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Surface Treatments on Clay and Making Meaning

Stephanie Lynn Schmidt

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SURFACE TREATMENTS ON CLAY AND MAKING MEANING

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts

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ABSTRACT


This is a student centered art-based research project that explores surface treatments on clay and how they may influence creativity and making meaning. It involved me introducing more surface treatments that are alternatives to glazes into my high school classroom. I wanted to broaden my own knowledge as well as provide more opportunities for my students so they would feel a greater sense of choice, power, and meaning in their artwork. This process forced me to learn about materials, open up to the unknown, and release power to the students. It was a rewarding experience that will forever make an imprint on my ceramics studio and possibly other content areas in the future. I learned to think about the many ways art can be meaningful and to reflect on the biases about such a topic I hold as an art teacher.
ACKNOWLEDGEMENTS

I want to thank my partner in life Todd and my parents Andrea and Raymond for their loving support through this journey. I am forever grateful for the patience, guidance, and encouragement of my professors at the University of Northern Colorado, Connie Stewart, Donna Goodwin, and Lynn Cornelius.
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CHAPTER I

INTRODUCTION

Background/Context

Working as an art teacher for the last 19 years has been an enjoyable, challenging, and ever-changing experience that has brought me much happiness. I have taught art at all grade levels from infants through high school. Currently, I am at a high school where I teach a variety of classes: Ceramics, Sculpture, Computer Graphics, and Art Comprehensive. Ceramics is the class I devote most of my time to as I have multiple class sections and a range of experience levels. The sequence starts at a Beginning Level class. Students may choose to continue on to Intermediate, Advanced, and Studio Levels. In these classes I provide a variety of learning opportunities where students can learn specific hand building and wheel throwing skills while also practicing creative ideas and techniques to embellish their pieces. Some of my favorite parts about being a teacher in the ceramics studio are that young artists can make pieces that are functional: they can be held in their hands, given as gifts, and used for a specific purpose. As with most art media, there are many pertinent elements involved with teaching clay processes. Young artists must understand scoring and slipping then blending the clay to make piece properly attached. Students need to understand other essential learnings such as slab construction, coil building, craftsmanship techniques, and the pinch pot method. They need to know answers to such questions: What is leather-hard clay? What is bone dry
clay? What can we do with our work when it is at these stages? How do I center my clay on the wheel? It seems the curriculum goals are endless. Do not get me wrong—they are all so much fun to introduce and explore with students, but at times a bit overwhelming. Sometimes, especially with my Beginning Level artists, it seems that teaching kids how to make a piece stay together and survive a firing takes so much time that I sacrifice energy on creative elements and decorative techniques that could enhance their work, make it more personal and encourage the whole process to be more exciting and rewarding for students.

Rationale

One of the things I see students struggle with in my class is wheel throwing. It is a difficult process that involves lots of practice and learning from failure. Watching a piece collapse, tear, or detach from the wheel is, of course, disappointing, but for some students it is also very discouraging. While I do my best to talk them through it, make it fun, and encourage them that failed pots on the wheel are normal and all a part of the process, many students are worn out before it comes to decorating their cylinder or bowl. I understand that the process to build their piece was time consuming, so I let them know they can keep it simple. I show them different examples of additive and subtractive sculptural elements as well as texture techniques. I try to encourage them to add something unique that makes it their own. Usually, I have a small group of students who take this creative part quite far and seriously, but for others, that is not the case. Many artists have not even thought about how they want to decorate their pieces which often took weeks of trials and tribulations to make. In general, most don’t seem too excited about that part and it has become another thing they have to do for a good grade. Then,
perhaps my most confusing struggle, there seems to always be a few students that forgot that creativity was even a requirement.

As a requirement for all pieces in our school’s art classes, students are graded on creativity and originality along with the other areas of craftsmanship, technical skill, use of class time, and a written reflection (see Figure 1).

Figure 1. Grading rubric. This was first completed by the student. She marked x’s to tell me where she believed she scored in each category and did the written component. Then I commented and circled scores.

For the creativity grade, my colleagues and I specifically want to see and evaluate that the artist is showing creative risk-taking, the work is original and unique, and it is not directly appropriated or copied. While grading these elements of students’ pieces, I reflect on how meaningful a piece is. I do not grade them on meaning, but I find I look
for what meaning is in the art. I often feel a piece that is more creative is more meaningful, but is that a correct assumption? Can a replication of a logo carved on a cup be just as meaningful as a piece that honors a deceased relative? Does creativity and originality influence the amount of meaning in a piece? Furthermore, how does one measure meaning in a piece?

I wonder still why a few students leave out potentially the most fun part—creativity! Perhaps they struggled so much in the building process which caused them to forget or sacrifice this element. For those with truancy issues, they might miss my direction that it is a requirement or they simply did not have enough time in the classroom and it had to be sacrificed. Or, maybe they were just simply unmotivated to create. At the last minute, they either quickly do something meaningless or with lack of effort. Some decide to sacrifice that part on the grading rubric and turn in their piece without one.

I find that hand-building lessons allow for more innovative thinking more easily than wheel thrown work does in my classroom. When introducing coil construction, a few students create interesting sculptures such as elephants, wood cabins, and fish instead of the traditional coil vessel. While a vessel is fine, I notice that some students again get stuck at being creative. They maybe just build with coils, use a few different coil designs as I required, but do not seem invested in the meaning and creativity of their work. It seems they have an attitude of let’s build this and get it done. Most do not challenge themselves extensively with creative expression. I suppose I find this disappointing at times because in other instances, students will argue for their right to do whatever they
want with their art. I hear things like, “It’s art! Can’t we be creative and do whatever we want?”

This is when I say to myself, “Wasn’t he looking forward to that part? How did she forget that she could add whatever she wanted to the piece? Isn’t it exciting to be able to add a creative element choice to her piece?” Then I wonder if the concept was too broad. I want them to have choice, but maybe they needed more direction and inspiration. Maybe I need to spend more time on other decorative techniques and put more meaning into the teaching and encourage more self-expression. Can I get them to really think about ways they can express themselves on their art and be more motivated? After all, that is what I want them to do. I want them to produce work that expresses themselves, is unique and meaningful. It seems a good handful of Beginning Level students will have a limit on how long they can work on a project without losing focus. Being a teacher who is always looking for ways to improve, I wondered how I could make the decorative and creative part of clay more fun and meaningful for them without feeling like another obligation given by the teacher that causes more stress and difficulties with time management, but an inspiration to create. There are so many other ways to embellish ceramic pieces other than making textures, carving into the clay, attaching sculptural pieces, and applying beautiful glazes (see Figures 2-5).
Figure 2. Coil built ice cream cone. Student, grade 10, before and after glazing. These show successful attempts at using additive sculpture and coil building to have the bulk of the creativity in the piece be three dimensional.

Figure 3. Glazed pieces. I made and use as samples in my classroom to show the beautiful effects glazes can have. However, I want to show new ways to treat clay surfaces.
The varying effects of glaze can be mesmerizing and beautiful, but there is a wondrous world of alternative surface techniques such as *graffito*, *mishima*, *slip trailing*, *stenciling*, *decal application* and *image transferring* which I feel lend to more meaning in artwork. Behind these unique techniques are interesting stories about their origins that can teach about history, cultures and how processes developed and changed over time. They can get students thinking about imagery, color, and storytelling. I wonder if making surface treatments a strong part of my ceramics curriculum and showing professional artists that use the techniques (see *Figures 4 and 5*) will encourage students to make more meaningful, personal, and creative work.

