

FUSING ALTRUISM WITH DESIGN THINKING IN THE HIGH SCHOOL ART
CLASSROOM

By

AMY CRANFILL

A CAPSTONE PROJECT PRESENTED TO THE COLLEGE OF FINE ARTS OF THE
UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTERS OF ARTS

UNIVERSITY OF FLORIDA
2012

©2012 Amy Cranfill

Acknowledgements

I would like to thank Craig Roland and Elizabeth Delacruz for the not only the educational role they played in my journey, but for all the work they have put, and continue to put, into this online Masters of Art Education program. I would also like to thank my amazing husband who sacrificed himself so that I could make it through this process and Stephanie Pickens for being my graduate school wing man.

Summary of Capstone Project
Presented to the College of Fine Arts of the University of Florida
In Partial Fulfillment of the Requirements for the
Degree of Master of Arts

FUSING ALTRUISM WITH DESIGN THINKING IN THE ART CLASSROOM

BY

Amy Cranfill

December 2012

Chair: Craig Roland
Major: Art Education

Abstract

The research described in the following paper focused on the use of design thinking as a way to develop an altruistic project in my art classroom. I used action research as a pragmatic philosophy of study and found that the design thinking process was a very useful tool to investigating and developing altruistically motivated ideas. My students used design thinking to create a solution to the problem: Germs are spread by not washing your hands. This capstone project investigated altruism, the design thinking process, and how I intentionally fused altruism into that process. I documented my students journey to creating a germ-fighting giraffe named “Big G,” their reactions, and some of my own observations during my research. The results of my project, my observations, and a project video are documented on my website

<http://www.amyswindowseat.com>.

Contents

Acknowledgements.....	3
Abstract.....	4
Contents.....	5
Introduction	8
Statement of the Problem	8
Purpose of the Study.....	8
Research Question.....	9
Significance of the Problem	9
Assumptions.....	10
Definition of Terms	10
Limitations of the Study	13
Literature Review	14
The History of Community Involvement in the Classroom.....	15
What Has Been Done Vs. What Needs To Be Done.....	16
New Perspectives.....	17
Connecting Altruism and Design Thinking	19
What is Design Thinking.....	19
Phases of Design Thinking.....	21
Why is Design Thinking a Good Match for Introducing Altruism in the Art Classroom?.....	22

Methodology.....	23
Population.....	24
Research Site.....	24
Procedures and Data Collection.....	25
Analysis	26
Data.....	27
Findings	28
First Observation: Design Thinking Keeps Students Focused	28
Second Observation: Design Thinking Developed Caring in Students.....	29
Fourth Observation: Letting Go of Control	35
Summary across all of my Observations	35
Discussion and Conclusion	36
Interpretations of my Findings.....	37
Significance of my Findings, and Recommendations.....	38
References	40
Appendix A.....	43
Appendix B	46
List of Figures with Figure Captions	48
Author Biography.....	49

Introduction

One of my personal goals as a teacher is to bring out in my students a sense of compassion for others. Two years ago, I was introduced to an art project called “One Million Bones” designed by Naomi Natale (One Million Bones, 2009). The idea behind the project was to bring awareness to world humanitarian issues, specifically the genocides in Africa, by creating bone replicas out of clay and plaster. I was inspired by this project to help my students understand how art might instigate change in the world, and the important role altruism can play as the underlying motivation for those art projects. I want to give my students opportunities to practice altruism in their thinking and I want to present them with a more comprehensive art program that would allow them to practice developing their altruistic ideas.

Statement of the Problem

The problem motivating this Capstone research project is that I have noticed a lack of altruistic behavior in my students. The research question to be studied is: How can I teach the idea of altruism to my students? A solution to this problem might be to create opportunities for my students to practice altruistic behavior through participation in my curriculum. I believe this idea should be studied because of its potential positive long-term effects on the student’s character. The study would also be beneficial to other art teachers that are, like me, interested in developing a sense of altruism in their students.

Purpose of the Study

The study’s main purpose is to observe and document my use of Design Thinking as a process in my art class. I believe that Design Thinking, might be a way to help my students take altruistic ideas and turn them into meaningful art projects. Through this Capstone study, I want to determine whether the design thinking process is a useful tool for developing well-informed

and well-rounded ideas in my art room, and if so, how design thinking facilitates the art making we will be doing. As mentioned before, I am interested in art that facilitates a sense of altruism in my students.

Research Question

In the summer of 2012, I took a Design Thinking class at the University of Florida. In doing so I was intrigued with the design thinking process and decided to include it in the following research question. This question guides my study.

1. How can I use design thinking as a tool to bring altruism into art projects?

Significance of the Problem

My study of the interface of design thinking and altruism in the art room is important to me because I believe that using art to affect social change can be meaningful to my students as well as an effective mode of communication. Students that are developing a sense of altruism may benefit from the experience of being helpful to others in their community. I believe that making artwork that is being created for someone other than ourselves requires a different type of thought process than a purely self-expressive based art project. Furthermore, I believe that going through the Design Thinking process gives students an outline structure and process for a more informed artistic solution. The field of education may benefit from this type of study because it fits in with research currently being done connecting pedagogy and altruism. For example, the Forum for Education and Democracy is a movement of teachers that are dedicated to improving education by incorporating skills that build students academically as well as opening their eyes to ways they can improve conditions in their community (Glickman & Thompson, 2009). Organizations like the Center of Compassion and Altruism research in Education support and conduct rigorous scientific studies of compassion and altruistic behavior.

These studies draw from several disciplines including neuroscience, psychology, economics and contemplative traditions which examines methods for cultivating compassion and promoting altruism within individuals (Center of Compassion and Altruism Research, 2012).

Assumptions

I have several assumptions for this study. To begin, I believe most of my art students have not been exposed to creating projects that are altruistic-oriented in nature. Having written the curriculum for the intermediate age level art classes (fourth through sixth grade) as well as all of the high school art electives at the school where I am doing my research, I know there has never been an outward-reaching focus towards the community through those art classes.

Furthermore, most of the art classes previously mentioned were driven by a curriculum which did not expose students to projects that require extensive research, communication or group thinking. Lastly, I believe despite these deficits, exposure to an established process like design thinking will have a positive effect on my students. The design thinking process was created so that the main design project is the result of mini stages of development, each with clear comprehensive agendas. I assume that this type of process will allow my students to experience the short term goal success they are accustomed as well as engaging them to further develop their ideas.

Definition of Terms

Growth Mindset. Wilhelm, (2009) introduced the idea of “growth mindset” a term referring to the idea that the hand that you are dealt is just the starting point for development and that a disposition toward learning and engagement are necessary ingredients. According to Wilhelm, these cherished qualities of thoughtfulness and concern for others can be developed to create a passion for thinking, acting and serving (Wilhelm, 2009). The idea of students being

able to learn positive behaviors is one of the most important ideas underlying teaching altruistic behavior.

