.com/> (Last accessed Mar. 26, 2022)

SimplyHired (this isn't theatre-related but is still useful) - <https://www.simplyhired.com/> (Last accessed Mar. 26, 2022)

## APPENDIX D. BOOK RESOURCES

*The Prop Building Guidebook: For Theatre, Film, and TV* (2<sup>nd</sup> Edition)– by Eric Hart

*The Prop Effects Guidebook: Lights, Motion, Sound, and Magic* – by Eric Hart

*Prop Building for Beginners: Twenty Props for Stage and Screen* – by Eric Hart

*Create Your Own Stage Props* – by Jacquie Govier

*The What, Where, When of Theater Props: An Illustrated Chronology From Arrowheads to Video Games* – by Thurston James

*The Theater Props Handbook: A Comprehensive Guide to Theater Properties, Materials, and Construction* – by Thurston James

*Making Stage Props: A Practical Guide* – by Andy Wilson

*Backstage Handbook: An Illustrated Almanac of Technical Information* (3<sup>rd</sup> Edition) – by Paul Carter

*Stage Properties and how to make them* – by Warren Kenton

*Stage Source Book: Props* – by Gill Davies

*Illustrated Theatre Production Guide* – by John Holloway

Carpentry/Woodworking:

*Woodworker's Power Tools: An Essential Guide* – by Rick Peters

*Woodworking with the Router: Professional Router Techniques and Jigs Any Woodworker Can Use* – by Bill Hylton

*Hand Tool Basics: Woodworking Tools & How to Use Them* – by Steve Branam

*The Woodworking, Wood Joinery and Woodturning Starter Handbook* – by Stephen Fleming (2020)

*Woodworking for Beginners Handbook: The Step-by-Step Guide with Tools, Techniques, Tips and Starter Projects* – by Stephen Fleming (2020)

*Woodworking Simplified: Foolproof Carpentry Projects for Beginners* – by David and Jeanie Stiles

*Complete Guide to Woodworking: All the Essential Techniques and Skills You Need* – by Chris Tribe

*Woodworking Basics: Mastering the Essentials of Craftsmanship* – by Peter Korn

*The Complete Manual of Woodworking: A Detailed Guide to Design, Techniques, and Tools for the Beginner and Expert* – by Albert Jackson, David Day, and Simon Jennings

*Stock Scenery Construction Handbook* – by Bill Raoul and Mike Monsos

Joinery:

*The Complete Guide to Joint-Making* – by John Bullar

*The Joint Book: The Complete Guide to Wood Joinery* – by Terrie Noll

*The Encyclopedia of Joint Making* – Terrie Noll

*Wood Joinery for Beginners Handbook, The Essential Joinery Guide with Tools, Techniques, Tips and Starter Projects* – Stephen Fleming

*Beginner's Guide to Japanese Joinery* – Jin Izuhara

*Intermediate Guide to Japanese Joinery* – Jin Izuhara

*Essential Joinery, The Fundamental Techniques Every Woodworker Should Know* – by Marc Spagnuolo

Cabinetry:

*Illustrated Cabinet Making: How to Design and Construct Furniture That Works* – by Bill Hylton

*The Fine Art of Cabinetmaking* – by James Krenov

*The Complete Illustrated Guide to Furniture & Cabinet Construction* – by Andy Rae

*Cabinetmaking: Procedures for the Small Shop* – by John Ward and Kevin Fristad

*Cabinet Making for Beginners Handbook: The Step by Step Guide with Tools, Techniques, Tips, and Starter Projects* – by Stephen Fleming

*Cabinetry: The Woodworkers Guide to Building Professional-Looking Cabinets and Shelves* –  
Edited by Robert A. Yoder

Furniture:

*The Woodworker's Guide to Furniture Design* – by Garth Graves

*Building Fine Furniture: A Woodworker's Guide to 12 Elegant Projects* – by Glen Huey

*With Saw, Plane and Chisel, How to Build Historic American Furniture with Hand Tools* – by  
Zachary Dillinger

*Terrific 2x4 Furniture: Building Stylish Furniture From Standard Lumber* – by Stevie Henderson  
and Mark Baldwin

*Making Rustic Furniture: How to Make Chairs, Tables, Bedroom Furniture, Garden Furniture,  
Gates, Fences, and More in the Rustic Style* – by Raymond Nugent

*Furniture Design & Construction: Classic Projects & Lessons of the Craft* – by Graham Blackburn

*The Furniture Bible: Everything You Need to Know to Identify, Restore & Care for Furniture* – by  
Christophe Pourny

Upholstery:

*Upholstering & Recovering* – by Janette Hall, Carol Henderson, and Karin Shakery  
*Singer Upholstery Basics Plus: Complete Step-by-Step Photo Guide* – by Steve Cone  
*Spruce: A Step-by-Step Guide to Upholstery and Design* – by Amanda Brown  
*The Upholsterer's Step-by-Step Handbook, A Practical Reference* – by Alex Law  
*The Complete Guide to Upholstery: Stuffed with Step-by-Step Techniques for Professional Results*  
– by Cherry Dobson  
*Upholstery: A Complete Course: 2<sup>nd</sup> Revised Edition* – by David James  
*Professional Upholstering: All the Trade Secrets* – by Frank Destro Jr.

