How Can Students Use Art to Learn Problem Solving?

Fei-Ya Su

Brigham Young University

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ABSTRACT

How Can Students Use Art to Learn Problem Solving?

Fei-Ya Su
Department of Art, BYU
Master of Arts

This study explores how art instruction can be used to help students engage with important problems that matter to them and thereby adding personal value within a holistic education experience. Through a two-week-long curriculum composed of eight two-hour classes, the researcher deeply examined the journeys of growth that three students underwent as they were exposed to new art-making techniques and ideas, with an emphasis on the meaning behind individual art creation. The researcher found that all three students showed growth that extended beyond art-making itself to help them develop as independent problem solvers. As an action research study, this study also allowed the researcher to reflect on her own journey as an art teacher and examine how she could improve her teaching methods to facilitate the practical application of art learning into problem solving.

Keywords: art education, problem solving, action research, curriculum
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Chapter 1: Introduction

The reason I became an art teacher was to let students know that they matter. I was born in Taiwan but moved to China when I was nine years old because my father got a job there. As an Asian girl, school was always an incredibly important concern to me, my family, and my culture. Yet for places like Taiwan or China, school did not mean art, music, and dance, it meant Chinese, English, math, science, history, and other so-called academic subjects. When I was little in Taiwan or China, I was always so excited to have art or music class. But in art and music classes, we always had teachers from the academic subjects come to the classroom and say to art and music teachers something like the following: “We’re going to have a test soon and these students have not been doing so good. Can I take over your class to help them prepare?” Those academic teachers would then take turns to teach us so that every year, we had maybe only ten art, music, and PE classes combined, with each class only lasting for forty-five minutes.

I did not mind someone wanting to help my grades improve. However, I think that some of the best experiences that made me who I am today were when I drew my friends and family. Even though academics were important to my family, they were so happy when I would spend time with them drawing, and I was happy too. Art was something that I enjoyed then and still do now. Yet as I progressed through school, everyone started to question my passion. Can art help you to make a living? Can art become food? I felt that as a child, because I loved art, but art was not considered useful, I myself was someone who was not useful to society. I had a hard time believing in myself as an artist. I was no longer confident in who I was or who I could be.

From 2015 to 2016, I worked as an art teacher in the United States. I used art to teach elementary students English, math, science, and history. I knew how hard learning could be, so I wanted students to have fun and I did not want to kill their motivation to learn even the academic
subjects. I wanted students to come to class feeling that this was a safe place to explore their passions with no right and wrong answers or methodologies. I wanted my students to be able to freely learn in divergent ways. I believed my art education helped me bring these more flexible approaches to my classroom. From 2016 to 2017, I returned to China to teach middle and high school art. I hoped that things would be different from when I was a student, but sure enough, once exam time neared, other teachers began to take students away from my class. Seeing my students’ disappointment reminded me of my own experiences.

I know that I cannot change the Chinese culture of judging art as an inferior and frivolous school subject, but I can use my teaching as evidence that art is just as important as other school subjects. The research problem that I address in this research project is: Can art be used to effectively help students learn how to problem solve? If the answer is no, then the consequence is that art may be considered less useful compared to classes such as science and math. Going into this study, I already had experiences giving me evidence that counters such a notion. To explore how art can be used to problem solve, I conducted an action research study where I taught a group of students art that was focused on finding out first, the problems that they want to solve and second, how they can solve them through artistic approaches.
Chapter 2: Literature Review

While many people believe that art is no doubt an important subject to be taught in schools, critics throughout history have questioned what value it has for a general education experience. In an interview with art education professor Lois Hetland, Rafael Heller discussed the “false dichotomy” of popular reasons why art education is important: that it is “between ‘arts for art’s sake’ and art for instrumental purposes” (Heller (2017), p. 16). To say that art is inherently useful does not really advocate for its value in a general education, and extensive research by Hetland disproved the idea that studying art would guarantee better grades in other subjects.

So, if art does not make students better at studying, then why is art important? When I was in school in China, teachers would always take students away from arts classes so that they could study longer for their exams. I know that for those teachers, this was what they were thinking when they did that: “Why waste time with art?” Hetland’s response to this issue resonates with me in the following:

I agree with people who say that schools need to do more to prepare students academically so they can succeed in college and careers. It would be irresponsible and elitist to say otherwise. But there also has to be time in school to teach people to be fully human, which includes teaching them to “read” works of art and to create new ones. If we don’t do that in school, then we produce impoverished citizens – and an impoverished society. (p. 16)

Math and science are important, but so is art. Students cannot just take art class and not study for tests in academic areas, but they also cannot simply study for tests and miss the opportunity to improve creative play and problem solving that a quality art education offers.
Hetland (as cited in Heller, 2017) went on to describe “eight studio habits of mind” and “four core structures” (p. 18) that more specifically explained the goals of art education. In response to Heller’s suggestion that other subjects could teach this as well, Hetland replied that “it seems to [her] that there’s something distinct about the kinds of things we make in the arts” (p. 18). Even though the different subjects can teach similar things, they are not the same. The arts offer a perspective on the world that is unique, and learning it, along with the perspectives from other subjects, helps students to grow into fuller citizens.

In “Educating the cultural citizenship: Reframing the goals of arts education,” Kutner (2015) talks about the goal of arts education “as a process of developing cultural citizens” (p. 86). He also makes the point that arts education is not the only thing that students need, but is instead just one necessary part of a whole experience. Kutner explains in the following:

Arts education represents an important piece of the puzzle, particularly in the context of major advocacy efforts to increase access to arts education for all young people. By putting arts education into conversation with the literatures on civic education and cultural citizenship, we gain a new perspective from which to hone and improve our efforts. (p. 87)

Furthermore, I appreciated how Kulinski (2018), in her paper “Awakening the Creative Problem Solver,” addresses the concern about how art is useful by asking herself questions about her teaching:

How can I awaken my students to authentically engage in and persevere through the artmaking process? How might this state of awareness contribute to my students’ understanding of themselves? How might this benefit my students beyond the visual arts classroom? (p. 42)
I like that Kulinski starts her questions not with how art can help students beyond art, but how students can learn to do art well. This is what she wants to happen in her classroom, and it is what I want in mine too. Even though we are teaching art, our job is not to make everyone become an art teacher or artist. Our job is to teach students how to make art, to love making art in their own ways, and to put their passion and the skills they learned into their lives outside of the classroom as creative problem solvers.

While I am not an art therapist, my goal of using art to help teach students with their problem-solving skills can be considered of similar purpose to art therapy practice. In her book *Introduction to Art Therapy: Sources and Resources*, Rubin (2010) states that “Art therapy is, always has been, and will continue to be a multifaceted field” (p. 1). As the combination of two disciplines, art and therapy, there has been much scholarship on not only what art therapy entails, but how it should be evaluated and who is qualified to practice it. In the following paragraphs, I will use Rubin’s compilation of scholarly research on art therapy to discuss its history, the procedures for its practice, and the risks involved for under-qualified practitioners.

On the history of art therapy, Rubin states that while “its emergence as a newly defined profession is relatively recent, its roots are ancient and universal” (p. 50). In other words, although the formal study of art therapy and its classification as a job that people can specialize in has not been here for long, the actual practices it entails, its methods and purposes, are evident throughout history. This is because the desire to explore mental realities through visual engagement is “a part of the human condition” (p. 50). In this way, like with many disciplines, it is not that art therapy had never existed before its establishment in professional practice, but rather that the professional practice draws from a rich history.
That said, Rubin traces interest in art therapy as a discipline back to fascinations of the human psyche that were represented “not only the depth psychologies of Freud . . . and Jung . . . but also in the novels of James Joyce and the poetry of the French Symbolists” (p. 51). Because society became far more interested in what happened inside human minds, when before its interest lay almost solely on what could be seen, it also became interested in figuring out the many ways to explore the mind. Art was one of these ways: “Around the time that psychoanalysts were beginning to plumb the mystery of dreams, Western artists were in the process of giving up the representation of the outside world for the mysterious goal of expressing the inner one” (p. 51). This shift in artistic goals in this way kicked off the beginning of art as a way to not just record what we could see, but to reveal what we could not.