Service Learning. Service learning is a pedagogical approach that encourages meaningful connections between the school curriculum and the community's issues (Glickman & Thompson, 2009). Service learning, in short, means learning in school subject areas through service activities in the larger community. This approach to teaching is reciprocal in nature, benefiting both the community and the students and is an effective way for teachers to encourage active citizenship (Glickman, 2009). This approach is found throughout the US, because this service learning is the most common way teachers are incorporating the community in their classroom.

Situated Cognition. Situated cognition, in short, is learning in specific, real world context, rather than merely from books or other classroom instructional materials. Platt-Gross (2010) talks about the idea of "situated cognition," based on the research of educational researchers John Brown, Allan Collins, and Paul Duguid, (1989) who aim to:

embed learning in activity and make deliberate use of the social and physical context, cognitive apprenticeship methods try to enculturate students into authentic practices through activity and social interaction in a way similar to that evident and evidently successful-in craft apprenticeship (Platt-Gross, 2010, p. 359).

In situated learning, motivation needs to be internalized through the satisfaction that comes from doing meaningful real-world work. The challenge in situated cognition is that in a classroom setting, there may often be little option for motivating the students other than external rewards. Extrinsic motivation is using rewards such as grades or money to perpetuate a behavior (Beehr, LeGro & Porter, 2010). Intrinsic motivation is internal and is based on the enjoyment or

interest in the activity itself. This type of motivation, (Clary et al, 1999; Clary & Snyder, 1999; Russell & Hutzel, 2007; Jones & Marks, 2004) is clearly much more effective to develop an altruistic character.

Primary Socialization. Primary socialization refers to influences of family and close caregivers towards ones enduring values and dispositions in early development (Jones, 2004).

Secondary Socialization. Secondary socialization occurs within the neighborhood, church, schools and youth organizations (Jones, 2004).

Reciprocal learning experience. In reciprocal learning experience (Hutzel & Russell, 2007), both parties join in a collaborative effort that share mutual benefits and responsibilities. In service learning ventures, where one often sees reciprocal learning, the community has its own responsibilities and competencies as does the student-team. This allows both parties to grow, and the project or service is not a burden to either parties.

Collaborate and Create. A collaborate and create pedagogy, refers to projects that are based on a collaboration with the artist and the public and in which artworks are meant to better the community, usually by addressing a political or social issue (Hutzel, 2007).

Design Thinking. Design thinking is a step by step process of set procedures that uses the designer's sensibility to match people's needs with what is technologically feasible (Brown, 2008). Design thinking process is broken down into five main phases: define, research, ideate, prototype, choose and implement (IDEO, 2008).

Altruism. Philosopher Thomas Nagel describes altruism as a willingness to act in consideration of the interests of other persons, without the need of ulterior motives (1979).

Limitations of the Study

There are several limitations to my research. Firstly, I teach at a Christian private school which limits the spectrum of demographic in my students. Observations that I make in this situation may not occur in a different teaching setting. There are also limitations to the amount of data due to the fact that the research phase only covered one project spanning a two week period. I am also only using freshman and sophomores who are enrolled in my Art Technique class, which is a beginning level art class. Future research may be done over a longer period of time with a series or multiple project opportunities. Another avenue for research on altruism may be looking at how the different genders react to different types of projects or various lengths of time.

There may be limitations to my research method as well. Although the process may be well planned, action research in itself is based on life, which is never simplistic or predictable (Waters-Adams, 2006). Action research is also subjective by nature and because the observations, ideas and opinions of the students are so personal it may be harder to bring a more collaborative practice into play. This sense of collaboration can be very important to action research because what is being researched is the education process in the classroom as a whole (Waters-Adams, 2006).

Lastly due to the regulations of the University of Florida, I am required to have my researched plan approved by the Institutional Review Board. My research plan was approved by the IRB office and I am obligated to the binding of that agreement (Appendix A). I am also required to acquire signed consent forms from the guardians of the students who are involved in my research project (Appendix B). I must remain in compliance with all the rules and regulations

set up by the Institutional Review Board and the University of Florida in order to insure the safety of the students I am involving in my research.

Literature Review

Altruism is something that I would like to see more of in my students. I believe that if I intentionally expose them to situations in which this type of behavior is perpetuated, I may begin to see more independently motivated altruistic acts in my classroom. The research reviewed was selected for its relevance in assisting me on my journey to find the best techniques and philosophies to develop altruism through art education.

Altruism is roughly defined as motivation to provide something of value to someone else. Altruism is the opposite of selfishness, and can be a great motivator for individuals that work with others in their community. David Horton Smith, research professor at Boston College states

Altruism is an aspect of human motivation that is present to the degree that the individual derives intrinsic satisfaction of one or more other persons without the conscious expectation of participating in an exchange relationship whereby those others would be obligated to make similar or related satisfaction optimized efforts in return. (Smith, 1981, p. 25)

Altruism is related to concepts of community and service to others. The following essays all focus on the subject of community service and its effects on either the students or the community. I have chosen these essays because it is important to understand what has already been done concerning community inclusion in the classroom, as well as variables surrounding the different opportunities of service and the short or long-term effect altruistic actions can have on the students. Russell and Hutzler (2007) observe that the social character of service learning and the emotional challenges faced by its participants makes its service a natural nurturer of

social and emotional learning. To clarify, service learning is not the same thing as altruism.

Service learning is the action in an attempt to develop altruism.

The History of Community Involvement in the Classroom

The idea of service learning dates back to Socrates, who was interested in educating free humans for the common good (Wilhelm, 2009). More recently in the 1960's, the idea of service-learning was renewed when the ideas of Martin Luther King, Ghandi and Dorthy Day showed us that we as individuals could be responsible for social change (McLellan, Yates & Yoniss, 1999). Susan Langer observes that at this point in time, art making had already been linked to “emotion [which] is a central feature that affiliates our minds with our social and cultural networks (as cited in Platt-Gross, 2010, p. 362) Vygotsky asserted that “art often acts not just as a social conduit, but also as a transformative medium” (1971, p. 362). Beliefs like these began to inspire teacher researchers to start involving community service in their pedagogies. Researchers began to study service learning to piece together what students thought about connecting this type of service work with their education (McLellan, 1999).