#### Welding:

*Modern Welding: Complete Coverage of the Welding Field in One Easy-to-Use Volume* – by  
Andrew Althouse, Carl Turnquist, William Bowditch, and Kevin Bowditch  
*Welder's Handbook: A Guide to Plasma Cutting, Oxyacetylene, ARC, MIG and TIG Welding* – by  
Richard Finch  
*Sheet Metal Handbook: How to Form and Shape Sheet Metal for Competition, Custom, and  
Restoration Use* – by Ron and Sue Fournier  
*How to Weld Scrap Metal Art: 30 Easy Welding Projects You Can Make at Home* – by Barbie the  
Welder  
*Welding for Arts & Crafts* – by Dewayne Roy  
*Welding Complete, 2<sup>nd</sup> Edition: Techniques, Project Plans & Instructions* – by Michael Reeser  
*WELDING FOR BEGINNERS: A Welding Book for Beginners with Well-Illustrated Practical  
Skills* – by Steve Christena  
*How to Weld* – by Todd Bridigum

*Welding Made Easy: A Book on Basics in Welding, how to Cut, Tools, Welding Techniques with Photos to Guide You* – by Brandon Lund

*Getting Started with Soldering: A Hands-On Guide to Making Electrical and Mechanical Connections* – by Marc de Vinck

*The Basic Soldering Guide Handbook: Learn to Solder Electronics Successfully* – by Alan Winstanley

*How to Solder Electronics: 15 Rules for Successful Soldering* – by SRA Solder

Blacksmithing:

*The DIY Blacksmithing Book* – by Terran Marks

*Blacksmithing for Beginners* – by Kylan Kobe

*The Home Blacksmith: Tools, Techniques, and 40 Practical Projects for the Home Blacksmith* – by Ryan Ridgway

*The Art & Craft of the Blacksmith: Techniques and Inspiration for the Modern Smith* – by Robert Thomas

*Blacksmithing for Beginners: An Easy Guide to Getting Started* – by Will Kalif

Painting/Sketching/Rendering:

*The Art of Coloring Wood: A Woodworker's Guide to Understanding Dyes and Chemicals* – by Brian Miller and Marci Crestani

*The Handbook of Painted Decoration: The Tools, Materials, and Step-by-Step Techniques of Trompe L'oeil Painting* – by Yannick Guegan and Roger Le Puil

Professional Painted Finishes: A Guide to the Art and Business of Decorative Painting – by Ina Marx, Allen Marx and Robert Marx

*The Paint Effects Bible: 100 Recipes for Faux Finishes* – by Kerry Skinner

*The Art of Faux: The Complete Sourcebook of Decorative Painted Finishes* – by Pierre Finkelstein

*The Ultimate Book of Faux Finishes* – by Martha Kenton

*Simple Trompe L'oeil: 20 Stylish Projects Using Stencils and Faux Finishes* – by Mary MacCarthy

*Painting Glass: Stylish Designs and Practical Projects to Paint in a Weekend* – by Moira Neal and Lynda Howarth

*Distressables* – by Tim Holtz

*Painter's Handbook: Revised and Expanded* – by Mark Gottsegen

*Paint Pouring: Mastering Fluid Art* – by Rick Cheadle

*Drawing & Rendering for Theatre: A Practical Course for Scenic, Costume and Lighting Designers* – by Clare P. Rowe

*Perspective Rendering for the Theatre* – by William Pinnell

*Drafting for the Theatre (2<sup>nd</sup> Edition)* – by Dennis Dorn & Mark Shanda

*Designing and Drawing for the Theatre* – by Lynn Pecktal

Carving/Sculpting:

*The Lathe Book (3<sup>rd</sup> Edition): A Complete Guide to the Machine and its Accessories* – by Ernie Conover & Ernest Conover III

*Fundamentals of Woodturning* – by Mike Darlow

*Learn to Turn (3<sup>rd</sup> Edition): A Beginner's Guide to Woodturning Techniques and 12 Projects, Step-by-Step Instructions, Troubleshooting, Tips & Expert Advice* – by Barry Gross

*Woodturning with Resin: Techniques & Projects for Turning Works of Art* – by Keith Lackner

*Woodcarving: Techniques & Designs* – by Mike Davies

*Twenty Decorative Carving Projects in Period Styles* – by Steve Bisco

*Carving the Human Face (2<sup>nd</sup> Edition): Capturing Character and Expression in Wood* – by Jeff Phares

*Basic Relief Carving* – by Georg Keilhofer

*Woodcarving: The Beginner's Guide* – by William Wheeler and Charles Hayward

*Chip Carving: 25 Projects with Instructions and Full Size Patterns* – by Harris Moore

*Paperart: The Art of Sculpting with Paper, A Step-by-Step Guide and Showcase* – by Michael LaFosse

*Sculpture: Principles and Practice* – by Louis Slobodkin

*Paper Sculpture: Fluid Forms* – by Richard Sweeney

*The Encyclopedia of Sculpting Techniques: A Unique Visual Directory, with Step-by-Step Instructions and a Gallery of Finished Works* – by John Plowman

*Foam Décor: Carve 30 Elegant Home Accents* – by Kristy McNeil

*Sculpting Basics: Everything You Need to Know to Create Three-Dimensional Artworks* – by Karin Hessenberg

Molding/Casting:

*The Prop Builder's Molding & Casting Handbook* – by Thurston James

*Breaking Out of the Mold: Resin and Clay Casting for Mixed-Media Art* – by Jen Cushman

*The Essential Guide to Mold Making & Slip Casting* – by Andrew Martin

*Modeller's Guide to Mould Making and Resin Casting* – by Alex Hornor

*Secrets of Expert Mold Making & Resin Casting (2<sup>nd</sup> Edition)* – by Karl Juelch

*Sculpture Casting (Studio Edition): Mold Techniques and Materials: Metals, Plastics, Concrete* –  
by Dennis Kowal

*Mold Making and Casting Guide: Reusable Mold Making for Arts, Jewelry, Crafts, Cake  
Decorating, Candles, Toys, DIY, and More* – by Stan Farrell, Michelle Miller, and Shawn Lemelin

#### Sewing:

*Sewing: Learn Hand Sewing Techniques and Strategies* – by Charles Faraday

*The Geometry of Hand-Sewing: A Romance in Stitches and Embroidery* – by Natalie Chanin

*The Encyclopedia of Sewing Techniques: A Step-by-Step Visual Directory, with an Inspirational  
Gallery of Finished Pieces* – by Wendy Gardiner

*Ultimate Sewing Bible: A Complete Reference with Step-by-Step Techniques* – by Marie Clayton

*The Sewing Book: Over 300 Step-by-Step Techniques* – by Alison Smith

*First Time Sewing: The Absolute Beginner's Guide* – by Editors Of Creative Publishing  
International

*First Time Sewing with a Serger: The Absolute Beginner's Guide* – by Becky Hanson and Beth  
Baumgartel

#### Puppetry:

*Introduction to Puppetry Arts* – by Cheralyn L. Lambeth

*Puppetry: How to Do It* – by Mervyn Millar

*The Complete Book of Puppetry* – by George Latshaw

*Making and Manipulating Marionettes* – by David Currell

*Puppetry in Theater* – by George Capaccio

Faux Food:

*The Fake Food Cookbook: Props you Can't Eat for Theatre, Film and TV* - by Karestin Harrison  
and Tamara L. Honesty

Paper Props:

*Fake Love Letters, Forged Telegrams, and Prison Escape Maps: Designing Graphic Props for  
Filmmaking* – by Annie Atkins

Computer Software and Technology:

*The Newbie's Guide to CNC Routing: Getting Started with CNC Machining for Woodworking and  
Other Crafts* – by Professor Henry

*Beginner's Guide to CNC Machining in Wood: Understanding the Machines, Tools, and Software,  
Plus Projects to Make* – by Ralph Bagnall

*Design for 3D Printing: Scanning, Creating, Editing, Remixing, and Making in Three Dimensions*  
– by Samuel Bernier, Bertier Luyt, and Tatiana Reinhard

*3D Printers: A Beginner's Guide* – by Oliver Bothmann

*The Laser Cutter Handbook* – by Eric Goodwin

*Creating with Laser Cutters and Engravers* – by Mary-Lane Kamberg

*The Affinity Photo Manual: A Step-by-Step New Users Workbook* – by Frank Walters

*Adobe Photoshop: Classroom in a Book* – by Conrad Chavez and Andrew Faulkner

*Adobe Illustrator: Classroom in a Book* – by Brian Wood

*Beginner's Guide to Digital Painting in Procreate: How to Create Art on an iPad* – by 3dtotal  
Publishing

*Make Great Art on Your iPad: Tools, Tips and Tricks for Using Adobe, Photoshop Sketch, Procreate, ArtRage, and Many More* – by Alison Jardine

*SketchUp to LayOut* – by Matt Donley

*Vectorworks for Theatre* – by Steve Macluskie

*AutoCAD 2022 For Beginners* – by CADfolks

*AutoCAD Exercises for Beginners: Designers Workbook for Practice* – by Saik Shameer

*Microsoft Word & Excel 2021 for Beginners & Power Users: The Concise Microsoft Office Word and Excel* – by Tech Demystified

*Excel 2022 for Beginners: The Complete Step-by-Step Beginner's Mastery Guide for Microsoft Excel* – by Joe Webinar

*Microsoft PowerPoint 2016: Step-by-Step* – by Joan Lambert

Electric Wiring and Other Components:

*Electricity for the Entertainment Electrician & Technician* – by Richard Cadena

*The Prop Effects Guidebook: Lights, Motion, Sound, and Magic* – by Eric Hart

*Audel Practical Electricity* – by Paul Rosenberg

*Practical Electronics for Inventors (4<sup>th</sup> Edition)* – by Paul Scherz

*Ultimate Guide: WIRING (8<sup>th</sup> Updated Edition)* – by Editors of Creative Homeowner

*Thermoplastic Materials: Properties, Manufacturing Methods, and Applications* – by Christopher Ibeh

*Basic Pneumatics: An Introduction to Industrial Compression and Components* – by Jay Hooper

*The Prop Effects Guidebook: Lights, Motion, Sound, and Magic* – by Eric Hart

Also, any of the books listed in the bibliography are good resources as well.