*Figure 4*. Mishima plate. Kristin Gruenberger creates a calm, yet playful design on *Whale Plate*. It would be a wonderful inspiration for high school students. Accessed from https://www.klaurelceramics.com.
Figure 5. Slip trailed plate. Kristen Kieffer uses patterns and minimal color to create beautiful designs on *Large Plate Periwinkle Floral* which would entice many high school artists. Accessed from https://kiefferceramics.com.

**Research Question**

*How can students create meaningful art when studying surface treatments in clay?*

The purpose of this research is to study if surface treatment lessons that incorporate more history and cultural connections encourage more meaning, intent, and craftsmanship in student work. It is a qualitative arts-based research study that addresses meaning and creativity in art. Will lessons using specific surface treatment techniques encourage students to:

- *Incorporate personal stories and creative expressions?*
- *Celebrate their culture, background or family?*
- *Pay homage to another culture by practicing similar design elements?*
Tell stories on their ceramic surfaces?

Be more invested in the creative elements of their pieces?

Put more time, thought and effort into craftsmanship and finishing techniques?

Teacher Inspiration and Motivation

When planning a lesson, I try to keep in mind that this is about the students. What do they have to say? What do they want to say? What are their experiences? Who are they? Where do they come from? What do they want others to know about them? This is why I try to create a strong sense of choice in the subject matter they choose to depict in their art. I admit, sometimes I am less successful at this than I would like. While I often feel I give a great amount of examples, ideas, and choice, I still see the same trite images from my students which can disappoint me: hearts, yin-yangs, peace signs, and my least favorite, the sun or moon with a face (see Figure 6).

Figure 6. Moon sgraffito sketch and plate. Selena, a ninth grader worked hard and did a good job on this. While her approach of dangling bead-like images is fun, the moon with a face is a very common design used by students.

Perhaps more structure regarding techniques could actually encourage more meaning in ideas. I am not trying to say that my students do not put meaning into their
work. A good amount of them do. It just is not always very visible or powerful as I hope it to be. There is often more meaning in the work for the students than it might initially seem. Often times, when I ask questions or require a reflective paragraph, a hidden meaning is explained to me. However, sometimes it is not. While she worked hard and was quite successful, even Selena admits in her reflective paragraph below that she could have been more creative on her plate. She wrote:

My creative process and decisions was to try and make the plate a night time theme. What was successful for my plate was carving my design onto the plate without any accidents. What was challenging for me was trying to figure out what design I wanted to carve and how to actually draw it. One thing I would do differently is possibly a more creative design (something more challenging). I would also plan ahead better. I intend to carve away the clay and paint in the moon, but I couldn’t because I would end up carving the moon’s face away.

I would like to improve this part of my student achievement. Encouraging students to find ways to put meaning into their work can give them a sense of power and validity in the classroom as well as the outer world. I see surface treatments as a great tool to accomplish this, perhaps more than the three-dimensional subtractive and additive techniques I have often required in the past.

**Definition of Terms**

**Bisque fire.** A bisque fire is the first firing of clay that puts it into the ceramic form and a porous state. A bisque fire should be done when the clay has fully dried and done slowly. Bisque fired clay is ready to be glazed or decorated with other art materials. (D’Souza, 2018)

**Coil building.** This is the process of rolling snake-like or rope-like pieces of clay and stacking them to create clay structures. Coils can be twisted, spiraled, braided and creatively arranged.
Craftsmanship. For the purposes of this study, craftsmanship will be defined as and evaluated according to the following definition on student rubrics:

- Attention to details
- Intent and purpose
- Finished, clean quality
- Is ready for display

Creativity. For the purposes of this study, creativity will be defined as and evaluated according to the following definition on student rubrics:

- Showing creative risk taking
- Original and unique
- Not directly appropriated or copied

Decal Application. This is when pre-made images are printed onto a specialty film and transferred onto a glaze fired piece. Once the decal is applied with water and pressure, the piece is fired again to fuse the decal onto the ceramic form.

Glaze. Glaze is often applied to a piece to make it dinnerware safe. It is applied to a ceramic piece after the first firing. In the glaze firing, the glass-like colored surface treatment fuses to the clay. While many think glazes are always shiny, they can also be matt, crackled, transparent, smooth or rough.

Image Transfer. Photographed or drawn images can be used in the form of templates, prints, stencils, or decals to apply underglaze or colored slip versions onto clay (Wandless, 2006).

Kintsugi. Kintsugi, also known as kintsukuroi, “golden repair”, is the Japanese method of repairing broken pottery with lacquer dusted or mixed with powdered or guilded gold,
silver or platinum. The philosophy is that breakage and repair are part of the history and beauty of an object (Carnizzi, 2018).

**Mishima.** This is a Japanese rooted process that involves first scratching into your unfired clay. Then underglaze, glaze or paints can be filled into the cracks and excess is sponged away. The result is a pigmented carved area while the uncarved surface is still the color of the clay body.

**Pinch Pot.** This is a simple, traditional process of hand building that involves squeezing the clay with fingers and thumb so as to shape it into a bowl, cup or vessel form.

**Scoring and Slipping.** This is a common practice to attach pieces of clay together. It involves scoring, or scratching the clay with crisscrossed marks, then applying watered down clay to help the clay bind together while pressing the pieces together. The clay should then be blended together at the seams.

**Sgraffito.** Sgraffito comes from the Italian word *sgraffiare*, to scratch. Underglaze is applied to unfired clay, then it is scratched to reveal the original color of the clay body.

**Slab Construction.** Slabs are flattened pieces of clay that are rolled out with a large slab rolling machine or a simple rolling pin. After the clay is rolled out, it can be formed to build vessels or sculptures.

**Slip.** Slip is watered down clay that has a smooth consistency like house paint.

**Slip Trailing.** Slip is watered down clay. Slip trailing is when the watered down clay mixture is applied with a skinny nozzle on a bottle that an artist can draw with. It creates raised clay lines, designs, dots or patterns that bind with the clay surface of a piece. Slip trailing can also be done with cake decorating tools or a plastic bag with a small hole cut in a corner.
**Stencil.** A sheet of material (metal, plastic, cardboard, waxed paper, silk, etc.) that has been perforated with a pattern, printing or design; slip or underglaze can pass through the perforations to create the printed pattern on leather hard or bisque-fired clay.

**Surface Treatment.** This refers to how a ceramic piece is tended to on the outermost layer of clay. It is the extended two dimensional aspect on a three dimensional piece.

Glaze is the most common surface treatment. However, there are other materials that can be applied to the clay during its various phases to achieve a variety of effects. Materials other than glaze may be put on the surface (ie: underglaze, overglaze, slip, tobacco tea, paint) and applied in ways such as stencils, transfers, decals and scratching into the clay.

**Tobacco Tea.** Tobacco tea is a mixture of water boiled with tobacco, then strained. It can be mixed with underglaze colors then applied to wet slip to create crawling effects with results resembling plant roots or fern leaves.