From there, the fascination with art as a window into the soul was propagated by artists, teachers, and psychologists alike until art therapy became “defined” as a “new field” by Naumburg and Kramer, who “were sophisticated in their reading and understanding of analytic theory, child development, art, and education” (Rubin 2010, p. 57-58). What I found interesting was that even these founding mothers of art therapy, Naumburg and Kramer, did not agree on what it was: “their definitions of art therapy were quite different, one stressing the therapy and the other the art” (p. 58). Figuring out art therapy can in this way be quite confusing, but this complexity also allows for a great depth in application that can incorporate art and therapy to accomplish things that neither can do alone. While this discipline grew mostly in the United States, it has “in recent decades” also made progress in other countries as well (p. 66). Global organizations such as the “International Networking Group of Art Therapists (ING/AT)” and “The European Consortium for Arts Therapies Education (ECArTE)” have ensured that this progress continues through communication and practice around the world (p. 66).
I appreciated how Rubin (2010) concluded her writing on the history of art therapy by quoting Johann Wolfgang von Goethe: “In My Italian Journey, published in 1787, Goethe wrote: ‘We ought to talk less and draw more. I, personally, should like to renounce speech altogether and, like organic nature, communicate everything I have to say in sketches’ (68). Art is in this way a form of communication that can be better than words because it shows true, deep feelings. The therapeutic purpose of art, then, is to allow the artist to communicate feelings in a creative form that can be difficult and painful to say or write, in this way transforming it from something destructive into something therapeutic. Regular classroom teachers can relate to this purpose in that education is the process of guiding students to grow in how they are able to understand and express themselves. Art itself is a very effective form of communication for children and can be used in any classroom, such as by expressing difficult to understand concepts to students and giving students a way to show their unspeakable anxieties through visual forms, in this way helping them to overcome those anxieties.

Yet it is important to note that regular classroom teachers are not art therapists. Rubin (2010) gives a clear and intimidating summary of what it takes to become a true art therapist in the following:

Just as it takes years of study and discipline to master the visual arts, so it takes time to master psychology and psychotherapy. Like related disciplines, such as counseling and clinical social work, the master’s degree is the entry level for practice. As with all forms of therapy, understanding and synthesis in art therapy come only with experience. To integrate knowledge about art and therapy requires two years of graduate study, which includes not only coursework, but also extensive clinical training . . .

Students are required to have a minimum of 700 hours during training and 1500 post-
master’s hours in order to be credentialed as a Registered Art Therapist (ATR). To become a Board Certified Registered Art Therapist (ATR-BC) requires passing a rigorous written examination. (p. 27)

These standards were established by the American Art Therapist Association (AATA) and continue to be in effect to this day. Without the required training, and even with it, there are many ethical issues to consider when conducting art therapy. Rubin listed some of these, providing the categories of “Provocative Images,” “Ownership and Storage,” “Confidentiality and Exhibitions,” “Disability Issues,” and “Multicultural Issues” (p. 252-258). At its core, these issues revolve around the risk that cannot be avoided when working with people on things that are personal to them, and that can hurt them if an accident happens or a mistake is made.

Because of this, teachers who want to bring art therapy into their classrooms should be as careful as they can be and understand what they can and cannot do with the training they have. For example, a teacher untrained in art therapy should not try to make a psychological diagnosis of a student and try to prescribe a treatment or use precise, specialized, clinical techniques and strategies. I think that they should instead, be observant of the students without judging them and be ready to stop what they are doing if it looks like the students are in psychological danger. Of course, even figuring out when they are in this danger is difficult, and so it is probably better if untrained teachers do not try to do art therapy or do it under the supervision of someone who is trained in it.

In her work for the UCLA Center, Neighbors (n.d.) wrote “About Art Therapy and Schools,” a paper about mental health in school programs and policy analysis. Neighbors stated that “in schools, the intent of art education is to develop knowledge, skills, and attitudes about art,” whereas “in contrast, the intent of art therapy is treatment.” I did not know before what the
difference between art therapy and art education was, but Neighbors showed me that they have different goals. Based on these goals, I am an art teacher, not an art therapist. However, as an art teacher, I can do art as a special kind of therapy with my students, to a certain degree, if I attend to the right conditions.

As I started to think about why I want to do art as therapy, I read Rolling Jr.’s (2017) “Art as Therapy.” In his editorial introduction to an issue of *Art Education*, he referenced Malchiodi (2003) and said that “Art therapy ‘is based on the idea that the creative process of artmaking is healing and life enhancing and is a form of nonverbal communication of thoughts and feelings’ that must be resolved in order to ‘achieve an increased sense of wellbeing’” (p. 5). This *Art Education* issue was in this way focused on how art healed, and the experiences of Willcox (2017) and Rufo (2017) really interested me as well. Rolling Jr. wrote that “Willcox explores the role of vulnerability in the art room, arguing that teachers can better support student risk-taking by fostering environments for creative exploration that are also psychologically safe”; he also wrote that “Rufo shares a story from his elementary school classroom documenting how children are capable of self-initiating the creative process as a form of therapy to alleviate learning anxieties when acquiring skills in math or other subjects in which they are regularly assessed” (p. 5). Their stories show that teachers, parents, or anybody using art as therapy can help students with their anxieties and help them to take risks. Yet what art teachers need to do is to keep records of what students think and allow them to make creative explorations that are also psychologically safe. In the following paragraphs, I will describe how Willcox and Rufo used a particular type of art education as a therapeutic aid to overcome fear and risk in their classroom, looking at what they said to their students, what questions they asked in their classes, and what they did to help students succeed as artmakers.
In her article “Vulnerability in the Art Room: Explorations of Visual Journals and Risks in the Creation of a Psychologically Safe Environment,” Willcox (2017) wrote that for students, “vulnerable moments can become courageous risks or confirmation that they do not belong in the art room . . . [and] need pedagogical and curricular attention from art educators to create a psychologically safe environment where students can be creative” (p. 11). Risks can help humans to learn, but art teachers need to have a safe classroom so that students can feel comfortable and avoid shame when they take creative risks. In making it clear what shame is, Willcox referenced Brené Brown (2006), who “defined shame as ‘an intensely painful feeling or experience of believing we are flawed and therefore unworthy of acceptance and belonging’” (p. 45). I found Libba’s ideas really interesting. She wanted to help students learn to take risks, but minimized shame by encouraging vulnerability, supporting students risk taking, and creating a safe environment that can help them be creative and find their own answers. To do this, she designed a curriculum step-by-step, making sure she knew all the details in the classroom and in students’ work, developing trusting relationships with them and engaging in authentic dialogue. This is something that I want to do in my classroom too. Furthermore, she shared the technique of another art teacher, Rose, who did the visual journal in her classroom:

The visual journal is like a reflective altered-book (or sketchbook) that students used to document and express their lived experiences . . . visual journals gave freedom to explore ideas, experiment with materials, and discover techniques; they also allowed multiple opportunities for fresh starts. While visual journals are shared with other students and teachers, in Rose’s classroom students controlled which pages to share. Consequently, visual journals were a low stakes assignment (Elbow, 1997a) that allowed students to
work out ideas visually and verbally, without the associated sense of failure if a larger assignment did not meet their expectations. (p. 14)

These strategies are all ways that Rose used to create a safe environment in her classroom. Wilcox (2017) also provides guiding questions to creating a psychologically safe curriculum as an art teacher that I really like. Her four categories, “Minimal grading,” “Writing to learn,” “Low-stakes assignments,” and “Attend to students as individuals,” together make a comprehensive outline of how to let students be as creative as they want to be (p. 16-17).