## APPENDIX E. YOUTUBE CHANNELS/VIDEOS

Props:

Working in the Theatre: Specialty Props (American Theatre Wing) –

[www.youtube.com/watch?v=ADR5VRaJ5mY](http://www.youtube.com/watch?v=ADR5VRaJ5mY) (Last accessed Mar. 26, 2022)

Working in the Theatre: Prop Masters (American Theatre Wing) –

[www.youtube.com/watch?v=xWMtFtzRC0](http://www.youtube.com/watch?v=xWMtFtzRC0) (Last accessed Mar. 26, 2022)

Working in Theatre: Prop Director (Center Theatre Group) –

<https://www.youtube.com/watch?v=g8EkmeAnWRA> (Last accessed Mar. 26, 2022)

Prop Making (Off The Wall Stratford) – <https://www.youtube.com/watch?v=ZCP-RFTHEGo>

(Last accessed Mar. 26, 2022)

Theatre: Props Design and Fabrication (Oklahoma City University) –

[https://www.youtube.com/watch?v=eGr\\_pNeh0vA](https://www.youtube.com/watch?v=eGr_pNeh0vA) (Last accessed Mar. 26, 2022)

Prop Manager (American Theatre Wing) - <https://www.youtube.com/watch?v=sQ1eRCOu5WM>

(Last accessed Mar. 26, 2022)

Disney Dream Job: Walt Disney Imagineer Prop Master (Disney Family) –

<https://www.youtube.com/watch?v=PEzoH2BVsb0> (Last accessed Mar. 26, 2022)

Artist Pages:

Eric Hart - <https://www.youtube.com/c/EricHartProps> (Last accessed Mar. 26, 2022)

Proptologist – Jay Duckworth - <https://www.youtube.com/user/jayduck9/videos> (Last accessed Mar. 26, 2022)

Scott Props & Roll - <https://www.youtube.com/c/ScottPropandRoll> (Last accessed Mar. 26, 2022)

Adam Savage's Tested - <https://www.youtube.com/c/tested> (Last accessed Mar. 26, 2022)

Punished Props Academy - <https://www.youtube.com/user/punishedprops> (Last accessed Mar. 26, 2022)

Handmade with Ashley - [https://www.youtube.com/channel/UC6SOnloZ\\_nBrrVLJuCwjshg](https://www.youtube.com/channel/UC6SOnloZ_nBrrVLJuCwjshg) (Last accessed Mar. 26, 2022)

SKS Props - [https://www.youtube.com/channel/UCGITwYebyH\\_1E\\_HF3QeH1cg](https://www.youtube.com/channel/UCGITwYebyH_1E_HF3QeH1cg) (Last accessed Mar. 26, 2022)

Much Props - [https://www.youtube.com/channel/UCT\\_1SF6J9uKh\\_UaGPtjGokg](https://www.youtube.com/channel/UCT_1SF6J9uKh_UaGPtjGokg) (Last accessed Mar. 26, 2022)

Carpentry/Woodworking:

WoodWorkers Guild Of America - <https://www.youtube.com/c/Wwgoa> (Last accessed Mar. 26, 2022)

Doing it With Jason - <https://www.youtube.com/channel/UCkIeTLc7zQojSU2DVFA6sKg> (Last accessed Mar. 26, 2022)

Training Hands Academy – <https://www.youtube.com/channel/UCELo4EJTWb-5vC-GBBTa1uA> (Last accessed Mar. 26, 2022)

John Malecki – <https://www.youtube.com/channel/UCVUSDq6-oSpWAAPUppHFtZQ> (Last accessed Mar. 26, 2022)

10 Must-Have Tools for Beginner Woodworkers (John Malecki) –

<https://www.youtube.com/watch?v=2eFeB2fTiQY> (Last accessed Mar. 26, 2022)

Crafted Workshop - <https://www.youtube.com/channel/UC-hTi9atsD6wA12s46LpAVw> (Last accessed Mar. 26, 2022)

3X3Custom – Tamar - [https://www.youtube.com/channel/UC39z4\\_U8Kls0lIAij3RRZAQ](https://www.youtube.com/channel/UC39z4_U8Kls0lIAij3RRZAQ) (Last accessed Mar. 26, 2022)

## Joinery:

Simple wood corner joints / Woodworking joints (Celal Unal) –

<https://www.youtube.com/watch?v=WFxieuIcPdU> (Last accessed Mar. 26, 2022)

Woodworking / Wooden Joints (Celal Unal) - <https://www.youtube.com/watch?v=jta03CHcI28>

(Last accessed Mar. 26, 2022)

Basic Wood Joinery (Eric Brennan) - [https://www.youtube.com/watch?v=-f7tTNRH\\_04](https://www.youtube.com/watch?v=-f7tTNRH_04) (Last

accessed Mar. 26, 2022)

Japanese Joinery – Kane Tsugi (Dylan Iwankuni) –

<https://www.youtube.com/watch?v=P-ODWGUfBEM> (Last accessed Mar. 26, 2022)

## Cabinetry:

Build Cabinets The Easy Way | How to Build Cabinets (Bourbon Moth Woodworking) –

<https://www.youtube.com/watch?v=89WeF52Xwcl> (Last accessed Mar. 26, 2022)

3 LEVELS of Cabinetry – DIY to PRO Build (John Malecki) –

[https://www.youtube.com/watch?v=WE\\_RBHIU-iE](https://www.youtube.com/watch?v=WE_RBHIU-iE) (Last accessed Mar. 26, 2022)