**Use of class time.** For the purposes of this study, use of class time will be defined as and evaluated according to the following definition on student rubrics:

- Attentive during demonstrations
- Used class time effectively
- Actively engaged in art making for duration of project
- Demonstrated perseverance and problem solving
CHAPTER II

LITERATURE REVIEW

Surface Treatments on Clay

The world of alternative surface treatments on clay is exciting. There are many methods that could inspire artists of all ages. Some methods are quite simple, while others take more time and patience. The carving techniques of *sgraffito* and *mishima* could be used to express anger or anxiety through rigid scratch marks. Or they could represent beauty, refinement and pattern through thoughtful, well-planned and carefully placed markings. These scratching methods, along with image transfer, stencil application and slip trailing are all exciting ways to apply two-dimensional images, photographs and designs onto the surfaces of clay. This gives clay a new potential for students.

Clay, after all, is the creative medium with the most receptive surface. The soft material is like a blank sheet of paper or a canvas on which you can use printmaking techniques to express ideas using color, narrative, symbols, marks, and textures. (Wandless, 2006, p. 6)

**Student Voice**

Elliot Eisner (2006) said that, “the arts might be used in some productive way to help us better understand more imaginatively and more emotionally problems and practices that warrant our attention in our schools” (p.10). I aim to support my students and help them find ways where they can share and develop their imaginations and emotions through art.
Since improving investment and meaning in student work is a focus of mine, I also find it pertinent to focus on student perspectives, voice, and validation. I can teach wonderful processes and historic lessons, but if I do not show them ways in which they can translate them in a contemporary society with their perspectives in mind, the projects can feel too much like obligations instead of inspirations for the young artists. Students need to be invested in their work and feel a sense of purpose. I believe that having access to surface treatment techniques can make the young ceramicist feel more empowered. It can create a new sense of choice, especially for those that think more two dimensionally. I find that many students come to me with more experience and therefore comfort in two-dimensional art, so I see surface treatments as a way to create a comfort zone for more self-expression. In his book, Do You Know Enough About Me to Teach Me? A Student’s Perspective, Peters says, “A teacher must capture a student before he or she can teach that student…the student must also be inspired. Someone must be standing in front of them in a credible way with something…they are interested in receiving” (2013, p.57). I believe surface treatments can help to inspire beginning level ceramicists to feel clay is accessible and translating their ideas into clay is possible. It also provides more opportunities for choice in their art. Jensen (2013) discusses the importance of students having choice and ownership in the classroom. The teacher should not hold all the power and, in fact, should give some to the students. He writes,

Keep in mind, there is no ‘power pie’ with only so many slices. In fact, the more you share power in your classroom, the bigger the pie gets—and the happier and more empowered your students will be. Every time I visit or read about high performing teachers, the pattern is the same: they engage with ownership, purpose and collaboration. (p. 74)
This concept of facilitating a classroom that makes students feel important, listened to, and validated inspired me to have my Upper Level Ceramic group research surface treatments. They presented their findings to their peers and decided which methods they would further study through application on a long term project. Perhaps this element of choice, ownership, and gaining knowledge would motivate artists to put more meaning in their work than classes I have had in the past. While these strategies of greatening responsibility and choice are to engage students coming from families with economic struggles, they are also appropriate for students from all backgrounds and cultures which are also important to examine (Jensen, 2013).

**Affirming Diversity**

Examining and recognizing the diverse cultures and backgrounds of our students is pertinent to them truly being and feeling successful as members and learners in our schools. They must know that teachers value their individual perspectives and contributions to the classroom. It has been a long standing issue that achievement gaps amongst race, culture, linguistics, class and gender exist in our country’s public schools. Whether being out or not, many of our students are queer and we must not forget that this is an umbrella that compromises nearly an infinite amount of possibilities in how people identify with gender and sexual orientation. This, along with being human, requires that we provide an educational system that takes on a social justice perspective. Bode and Nieto (2008) explain that

A social justice perspective is *drawing* on the talents and strengths that students bring to their education. This requires a rejection of the deficit perspective that has characterized much of the education of marginalized students, to a shift that views all students – not just those from privileged backgrounds – as having resources that can be a foundation for their learning. These resources include their languages, cultures, and experiences. (p. 12)
Patty Bode has been an inspiration to me as an art educator ever since I stepped into her classroom in 1997. I was an undergraduate observing art classrooms who then had the privilege of student teaching with her in 1998. Her direct and brave approach to facing multicultural issues in the classroom and education in general, has made her my number one lifelong mentor. For my new surface treatment curriculum, I aimed to provide opportunities where young artists could share their experiences via their artwork, conversations, and research topics. Showing multiple approaches to the projects and art from different cultures while also performing a think aloud for the students was my plan in getting them to possibly tell bits of their personal stories.

Making Meaning in Art

While keeping the experiences, perspectives and motivations of young artists in mind, it was important that I look at ways to appropriately teach these new surface treatments. “I knew that a curriculum based on the formal 7+7 would not engender in teen artists the commitment to get out of bed…” (Gude, 2004, p. 8). In her article, “Postmodern Principals: In Search of a 21st Century Art Education” Olivia Gude stands strong in her belief that the traditional elements and principles of art and design should be used carefully and not the sole foundation for art curriculum in today’s world. She explains that in our postmodern society, simple concepts such as line and form, do not inspire the youth of today, nor do they even come close to making up the deeper elements involved in thoughtful, contemporary art. She argues that the heart and soul of postmodern art making for youth of today is its relevance to the artist. The maker of art should also be the maker of meaning—meaning that is important to them. There are
different ways artists can use creative expression to make meaning in their work. Gude presents eight postmodern elements of art in her article.

- **Appropriation**: recycling imagery, creative expression through cheap, disposable images and materials
- **Juxtaposition**: the bringing together of radically disparate elements, intentional clashes
- **Recontextualization**: positioning familiar imagery so that it relates to text, symbols or pictures in a way not usually done to create meaning
- **Layering**: as images become more plentiful and accessible, they are piled on top of each other creating complexity
- **Interaction of Text and Image**: creating irony or disjuncture by combining the two, often creating a new meaning
- **Hybridity**: cultural blending in works; various media in works
- **Gazing**: the act of looking, the act of a figure looking back at the audience
- **Representin’**: Street Slang for proclaiming one identity and affiliations

(Gude, 2004, p. 9-11)

These Postmodern Principles can be implemented with both new and old ceramic surface techniques to create meaning in art. Gude (2010) also looks at approaching creativity and creating psychologically safe spaces in her article, “Playing, Creativity, Possibility.” She asks questions such as, “Why is it sometimes so difficult for teachers to create conditions that support the emergence of creative behavior and surprising images?” (p. 31) and “Why do some students so actively resist opportunities for constructive creative play?” (p. 32). She argued that “The student is not lazy or spiritless, but the student is dispirited, without the spirit of fearless exploration needed to make art” (p. 32). Gude goes on to state

There is a general misapprehension that a teacher’s wish to create a safe, creative psychological space will necessarily generate this experience for students. Conditions of psychological safety and freedom that make creativity possible are produced, not merely made by the teacher’s wishes. But rather by how his or her attitude manifests itself in the range of choices that affect course content, work styles, class discussions, peer interactions, opportunities for playful engagement with materials and ideas, and assessment or lack thereof. (2010, p. 34)
As I approached introducing a variety of alternative ceramic surface treatments and a research assignment, I was careful to use strategies that encouraged student voice and creativity. The motivation to work and the meaning behind student work were the main factors that drove my planning. I wanted the students to feel empowered, purposeful and successful as they learned new clay skills. When considering meaning in art, I recognize it can be placed by the artist before, during or after the art process and that this can vary for each artist as they create multiple pieces. “Cognitive research into creative behavior supports artists’ practices of not predetermining meaning but letting it occur during the artmaking process and even after artworks have been completed” (Walker, 2001, p. 134).
CHAPTER III
RESEARCH STRATEGIES, METHODS AND PROCEDURES