However, there is no way to make sure that students that take risks will never experience problems. I really like what Biesta (2013) said about this in the following:

[E]ducation always involves a risk . . . the risk is not that students might fail because they are not working hard enough or are lacking motivation…. The risk is there because education is not an interaction between robots, but an encounter between human beings…. [I]f we take the risk out of education, there is a real chance that we take out education altogether. (p. 1)

In art education, it is especially necessary for the students to take risks because whereas many other subjects focus on solving things in one way, there are many ways to do art. Art classes are in this way necessary to provide a balanced education, providing students with a unique environment where they are able to take risks to learn, but in as psychologically safe space as far as art teachers can make it. I appreciated how Willcox (2017) put it:

Because the art classroom promotes risk-taking as a part of education, art teachers have an opportunity to teach students how to try new things and learn from these trials, no matter the result. Creating a space in which learning is possible also enables our students to benefit from the beautiful risk of education in the art room and in life. (p. 18)
Taking risks to grow in the art classroom prepares students to take risks in life. By working in the safe environment of the classroom, they will better understand how to stay psychologically safe outside of it as well.

Rufo (2017) also talked about his experience with art as therapy in his article “Math Hater: How One Child Overcame Her Math Anxiety Through Self-Administered Art Therapy.” Rufo worked as a teacher in private schools for fifteen years. He did not teach art, but language arts, socials studies, science, and math. In his paper, he told a story of when he was the sole math instructor for 4th and 5th grade students. He had one student, Danielle, who loved to draw, but had a hard time learning math. She was so frustrated that one day, when Rufo was looking at her homework, he saw a troubling drawing:

I saw a six-panel comic drawing titled, My Life. In the first panel a student asks her teacher why students have homework. In the remaining panels the child complains to her mother that she does not understand her math homework, has a nightmare that she is being attacked by the homework, returns to school in tears, and finally, announces that she hates math. (p.7)

Danielle’s in this way began drawing herself as “Math Hater,” a character who represented her own dislike of math. Concerned that this would make her hate math forever, Rufo tried to help her see that math is not so bad. The first thing he did was to offer Danielle encouraging words, giving her the opportunity to do art in all different ways and adding hands-on activities to his curriculum. Yet this was not completely successful:

Danielle was bright, gregarious, and creative. She was also convinced that she was not good at math and often expressed these feelings to me and to her classmates. I tried to bolster her confidence by offering encouraging words, explaining mathematical processes
in various ways, incorporating hands-on activities, and offering weekly tutoring sessions. However, those techniques did not seem to work and most days she informed me that she did not understand the lesson and had difficulty completing her homework assignments. (p.7)

Rufo’s teacher-directed strategies to resolving his student’s problem failed to engage the student in a meaningful way. Recognizing this issue, Rufo thought about how he could support her by shifting to student-directed strategies. He explains in the following:

I felt the best way to support Danielle was to help her see our classroom as a safe place rather than a stressful environment that threatened her self-worth. In my experience, children feel safe when they have choices and are allowed agency to learn in ways that are pleasurable to them . . . I observed how my students responded positively when they were allowed to take part in self-initiated creative activities during class. (p.8)

Like Willcox, Rufo decided that the key to supporting students as an educator was to create an environment where they would feel psychologically comfortable with taking risks. Danielle in this way had a place that made her feel safe to share her feelings with others, knowing that they would not judge her. Engaging with the art of her classmates, she transformed her potentially negative art making to a positive, therapeutic experience where “the Math Hater had become the Math Helper” (p. 10). This happened because Rufo created a safe environment so that not only he, but other students were also able to support her to self-administer her own art as a type of therapy, giving her hope and changing her to a person who was willing to learn.

The most important thing to do in art education and art therapy is to create a psychologically safe environment where the students can take risks, as happened in Willcox’s experience, and think for themselves about how to solve their problems using art, as happened
for Rufo’s student. I also want to create such a space for my classroom so that students can be able to try to problem solve by themselves without being afraid of shame.

In my research study, I had students make artworks that helped them find and reflect on the problems that were important to them. These problems did not need to be personal, did not need to be issues that were hurting them and that they would need therapy for, but were issues like “How can I protect the environment?” or “How can I make my family happy?” In doing these artworks, I focused on teaching them the skills that they needed to make the art, and learning these skills helped them to grow socially and emotionally. In other words, I was not trying to fix my students, or even trying to help them fix themselves, but rather wanted to guide them in gaining the skills to problem solve by themselves, and to express that problem solving through their art.

Even though I did not do art therapy in this study and am not qualified to do art therapy, I had to be careful in my classes because my students could have still worked with personal and difficult issues that could hurt them if something goes wrong. The most important thing for me as an art teacher was to create a safe environment for my students so that they could be creative and could have a positive experience with me and with their classmates.
Chapter 3: Methodology

Background

I used action research for my study. Action research is an established methodology in education that focuses not only on how teachers can improve, but also on how institutions can change for the better. My study helped me to improve as a teacher and contribute to how art can be taught not only for its own sake, but as a way to help students develop as independent problem solvers. This was a real-life process of learning for both me and my students, a process that was not just about the goal, but valued the journey to get there. As O’Leary (2014) stated:

Action research is a cyclical process that takes shape as knowledge emerges. The premise here is that you learn, you do, you reflect, you learn how to do better, you do it better, you learn from that, do it better still, and so on. You work through a series of continuous improvement cycles that converge towards better situation understanding and improved action. (p. 169)

In my study, I taught, learned, and reflected, over and over again, to help myself become a better teacher for my students.

To understand more about action research, I read the research of three educators: Fry (2015), Kulinski (2018), and O’Halloran (2000). Fry created an art-culture in her classroom, a place where people with different backgrounds worked together to create meaningful art for themselves; she had students “(a) relate to each other, (b) have social experiences, (c) mirror and change society in which we live, and (d) encourage artistic expression that is a strong balance between concept and craft” (p. 12). These objectives created an environment that not only nurtured critical thinking and problem-solving through practical application, but also emphasized the importance of developing positive relationships among classmates that further fostered
learning. In my study, I also worked to create this kind of environment through welcoming activities and encouraging communication between classmates.

I also admired how Kulinski (2018) designed her action research by drawing and writing about her students as they went through her class. In her pre-survey, she asked students if they thought they were good at art, why they wanted to do art, and how they got inspiration. In addition, she asked what students thought about to get ideas about making art and had them talk to each other about what they wanted to make and how they were going to make it. After they made their art, she then had them reflect on the materials they used and why they decided to make their art in the way that they did. This constant procedure of pushing students to reflect on their own decisions and motivations is a technique that I used as well through pre-surveys and similar questioning strategies.

O’Halloran (2000) used students’ attitudes to decide what worked in his writing classroom. The results of the surveys he conducted with his students showed how action research can be beneficial to not only the researcher, but also to the research subjects: the students. The feedback that students provided included:

I can express myself more easily and correctly on paper.

I would write my stories in a different style [in response to the question: what would you do differently?].

[Writing] is not that bad when you know what you’re doing.

I feel my [writing] skills are more solid. (p. 11)

Just as O’Halloran was able to take a subject that his students had preconceptions about and provide them with a new perspective and new skills, I aimed, in my study, to show my students
how art making was valuable for improving problem solving skills and develop their skills to utilize art making for this purpose.

One criticism of action research is that it can reflect institutional biases and motives, making it a reinforcement of already existing methods and pedagogies rather than a push towards improvement that can often require thinking outside of established norms. This was not an issue for me, however, because I did not conduct my research as part of any K-12 school or organization with a stake in influencing my results. Another common criticism is that because action research is heavily connected to the researcher, any results would be too subjective and context-specific to have value for people other than the researcher. While my research is indeed personal and focused on how I can improve as a teacher, I also use my experiences and learnings in this study to make suggestions on how other art teachers can change their curricula or methodologies to help students use art making to learn problem solving skills. A limitation of my research is the small sample size. It would be interesting to repeat this process with a larger or more varied group.