The Basics of Making Cabinets (Bent's Woodworking & More) –

<https://www.youtube.com/watch?v=mNQi2UOFmSo> (Last accessed Mar. 26, 2022)

10 Tips for Building Cabinets (John Malecki) –

<https://www.youtube.com/watch?v=Nf05ykKSkHY> (Last accessed Mar. 26, 2022)

## Furniture:

Helping You Make Wood Work: Episode 1 – Basic Furniture Design (Woodcraft) –

<https://www.youtube.com/watch?v=rhU9A9wheEE> (Last accessed Mar. 26, 2022)

How To Build A Wooden Chairs For Dining Table (I Like Woodworking) –

<https://www.youtube.com/watch?v=22EQTGOOEIlg> (Last accessed Mar. 26, 2022)

Building a Set of Dining Chairs (AlabamaWoodworker) –

[https://www.youtube.com/watch?v=AAFMAej3q\\_w](https://www.youtube.com/watch?v=AAFMAej3q_w) (Last accessed Mar. 26, 2022)

Queen Anne Chair Building Process (Doucette and Wolf Furniture Makers) –

<https://www.youtube.com/watch?v=xkHSAEUIGxk> (Last accessed Mar. 26, 2022)

Doucette and Wolfe Furniture Makers - <https://www.youtube.com/c/Doucetteandwolfefurniture>  
(Last accessed Mar. 26, 2022)

Upholstery:

Beginners Guide to Furniture Upholstery (So Much Better With Age) –

[https://www.youtube.com/watch?v=s9Y\\_Dz-wBh8](https://www.youtube.com/watch?v=s9Y_Dz-wBh8) (Last accessed Mar. 26, 2022)

DIY Upholstery For Beginners: How To Reupholster A Chair (BYOT) –

<https://www.youtube.com/watch?v=bTDiDiwU-ZQ> (Last accessed Mar. 26, 2022)

Alliance Theatre Props – Upholstery (Ep. 1) (Alliance Theatre) –

<https://www.youtube.com/watch?v=9ASQwr2SLk8> (Last accessed Mar. 26, 2022)

How to Upholster A Seat Bench with Buttons (ALO Upholstery) –

<https://www.youtube.com/watch?v=xXxjZryjDQA> (Last accessed Mar. 26, 2022)

ALO Upholstery - <https://www.youtube.com/channel/UC8YjZ9O9HglSY4fzluW3PAw> (Last  
accessed Mar. 26, 2022)

FaceLiftInteriors - <https://www.youtube.com/channel/UChmdPxTR7lshHhhCvfhnywQ> (Last  
accessed Mar. 26, 2022)

Kim's Upholstery - <https://www.youtube.com/c/KimsUpholstery> (Last accessed Mar. 26, 2022)

Mark's Upholstery - <https://www.youtube.com/c/MarksUpholstery> (Last accessed Mar. 26, 2022)

Metalworking:

Artistic Welding (Off The Wall Stratford) - <https://www.youtube.com/watch?v=nBgFFJh35qA>  
(Last accessed Mar. 26, 2022)

Weld.com - <https://www.youtube.com/channel/UCM0kHJXSHR1k1wtLuliKmHg> (Last accessed Mar. 26, 2022)

TimWelds - <https://www.youtube.com/c/TimWelds> (Last accessed Mar. 26, 2022)

WeldTube - <https://www.youtube.com/c/WeldTubeHouston> (Last accessed Mar. 26, 2022)

Everlast Welders - <https://www.youtube.com/c/everlastgenerator> (Last accessed Mar. 26, 2022)

Millers Welder - <https://www.youtube.com/channel/UCTRI9Us8zLiywY29vsW3kKg> (Last accessed Mar. 26, 2022)

How to properly use an oxygen acetylene torch for cutting (J-Tech) –

<https://www.youtube.com/watch?v=8oYs2T6shZc> (Last accessed Mar. 26, 2022)

Cutting Torch – Tips for Oxygen Acetylene Cutting (weldingtipsandtricks) –

<https://www.youtube.com/watch?v=AOYQEg9SXoA> (Last accessed Mar. 26, 2022)

How Does a Plasma Cutter Work? (Miller Welders) –

<https://www.youtube.com/watch?v=9qXja6MEsdE> (Last accessed Mar. 26, 2022)

Plasma Cutting For Beginners; Plasma Tips and Tricks (Urchfab) –

[https://www.youtube.com/watch?v=\\_oBaXyIax\\_Q](https://www.youtube.com/watch?v=_oBaXyIax_Q) (Last accessed Mar. 26, 2022)

Blacksmithing:

How Real Swords Are Made For TV and Movies (Insider) –

<https://www.youtube.com/watch?v=qmfvN-CBaco> (Last accessed Mar. 26, 2022)

Alec Steele - <https://www.youtube.com/user/alectheblacksmith> (Last accessed Mar. 26, 2022)

Black Bear Forge II - <https://www.youtube.com/c/BlackBearForgeII> (Last accessed Mar. 26, 2022)

Painting/Sketching/Rendering:

Behind the Scenics (the best channel, in my opinion) –

<https://www.youtube.com/channel/UCCDP3ek1KsyJQtq8u2lb2dQ> (Last accessed Mar. 26, 2022)