Plan of Action

This was an arts-based, action research study in which I hoped to learn about student creativity by looking at how and when they are inspired to put meaning in their work. I compared student engagement throughout multiple projects by studying how they performed in multiple areas assessed on the rubric such as creativity (risk taking, original and unique, not directly appropriated), craftsmanship (attention to details, intent and purpose, finished, clean quality, ready for display) and use of class time (attention during demonstrations, used class time effectively, actively engaged in art making for duration of project, demonstrated perseverance and problem solving). I evaluated student performance for each project assigned with a rubric (see Figure 1, p.3). These categories could be studied in how I evaluate meaning along with what information students give me in classroom conversations, one on one discussions and their written reflections.

My fellow art teachers and I developed this rubric for all major art assignments. For each project, the rubric remains consistent with the exception of the skills required portion which we alter for each project as it speaks specifically to the media and skills being addressed. We felt having a standard rubric across the art department would help teachers to evaluate consistently and support students who take multiple art classes so they have only one evaluation system to understand. For my research, I used the written
components to help me learn about their work, but I was not concerned with tracking the performance of the quality of their reflection. I also did not track the skills required areas because they are very specific to each project and separate from one another. My concern was more with understanding their progress over the semester regarding creativity, meaning and investment in their art. I saw these areas of Originality/Creativity, Craftsmanship, and Use of class time to be an appropriate focus to studying the progression of student performance throughout the semester as meaning can have to do with creativity, care and time spent on art.

My research entailed implementing new curriculum concentrating on surface treatments in both my Beginning and Upper Levels of Ceramics classes. By comparing the artwork and processes of students from new surface treatment lessons to that of my previously used lessons on topics such as coil building and wheel throwing, I hoped to gain insight on how high school artists are motivated to put meaning in their art. The new curriculum focused on the use of surface treatments as a way of decoration and expression as opposed to the building method being the main inspiration for creativity. In my previous ceramics lessons, I showed a variety of contemporary approaches to clay techniques by presenting students a collection of related artwork. I continued to do this; however, with the surface treatment studies, I incorporated more history and cultural contexts as a starting point then moved into contemporary interpretations and methods of such techniques. I continued to show multiple approaches and artists when introducing concepts as I believe it is important for young artists of today to see fresh, innovative, and thought provoking ideas. The old and historical can often can feel boring and ancient. However, by sharing cultural influences and history along with contemporary art, I hoped
to inspire students to find more ways they can create meaning in their art. When introducing the sgraffito plate lesson to Beginning Level students, I showed examples of Polish wood carved plates that I received from my grandparents. I explained my Polish heritage and how the plates passed down to me are very special. Using similar design elements on a sgraffito plate could serve as a symbolic way to honor my family’s Polish heritage and traditions. I also showed a variety of designs and imagery from other countries that would lend well to the sgraffito technique. I was sure to include Mexican art since I wanted the large group of students with Mexican heritage in my classroom to feel represented. Telling a story was another approach I shared. I explained that addressing a significant day for a family or a special event might be a way to address the imagery portion of the sgraffito plate. Giving Beginning Level students ideas for possibilities by enthusiastically sharing inspiration possibilities and showing examples was important in my approach to this new sgraffito plate lesson.

Since I also had a group of Upper Level ceramics, I was excited to implement a deeper study of surface treatments by having them conduct and present their own research to the class. Encouraging them to learn the roots of some contemporary processes, I hoped they could gain a sense of pride and ownership in newly discovered techniques. By spending a few days researching artists, methods, culture, and history, students created a much larger bank of surface treatment knowledge that the whole class then used as possible tools when working with clay. Together they learned a variety of ways to express their ideas. This research-and-share approach was a fun, collaborative way to gain multiple new methods and much more appealing than teacher taught instruction for Upper Level students.
To introduce this research project, I did a presentation about the mishima technique and provided sample tiles (see Figure 7) to show process results. This way students could have a clear understanding of expectations and hopefully not feel overwhelmed by the work and giving a presentation to the class.

![Mishima tiles](image)

*Figure 7. Mishima tiles. My sample tiles which show the varying ways you can inlay underglaze with the mishima carving technique.*

My presentation included the requirements I asked of the students, including many images that show the process and results. I took them through a slideshow about mishima and then gave lots of ideas for possible surface treatments to explore by providing a list, websites, and many books. The following were the criteria of the research presentations (see *Figure 8*):
Research a surface treatment of your choice

Steps:

1. Explore and investigate some possibilities, then be sure to get teacher approval on your topic and sign up for it

2. Create a Google Slides presentation that includes the following:
   - title slide
   - minimum of 10 good images that show examples of the surface treatment
   - 3-5 facts about history, background information
     - Where did it come from?
     - Is it a technique that mimics a traditional technique?
     - Does it have an association with a specific culture?
   - Artists that use the technique.
   - explanation of surface treatment technique (can be a bulleted or numbered list, keep it simple)
   - define any new vocabulary
   - feel free to include more! a video, quotes by artists, anything else you find helpful!

Create a sample tile of the technique. This may be an adapted version of the technique due to resources, materials and cost. Please communicate with me so we can get you what you need. I will help you figure it out!

*Figure 8. Research assignment requirements.*

Before implementing new lesson plans involving surface treatments, I investigated some new materials and techniques on my own. I wanted to understand the process I was asking my students to undertake, especially when it came to the research project I had my Upper Level Ceramicists do. It was exciting and sometimes frustrating exploring these new approaches (see *Figures 9-11*).
I found that metallic overglazes were much simpler to use than I previously assumed and they added a special charm to pieces. Juxtaposing them with the more rustic wood-fired glazes gave the vessels some glamour that was different for me. I enjoyed the
control, yet flexibility, of acrylic paints, watercolors, and metallic rub-ons. These cold or post-fired finishes had more forgiveness than most glazes; as a result, they were wonderful options to introduce to my students as well as use myself. I loved how the paints sunk into the clay resulting in stained effects while the metallic rub-ons could add another layer and sheen. The excitement and some unexpected results from firing the tobacco tea pot with horsehair inspired me to continue layering materials. The watercolors and metallic rub-ons interacted in a manner where I felt very in control, yet they still had some surprising effects. This exploration process allowed me to think about student perspectives as well as plan and prepare the implementation of my lessons in my arts-based student research study.

**Setting and School Demographics**

I conducted my study with three Ceramics classes at a comprehensive high school just ten miles southwest from downtown Denver. It had a growingly diverse population and a total of 1,672 students. Approximately thirty-five percent of our students were on free and reduced lunch at the time of my study. As this population has grown larger over the years, our test scores and graduation rates stayed rather consistent. The school had earned special recognition for our growth and accomplishments both locally and nationally despite the fact that we have had many students struggle with academics, socio-emotional needs, financial stability, and family issues. Our staff has always worked hard together, been well organized and kept a positive working environment. The faculty team has been strong, caring, and reflective on strategies for student improvement. The school has long offered a wide range of art classes and other electives in the Performing
Arts, Physical Education, World Language, Business, Family and Consumer Studies and also in the core subjects.