Application

My research project utilized an action research methodology to better understand how art education can be used to teach students how to problem solve. Besides that, and as an action research study, I aimed to improve myself as a teacher through constant reflection as the classes progressed.

My study took place in a multipurpose classroom at Brigham Young University, Provo, Utah. I booked the room for the sole purpose of my classes, meaning that none of my students had ever to my knowledge entered that classroom before the study began. The participants were three male children aged 15-17. Two were second-generation Americans born in the US, their
parents having immigrated from China and Hong Kong; the third had recently immigrated to the US from China.

IRB approval was obtained before contacting potential students for this study. Permission was obtained from parents and students before the study began, and while students were free to withdraw from the classes at any point, none did. As a researcher unaffiliated with any educational institution that these subjects attended or could have attended at the time of the study, there was no potential for a conflict of interest between me, the subjects, and any educational programs they attended. They were recruited from word-of-mouth, with correspondence prior to the study conducted through email and phone.

Research activities consisted of eight classes with two hours duration each, which included both teaching and data collection. The classes were centered around producing three artworks: a miniature golf course, a recycling art project, and an art project where they were to take something that they do not think is beautiful and transform it into something personally aesthetically pleasing. As stated in my IRB application, the procedures for the classes were as follows:

**Class 1:**

1. Collect all release forms and permission forms
2. Pre-survey
3. Art activity—A Problem Solving Game: “Build a Miniature Golf Course”
4. I will give them stamps and they will choose one to stamp on their sketchbooks.

**Class 2:**

1. 1st Art activity— A Problem Solving Game: “Build a Miniature Golf Course”
2. Show them the artwork of three artists: Emmalee Powell, Yayoi Kusama, and me. I will talk about how Emmalee Powell gives herself problems in her art and how she thinks that can help her in her life. I will then talk about how Yayoi Kusama has OCD, and that even though she is very old now, she still makes art. She believes that when she works on her art, she feels cured. For my art, I will talk about how I created art through recycling that I made to talk about myself.

3. Discuss with them on what their next art activity should be and deciding what materials they want to use so that they can bring it next time.

4. I will give them stamps and they will choose one to stamp on their sketchbooks.

**Class 3:**

1. 1st Art activity—Look over what they are making for their artworks.

2. Conversation about 1st artwork—I will ask them: what questions were you thinking about while doing the first artwork? Were you scared about doing something wrong? When you finished, were you happy about what you did? What was the hardest part for you? What do you do when you have a hard time? What did you enjoy about doing this artwork? Why? Do you think doing this artwork has helped you with solving a problem you care about? What do you think about the artworks that other people have made?

3. 2nd Art activity—Recycling Art: “Who am I?”

4. I will give them stamps and they will choose one to stamp on their sketchbooks.

**Class 4:**

1. 2nd Art activity— Recycling Art: “Who am I?” Continued

2. I will give them stamps and they will choose one to stamp on their sketchbooks.

**Class 5:**
1. 2nd Art activity—Recycling Art: “Who am I?” Continued

2. Conversation about 2nd artwork—I will ask them: what questions were you thinking about while doing the first artwork? Were you scared about doing something wrong? When you finished, were you happy about what you did? What was the hardest part for you? What do you do when you have a hard time? What did you enjoy about doing this artwork? Why? Do you think doing this artwork has helped you with solving a problem you care about? What do you think about the artworks that other people have made?

Class 6:

1. 3rd Art activity—"What is not beautiful in your eyes, and how can you make it beautiful?"

2. I will give them stamps and they will choose one to stamp on their sketchbooks.

Class 7:

1. Show students 3 artists. The first is an artist named Filipe, and I will talk about how the reason he decides to make this art is because he wants to make people think about what the real meaning of beauty is. The second artist is William Ely Hill and his art "My Wife and My Mother-in-Law" allows students to see things in a different angle. I will finally talk about how my own art, which will include a discussion on what I perceive as not beautiful and how I can make that beautiful for me through my art.

Class 8:

1. 3rd Art activity—"What is not beautiful in your eyes, and how can you make it beautiful?" Continued

2. Conversation about 3rd artwork—I will ask them: what questions were you thinking about while doing the first artwork? Were you scared about doing something wrong?
When you finished, were you happy about what you did? What was the hardest part for you? What do you do when you have a hard time? What did you enjoy about doing this artwork? Why? Do you think doing this artwork has helped you with solving a problem you care about? What do you think about the artworks that other people have made?

3. Survey and Interview—the interview will be conducted as a group interview with all students at once in the last 30 minutes of the final class. I will converse with the class in a free discussion format on their responses to the interview questions. This discussion will be audio recorded. The survey will be given after the interview and students will have the option of sending their responses to me by email after the class.

4. I will give them stamps and they will choose one to stamp on their sketchbooks.

5. If they have come 8 times, they will receive a gift from me.
Chapter 4: Results

My class began on July 15, 2019, and after collecting their permission forms, we started class with a pre-survey to get to know everyone better. This survey was adapted from Kulinski’s (2018) pre-survey. In her pre-survey, she asked students if they thought they were good at art, why they wanted to do art, and how they got inspiration. I added two more questions:

1. How creative are you? (0 is not creative, 5 is super creative) Explain.
2. Do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain.

After adding these two questions to Kulinski’s pre-survey, my five total questions for my pre-survey were:

1. How artistic are you? (0 is not good, 5 is very good) Explain.
2. How creative are you? (0 is not creative, 5 is super creative) Explain.
3. Why do you want to make art?
4. Where do you get the ideas for the art that you want to make?
5. Do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain.

To protect the identity of my three students, I assigned them the pseudonyms of Jack, George, and Stewart. The following are their answers to the pre-survey.

Jack’s answers to the pre-survey were:

1. 2 (on the 5-point scale); Sometimes I cannot get the picture or drawing to look like what I intend for it to look like, sometimes the thing I draw is sloppy.
2. 2; I have a hard time getting ideas that are creative.
3. So I can make things that look cool and impress others.
4. I search online, or I ask others for ideas.

5. 2; I think that art could relieve stress and could help you relax.

Jack’s answers suggested to me that although he thought of himself as not that creative or good on artistic work, he did believe he had some knowledge of art. Relieving stress and relaxing is a way of solving psychological problems, which I felt that Jack understand from his answer to question five.

George’s answers to the pre-survey were:

1. 3; It really depends on the day….

2. 3; Same answer as question 1. It all comes down to how well I feel like drawing. Some days I can become like Bob Ross and other times just is caveman drawing.

3. So I can flex on my friends.

4. Either on Instagram, Youtube or Google.

5. 4; Yes, problem solving such as using the Fibonacci spiral to help draw.

George’s answers suggested to me that he believed himself to be average, although he did know some artists. It was interesting to know that he had such specific thoughts on how art could help solve problems with his specific reference of the Fibonacci spiral! His responses were also similar to Jack’s in that both emphasized relationships, suggesting that relationships were important to both of them.

English was not Stewart’s first language, so I emphasized to him that he could ask me if he was unclear about anything. His answers to the pre-survey were:

1. 3; I just know how to draw. Don’t know any other about art.

2. 3; I just creative some draw cartoon picture.

3. Because art can help to real life easy do something.
4. I like to draw the game hero, so I like it.

5. Some can help me down my work and if I see some my favorite thing I can draw.

Compared to Jack and George, Stewart did not emphasize relationships in his responses. I thought that this could perhaps reflect a cultural difference, as although Jack and George were born in the US, Stewart had recently immigrated from China. Personality-wise, however, all three were very different. Jack was shy and calm, George was friendly and enthusiastic, and Stewart was quick to think of new ways to complete tasks.