As teacher researchers observed the links between art, community involvement and social change, studies began to focus on people's motivations to affect change. Public schools personnel began to notice the trend of community service as a positive activity for their students. Keith reports that as a result, “educational institutions have sought to increase levels of volunteer activity by requiring community service of their students” (as cited in Clary, Snyder & Stukas, 1999, p. 59). However, studies also show that attaching a mandate to volunteering is counterproductive. In fact, some studies reveal that students that felt external pressure towards service had a negative association with the process and that they were less likely to continue in service to others in the future (Clary, et al, 1999). Research has also been conducted in an

attempt to find the most successful timing for the introduction of service-learning in a student's education as well as other variables (Clary, et al, 1999). Each of these studies begin to build insight about the most optimal service-learning experience.

What Has Been Done Vs. What Needs To Be Done

It is clear that teachers these days are learning how important community involvement is and are being more proactive to include service learning in their curriculum. Teachers are also setting up reciprocal partnerships with the community and involving collaborate projects where the expertise of others in the community can be utilized in the students learning (Hutzel & Russell, 2007). Organizations dedicated to facilitating these partnerships have emerged. For example,

Learn and Serve America, a service-learning resource for teachers, has developed a model, PARC (Preparation, Action, Reflection and Celebration), for implementing service learning in schools and universities (Glickman & Thompson, 2009). This model of learning uses the key elements; preparation, action, reflection and celebration in a structured lesson to expose their students to the educational and emotional benefits of service-learning (Glickman & Thompson, 2009).

Unfortunately many educational systems are opting to increase levels of volunteering by requiring community service activities as part of a grade. In fact, according to Clary and his colleagues, (1999) a number of institutions, mainly high schools are requiring community service in order to graduate. The idea is that requiring community service will perpetuate a sense of value or duty. This is, however not to be confused with service learning. Community service negates the educational component because the core purpose is to be of assistance. Glickman & Thompson agree with this claim, "It is important to distinguish these service activities

[community service] from the powerful learning that results from the purposeful connection between student learning and civic engagement” (2010, p. 11).

According to most of the research done about the correlation of this requirement and its long term effects of volunteering is not positive. Researchers have concluded that we must find a balance between creating service learning encounters that can be graded and drowning those encounters with requirements. Students that are forced to do something for a grade are not likely to repeat that same behavior on their own (Beehr, 2010; Clary et al, 1999).

Looking forward, research still needs to be done on how certain forms of motivation affects certain types of behaviors rather than focusing on which type of motivation has stronger effects (Berger, 2002). Berger (2002) suggests that “we need to know more about how and why participation in particular types of service lead to certain outcomes” (p. 99). In the findings of such research, we may begin to understand other types of characteristics our students possess and how those characteristics may impact the service they chose to engage (Berger & Milem, 2002).

New Perspectives

There is much work left to be done on the relationship between altruistic intentions and community involvement in the classroom. One of the ideas from Berger and Milem, (2002) is that, “future studies should examine how each type of motivation affects certain types of outcomes rather than focusing on which types of motivation has stronger effects than the others on a limited range of outcomes” (p. 99). They go on to say, “It is clear that academic community service is the only type of community service to have a positive effect of self-concept, but we need to know more about how and why participation in particular types of service leads to certain outcomes” (Berger & Milem, 2002, p. 99). In fact such studies have since emerged. For example,

Serow (2012) is interested in the differences between the genders and moral thinking. He quotes Gilligan who identified that

moral development among women diverge from that derived from studies of men.

Women's construction of the moral problem as a problem of care and responsibility in relationships rather than as one of rights and rules ties the development of their moral thinking to changes in their understanding of responsibility and relationships just as the conception of morality as justice ties development to the logic of equality and reciprocity.

(as cited in Serow, 2012)

Based on such considerations in looking at the classroom, it may be important to take into account the differences in genders as a partial explanation for differences in responses to, or interest in community involvement. Varied teaching strategies and experiments with grouping the different genders together may be appropriate.

As mentioned earlier research also demonstrates that external control over volunteering has negative effect (Clary et al, 1999). Clary and his colleagues found that students who perceive high levels of external control are less likely to build a connection of experience and intentions. The trick, then, is to expose students to experiences without attaching extrinsic motivation or build in a sense of more complete ownership of the task. A possible solution to this problem is to allow the students to design and focus specific areas of their service, using their own creativity to solve problems within the parameters of their own personal agendas (Clary & Snyder, 1999; Clary et al, 1999). In addition it may be useful to emphasize internal rewards such as feelings of satisfaction rather than external rewards.

Wilhelm (2009) brings forth the idea of our students being agents of possibility. He goes on to suggest "When we link academic content and goals to social action and service, we are sure

to have a grounded, problem solving curriculum that means something” (Wilhelm, 2009, p. 35). Even further, Jones and Jones (as cited in Hutzler & Russell, 2004) conclude that this type of behavior must be explicitly taught to students, like any other curriculum. We must not only give students opportunities to participate, but we must help them to become critically engaged in the entire process of positively affecting the community.

Connecting Altruism and Design Thinking

Having reviewed the literature, I now see that extrinsic motivation is a huge stumbling block in the effort for continuing service or developing altruistic behaviors. Marks and Jones (2004) talk about the importance of primary socialization and how it is during this time in someone’s life that the largest amount of character development occurs. Secondly, I believe that altruism can be taught by intentional teacher example and by participating in lessons that affect change socially. I also believe that education is a perfect place to integrate these ideas into concrete lessons. Even further, my hope is that my Capstone research project will help me and like-minded teachers integrate altruism in their classroom through the use of Design Thinking.

I understand that students cannot be productive if they only study a topic from the outside, but that “they must have access to the issues, problems, and ideas surrounding that topic” (Edmunds & Wall, 2009, p. 18). In other words involving the students in developing the service-learning projects they participate in, can be paramount to a successful education. This may be a perfect match for the design thinking approach, because the students are the ones making the decisions in each of the steps of the design thinking process.

What is Design Thinking

Tim Brown, the CEO and president of IDEO, an award-winning global design firm, defines design thinking as a human-centered approach to innovation that draws from the

designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success

(<http://designthinking.ideo.com/?s=Definitions+of+design+thinking>). Design thinking is based on the assumptions that anyone, not only a designer, is able to find new solutions by applying a specifically defined process and is a specialized approach to problem solving that uses design methodologies to identify new opportunities. These methods include observation, prototyping, building, and storytelling, and can be applied on a broad scale for organizational and innovation challenges (Faces of Design, 2012). Richie Thimmaiah, the founder of *Richworks Design Blog* defines design thinking as a process for practical, creative resolution of problems or issues that looks for an improved future result. It is the essential ability to combine empathy, creativity and rationality to meet user needs and drive business success (2010). I am interested in using design thinking as a tool in my classroom to introduce the idea of altruism to my students. I feel like this process is a well thought approach towards solving any type of problem because it doesn't involve early judgments, thus eliminating the fear of failure and encouraging maximum input and participation in the ideation and prototype phases (steps in the design process, which I will be talking about later).