This high school has had a growing minority population over the last decade. Of our 1,672 students the demographics during the time of my research were as follows: 54% white, 34% Hispanic, 7% Asian/Pacific Islander, 3% multi-racial, 1% American Indian/Alaskan Native and 1% Black. Our English Language Learner population is 125. We have had students that come from strong academic backgrounds, students that do not have much academic encouragement from home and students in the middle of the spectrum. Some struggled to get to school each day while others were investigating which Advanced Placement class they could take next. We have had homeless students, families that struggle to pay rent and families that lived in large suburban houses that overlook the mountains. We have a wonderful facility that was built in 2009 so the building is in good condition and an attractive design. My art team has worked over the years to make student art visible throughout the school. This has been a mission we have been dedicated to constantly improving. Students have had decent access to computers, laptops, and tablets. All classrooms had Smartboards; we were probably more equipped with technology than the average public school in the country. I have taught here for twelve years and have enjoyed the students and staff. While it has been a challenging and at times exhausting job, I found it a healthy working environment where I was pleased to conduct my research.

**Procedures**

This research took place in the spring semester of 2018 from my three ceramics classes. I collected data from students throughout the semester and studied their work and
behaviors before, during, and after the implementation of the new curriculum. The data collected which is explained more later was generated in the regular classroom setting. All procedures were conducted and research was gathered during normal classroom practices. Compiling and deeply studying the data took lots of time outside of the classroom, but the process was a realistic endeavor, since I had students record their progress on graphs.

**Participants**

I was the main person collecting the data for this research while the products and information were naturally generated by students. I developed a system where my teaching assistants gathered and recorded some data for me. For instance, once I used rubrics to evaluate student artwork, my teaching assistants tracked information on how they scored. Student artists, who were identified in my research with pseudonyms, also tracked their own progress from project to project with charts. This was a helpful process for me in collecting data, but also a reflective process for them. Teaching assistants were also additional observers to the classroom and helped with discussing meaning and ideas in art with students. They also helped me with loading kilns, supporting students, and interpreting art work. Colleagues also conducted classroom observations to help gain insight on my practices, student processes, and interpretations of student performance.

**Data Collection**

It was important that I collected a variety of data addressing student performance as well as their creative and thought processes. I evaluated student artwork by observation and with our standard art department grading rubric. Throughout the semester, I compiled data from observations, conversations, and interviews with students.
to get a deeper understanding of their creative intentions and their personal perspectives.

While rubrics and student progress graphs can provide sufficient data to analyze, I anticipated that student written reflections and spoken words were potentially the most valuable form of data as they can provide rich and powerful insights a teacher otherwise would not know.

**Analysis of Data**

After compiling all the physical, conversational, and anecdotal data, I hoped to find that by incorporating more cultural connections to technical processes that young artists may be more inspired to create authentic meaning in their artwork. I aimed for my students to find avenues to express themselves in ways deeper than interesting designs in construction techniques, appropriating logos, and replicating trite imagery. It was my aspiration to see students creating art pieces that might address their family’s historical roots or experiences, celebrate their own heritage, tell a story, or pay homage to a particular family member or friend. The art I was looking for did not have to be of such meaning, but I was hopeful that by addressing such topics in class, students would find a path to exploring their identity, what is really important to them or what truly makes them unique. I was hoping to see more work like Minh’s sgraffito plate (see Figure 12) where she represented her love for camping, an activity she often did with her family in her native country, Vietnam.
I suspected I would still see some artists struggle to decide on surface treatment imagery or want to pay tribute to their favorite band by carving an existing logo. However, I imagined that through these lessons, the artwork would carry more meaning and voice than student art from the lessons focused solely on construction. If this were true, I felt I could eventually get my Upper Level classes to work more deeply as a whole group than I had in years past. Once the construction methods were learned, the use of various surface treatments applied to them could lead to more intriguing bodies of work. I thought that perhaps the anticipation of having to think about treating the surface before firing a ceramic piece, artists might put more care, time, thought, and effort into their clay work.

**Limitations**

The art room is a place where students from all over our school get together. Freshman through seniors make up my student rosters. Every semester I have honors and Advanced Placement students, Special Needs students, Challenge or Intensive Special Needs students and all levels in between. For this research, I had two students who are so
new to the English language that they have tutors when the program directors can send one. Minh recently arrived to the United States and speaks Vietnamese while another girl’s first language is Korean. It is rare that I am fortunate enough to get a paraprofessional or tutor in my room for these students with special circumstances, but some semesters it does happen. Many times, I have to balance their needs with the other students all on my own which is far too common for teachers. I see the fact that one size does not fit all can be a limitation to analyzing my data. Just like in teaching and assessing, I will have to take into account each artist’s previous experiences with art, personal abilities, and conceptual understandings. Cultural perspectives and language barriers may also play a role into the way I can interpret young artists’ creative expressions in art.

Most students in my art classes chose to be in them, but a small group of them got it on their schedule because they never filled out the scheduling preferences form or their preferences did not coordinate with other required courses. I have taught students who really did not want to be in the class and felt stuck there, while others got there with attitudes of indifference. Sometimes I turned the student into an art enthusiast, other times, we just did our best given the circumstance. Fortunately though, most were happy to be in the class and liked the hands-on approach which was different from many of their other classes.

In addition to these limitations, I also saw the idea of measuring meaning in art as a slippery slope. How can one truly measure that? One may argue that meaning is in the eye of the beholder. Another may say it is held in the mind of the artist. Just like art, this topic can be subjective. The process and journey can also create the meaning in a piece
more so than a sculpted design. I had to work to separate meaning from skill and get to the artists intentions, expressions, and stories by having conversations with them.
CHAPTER IV
RESULTS

I compiled and organized different forms of data to make insights, find patterns and notice trends. Interviews, discussions, and student writings provided multiple avenues for collecting the voices and thoughts of my students. Artwork, rubrics, and observations helped me to understand their meaning making, motivation levels and progression throughout the semester.

Data Analysis

Students used graphs to track their scores in the identified rubric categories (see Figures 13 and 14). Each artist was able to have a visual picture of how they increased, decreased, or remained consistent in their performance over time. I was able to compare pieces that centered on being creative through three-dimensionality versus pieces that focused on surface treatments.
Figure 13. Progress graph for Lanay. Lanay marked herself as starting at zero in each category to signify the beginning of the semester. It is important to note she did not ever score a zero. In fact, Lanay was one of the higher performing students.

Figure 14. Progress graph for Mario. Mario, grade 11, did not attempt a creative element on his first wheel-thrown piece which is very noticeable on his chart. This was due to a couple absences combined with struggling to wheel throw. After forgetting to come in for make-up time on multiple occasions he forfeited this element of the grade and turned in what he could.
When studying the performance of each individual Beginning Level artist, I looked at the highest score for his/her four hand building projects and compared that with the highest score in his/her sgraffito projects. Since there were multiple projects in each category, I decided to focus on their highest performances to analyze their progress. There are a few reasons for this. First, when students scored very low, it usually had to do with truancy issues and I did not feel that those scores were a true reflection of how the lessons compare. I believed the students’ highest performances were the best way to most evenely compare the different lesson approaches. Comparing their highest scores with each other seemed to even the playing field rather than looking at how a lowest score in a category compared to a highest score in that category. In that case, it was more likely to see significant change in scores. However, I was more concerned with the overall and potential progress of my students (see Figure 15).