For the first activity, I showed them how to make a sketchbook and at the same time made observations about what they were good at and how my class could help them. Jack was patient on what he was making and did not share much about what his ideas were or how he got them; I hoped that my class could help him become more open to share his thoughts and express himself. George was very friendly and enthusiastic, but when everyone besides him was done with their art, he became self-conscious and gave up what he was working on; I hoped that my class could help him gain more patience and confidence in himself. Stewart was good at finding short and fast ways to make his art, but he had a difficult time interacting with others in the class, perhaps because English was not his first language; I hoped that my class could help him gain more confidence in himself despite the language barrier.
After making a sketchbook we started working on the first art project: a miniature golf course. On the second class, I brought a lot of recycling materials, some golf balls and two golf clubs to class. I taught the class by showing them the artwork of three artists: Emmalee Powell, Yayoi Kusama, and myself. I discussed how Emmalee Powell gave herself problems in her art and how she thought that can help her in her life. I then discussed how Yayoi Kusama has OCD, and that even though she was very old now, she still made art. She believed that when she made art, she felt cured. For my art, I talked about how I took recycled materials and made my art and how that art helped me to see what other ways of life can be.

I showed them how I made my miniature golf course and let them draw and write down their own ideas about what they wanted to do with this project, which they then shared with each other. George was the first to share. He said that he wanted to let people have fun on his miniature golf course. He wanted to make it like a pool table and thought that he would use a box to create the course. On the other hand, I could tell that Jack still did not feel completely comfortable with sharing his ideas, so I asked him what he wanted to make, and he answered that he wanted his course to go up and down. Stewart, due to his limited English understanding and

Figure 1. Jack, George, and Stewart's sketchbooks
discomfort with communication, told me that he did not need any help and that he just knew what to do.

![Figure 2. Artwork from Yayoi Kusama (left) and Emmalee Powell (right)](image)

I let them start on their artwork by drawing in their sketchbooks blueprints of what they wanted their final golf courses to look like. After taking photos of their sketchbooks, I wrote down when they talked to their peers to help them be more open with thinking of new ideas, such as when George asked questions to Jack, who then felt good about making a pool table for his art. I believe that taking the time to communicate with others can give you the power to be willing to try something different, that you may have never done before. I thought about what kinds of questions I could ask or what actions I could take to help my three students break the ice with each other and myself.

On the third day of classes, I started by sharing more information about the artist-designed miniature golf. I told them that the reason why other artists made this art was because they wanted more people to come see art and have fun together; I also told them about when I went to see this art with my brother, and how we both had fun there. After this, they began working on their own golf courses.
Stewart worked so fast that he looked like he was almost done after just twenty minutes. I asked him to check his sketchbook blueprint to see if he still wanted to add anything or if anything was still missing. He showed me his sketchbook, and I saw that he had not actually drawn or written anything about the golf course in it, so I asked him to stop making his art and draw his blueprint in his book so that he could have a clearer idea of what he wanted to make. In order to make sure that he understood what I was asking, I spoke in Chinese, which was his first language. However, I did not want to make him feel like I did not believe in him, so I later told him my story: about when I came to America and how English was hard for me then, and still sometimes is now. I told him that if we were willing to try, willing to work on improving, then everything would eventually become better. He became more open after our discussion, asking me questions when he did not know something. When he was done making his blueprint in his sketchbook, he went back to work on his art and completed it in ten more minutes. I asked him to add more details and suggested that he decorated it so that people could have more fun with its visuals. He began to think about how to do this.
Jack was a very hard worker when I observed him. He did not just make a miniature golf course, but also tested it by actually trying to play golf with it and improving on the design over and over again as he found issues. His patience was outstanding, and I saw one time that he finally hit the ball into the hole.
George began to have difficulties with working when everyone else finished early. The time I gave for this activity was not yet over, but because he was the only one who had not yet completed the work, he started to become flustered and asked me what he could do. He told me that the art he made was not what he wanted it to be. I told him that he had done a good job already, but that he could choose to use the last ten minutes of class to either start a new artwork or use what he already had to build something new. He chose the latter and persevered to construct a wonderful golf course.

![George's sketchbook blueprint and miniature golf course](image)

*Figure 6. George’s sketchbook blueprint and miniature golf course*

When they were all done making their miniature golf courses, we tried playing on them. Afterwards, I asked them the following questions:

1. When you finished, were you happy about what you did?
2. What was the hardest part for you? What do you do when you have a hard time?
3. What did you enjoy about doing this artwork? Why?
4. Do you feel art can help you to problem solve?
From our discussions, I felt that they had a light inside of them—a light of understanding and satisfaction about the work that they produced. Jack stated that he loved what he was working on, and that the hardest part was making sure that every part of the course was functional and that the golf ball could really make it to the hole. When he had a hard time, he liked to experiment and talk to others to get new ideas. He enjoyed seeing the ball reach the hole and felt that he was successful in his project. He stated that art can solve problems because it let him make something that did not exist before, but now did.

Although George did not make the art look exactly like what he wanted, he was positive after I encouraged him not to give up and finished his art in the last ten minutes. He thought that the hardest part of the project was to make sure the box was flat because he tried many ways and none of them worked. He stated that when he has a hard time, he will cry and complain, but does enjoy that he was still making something. He believed that art could solve problems by helping you to discover your strengths and weaknesses.

Stewart just loved what he made and did not like the idea that there was a hard part to making his art. He stated that whenever he had difficulty, he just tried until it worked. He believed that bringing his art from the 2D sketchbook blueprint to the 3D project was a way to help with problem solving.

On the same day after finishing the miniature golf course project, we started a new art project called “Recycling Art: Who am I?” This time, I showed Takashi Murakami’s art and my own art. Takashi Murakami’s art was called Mr. DOB. He believed that Mr. DOB was a reflection of himself and that if you went to see what Mr. DOB looked like it could have all different kinds of moods. He said that was how he felt about different things happening to him in life. My art recycled old cloth that I had with me for a long time. I chose to let it be the artwork
that represented me. I told the students that my spirit animal was a bunny and that when life was hard, I would hide because I had no idea what the future would be like for me, who was so small. However, life always pushed me to use what I could get to go forward. The students then told me what they might choose to represent them.

![Image of a bunny and Murakami’s Mr. DOB](image.png)

*Figure 7. My spirit animal (left) made from old cloth and Murakami’s Mr. DOB (right)*

Unfortunately, on the fourth day of classes, only Jack and Stewart were present because George had other work to do. I let the two students who were there draw and write down their ideas before sharing with each other what they wanted to draw and how they were going to use their materials. Jack and Stewart both only took ten minutes to finish their sketchbook blueprints. I told them, “Wow, you guys are so fast,” and started to ask questions such as: “What is your spiritual animal?” Jack answered that his spiritual animal was a monkey, whereas Stewart said that his was a panda. When I asked Jack why he chose a monkey, he looked confused. I told the students again about why Takashi Murakami and I thought that our respective artworks reflected us. I gave Jack more time to think about it, and when I asked Stewart why he chose a panda to be
his spiritual animal, he answered: “Because I am a Chinese baby. Every Chinese baby is a panda.” I replied: “If everyone who was born in China is a panda, does that mean that everyone in China has the same personality?”

This discussion made me happy because I felt that I was helping the students to think more deeply about their choices, which could lead to them better understanding how their art could help them solve the problems that are important to them. After taking ten minutes to think, Jack told me that he chose a monkey because monkeys like to try new things; I thought this was a fun answer and was happy to learn more about him, so I told him that I liked his idea. Stewart told me that he is a panda because he loves to eat a lot and does not care about getting dirty, fat and lazy. I thought that he was very brave to talk about his opinion, and I pushed him further by asking whether he would feel sad if someone called him fat and lazy. He said: “That is their opinion.”

For the art, both Jack and Stewart brought pieces of their old clothing as material. Although I emailed their parents so that they also knew I was asking the students to bring materials from him, I felt that giving the students the responsibility to bring their own materials would help their growth, and they both did good in that regard. I showed them how to make the art and they started working. Then on the fifth class, George was still absent, so Jack and Stewart came to finish work on their spiritual animals. They took an hour and a half to finish, and I felt that because I was also working on my own art as they worked on theirs, our relationship grew closer. When they were done making their art, I asked them the following questions:

1. How did you make your art?
2. Why did you design your art in this way?
3. What gave you inspiration?
4. Do you feel that art can help you to solve problems.