Design thinking incorporates the following steps, or phases in order to grow information into a problem solving product. I have noticed in researching this topic that although the process remains the same, there are slight variations in wording or the clumping of mini-phases in the different phases. I, too, will be using the concepts of the 5 phases used by IDEO, however, in order to better adapt it to my students, I will be breaking down the process into seven phases; empathy, the search for opportunities, storytelling and brainstorming, think and research, ideate, prototype and finally building and testing the product. The following section's information is

taken from the IDEO Toolkit,

(http://www.ideo.com/images/uploads/hcd_toolkit/HCD_INTRO_PDF_WEB_opt.pdf) a

handbook written by the IDEO Company to assist educators as they implement design thinking.

Phases of Design Thinking

Phase One: Empathy and Designing the Challenge. This is the first phase of the design thinking process. This is the stage where the concept of altruism is most easily introduced because the phase depends on becoming aware of the world around you. Other features of this phase is building your team and understanding what each team member has to contribute (IDEO, 2008). During my research we will be designing our challenge around solving a problem that affects the students at our school.

Phase Two: Searching for Opportunities. This phase is where you immerse yourself in what you are researching. This will be the chance for my students to interview teachers, students, administration as well as each other, as experts in order to gather ideas, problems, and stories (IDEO, 2008). The goal is to pinpoint the problem areas from the people who experience them on a daily basis. Gathering this information first hand is important because it allows the students to attach a face (or people) to the problem (IDEO, 2008).

Phase Three: Share What You Learned and Search for Meaning. IDEO refers to the first part of this phase as “telling stories.” This is an opportunity for everyone to come back and share what they have discovered through the interviewing process. In order for students to be better heard, I will be breaking them into small groups of four or five students (IDEO, 2008). This will allow more personal interaction and insure that they are able to share everything they learned. Students will then as sort through the stories and interviews to search for main areas of concern and finally develop a solid problem to solve (IDEO, 2008).

Phase Four: Think and Research. After landing on a solid problem, students will spend time in more focused research. This phase is where researchers may go back to their sources and ask more pointed questions (IDEO, 2008). They may also do Internet research or other research techniques to gather suitable background information about different aspects of the problem, for example; what has been done before? What has not worked as a solution? Why? Those issues need to be investigated in order to not repeat an already failed solution to the problem (IDEO, 2008)

Phase Five: Ideate. Ideate means to generate lots of new ideas without constraints. This is where the creativity will come in to play. They will be asked to brainstorm any and all possible solutions and narrow those ideas into a small group of promising ideas that will be prototyped (IDEO, 2008).

Phase Six: Prototype. This phase is a practice run at the solutions that were most promising in the Ideate session. The purpose for the prototype is creating a tangible version of your idea, this allows the designers to be able to easily introduce their promising idea to the group for further evaluation (IDEO, 2008). It is also an opportunity to discover any flaws or missing links in the idea itself. After the prototypes have been introduced and scrutinized, designers are able to narrow down the promising ideas to one winning idea. This idea will then be built.

Phase Seven: Build it. This is the final phase of the design thinking process. It is where the winning idea is built and used to solve the original problem (IDEO, 2008).

Why is Design Thinking a Good Match for Introducing Altruism in the Art Classroom?

Design thinking is a natural fit for introducing altruism because it is a solution seeking process. Altruism is seeing a problem and being the solution to that problem. Design thinking

becomes a tool to analyze research and develop the best solution for the problem. Introducing an idea like altruism can be intimidating for teachers and students because it is easy to feel overwhelmed by the vastness of options and solutions. Using a phase-by-phase process allows the students to slowly and methodically work their way to a solution while providing the teacher with an outline to keep his/her students focused on the main goal, which is helping someone. Wiggins and McTighe discuss the importance of showing understanding in their book *Understanding By Design* (Wiggins and McTighe, 2007). I am particularly interested the last two steps of the six steps they discuss, which are empathy and self-knowledge. They describe empathy as being sensitive, open, receptive and tactful and self-knowledge as being self-aware and self-adjusting which are all important parts of altruistic behavior (Wiggins and McTighe, 2007). Empathy, in general, is noted to be important in shaping pro-social development which is not normally associated with altruistic behaviors (Serow, 1991). More importantly, I believe that by using design thinking, students are given opportunities to practice these understanding behaviors by intentionally revolving the results around the beneficiary of the solution, and by collaborating with each other to reach the solution.

Methodology

I used action research techniques as a pragmatic method of studying my own practice. Carr and Kemmis (1986) describe action research as concerned with three types of improvement; the improvement of practice, the improvement of understanding of practice and the improvement of the situation in which the practice takes place. Improvement, in this case, is based on gathering evidence from the classroom and making informed, intuitive and pragmatic judgments and decisions to solve or better the problem in question (Carr, 1986). My research was conducted around the question: How can I use design thinking as a tool to bring altruism into my art

projects? I used my students that are enrolled in my Art Technique class where I am currently employed. These students are mostly freshman and sophomores and I will be studying them for the duration of one project.

Population

Elliott (1987) discusses the importance of specific criteria when choosing a population to research while using action research. There are several reasons why it was so important for me to use my own students in this study. Firstly, the research itself should be taken from the perspective of the students that will be affected by the study. Secondly, it is imperative that these students have opportunities of unconstrained dialogue and have ready access to my observations, accounts and other data. Lastly, I need to have access to the student's opinions, understandings and feelings. This type of a relationship is not found in outside the classroom (Elliott, 1987). So, I will be using 25 students that are already enrolled in my freshman and sophomores grade Art Technique class. My students will be appropriate for my study because they are able to give me immediate feedback, opinions and will be easy for me to access during the entire process.¹

Research Site

My research took place in my classroom. The school campus building holds the high school, the middle school and one of the elementary schools which allowed easy access to the students we are used as our problem inspiration as well as the bathroom where we installed the finished product. My classroom itself is large, with separated large tables which allowed the students space to break off into smaller groups during some of the design thinking phases. Doing the project in my classroom also allowed me to have easy access to all of my art supplies and gave the students a familiar and safe place to experience a new style of learning.

¹ Although I will be conducting my research with real people, I will be using pseudo names to protect their confidentiality.

Procedures and Data Collection

Elliott (1987) writes that action research is to deepen the teacher's understanding of his problem, and that this understanding does not determine appropriate action but appropriate action must be grounded in understanding. What I liked about the action research techniques is that there is an interest in developing an understanding of process. Once I understood my problem, I was able to create and implement a solution to that problem. Once I attempted the solution, I analyzed the outcomes and made changes to my curriculum accordingly. Therefore it was very important, through this process, that I recorded my own observations.