<table>
<thead>
<tr>
<th>How students progressed on the rubric when focused on surface treatment centered projects compared to hand-built, more three-dimensionally focused projects.</th>
<th>Creativity</th>
<th>Craftsman-ship</th>
<th>Use of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of students who improved 6% or more</td>
<td>20%</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>Amount of students who stayed consistent within 5%</td>
<td>66%</td>
<td>73%</td>
<td>83%</td>
</tr>
<tr>
<td>Amount of students who decreased 6% or more</td>
<td>14%</td>
<td>9%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*Figure 15. Chart of Student Progress.*

These findings show that the majority of students stayed consistent with their performance for both approaches. While significant portions of students improved or decreased more than 60%, those totals nearly even out each other. They do not seem to
suggest that either approach should be abandoned, nor marked as being amazingly more successful than the other.

**Student Research**

The Upper Level Ceramicists seemed to enjoy the research projects even though it was a change in our usual classroom routines. Some students were intrigued by the aesthetics or tools of a technique while others chose their research topic based on the culture or history behind processes. A couple students were at first resistant to working on the computer to do the research about history and put together a slideshow (see *Figure 16*); however, they all were motivated to explore materials and methods in a hands-on way. Not surprisingly, the more apprehensive students chose to do the hand-on experimenting with clay materials (see *Figures 17-19*) before doing the research for the presentation portion which helped them to later ease into the literary inquiry after seeing other classmates succeed at it in a class period or two. While working, many artists talked about their processes and shared results with nearby peers. Some needed to ask for assistance, so a few students were actively involved in two research methods. For instance, the girl trying to apply decals had to ask another a friend to hold the piece while she rubbed on the decal. They asked questions, shared results, and quite a few tried making multiple samples going beyond the expectations. Some made so many sample tiles that I had to quickly make more. One per person was simply not enough!
Both artists in *Figure 17* made important discoveries with their hands-on work.

Fiona, on the left, realized that to get a great marbled look, the tool must have a thin point. On the right, Marnie investigated stencils and determined using a leather hard clay yielded better results than a bisque fired piece of clay. She determined that using a sponge and mildly saturating it with slip, then applying in thin layers made the cleanest
looking stencil image. Too much slip at once could cause the design to bleed and blur the edges.

Figure 18. Marbled slip tile. Fiona experiments with colored slips. She moves them around aiming to get a marbled look.

Figure 19. Layered clay. Alina stacked different colors of clay in preparation for marbling or swirling clay bodies together.
Figure 20. Student tiles I. Top row, left to right: two with slip application using stencils, one with flower decal. Bottom row, left to right: silk screen applied flowers, enamel design, and kintsugi gold application in cracks of broken pieces.

Figure 21. Student tiles II. Top row, left to right: leaf imprinting with metallic rub-ons, marbled colored slip, marbled clay, and clay encrusting/inlay with two clays. Bottom row left, to right: two with tobacco tea underglaze, and slip trailing.
Figure 22. Peer audience and presenter. Students learn about new surface treatments from their classmates’ presentations.

Figure 23. Student presenting kintsugi poem. The poem beautifully explains the meaning behind the process. Kintsugi celebrates the broken and centers around seeing the beautiful in those that are damaged.
After the artists made sample tiles and a slideshow, many of them had time to also make a sample piece of art using their method. We then devoted a few class periods to having presentations (see Figures 22-23) at the beginning of class followed by studio time. All students that presented were successful and gave great information to their classmates. The only problems were with three students that had poor attendance. As a result, a couple students presented late. Unfortunately, one student stopped attending, but all others completed the presentation proficiently or above the expectations. Some images from student slideshow presentations (see Figures 24 and 25) show just a snippet of the big bank of knowledge and new possibilities for our future work in the classroom studio.

Figure 24. Slide image from Annaleise’s slip trailing presentation.
Figure 25. Slide image from Nikolina’s horse hair firing presentation.

**Insights**

Perhaps the meaning in some work is the process for students. The process of gaining a skill is often so much work that the meaning is in their effort, overcoming challenges, and the pleasure the process brought them. Many of my students take multiple Advanced Placement classes or simply find school hard and see ceramics as a break from such stressors. Sometimes students say their brains get a break from the rest of school when they are in my class. I like to think that their brains are still working, but just in a different way. Perhaps exercising that part of the brain is the meaning. This research has strengthened my belief in the power that meaningful experiences are just as, if not more valuable, than meaningful finished products.
Patterns

I noticed some common themes in how artists put meaning into their artwork or later found meaning in their artwork. These themes were:

- making art for a loved one; the intent and purpose was the meaning
- honoring a loved one, some of these were even animals/pets
- overcoming a significant challenge while building and successfully working through it
- spending significant time outside of class on their work
- appropriating imagery or logos having to do with bands/musicians, clothing brands or stories/movies/books
- references/celebrations of cultural heritage
- recognition by peers, teacher or art show judges; the piece was identified as being of a higher level of quality and standing out above the others

I also noticed patterns in the imagery that was represented. There were multiple students that represented flowers, animals or appropriated images/logos in their art (see Figure 26).
Figure 26. Nine student art pieces.

Representing these images in artwork seems important to many of my students because they are expressing their interests and likes. They are making things with a common symbol of beauty, a flower, that people across cultures and time can recognize as a simple, natural beauty. Perhaps the artists portraying flowers want to please the person they are gifting the art to; or, perhaps they knowingly or not, want to please a wider audience and go for a safe and widely accepted symbol of beauty and/or happiness.
**New Understandings**

As I predicted, I found the data collected in conversations and written reflections to probably be the most noteworthy. It is with these methods that I learned more deeply about individual artists. They tell me things I just cannot know from looking at their art, reading rubrics and evaluating charts. It seems the process of art making holds a greater impact to the meaning of a piece that the finished product. Many students in my conversations with them talked more about time, effort and the feelings or effects the process has on them than the look or imagery of a product.

**Evidence to Support New Understandings**

Before asking students questions addressing meaning in art, I gave students some reasons why art might be considered meaningful. I included the following:

*Art can be meaningful because*

- it gives us pleasure
- it addresses an issue important to us
- it makes us feel successful or confident
- we went through a large struggle for it
- it is for someone else important to us
- we learned an exciting thing
- it brightened our day
- it has an emotional quality
- it represents our self, heritage, identity, family
The young artists responded with some additional ways art can be meaningful:

“It gives us a sense of control in our lives. It makes us feel like we can add something to the world.” -Kayla

“They allow us to express ourselves and you’re able to make something for someone else from the heart.” -Serena

“It tells a story…I think diversity, making every piece of artwork different, makes it meaningful.” -Lanay

“When you dedicate time.” -Fiona

“It relieves stress.” -Parker

“It’s therapeutic.” -Tanner

“I can use them in my everyday life.” -Marcos

I also asked students about what piece of artwork was most meaningful to them and why. The responses reinforced this theory that the process holds stronger meaning for most students than the imagery, creative elements or finished look of a piece. Samara, a senior, had a three semester break between her Advanced Level class and her Studio Level class. At the start of the semester, she was worried about getting back on the wheel after so long. In reflecting about her most meaningful project, she said, “My first simple bowl I wheel threw in the beginning of this semester was the most meaningful to me because it connected me to wheel throwing again. An art piece is meaningful to me when I have put a lot of thought and effort into it, when I chose the piece I wanted to make, and I enjoyed making it.”