5. When you finished, were you happy about what you did.

6. What was the hardest part for you? What did you do when you had a hard time?

7. What did you enjoy about making this art? Why?

We had a small art show together to show our three artworks to each other and had a conversation around those questions. Because their answers to the first three questions were the same as before, we started on the fourth question. Both Jack and Stewart felt that art helped them with problem solving because they thought that making their ideas into something real helped to show themselves who they were. They were both very happy about their finished works. The hardest part for Jack was to figure out how to make the art. Stewart said that the hardest part for him was putting the panda’s head on.

Figure 8. Jack’s monkey (left) and Stewart’s panda (right)
I observed in class that they were both passionate about what they were making and only stopped working on their art when they needed to ask me a question. I never thought that men would enjoy sewing, so this was a learning experience for me as well.

![Figure 9. Jack making his monkey](image)

On the sixth class, we started our last artwork: “How can you make beautiful what is not beautiful in your eyes?” using watercolor. I was happy to see that George had finally rejoined us. To start off, I showed the three students the art of four different artists: A-mei,UGH Gallenkuş, Filipe Dores, and me. A-mei’s art was a music video that she worked on with her team. This music video was called “Left Behind,” and was about how you say goodbye to someone you love who leaves you behind. She got the idea for this video when her sister died and she missed her so much; in 2016, the news in Taiwan showed that a four-year-old girl was decapitated randomly, and the music video showed how the dead in Taiwan are cremated by their families. She said that when you feel hurt, instead of pushing yourself to walk out, you sometimes need to just have a place where you can feel pain because you miss someone. I shared with the students that this is a way that I know to miss people too.
Uğur Gallenkuş’s art is called “Two Different Worlds.” He used two different worlds within a single image so we could be able to compare both images very easily. Filipe Dores’ art was a watercolor. He painted some garbage, and the idea was that he wanted people to know more about his hometown, and that he can take something that is not so beautiful but make it so beautiful. These artworks all focus on themes of pain and let people confront that pain. That is their way of problem solving. I also showed the students my art and discussed how I made it because I know everyone has their own difficulties in life, and so do I, but if you have family and friends who care about you, then you still have a way to get through the difficulties in life. Making art is thus a way for me to let go of my pain a little bit, and my way to solve a problem that is important to me.
I showed the students six different watercolor skills and they tried them out on their own. After that, they drew and wrote down their ideas about the art they wanted to make and shared them to each other; they also shared about why they want to make their art and how they were going to use watercolor in their art.

![Figure 12. The students’ watercolor practice](image1)

Everyone used more than thirty minutes to think about what they wanted to draw, what they thought were issues for them, and how they could solve their problems. Jack asked a lot of questions of himself and George, then decided that his art would be about how you shouldn’t let your future affect your present.

![Figure 13. Jack’s watercolor blueprint](image2)
George was actually the first student to think of an idea this time. He cared very much about recycling issues, so his idea was to show people that we still do not care enough about Earth. He wanted to emphasize that if we did not find a way to save the Earth, one day our home would end up like what he drew.

![George’s watercolor blueprint](image)

**Figure 14. George’s watercolor blueprint**

Stewart’s idea was that a lot of people do not even know what is going on and think that it is okay to just hide behind their computers and say hurtful things to other people. He therefore wanted to draw about that and let people know that this is something you should not do.

![Stewart’s watercolor blueprint](image)

**Figure 15. Stewart’s watercolor blueprint**
When the class was done, I felt that they had progressed a lot. They were now taking longer to think and have deep reflections about what they wanted to do and the problems that they wanted to address. I learned a lot as well when they shared their thoughts on the matters that were important to them. On the seventh class, the students already knew what they wanted to do, so they just started making their art. When they were done, I asked them the following questions:

1. What gives you inspiration?
2. Do you feel that art can help you solve problems?
3. When you finished, were you happy about what you did?
4. What was the hardest part for you?
5. What did you enjoy about doing this artwork? Why?

Figure 16. Jack’s watercolor art
They told me that their inspiration came from the artworks that I showed them and what happened in their daily lives. George very much believed that art could be used for problem solving. Jack believed that art can solve problems that you find in your heart or mind. Stewart also believed that art could solve problems, or at least let people know about problems. Jack and Stewart were both happy about what they had made. George did not finish this time, but he was not very worried about that, compared to before; he just wanted to do every part of his art that he
did complete as good as he wanted. All three students believed that the hardest part of this project was coming up with their ideas. They loved trying different watercolor skills.

On the final class, I gave the students surveys and interviewed them. The survey results are as follows:

**Jack**

- How artistic are you now? (0 is not good, 5 is very good) Explain:
  
  0—1—2—3—4—5

  3, I learn how to use watercolor, and I have an easier time getting idea now.

- How creative are you now? (0 is not creative, 5 is super creative) Explain:
  
  0—1—2—3—4—5

  2, I have an easier time making art that is unique, and I can think of more ideas on what to add.

- Have your reasons for wanting to make art changed? Explain:
  
  No, I still think that my reason for making art is to relieve stress, create useful art, and create art that looks good.
Have you found new places to find the ideas for the art that you want to make? Explain:

Whenever I’m stuck and have no ideas, I usually look online, or get inspiration from other people.

After these classes, do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain:

3, I believe that art can solve certain problem, like stress, but I don’t think that art could solve the problem completely.

Do you like asking questions that help you know what to do in a hard time and help you to make your art? (0 is don’t like it, 5 is totally love it) Explain:

4, I think it’s useful too know what other people did when they had a hard time, and how they overcame it. So I can learn from their mistakes and their experience.
In the future, if you have a hard time, do you want to make art by asking questions and learning what everybody does when they have hard times? (0 is don’t want to do it, 5 is totally will do it) Explain:

0—1—2—3—4—5

4, Yes, it’s good to know what other people feel when they have a hard time.

What do you think Sophia can do to be a better art teacher?

Prolong the ‘creating the art’ time.

George

How artistic are you now? (0 is not good, 5 is very good) Explain:

0—1—2—3—4—5

I can come up with great ideas but never finish or way too lazy to finish.

How creative are you now? (0 is not creative, 5 is super creative) Explain:

0—1—2—3—4—5

Much like the last question
Have your reasons for wanting to make art changed? Explain:

I guess? Cause in the end most of my reasons to draw is when I’ve really nothing else to do.

Have you found new places to find the ideas for the art that you want to make? Explain:

I feel like the internet is a good place to be.

After these classes, do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain:

0—1—2—3—4—5

5, definitely, problems solve as depression or stress can really be helped.

Do you like asking questions that help you know what to do in a hard time and help you to make your art? (0 is don’t like it, 5 is totally love it) Explain:

0—1—2—3—4—5

4, Yes, asking questions help me know what to draw.
In the future, if you have a hard time, do you want to make art by asking questions and learning what everybody does when they have hard times? (0 is don’t want to do it, 5 is totally will do it) Explain:

0—1—2—3—4—5

4, yes, many art are drawn through the emotions of the artist and I would like to draw my emotions too.

What do you think Sophia can do to be a better art teacher?

Mine isn’t really a critique but a suggestion. I would like the class to be longer.

Stewart

How artistic are you now? (0 is not good, 5 is very good) Explain:

0—1—2—3—4—5

3, now I felt my art be good before I this class. I learn needle watercolor painting.

How creative are you now? (0 is not creative, 5 is super creative) Explain:

0—1—2—3—4—5

2, now I can creative some situational painting. Before I need copy image.
Have your reasons for wanting to make art changed? Explain:

Before I draw just the cartoon characters but know I can draw exterior.

Have you found new places to find the ideas for the art that you want to make? Explain:

No, because I don’t like needle, I don’t have patience, but I like the last draw, that’s my new ideas.

After these classes, do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain:

0—1—2—3—4—5

4, yes, a painting can express many things, can see the heart of a person.