I began my research project with an introduction to the idea of altruism and how artists have used altruistic motivation to make a positive change in their community. As a class, we talked about the One Million Bones movement (One Million Bones, 2007), the Wasteland Project (Wasteland, 2010) and the Empty Bowls project (Empty Bowls, 2012), which are all examples of altruistically motivated art projects. From there, I introduced design thinking and explained the different phases of the process and how we could practice altruism in each different phase. I also explained that although the design thinking process can be used in all types of art projects, we would be focusing on a design project specifically, that would solve a problem affecting our school.

The next step in my research was to have the students participate in a design project where altruism was the motivator. As a class we chose to focus our attention on problems facing elementary students and through researching and gathering inspirations my class decided to focus on the problem that germs are being spread because the students are not washing their hands. I found that although my students were the idea generators I was able to maintain my research agenda by being both the referee between groups and the person that made lists on the

board and prompted students with directive questions. For example, I was the starter and stopper of group time, and I was in charge of keeping the flow of the design thinking process moving. If there was a lull, I would make sure that students were engaged with the activity at hand. This type of intervention allowed the students to focus on their ideas and not on the process itself.

Through the final phases of design thinking my students created a solution which was a three part installation to encourage and inform the students about the importance of washing their hands. The first of the installation was an character named “Big G” (see Figure 3) an eight foot giraffe that stood outside the bathroom with a thought bubble saying, “Don’t forget to wash your hands!” The second part was posters (see Figure 4 and 5) designed by the students with images of “Big G” and encouraging reminders about washing your hands which were placed on the inside of the stall doors for easy access. The final pieces of the installation were hoof prints, (Big G’s hoof prints) that were placed from the toilets leading to the sinks in the bathrooms (see Figure 6).

Analysis

Action research uses the participant observers as part of the collaborate team. Baskerville and Myers (2004) suggest both teachers and students need to be involved in the reasoning, formulation of action as well as the action taking. Elliott (1988) encourages interviewing, participants self-reflection and participant observation in order to understand the problem from my students view point. Understanding my student’s reflections, opinions and reactions accounted for the largest amount of data to be analyzed. Each research day, I would journal exactly what happened during the class. I also noted what I did that was successful as well as what I would do differently. I ended every entry with my general reactions to the day’s events. These details were cataloged in my observations for further consideration and assistance as I create future design projects.

Action research is part of a pragmatic philosophy of study. As a philosophy, pragmatism concentrates on asking the right questions, and getting empirical answers to those questions. By using pragmatic action research techniques I had the freedom to use the knowledge and familiarity I have with my subject to design the best answer for the questions that I was asking. I discovered what I felt needed to be changed, for example, during the storytelling phase, I realized that having the students in large groups was not working. Some students were talking over each other, while others were staying silent. After noticing this problem, I broke the students into small groups of four and five students so that students could more easily communicate their information. I relied on my intuition or my pragmatic reaction to implement my solution.

My research project lasted seven days and was broken into the seven different phases of the design thinking process. I was interested in my student's ideas and opinions about the design thinking process. However, not wanting to ask them leading questions, I centered my inquiry on two main questions: What did you think about this particular phase of the design thinking process? What are your feelings about this project? I presented these questions to individual students as well as groups of students and I collected these answers every day. A full documentation of my daily process, observations and some of my student's ideas and opinions can be found on my personal website www.amy'swindowseat.com.

Data

I kept a field journal of the daily observations I had during the course of this study. Each day I would journal what procedures were accomplished in the class. These writings included my observations, reactions of my students, what I found to be successful and some general ideas about what I might do differently.

Findings

My study's main purpose was to introduce a Design Thinking and altruism-oriented curriculum unit in my high school art class, and to observe how the Design Thinking pedagogy helped my students take altruistic ideas and turn them into meaningful design projects. My goal was to observe the design thinking process and see if it would help develop well informed and well-rounded solutions to these problems. I started with one main question: How can I use design thinking as a tool to bring altruism into design projects? The following section will summarize what I discovered during my observations.

First Observation: Design Thinking Keeps Students Focused

The Design Thinking allows for very little down time. In order to get to the next phase in the process my students were constantly researching and editing the ideas of the class, as well as their own ideas. The format for design thinking is divided in a way that each phase can seem like a mini project. This type of teaching promotes fresh attitudes because students did not become stuck in one aspect of the process.

Each phase of design thinking is different from the one before, so it is not repetitive in nature. For example the ideate session was centered on list making, brainstorming ideas, and discussing solutions and was done in a small groups of students sitting around a table. The next phase, the Prototype phase was completely different- here students were physically engaged in building the giraffe, hoof prints and posters. This phase was done as a class, and students had more freedom to talk to each other and work at their own pace. Every different phase had a new goal, which energized the students and helped to kept them focused.

Second Observation: Design Thinking Developed Caring in Students

The Design Thinking process provided opportunities for my students to develop a sense of caring for the K-3 students we chose to help. Students were required to research these students' habits, likes and dislikes, and they began to understand what life may be like at the elementary. I first noticed caring in my students during the storytelling phase. Mostly by the way they told the stories about the different elementary students. They also related themselves to the stories and began to reminisce about when they were little kids. I actually extended the time I allotted for this phase because the students were having so much fun and I knew how important it was for my students to identify with the elementary students.

I also saw caring in my students, reflected in how good they wanted the art project to be, especially the kids that were in charge of the posters. They were so careful about making sure the font was readable and the phrasing was something the elementary students could understand. The students were constantly filtering ideas through what they discovered in their research in order to come up with an age appropriate solution (see Figure 1). They had to keep reminding themselves how old the elementary students were and what things they might like. This type of conversation happened over and over throughout the process and I overheard several students in different groups saying things like, "Oh they would love that." (Referring to the elementary students), or "They aren't going to get that." This kind of awareness shows that the students are caring about the effectiveness of the projects result. Key word here is caring.