The Artful Brittani - <https://www.youtube.com/channel/UC77jIyc5jGJ3nLri1pGmuCw> (Last accessed Mar. 26, 2022)

Amy Howard - <https://www.youtube.com/c/amyhowardathome> (Last accessed Mar. 26, 2022)

Hand Rendering Basics (tasmccarthy) - <https://www.youtube.com/watch?v=9wFzEVO3Vcw> (Last accessed Mar. 26, 2022)

How to Get Better at Drawing, 6 Things You Need to Know (Dan Beardshaw) –

[https://www.youtube.com/watch?v=mio-\\_RyxOyQ](https://www.youtube.com/watch?v=mio-_RyxOyQ) (Last accessed Mar. 26, 2022)

How to Learn Digital Painting (Beginners) (Sinix Design) –

<https://www.youtube.com/watch?v=iwRa5qTnr8o> (Last accessed Mar. 26, 2022)

How to Quickly Improve Your Art (Sara Tepes) –

<https://www.youtube.com/watch?v=orgVs2csqbo> (Last accessed Mar. 26, 2022)

Carving/Sculpting:

Sculpture (Stan Winston School) – make sure to subscribe to this channel to see full videos

<https://www.youtube.com/watch?v=op3qPyrcZNI&list=PLw3FQmoG4RtEKfwkxrh3uS-LL5XrVLa75> (Last accessed Mar. 26, 2022)

Sculpting and Carving Foam (Eric Hart) - <https://www.youtube.com/watch?v=YINmKrCynhU>  
(Last accessed Mar. 26, 2022)

Aden Hynes Sculpture Studios - <https://www.youtube.com/c/AdenHynesSculptureStudios> (Last accessed Mar. 26, 2022)

Tested Favorite Tools: Hot Wire Foam Carving Set (Adam Savage's Tested) –

<https://www.youtube.com/watch?v=D25Cnn74o1A> (Last accessed Mar. 26, 2022)

How to Carve Dwarven Pillars with Faces from XPS Foam (Nat 1 Videos) – while this video is specific, it shows good techniques when it comes to carving foam

<https://www.youtube.com/watch?v=dnuzUi0HgT8> (Last accessed Mar. 26, 2022)

Wood By Wright How 2 - <https://www.youtube.com/channel/UCQNFJVAUF-qWtK0dawxcOaQ>  
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Wood Carving Tools & Techniques for Beginners (Wood and Shop) –

<https://www.youtube.com/watch?v=4EVr-HnOKBY> (Last accessed Mar. 26, 2022)

Simple Carving With Basic Tools (Wood By Wright How 2) –

<https://www.youtube.com/watch?v=oSxxv4YwGZw> (Last accessed Mar. 26, 2022)

WOOD magazine - <https://www.youtube.com/user/Wood> (Last accessed Mar. 26, 2022)

Lathe Basics (WOOD magazine) - <https://www.youtube.com/watch?v=jcokD6zRyrw> (Last accessed Mar. 26, 2022)

How to Turn Wood on a Lathe – Intro to Woodturning (Darbin Orvar) –

<https://www.youtube.com/watch?v=e0iACey0mcQ> (Last accessed Mar. 26, 2022)

Molding/Casting:

Molding Or Casting? Which is it? (Robert Tolone) –

<https://www.youtube.com/watch?v=Bp5fTtN-LIM> (Last accessed Mar. 26, 2022)

Robert Tolone - <https://www.youtube.com/channel/UCPA1NCFqYebL6RBW5-bnOrg> (Last accessed Mar. 26, 2022)

Prop: Shop – Molding & Casting 101: How to Make a One Part Mold (Punished Props Academy)

- <https://www.youtube.com/watch?v=GN7wITTHFrc> (Last accessed Mar. 26, 2022)

Prop: Shop – Molding & Casting 101: How to Make a Two Part Mold (Punished Props Academy)

- [https://www.youtube.com/watch?v=Ag5CzNb\\_JxI](https://www.youtube.com/watch?v=Ag5CzNb_JxI) (Last accessed Mar. 26, 2022)

Prop: Shop – Molding & Casting 101: Intro to Silicone Rubber (Punished Props Academy)

<https://www.youtube.com/watch?v=m0pv3kDKynQ> (Last accessed Mar. 26, 2022)

How to Mold and Cast Foam Props! (Adam Savage's Tested) –

<https://www.youtube.com/watch?v=ez1oPe0pMiA> (Last accessed Mar. 26, 2022)

Life-Casting & Mold Making (Stan Winston School) –

<https://www.youtube.com/watch?v=H8KP3oRC1Dk&list=PLw3FQmoG4RtHNKBx2j1Lnb2CPsboAgpc> (Last accessed Mar. 26, 2022)

Sewing:

Made to Sew - <https://www.youtube.com/c/MadetoSew> (Last accessed Mar. 26, 2022)

Learn How to Sew, Easy Sewing Class for Beginners! (Good Housekeeping) –

<https://www.youtube.com/watch?v=rnTwT-ifLkU> (Last accessed Mar. 26, 2022)

Hand-Sewing | Basic Stitches and Techniques (Nutty Crafter) –

<https://www.youtube.com/watch?v=1FknfumFPX8> (Last accessed Mar. 26, 2022)

17 Very Basic Sewing Tips for Beginners (Sewing Report) –

<https://www.youtube.com/watch?v=-xyRvhE9EUs> (Last accessed Mar. 26, 2022)