Another artist, Parker, grade 12, found particular meaning in her teapot with flower decals (see Figure 27) because decals was the topic she researched. I think it was
particularly powerful for her to teach not just her classmates about the process, but also for her to walk me through the process for the very first time. Parker spent an incredible amount of time on her piece. It was well crafted and simple in both form and color. Her teapot was accepted into the highly competitive district art show. Parker had seen other classmates in previous years be accepted into this show and now it was her turn to feel this type of accomplishment. While I believe she was very happy with the form, white glaze and decals, it seemed the meaning in her piece came more from the process and the external elements it created for her.

Annaleise, also a senior, was one of the few students that talked about meaning in a different way. She stated, “My teacup (see Figure 28) was meaningful because it was the first piece that I made that had a story behind it. I got inspiration from the theme of a show I watched about the nature of humanity.” This is interesting because the story behind it has to do with a show she watched. I love that she expressed her idea without using logos or direct imagery from the show, but used jagged forms for her feet and white glaze with black drips. Her piece seemed to speak to a wider audience that way than if she appropriated imagery from the show.
Revisiting Assumptions

Before this research, I assumed that surface treatments could get students to more easily express meaning and creativity in their artwork. While the graphs and rubrics did not prove that as a definite fact, I found that for some artists it made approaching creativity more accessible. To be able to turn a drawing into a carving or a clay transfer helped some students get excited in a new way and feel less overcome with construction obstacles. It was like they could see the light at the end of the tunnel when they started the project. I think some students, especially those who do not think as three-dimensionally, found the sgraffito plates to be an easier approach compared to the more in depth construction of hand building.

I also assumed that a research project could give artists more choice and sense of power in the classroom. While it seemed to do this, especially right at the moment artists achieved success on their tiles, I am afraid it had the opposite effect on one student. When I introduced the project, I was careful in addressing the fact that they were
researching and presenting and it was not the norm in our art class. I knew it could be hard for some to accept, but I thought all would be just fine in the end. Well, unfortunately, it was right around that time where one boy started a long stretch of unexcused absences which led to me not seeing him again. He managed to make the tiles with lots of guidance and support from me. He seemed to like the process and results, but he did express not wanting to present to the class. I told him we could work something out. I suggested that I could help him present and that I would walk him through the research process. He came to class one more time, then never returned. I noticed he also was absent from other classes, but I cannot help but think perhaps the stress of research and a presentation was one thing that caused him to make the choice to not attend. This student was in the Exceptional Student Services program and I had always worked well with him before this. Ceramics class was one of the few places where he experienced success. It was disappointing that I did not feel success with him after our spring break.

While this boy was not a success story, much of what came out of my research helped me to learn about my students, their art and how meaning is made. When introducing projects, I was more mindful to demonstrate processes artists use to generate ideas in their work and ways to express them. As students created their art, wrote reflections and spoke with me, I learned more ways that art can be meaningful to them. Going into this research, I hoped to see more visual representations of meaning in my students’ artwork. While they did make some impressive imagery, I learned that meaning can come in many other forms and be just as, if not more, valuable.
CHAPTER V
CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Overall Conclusions

As I reflect on my original question, *How can students create meaningful art when studying surface treatments in clay?* I conclude that there are multiple answers to this. For some, the meaning stemmed from an intention to make the piece for, or in honor of, a loved one. Others put meaning into their work by referencing pop culture. Some artists represent their family or friends through their work. However, the most common theme I observed in *how meaning is made* was a focus on the art making process. Most of the artists emphasized that the meaning in their work came from the large amount of time and energy they put into the projects. Significant accomplishments regarding obstacles in technical skill, patience or problem solving seemed to weigh more heavily on the artists’ meaning than the visual aspects of the piece.

Improving Practice

A big take away for me was that releasing more power to the Upper Level students was in a way more work, but very rewarding. I was buzzing around like a busy bee when students were ready to start experimenting with new materials. Since they were new, I had to introduce different materials to each student. Some needed more guidance than others, and some were ready at the same time which caused a few to have to wait a bit. It was tricky to juggle everything at once. However, I find that kind of teaching, a
more student-centered approach, is extremely rewarding and exciting. When doing similar practices in the future, I could organize, label and prepare materials a bit more ahead of time. However, part of what was great about this learning experience was that the students mixed recipes and I would not want to lose that. I think it helped them to gain a sense of value, anticipation, and power in the classroom. I definitely want to improve my teaching practices by implementing more lessons that turn the power and investigations over to the students.

**Future Action**

**Curriculum**

I see surface treatments as an appropriate study for the work that I do because they can quickly benefit my biggest population of students which is two classes of Beginning Ceramics and one Upper Level section each semester. It can also benefit my Art Comprehensive and Sculpture curriculums as they include ceramic studies in them. Perhaps one day I could even incorporate some techniques to my Computer Graphics class by having them create stencils or image transfers using Adobe Photoshop or Illustrator, then applying them to clay tiles! Surface treatments other than glazes are something I have wanted to explore to broaden my own ceramics practices as well as with my students. They are fun and open up a world of options. Introducing more decorative techniques could help the Upper Level students understand there are endless amounts of things to study in ceramics, thus encouraging them to continue furthering their studies.

This study, along with so many others, has confirmed that students need choice to feel empowered and valued in the classroom. In the future, I plan to implement a research
unit to each upper level section of ceramics classes. The findings of the students’ research will then be compiled and used as resources in the studio in a similar way I plan to do with the surface treatments (see Figures 29-31). For example, a binder about hand-building techniques could be placed in an accessible spot so artists can refer to it when wanting ideas or when problem solving a construction issue. Or, perhaps each artist invents a tool that creates a unique texture in clay and is added to our class supplies. We could then make a display showing texture possibilities for future artists coming through the studio. The students not only learn new techniques, but they also help to build on the collection of resources in the classroom. Their personal mark on the classroom enhances the studio experience and also leaves a bit of their legacy. It helps me to show future students that what we learn here is valued and appreciated.

**Classroom Environment**

As a result of the research study done by my Upper Level classes, I have collected images and text from their slideshow presentations and printed them onto paper to create a bulletin board that is currently in progress (see Figures 29-31). This display shows an array of surface treatments, a bit about their history and a step by step process of how to do each technique. I have put materials and tools in labelled drawers under the display so that students in the future can work independently. They may need guidance and have questions during the process, but this is a starting point and an overview of many options they have as working ceramicists. Sample tiles made by the students are displayed with the written instructions so as to easily see the characteristics and results of each process.
Figure 29. Bulletin board in progress. My goal is to organize the layout better. At the time of the photo, not all instruction guides were made.

Figure 30. Instruction guide for kintsugi. This is the format I used for each surface treatment mini poster. I took images and words from student presentations to make them. See more in Appendix.
Sharing with Colleagues

This arts-based research would also be beneficial to other Ceramics teachers in my district. We do not have many formal opportunities organized by the district to work on curriculum together, but a couple teachers and I have done so on our own. We share lessons, ideas, and strategies over coffee or by visiting classrooms. Perhaps I could host a professional development workshop after school which our district art department supports. Since some of the surface treatments I learned about were triggered by conversations with other ceramics teachers in the district, it would be appropriate to give back by sharing the knowledge and resources I have gained. My fellow ceramics teacher friends have helped me to talk through and develop this research topic and they would be excited to learn results.
New Questions

This arts-based research has led to many new ideas and questions that explore further curriculum implementation, teacher approaches and future action research.