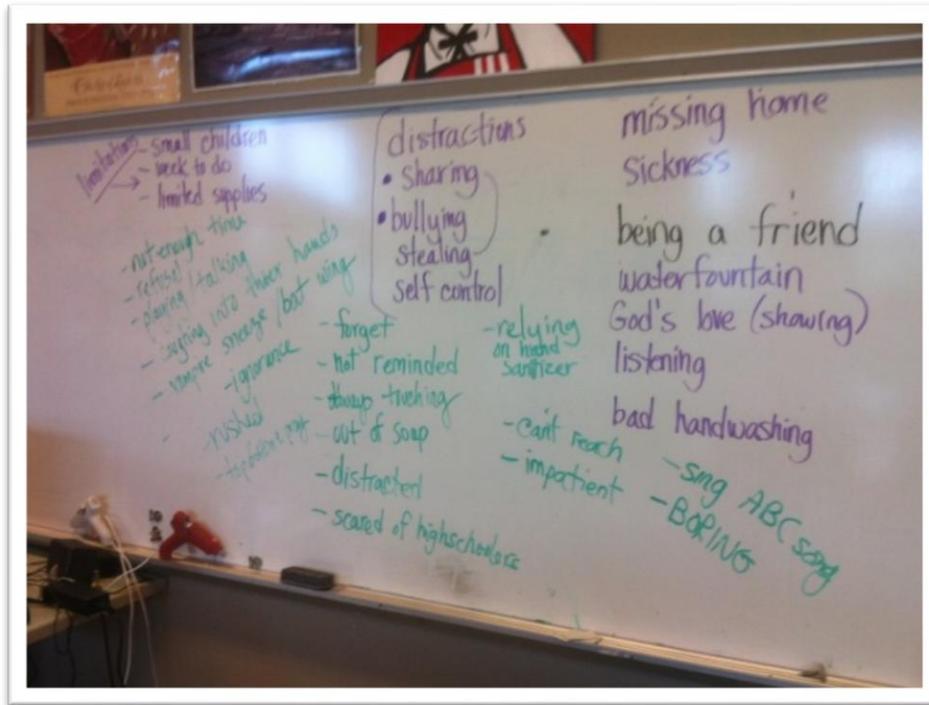


Figure 1. Brainstorming as a way to develop ideas.

Third Observation: Design Thinking Brought Out the Best Ideas in My Students

The Design Thinking process encourages a survival of the fittest for design project ideas. It allows for reforming ideas so that the best solution is presented. I noticed that the “ideate” and “prototype” session were where most of the streamlining occurred (see figure 2). Students broke into small groups where they shared the stories and other information they had learned in the interview and research process. They also accumulated and narrowed down ideas for the

prototype project that they presented to the class



Figure 2. Students working prototype ideas they later presented to the class.

Next, each group presented their prototype idea, and as a class we combined the best elements of these prototypes to create the final project. I found that design thinking is very helpful for students that tend to commit to the first idea they come upon. Some of these ideas were discarded or reimaged, for example one group came up with an interactive tissue box that teachers could keep in their room for the students to use, and another group came up with a bat character to encourage students to “bat sneeze” into their elbows like a vampire. But these were not age appropriate or doable within the time allotted.

Students also used the ideate session to combine ideas together to form what we called a “Super” idea which is the three part installation including the eight foot giraffe (see Figure 3),

the posters (see Figure 4 and 5), and hoof prints (see Figure 6). What is most significant about the “super” idea is that it is result of my students design choices, based on their own research and their own motivations. Which is exactly what research has shown to be the most effective way to encourage altruistic manners in future art or design projects.



Figure 3. “Big G.” is feature mascotte of the design project.



Figure 4. Samples of students design posters



Figure 5. Sample of students posters

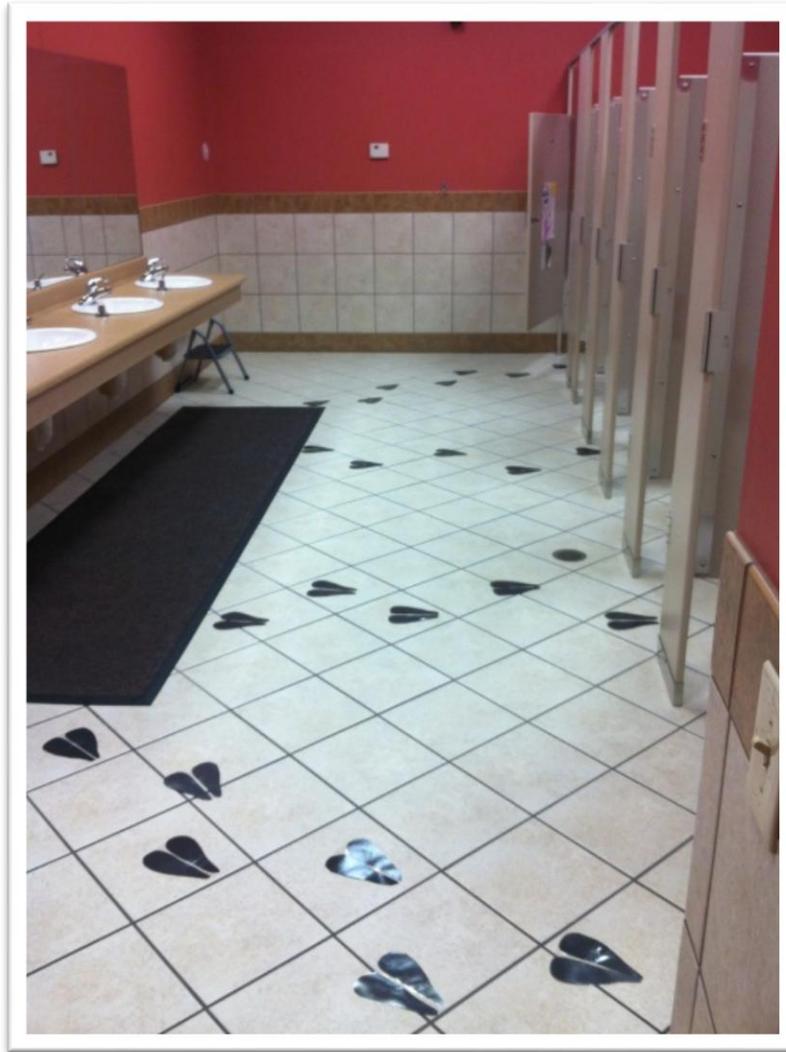


Figure 6. Giraffe hoof prints from the stalls to the sinks

Next, each group presented their prototype idea, and as a class we combined the best elements of these prototypes to create the final project. I found that design thinking is very helpful for students that tend to commit to the first idea they come upon. Not only were ideas discarded or reimagined but students used the ideate session to combine ideas together to form a “Super” idea which is the three part installation including the eight foot giraffe, posters and hooves. What is most significant about the “super” idea is that it is result of my students design choices, based on their own research and their own motivations. This observation reflects the

research that Clary and his colleagues experienced as being the most effective way to encourage altruistic motivations in future art or design projects (Clary et al, 1999).

Fourth Observation: Letting Go of Control

The most surprising discovery was how hard it was for me to not control the outcome of the final product. If I truly wanted this to be an altruistic project; one that was created by my students, for someone else, I need to completely let go of the control of the outcome.