Learn How to Sew by Hand: Six Basic Hand Stitches (Homedit) –

<https://www.youtube.com/watch?v=xvxqtc8thRg> (Last accessed Mar. 26, 2022)

Puppetry:

Puppet Nerd - <https://www.youtube.com/c/PuppetNerd> (Last accessed Mar. 26, 2022)

Swazzle Productions - <https://www.youtube.com/c/SwazzleProductions> (Last accessed Mar. 26, 2022)

The Art of Puppetry & Marionettes (Participant) –

<https://www.youtube.com/watch?v=8zqUprOVCC0> (Last accessed Mar. 26, 2022)

Shadow Puppetry Tutorial (York Theatre Royal) –

[https://www.youtube.com/watch?v=pSVd\\_0AKTKc](https://www.youtube.com/watch?v=pSVd_0AKTKc) (Last accessed Mar. 26, 2022)

The Genius Puppetry Behind War Horse | Handspring Puppet Company (TED) –

[https://www.youtube.com/watch?v=pSVd\\_0AKTKc](https://www.youtube.com/watch?v=pSVd_0AKTKc) (Last accessed Mar. 26, 2022)

Faux Food:

How Realistic Fake Foods Are Made For TV And Movies (Insider) –

<https://www.youtube.com/watch?v=eemkTcS0zsM> (Last accessed Mar. 26, 2022)

Life of (FAKE) Pie: sculpting, molding & painting a realistic CHERRY PIE (This is Jess Paul) –

<https://www.youtube.com/watch?v=9OyvsIsb8hw> (Last accessed Mar. 26, 2022)

Fake Food Props (this is list of various YouTubers making fake food) –

<https://www.youtube.com/watch?v=4fvKKp1jZZ0&list=PL1ShyRtNnEkiYiO2kGT7ZwnQvT1pAMRhX> (Last accessed Mar. 26, 2022)

#### Paper Props:

How to Create Authentic Looking Aged Paper in Three Minutes – Film Props (UglyMcGregor) –  
<https://www.youtube.com/watch?v=rBcD-8QSWpw> (Last accessed Mar. 26, 2022)

Making some Sci Fi Paper Props – Part 1 (CityAperture) –  
<https://www.youtube.com/watch?v=Rthm4sSvzbU> (Last accessed Mar. 26, 2022)

Making a Prop Newspaper and Other Paper Props (Jake Hellbach) –  
<https://www.youtube.com/watch?v=8pcCdXxpka0> (Last accessed Mar. 26, 2022)

#### Computer Software and Technology:

CNC Basics – What You Need to Get Started (Product Design Online) –  
<https://www.youtube.com/watch?v=lQ-MYnyxh7M> (Last accessed Mar. 26, 2022)

CNC Routers Can Do ALL THAT? (WOOD magazine) –  
<https://www.youtube.com/watch?v=NWDrWbCbI3s> (Last accessed Mar. 26, 2022)

Getting Started Guide for Laser Cutting (Core Electronics) –  
<https://www.youtube.com/watch?v=sdACSB8GH3Y> (Last accessed Mar. 26, 2022)

Complete Beginner's Guide to 3D Printing (Teaching Tech) –  
<https://www.youtube.com/watch?v=T-Z3GmM20JM> (Last accessed Mar. 26, 2022)

The Ultimate Beginner's Guide to 3D Printing (3D Now)  
<https://www.youtube.com/watch?v=3LBTKLsjHGQ> (Last accessed Mar. 26, 2022)

Learn Vectorworks Basics in 9 Minutes (LYH Studio) –

<https://www.youtube.com/watch?v=NUEU21yr5Z0> (Last accessed Mar. 26, 2022)

Vectorworks 2022 Basic Floor Plan Tutorial For Beginner (Mufasu CAD) –

[https://www.youtube.com/watch?v=g843H\\_cjcKY](https://www.youtube.com/watch?v=g843H_cjcKY) (Last accessed Mar. 26, 2022)

AutoCAD Basic Tutorial for Beginners (SourceCAD) –

<https://www.youtube.com/watch?v=cmR9cfWJRUU> (Last accessed Mar. 26, 2022)

Autocad – Complete Tutorial for Beginners (CAD in black) –

<https://www.youtube.com/watch?v=pvKVy-eMDYc> (Last accessed Mar. 26, 2022)

Getting Started with Sketchup Free (TheSketchUpEssentials) –

[https://www.youtube.com/watch?v=I\\_bJPNnO3HQ](https://www.youtube.com/watch?v=I_bJPNnO3HQ) (Last accessed Mar. 26, 2022)

TheSketchUpEssentials - <https://www.youtube.com/channel/UCJafTeHBrRBL9tS-S-kRbpw>

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SketchUp - Tutorial for Beginners in 10 Minutes (Skills Factory) –

<https://www.youtube.com/watch?v=qgt2s9RzvKM> (Last accessed Mar. 26, 2022)

Intro to Procreate: Learning to Draw on the iPad (Bardot Bush) –

<https://www.youtube.com/watch?v=EI-ToB0tG9A> (Last accessed Mar. 26, 2022)