Do you like asking questions that help you know what to do in a hard time and help you to make your art? (0 is don’t like it, 5 is totally love it) Explain:

0—1—2—3—4—5

3, now when I want make a thing I will first think how to do, do what.
In the future, if you have a hard time, do you want to make art by asking questions and learning what everybody does when they have hard times? (0 is don’t want to do it, 5 is totally will do it) Explain:

0—1—2—3—4—5

3, I always ask my mom to do something or use Google, before I never use art to do things.

What do you think Sophia can do to be a better art teacher?

Nothing.

The interview results were as follows:

1. **Do you like your teacher to come up with questions for you or for you to think about questions for yourself? Why?**

   In the beginning, Jack and George liked for me to ask more questions so they could respond more. George said that I could ask more questions to keep the conversation going. Later, Jack thought that they still need to both get questions from me and think about them themselves. He said that students need to come out with questions so that they can talk back, and George agreed with this. In the end, however, they all agreed that they liked me asking them questions more than them thinking of questions themselves. I believe that this is because it is easier for them to build their ideas from something than to create them from nothing.
2. **In these classes, what did you do to problem solve?**

George said that he problem solves by talking to people and asking questions, not overthinking but instead asking for help when he needed it. Jack said that he just kept trying to solve any issues himself but would ask for advice if his solutions did not work. I asked the students if they were scared about failing, and both Jack and George said that they were not scared about failing in art but failing in school. Stewart said that he problem solves by using Google or the teacher, but if the teacher looks mean, he will not ask questions.

3. **Do you like to problem solve using art? Why?**

Jack and George said that they do. They both agreed that art can help you relieve stress and said no when I asked them if this class gave them any stress. George said that he really liked painting the watercolors, and told us that when he makes art, he feels like he is drawing away his pain. They also talked about how art can reveal their issues and let other people know that they have similar issues. George also said that even math can use art to solve problems. Stewart, however, said that he never used art to problem solve and that he maybe never will. Yet he said that even if he does not totally use art to problem solve, he still likes to draw, such as drawing game characters, and that this is a way of problem solving for him. He also agreed that making art can relieve stress.

4. **We have done 3 different art projects. Which one did you like making most and why? Which one do you feel you learned the most from and why?**

Jack said that he most liked the spirit animal art. He liked to make that because he could use it and carry it around, as opposed to a painting that can only be hung on the wall.

George said that he most liked the watercolor art. He said that he had time to concentrate,
and that somehow this art helped him become calmer; he also loved to use the colors. Stewart also liked the watercolor art the most because he loves to draw. Jack felt that he also learned the most from the watercolor art, because he feels he learned a different art skill. George said that he learned the most from the miniature golf course, as he learned to tell how big he needs to cut the materials and how to put it together. I said that we all learn from many different ways—sometimes we learn from art itself, and sometimes we learn from somebody else. Jack and George both agreed. Stewart said that he learned the most from the watercolor art because he drew out something that he does not like to see happen in real life. He said that he learned the most by doing the art itself.

5. **In the future, if you have a hard time, do you want to make art by asking questions and learning what everybody does when they have hard times?**

Jack said that he thinks it is useful to know what other people do when they have a hard time, and how they overcome it, so that he can learn from their experience. George agreed and added that after learning how artists draw to get rid of their problems, he thinks that what he can do is to learn from how they do their art and see what happens in the stories that their arts tell. He wanted to use art to draw his story too. Stewart said that when he has hard times, he just wants to play sports. I asked him if he thought that he would not do art anymore after he left the classroom. He told me that he still will, and so I asked him if art helps him to relieve stress. He said that he does feel art can help him to relieve stress.

6. **What do you think I can do to be a better art teacher?**

Jack wanted a longer class, George said I should get more people for the class, and Stewart did not give any suggestions, but just said that he thought I did good.
Chapter 5: Discussion

In the first chapter, I stated that the research problem this research project would address is: Can art be used to effectively help students learn how to problem solve? In order to answer this question, I utilized an action research methodology to understand how art education can be used to teach students how to problem solve. Furthermore, and as an action research study, I aimed to improve myself as a teacher through constant reflection as the classes progressed.

In just eight two-hour classes spread over two weeks, I tried to create an art-culture in the classroom, a place where people of different backgrounds could work together to create meaningful art for themselves. It was the students who decided what worked in my classroom, and the cycle of learning, doing, and reflecting allowed both them and me to improve in this action research study. I saw so much growth in my students, and they saw it too as they wrote down on their surveys about what they do differently from before. Jack was shy in the beginning and hesitant to ask for help, but in the final interview, he was the first to speak up and communicate his thoughts to everyone else. In the first two art projects, George felt pressured because his classmates finished their art before him, making him lose patience with himself. However, even though his classmates were still faster than him during the last art project, he did not rush himself to finish—he focused instead on learning how he could make his art more real, make it something that he liked more with more interesting and vivid color.

As an art teacher, my goal is to see my students grow and to learn from them as I teach. This means that I do not always hear what I hope to hear from them. When Stewart said that he did not want to do art in the future, I felt that I was a bad teacher; however, when I asked him for more information, I realized that I misunderstood his point. He still wanted to do art, but just did not want to do the art we did in the class. At the same time, he said that he enjoyed the last art project the most because that was the art where he was best able to express his own ideas. I
thought that his comment that “a painting can express many things, can see the heart of a person” was especially beautiful and spoke to the depth of his ability to critically think about art.

If I could do this class all over again, the change that I would consider making the most is to have students create an art journal and update it every day at home. This would have given them more opportunity to think about trying different art materials and generate new ideas that they could record and refer to come class time. Keeping a record could also help them to remember what they liked to use and how they liked to use it, and would be a safe place for them because they could choose which pages they want to share with others and which they do not. Even now, however, I am conflicted about this idea because it would mean giving students homework. Students already have so much homework, and I do not want them to think of art as another burden that they must take home with them. I did consider incorporating an art journal activity into the class time, even for just ten minutes, but there was already so much that I had to cover in the eight classes I had that there was simply no room for that activity. I therefore had students draw their ideas in a sketchbook but did not have them maintain an art journal. With a longer class, however, incorporating an art journal into the curriculum would be much more feasible.

Because the process of learning problem solving through art making is in many ways connected to art therapy, where students may delve into important issues that can matter personally for them, I feel that one place where I need to improve as a teacher is to become better at creating an environment where students feel confident about expressing themselves. I can do this through more ice breaking activities, taking more time to know my students, and being more observant about what they are good at and what their weaknesses are. With more familiarity and comfortability, I can better encourage students through praise and challenge them to think deeper
about their work through critical questions. If students are less afraid to fail, then they will be more willing to take risks to solve the problems that matter to them.

An example of how this research project has produced concrete results is Stewart’s experience. During the post-classes interview, Stewart informed me that whenever he had a hard time or any issues with his life, his solution was always to ask his mother for the solutions to his problems. However, he stated that my classes have taught him how to tackle these issues by drawing them out, which allows them to become clear in his mind so that he can then plan a solution by himself. His case is thus evidence that supports a positive answer to the question: Can art be used to effectively help students learn how to problem solve?