I asked the students questions that were open ended- trying to keep them focused on where their research was leading, but I was constantly checking myself as to whether my leadings had ulterior motives. It became particularly tricky during the brainstorming sessions where they needed guidance and during prototype stage where the students pulled the best ideas from each group and created the final project.

For example, I had one group that was trying to come up with clever phrases for their posters and they were using saying that were not age appropriate, instead of saying anything, which was really hard, I waited, and saw that one of the other students noticed it as well and was able to say to the rest of the group- that maybe an easier saying would work better. I was so glad I didn't say anything because that was an important moment for that student to connect with the project that I almost took away. It also happened with the prototype phase, where I saw a great project right away- but I had to wait and keep my mouth shut and let the class hash out what they thought would be the best.

Summary across all of my Observations

The observations I made during my research showed me that design thinking can create positive side effects in my student's work ethic. I observed that this process not only kept my students focused and centered on the task in front of them, but it brought out the best solution

they could create. My students were also able to develop a sense of caring by the conversation they had with the elementary school students, teachers and administration and by the research they did as they were developing their ideas. This was evident in my students interest in the elementary students after the project was completed. I had several students that inquired about the success of the project and whether the elementary students enjoyed the posters. Students also wanted to visit the students and the project to see their reactions first hand.

I also observed in myself, a conflict between wanting to be in control of the outcome of the solution and allowing my students to work through the design thinking process and come to their own solution. Looking back on this entire process, specifically in the brainstorming and prototype phases where the ideas were being generated, I see it was imperative for me to let go of control because it allowing the design thinking process to do the work. Many of my students were able experience caring through the design thinking process. Design thinking gives the students structure and process where the responsibility of ideation, planning, decision making and execution were all placed on the students. As my students took ownership of the results, they were able to experience self-motivation, which is a key component of altruism.

Discussion and Conclusion

My goal in this study was to observe if using the design thinking strategy might be an effective way to integrate altruism into a design project. Developing a way to better infuse altruism in art education has many positive effects on an individual, for example, empathy, caring, and service to others. Research shows that allowing students to design and focus specific areas of their service and use their own creativity to solve problems within the parameters of their own personal agendas builds a connection with the recipient of the project as well as inspiring the student to participate in future service projects (Clary & Snyder, 1999; Clary et al,

1999). I attempted to incorporate altruism in a design project by going through the design thinking process. My goal was to observe whether or not using design thinking helped to better infuse altruism in a design project. I used action research as a method for studying my own practice. My intention was to observe this project as it unfolded, figure out what was effective and what could be changed and use those findings to inform my future teaching. In the following sections I will interpret my findings; discuss the significance of these findings as well as my recommendations based on what I have learned.

Interpretations of my Findings

Based on my observations I believe the design thinking process is a very useful and effective way to bring the practice of altruism into an art project. Combining these two ideas; altruism and design thinking, I was able to give my students an opportunity to develop their creative ideas and at the same time develop their sense of caring through research and personal communications with the people we wanted to help. I believe that one without the other would not have produced as successful and well-rounded project.

A design project based on altruistic motivations provides students with a more meaningful prompt and also allowed them to be a part of bettering their community. Using the design thinking process properly informed the students of what elements they needed to consider building the best solution to the problem. Because design thinking forces students to research, communicate and understand the problem, it also inadvertently creates a relationship with the people being affected and in turn supports the altruistic motivation by such a connection. I observed this connection as my students reminisced about memories of themselves as elementary students. The association my students had through similar experiences created a desire to help the younger students.

Significance of my Findings, and Recommendations

Teachers that are interested in developing the idea of altruism in their students can use the design thinking approach to inform their own teaching pedagogy. As my research demonstrates, the significance of finding a successful vessel like design thinking to teach altruism is important because it gives teachers a concrete instructional and creative process to implement a very abstract idea. Research is showing that forcing students to do community service is proving to be counterproductive (Beehr, 2010; Clary et al, 1999). What is more successful is allowing students to develop their own projects based on their own research and internal, altruistic motivations (Edmunds & Wall, 2009). My own research confirms these earlier findings made by other researchers. I have found that altruism can be taught by intentional teacher example, I also believe that art education is a perfect place to integrate altruism, design thinking and art making. Altruistic behavior must be taught to students, like any other curriculum. Like Jones and Jones, I am convinced that we must not only give students opportunities to extend themselves to others in selfless ways, but we must help them to become critically engaged in the entire process of positively affecting the community (Jones and Jones, cited in Hutzell & Russel, 2004).

I will continue to use the design thinking process to accomplish that task in my teaching and I would recommend that same to art educators who believe in the importance of altruism being integrated into their curriculum.

In the future, I would like to see further research on the effects of this type of integration (combining design thinking with altruistic-themed art projects) on different age groups. I acknowledge that design thinking requires a certain level of maturity, however it can and must be presented at an age early enough to make the most impact on the student's character.

Altruism is an important character trait for students to not only understand but to begin to develop in themselves. Altruism-inspired work can be a huge motivator for art projects, projects that can have a positive effect on a community, and I believe my findings demonstrate one way altruism can be taught. I have created the following website that houses my field notes-

<http://www.amyswindowseat.com/capstone-field-notes.html> , and a brief overview of my project and a video documenting my student's involvement in my research.

<http://www.amyswindowseat.com/capstone-project.html> . My goal through the website documentation is to make an easily accessible and informative to other teachers that are interested in trying the same type of integration in their curriculum.

References

- Agogino, A. M., Dym, C. L., Eris, O., Frey, D. D., & Leifer, L. J. (2005). Engineering design thinking, teaching , and learning. *Journal of Engineering Education*, 9(1) 103-120.
- Barry, M. & Beckman, S. L. (2007). Innovation as a learning process: Embedding Design Thinking. *California Review Management*, 50(1), 25-56.
- Baskerville, R. & Meyers, M. (2004). Making research relevant to practices. *MIS Quarterly*, 28(1), 229-236.
- Beehr, T. A. LeGro, K. & Porter, K. (2010). Required volunteers: Community volunteerism among students in college classes. *Teaching of Psychology*, 37(4), 276-280.
- Berger, J. B. & Milem, J. F. (2002). The impact of community service involvement on three measures of undergraduate self-concept. *Naspa Journal*, 40(1), 85-102.
- Blum, F. (1955). Action research- A scientific approach? *Philosophy of Science*, 22(1), 1-7.
- Bingle, Robert G., and Julie A. Hatcher. "Implementing service learning in higher education." *The Journal of Higher Education*, 67(2),221-239.
- Blatt-Gross, C. (2010). Casting the conceptual net: Cognitive possibilities for embracing the social and emotional richness of art education. *Studies in Art Education*, 51(4), 353-367.
- Brown, T. (2008, September 7). Definitions of design thinking [Blog post]. Retrieved from <http://designtesting.ideo.com/?p=49>
- Brown, T. & Wyatt, J. (2010). Design thinking for social innovation. *Stanford Social Innovation Review*, 8(1), 30-35.
- Center for Compassion and Altruism Research in Education. (2011). Mission. Retrieved from

<http://ccare.stanford.edu/aboutus/mission>

Carr, W. & Kemmis, S. (1986) *Becoming critical: Education knowledge and action research.*

Lewes: Falmer.