Intro to Procreate – The Basics for Beginners in 10 Minutes (luma\_llama) –

[https://www.youtube.com/watch?v=oo8\\_NODWjbw](https://www.youtube.com/watch?v=oo8_NODWjbw) (Last accessed Mar. 26, 2022)

Art with Flo - <https://www.youtube.com/c/ArtwithFlo> (Last accessed Mar. 26, 2022)

Photoshop Tutorial for Beginners 2022 | Everything You NEED to KNOW! (Vince Opra) –

[https://www.youtube.com/watch?v=61mkx\\_OV61s](https://www.youtube.com/watch?v=61mkx_OV61s) (Last accessed Mar. 26, 2022)

Photoshop for Beginners (Envato Tuts+) –

[https://www.youtube.com/watch?v=IyR\\_uYsRdPs](https://www.youtube.com/watch?v=IyR_uYsRdPs) (Last accessed Mar. 26, 2022)

Affinity Photo – Tutorial for Beginners in 12 Minutes (Skills Factory) –

<https://www.youtube.com/watch?v=IDQn7O11z2Q> (Last accessed Mar. 26, 2022)

Affinity Photo Tutorial for Beginners – Top 10 Things Beginners Want to Know (Affinity Revolution) - <https://www.youtube.com/watch?v=Yn8kwOQhMJA> (Last accessed Mar. 26, 2022)

Electric Wiring and Other Components:

Furniture and Lighting Props (National Theatre) –

<https://www.youtube.com/watch?v=WxlSCpjTzZE> (Last accessed Mar. 26, 2022)

Ground, Neutral, and Hot Wires Explained (The Engineering Mindset) –

<https://www.youtube.com/watch?v=P-W42tk-fWc> (Last accessed Mar. 26, 2022)

How Electricity Works – Working Principle (The Engineering Mindset) –

<https://www.youtube.com/watch?v=mc979OhitAg> (Last accessed Mar. 26, 2022)

Prop: Shop – How to Make a Vacuum Forming Machine (Punished Props Academy) –

<https://www.youtube.com/watch?v=Gx66mS7U2vY> (Last accessed Mar. 26, 2022)

Adam Savage’s Vacuum Forming Machine (Adam Savage’s Tested) –

<https://www.youtube.com/watch?v=Cacr1WeKOzY> (Last accessed Mar. 26, 2022)

Vacuum/Thermal Forming Explained (Alejandro Bona) –

[https://www.youtube.com/watch?v=HWX\\_XxS4zY8](https://www.youtube.com/watch?v=HWX_XxS4zY8) (Last accessed Mar. 26, 2022)

Getting Started with Pneumatics – the Basics (Maketronics) –

<https://www.youtube.com/watch?v=Uz9xXEXzKxQ> (Last accessed Mar. 26, 2022)

Pneumatics for Beginners (Motion) - <https://www.youtube.com/watch?v=s3I-OJoeosQ> (Last accessed Mar. 26, 2022)

Ms. Pneumatic - <https://www.youtube.com/c/MsPneumatic> (Last accessed Mar. 26, 2022)

## APPENDIX F. QUESTIONNAIRE

### QUESTIONNAIRE FOR ANONYMOUS SURVEY PARTICIPANTS

1. What area of work are you in?
2. How long have you been working in the prop industry?
3. Rank your proficiency from 0-5 (0 being, not having the skill, 5 being, advanced in the skill), current frequency from 0-5 (0 being not used, 5 being used all the time), and primary attainment on the skills listed below.

The skills listed: carpentry, basic, intermediate, and advanced joinery, cabinetry, furniture construction and repair, re-upholstery and upholstery, cording, tufting, fabric manipulation, steel working, aluminum metal working, stick welding, MIG welding, TIG welding, soldering, cutting with an oxyacetylene torch, cutting with a plasma cutter, blacksmithing, faux painting, distressing and aging, faux fine art, airbrush, wood carving by hand, wood carving with the lath, foam carving by hand, foam carving with a hotwire/hot knife, foam carving with a drill press or lathe, sculpting, hand drafting, software drafting, hand rendering, digital rendering, CNC, laser cutter, 3D printer, vacuumforming, puppetry, faux food, moulding and casting, textures/goops, hand sewing, machine sewing, surging, basic, intermediate and advanced sewing, leatherwork, electronics, electrical wiring, special effects, motorized props, hand props, pneumatics, paper props, licensed pyrotechnician, licensed gunsmith, and plumbing.

4. Are there any skills (like the ones listed in the chart) that you utilize that are not listed? If so, list your top 5 like in the chart (skill, proficiency, current frequency, primary attainment). If not, write N/A.

5. If you answered 'other' under the topic of attainment for a skill, please list the skill and where it was attained. If you didn't, write N/A.
6. From the way you have obtained your skills, what way was the most useful? Why?
7. Do you think there are specific skills that need to be practiced in order to remain effective and efficient in the props industry?

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## VITA

Crystal Hayner is originally from Norwich, NY. They graduated from Utica University in 2019 with a Bachelor of Arts degree in Communications with a concentration in Theatre. Currently, they are an MFA student in Properties Technology and Design at LSU and is a Teaching Assistant for LSU's Prop Shop. Professional prop credits include *Brooklyn Bridge* and *The Wolves* at Louisiana State University. Crystal has always loved theatre and the world of props. They hope to continue the love of teaching of props to generations after them. They anticipate graduating with their master's degree this May 2022.