I conducted this study because I wanted to explore for myself how art gives value to students that makes it no less beneficial than traditionally academic courses such as math and science. Despite only being their teacher for two weeks, I was able to learn much about my students through the thoughts, experiences, and problems they expressed through their art. This expression is one way that we can solve problems that matter to us. A lot of times, even if we have what we think is a good idea in our minds, if we are not able to make it out or draw it out, then we cannot truly manifest our creativity and use it to solve our problems. Unlike math or science problems, there is no way to do art that is right or wrong for everyone. Students instead learn from their own experience and everyone in the classroom about what is the right way for them. Art class may not help students with taking tests, but it will foster their ability to connect themselves with the world around them through creation, in an environment where they can take risks and push themselves because there is no passing or failing. This is why art is just as important a school subject as anything else—it is one crucial part of a complete learning experience.
Whether I am a good teacher or not is something that only my students can decide. In this study, I learned from my students where I did well and where I could improve. When I showed my students the work of other artists and shared stories about art that they had never heard before, I saw light in their eyes and the excitement of wanting to learn more. That to me was a sign that I and my students were all doing a good job. That light continued when I showed them how to make art that they had never made before; they were smiling and they were happy—even talking about how they wanted to tell their neighbors about how fun this was—because they valued what they were learning, and wanted to share the fruits of their hard work with those who could appreciate it as well. When I saw Jack become more open, George become more patient with himself, and Stewart reflect deeply on his own experiences, I realized once again that art is not done just for art’s sake. And of course, when a student tells you that if you were not here to encourage me, then I would never have known that this could be so much fun—that you are the reason I am here—I feel that everything was worth it.
References


APPENDIX A: Consent Forms

Parental Permission for a Minor

Introduction

My name is Fei-Ya Su (you can call me Sophia). I am a graduate student from Brigham Young University; my supervisor is Dr. Daniel Barney, PhD, professor at BYU. I am conducting a research study about how to use personal experience to solve problems through making art. I am inviting your child to take part in the research because she is interested in art and between the ages of 12-17.

Procedures

Your child will be given classes where they will have the opportunity to make their own art and decide how they tackle their problems while reflecting on their personal experiences. These classes will take place at Brigham Young University between July 15-27 and are not related to any curriculum from your child’s school.

If your child participates in this study, this is what will happen:

• Your child will go to 8 classes that are 2 hours each
• Your child will be asked some questions before the classes on how she feels about making art and some questions after the classes about how she feels the class has helped her
• Your child will be interviewed at the end of the study for around 30 minutes on how he felt about the classes
• The interview will be voice recorded
• The classes and interview will happen at Brigham Young University at a time that is okay for you or it will take place at a time and place okay for you
• Sophia may call you later to ask about your child’s interview answers for around fifteen minutes
• In total, this will take about 16 hours

You are welcome to watch over class proceedings by being present in the space where the classes are being conducted. Your child will be voice recorded for the interview and may have pictures of her art taken. These recordings will not happen without your and your child’s permission.

Your child will not be able to participate in the classes without participating in the study.

Risks

Your child may feel uncomfortable with sharing some of their personal experiences. As a certified secondary school teacher in Utah, Sophia will not pressure your child to reveal anything that they are uncomfortable with and will work to maintain a positive and welcoming space. The class location is at a regular classroom at Brigham Young University in a safe, well-trafficked location. Your child will remain with the other participants under Sophia’s constant supervision. The door to the classroom will always be left unlocked and you are welcome at any point in time to be present in the class.
Confidentiality

There is a risk of loss of privacy, which the researcher will reduce by not using any real names or other identifiers in the written report unless given permission to do so by you. Data such as photos of art and of the children will only be released with your explicit permission.

Benefits

There are no direct benefits for your child’s participation in this project.

Compensation

There will be no compensation for participation in this project.

Questions about the Research

Please direct any further questions about the study to Fei-Ya Su at 3859850522 sophiasu0203@gmail.com. You may also contact Dr. Daniel Barney at 8014221581 and Daniel_barney@byu.edu.

Questions about your child's rights as a study participant or to submit comment or complaints about the study should be directed to the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602. Call (801) 422-1461 or send emails to irb@byu.edu.

You have been given a copy of this consent form to keep.

Participation

Participation in this research study is voluntary. You are free to decline to have your child participate in this research study. You may withdraw you child's participation at any point.

Child's Name: _________________________________

Parent Name: ___________________ Signature ___________________ Date: _______________
Youth Assent (15 to 17 years old)

What is this study about?

My name is Fei-Ya Su (you can call me Sophia). I am from Brigham Young University; my supervisor is Dr. Daniel Barney, PhD, professor at BYU. I would like to invite you to take part in a research study. Your parent(s) know we are talking with you about the study. This form will tell you about the study to help you decide whether or not you want to be in it.

In this study, we want to learn about how students can use art to learn problem solving.

What am I being asked to do?

If you decide you want to be in this study, this is what will happen.

• You will go to 8 classes that are 2 hours each
• You will be asked some questions before the classes on how you feel about making art and some questions after the classes about how you feel the class has helped you
• You will be interviewed at the end of the study for around 30 minutes on how you felt about the classes
• The interview will be voice recorded so we remember what you said
• The classes and interview will happen at Brigham Young University at a time that is okay for you
• Sophia may call you later to ask about your interview answers for around fifteen minutes

• In total, this will take about 16 hours

You will be recorded for the interview and may have pictures of your art taken. These recordings will not happen without your permission.

You will not be able to go to the classes without being in this study.

What are the benefits to me for taking part in the study?

Taking part in this study may not help you in any way, but it might help us to learn if these kinds of classes can help students to learn to problem solve by themselves.

Can anything bad happen if I am in this study?

We think there are few risks to you by being in the study, but some kids might become worried or sad because of some of the questions we ask. You don't have to answer any of the questions you don't want to answer. If you become upset, let us know and we will have your parent/guardian help you with those feelings.

Who will know that I am in the study?

We won't tell anybody that you are in this study and everything you tell us and do will be private. Your parent may know that you took part in the study, but we won't tell them anything you said or did, either. When we tell other people or write articles about what we learned in the study, we won't include your name or that of anyone else who took part in the study.
**Do I have to be in the study?**

No, you don't. The choice is up to you. No one will get angry or upset if you don't want to do this. You can change your mind anytime if you decide you don't want to be in the study anymore.

**What if I have questions?**

If you have questions at any time, you can ask us and you can talk to your parents about the study. We will give you a copy of this form to keep. If you want to ask us questions about the study, contact Fei-Ya Su at 3859850522 and sophiasu0203@gmail.com. You may also contact Dr. Daniel Barney at 8014221581 and Daniel_barney@byu.edu.

Before you say yes to be in this study, what questions do you have about the study?

If you want to be in this study, please sign and print your name.

Name (Printed): __________________________ Signature __________________________ Date: ________________

I give my permission to have my voice recorded: Yes  No
APPENDIX B: Survey Instruments

Pre-survey

Survey to get to know you: 😊

➢ How artistic are you? (0 is not artistic, 5 is very artistic) Explain:
0—1—2—3—4—5

➢ How creative are you? (0 is not creative, 5 is very creative) Explain:
0—1—2—3—4—5

➢ Why do you want to make art?

➢ Where do you get the ideas for the art that you want to make?
Do you believe that making art can help solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain:

0—1—2—3—4—5

After-survey

Survey to know how you’ve grown: 😊

How artistic are you now? (0 is not good, 5 is very good) Explain:

0—1—2—3—4—5

How creative are you now? (0 is not creative, 5 is super creative) Explain:

0—1—2—3—4—5
Have your reasons for wanting to make art changed? Explain:

Have you found new places to find the ideas for the art that you want to make? Explain:

After these classes, do you believe that making art can help you solve problems that matter to you? (0 is not believe, 5 is totally believe) Explain:

0—1—2—3—4—5
Do you like asking questions that help you know what to do in a hard time and help you to make your art? (0 is don’t like it, 5 is totally love it) Explain:

0—1—2—3—4—5

In the future, if you have a hard time, do you want to make art by asking questions and learning what everybody does when they have hard times? (0 is don’t want to do it, 5 is totally will do it) Explain:

0—1—2—3—4—5

What do you think Sophia can do to be a better art teacher?
Interview Questions

1. Do you like your teacher to come up with questions for you or for you to think about questions for yourself? Why?

2. In these classes what did you do to problem solve?

3. Do you like to problem solve using art? Why?

4. We have done 3 different art projects. Which one did you like making most and why? Which one do you feel you learned the most from and why?

5. In the future, if you have hard time, do you want to make art by asking questions and learning what everybody does when they have hard times?

6. Do you believe that making art can help you problem solve? Why?

7. What do you think I can do to be a better art teacher?