- What if I have Upper Level students’ research ways to make texture tools that mimic a material different than clay?
- How could they represent wood, metal, textiles in clay while also making a new tool that will work in the studio long-term for future use?
- How about asking the students what they think the studio could use to enhance their ceramics experience?
- What do the high school students want to research?
- What other ways could they present and share their findings with their classmates and teacher?
- Will prompting high school artists to think about how they put meaning into their work help them move forward to make deeper and more meaningful work?
- How could I apply surface treatments on clay with Computer Graphics students?

These questions excite and inspire me to continue exploring classroom practices, student work, and my own art with an action and arts-based research mindset. This process made me more aware and intentional in my lesson design and implementation. The struggles I had along the way reminded me that the students also go through similar experiences in their own world. Feeling overwhelmed, confused, and unsure about what lies ahead can be challenging for anyone and it is always important for teachers to be
aware of student stressors as well as their own. Going on this research journey helped me to understand my students more as well as myself, both in and out of the classroom.
REFERENCES


APPENDIX

IN PROGRESS BULLETIN BOARD DISPLAY

These are some mini posters for the in progress bulletin board display for future classroom use as a result of the Upper Level Ceramicists research project.

Decals

- pre-printed images or designs that can be transferred to ceramics
- decal application is similar to the fake tattoo process

HOW TO:
1. Clean surface of a glaze fired piece.
2. Soak decal in lukewarm water until it slides off paper.
3. Smooth decal onto your piece.
4. Fire to Cone 018.
5. Need it dinnerware safe? Clear glaze it after Step 4!

HINTS:
♦ Works better on shiny glazes.
♦ Consider glazes that show contrast to the decal; dark glazes might not show the decal very well.
Kintsugi

- **Kintsugi** (金継ぎ, きんつぎ, "golden joinery"),
- Also called **Kintsukuroi** (金繕い, きんつくろい, "golden repair")
- originated in the late 15th century China and spread to Japan
- meant to create something beautiful from the broken
- originally made with real gold

Nothing that is broken becomes ugly, embrace and admire the beauty that comes from it.

**HOW TO:**
1. Mix a small amount of liquid gold gilding and E6000.
2. Use it as a glue to hold together broken pieces and fill in the cracks.

**HINTS:**
- Use tape to hold pieces together.
- This will take hours to dry, so plan accordingly. It may need to be glued in stages.

You will always find perfection in imperfection.
Leaf Impressions

- Veins and leaf shape are pressed into clay

HOW TO:
1. Lay leaf on your wet or leather hard clay form.
2. Roll over it to make an impression; try a mini roller from the window sill.

HINTS:
- Make sure your clay is not too sticky or wet when imprinting
- Consider applying an underglaze or glaze in the imprints and sponging away (see mishima process).
- Try a celadon or transparent glaze to see the lines.
- An acrylic wash is also a great way to show the imprint.
- Try other natural materials, fabrics or objects to press in your clay.
**Slip Trailing**

- Creates raised lines on your clay surface.
- Dates back to pre-historic times.
- Slip, a smooth watered down clay mixture, is applied with a slip trailing bottle that has a thin nozzle.
- Can also apply it with cake decorating nozzles or plastic bag with a hole in the corner.

**HOW TO:**
1. If you want to plan your design, sketch it with a needle tool on your wet or leather hard clay. Or, you can draw a design on paper then transfer onto the clay.
2. Choose your slip color. You may need to mix it. We use slip or mason stain powders mixed with underglaze.
3. Apply your slip lines carefully to wet or leather hard clay.

**HINTS:**
- Be sure to apply slip to clay that is not very dry. It does not adhere as well to bone dry clay.
- If you make a mistake, you can wipe the slip off of your piece. It may take some practice.
- If the nozzle is clogged, use a thin needle to unclog it.
Image Transfer

- Technique used to apply printed or drawn images on paper to your wet clay.

HOW TO:

1. Draw or print an image on newsprint paper.
2. Paint underglazes over the design. Here’s the tricky part though: you have to paint the things you want to show on top, first! So, paint the tiny details first, then background colors can go on top of those on your paper.
3. After underglazes are dry, paint a layer or two of slip over it to fully cover the design.
4. Let the slip dry until it is not shiny anymore.
5. Place over a fresh piece of clay still moisturize.
6. Press and rub with a spoon to make sure it adheres to clay.

HINTS:
- Peel off the paper a tiny corner first to see if it worked well. If not, push back down and repeat.
Stencils

- a thin sheet of cardboard, plastic, or metal with a pattern or letters cut out of it
- underglaze or colored slip painted through the holes puts the cut design on the clay surface

HOW TO:

To imprint on wet or leather hard clay
1. Push stencil into wet clay to imprint the design right into the clay.
2. Use small tools to push down on the stencil.
3. Peel up as soon as you’re done pushing it down.
4. Fix any areas that the design did not imprint.

To paint on wet clay:
1. Lay stencil on the surface and secure with your hand.
2. Dab underglaze or colored slip with a sponge to apply the color.
3. Immediately peel off the stencil.
4. Use a fine paintbrush or wipe any imperfections away.

HINTS:
- Don’t over saturate your sponge! Too much liquid will make a goopy stencil design.
Blue & White Ceramics

- Blue and white porcelain started to gain popularity during the Ming Dynasty in China.
- Cobalt blue oxide was imported from the Middle East and used for this look.
- Early painted porcelain from China mainly consisted of floral designs.
- Any color of underglaze can be used to get this look!

Contemporary artist Lei Xue makes ceramic cans painted in a similar technique.
HOW TO:
1. Paint an underglaze color to cover your piece.
2. Sketch your design with a pencil over the dried underglaze.
3. Paint your designs with underglaze over your pencil lines.
4. You can put 3 layers of clear glaze on top of the finished underglaze. Or, if you prefer, submit the piece for a glaze fire, then clear glaze after that.

HINTS:
♦ Use as many layers of underglaze as it looks like you need. If you can see through it now, you will see through it after the firing. You may or may not want that look.
♦ Using watered down underglaze can make your colors transparent and have a softer, watercolor painting effect.
♦ Take your time painting and use the right size brush.
Japanese Kutani Ware

- Old Kutani has a more limited color palette; red, dark blue, green, yellow, and purple.
- The historic process involved using enamel on top of a glaze.

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Japanese Cloissone

- Originated in ancient Mycenae and Greece
- The style re-appeared in Byzantium and Persia, then in medieval France, Germany, China, and finally in Japan.
- It was only in Japan that the rebirth was so dramatic.

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Horse Hair Firing

- After clay is bisque fired horse hair is placed on the hot surface to create interesting dark squiggly lines.

HOW TO:
1. Arrange a time to do a firing with Ms. Schmidt.
2. Remove piece and apply horsehair when the clay is about 900° F.

HINTS:
- Have a bucket of water nearby in case of an issue.
- Wear gloves to protect yourself.
- Pull hair or loose clothing back.