Clary, E. G. (1999). The motivations to volunteer: Theoretical and practical considerations.

Psychological Science, 8(1), 156-159.

Clary, E. G., Snyder, M. & Sukas, A. (1999). The effects of “mandatory volunteerism” on

intention to volunteer. *Psychological Science*, 10(1) 59-64.

Edmunds, J. S. & Wall, A. (2009). Schoolwide literacy and learning through the millennium

development goals. *Voices from the Middle*, 17(1), 16-23.

Edutopia Staff. (2012). Week Three: Ideation. Retrieved from:

<http://www.edutopia.org/design-thinking-for-the-educators-introduction-week-one>.

Elliott, J. (1987). What is action research. *Journal of Curriculum*, 10(4) 355-357.

Empty Bowls Project. (2012). Welcome to the empty bowls project. Retrieved from:

<http://www.emptybowls.net/>.

Faces of Design. (2012). Faces of Design Academy: What is design thinking? Retrieved from:

<http://facesofdesign.com/content/faces-of-design-academy-what-design-thinking>

Glickman, C & Thompson, K. (2009). Tipping the tipping point: Public engagement, education

and service learning. *Voices from the Middle*, 17(1) 9-15.

Hutzel, K. & Russell, R. L. (2007). Promoting social and emotional learning through service

learning and art projects. *Art Education*, 60(3), 6-11.

Jones, S. R. & Marks, H. M. (2004) Community service in translation. *Journal of Higher*

Education, 75(3), 308-339.

McLellan, J. A., Yates, M. & Youniss, J. (1999) Religion, community service, and identity in

- American youth. *Journal of Adolescence*, 22(2), 242-253.
- Nagel, T. (1979). *The possibility of altruism*. Princeton University Press.
- One Million Bones (2009). *One Million Bones*. Retrieved from:
<http://www.onemillionbones.org/>.
- Richworks, T. (2010, July 12). The art of design/creative thinking: 10 ways to foster creativity [Blog post]. Retrieved on <http://richworks.in/2010/07/the-art-of-design-creative-thinking-ways-to-foster-innovation/>
- Serow, R. (1991). Students and voluntarism: Looking into the motives of community service participants. *American Educational Research Journal*, 28(3) 543-556.
- Smith, D. H. (1981). Altruism, volunteers, and volunteerism. *Nonprofit and Voluntary Sector Quarterly*, 10(1), 21-36.
- Toolkit, H. C. D. (2008). IDEO. Retrieved on 10th August.
- Wasteland. (2010). *Wasteland*. Retrieved from: <http://wastelandmovie.com/index.html>.
- Wilhelm, J. D. (2009). The audacity of service: Students as agents of possibility. *Voices from the Middle*, 17(1) 34-36.
- Whitehead, S. (1989). Creating a living theory from question of the kind, 'How do I improve my practice?'. *Cambridge Journal of Education*, 19(1), 41-52.
- Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*. Association for Supervision & Curriculum Development.
- Vygotsky, L. S. (1971.) *Psychology of art*. Cambridge, MA:M.I.T. Press.

Appendix A

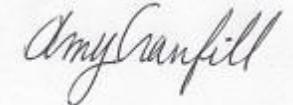
UFIRB 02 Protocol Submission Form

is no “subjective” component to the grade that could be so influenced. **UFIRB 02 –
Social & Behavioral Research
Protocol Submission Form**

This form must be typed. Send this form and the supporting documents to IRB02, PO Box 112250, Gainesville, FL 32611. Should you have questions about completing this form, call 352-392-0433.

Title of Protocol:	Developing Altruism through Art		
Principal Investigator:	Amy Cranfill		UFID #:
Degree / Title:	Masters of Art In Art Education	Mailing Address: (If on campus include PO Box address): 3521 Trails End Lexington, KY 40517	Email: amycranfill@ufl.edu
Department:	School of Art and Art History		Telephone #: 859.539.6537
Co-Investigator(s):		UFID#:	Email:
Supervisor (If PI is student):	Craig Roland		UFID#:
Degree / Title:	PHD	Mailing Address: (If on campus include PO Box address): College of Fine Arts Office of the Dean 101 FAC PO BOX 115801 Gainesville, FL 32611- 5801	Email :
Department:	School of Art and Art History		Telephone #: 217.898.2346
Date of Proposed Research:	Fall 2012		
Source of Funding (A copy of the grant proposal must be submitted with this protocol if funding is involved):	none		

<p>Scientific Purpose of the Study: To develop a curriculum that promotes altruistic or caring behaviors in the high school art classroom through a service learning project in which the students are able to research, develop and take action in order to affect some change in their community.</p>					
<p>Describe the Research Methodology in Non-Technical Language: <i>(Explain what will be done with or to the research participant.) The method of research for this study is Participatory Action Research (PAR) During this study I will be observing students as they are involved in an art project. The art project will involve bring awareness to a social issue through peer teaching, sharing ideas and artwork. Participatory Action Research methods will be used for this study. I will observe students as they researching social issues, developing art projects and peer teaching fellow student. I will keep field notes that document these classroom observations. I will take pictures of the artwork produced in the project. I will have informal conversations about these projects with the students and I will keep field notes about these conversations. No students will be identified. No recognizable photographs of students will be taken. I will write up my findings in a capstone paper. Some of the photographs of the art projects will appear in this paper. This paper will be deposited in the University of Florida's digital repository in which masters theses and dissertations are housed. No students will be pressured or coerced to be participants in this study. All students will have the options to withdraw from the study even after the study is over. Student participation as subjects in this research will be completely voluntary. No students will be pressured to be volunteers to be in this project and students will be treated the same as others not participating.</i></p>					
<p>Describe Potential Benefits: . The benefit will be: exposure to the idea of altruism or caring behaviors, communicating an altruistic idea to other classmates and seeing other classmate's altruistic ideas. Developing a project within the classroom. Long term benefits are developing altruistic or caring behaviors, social awareness and social change through my students future actions.</p>					
<p>Describe Potential Risks: <i>(If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.) NONE</i></p>					
<p>Describe How Participant(s) Will Be Recruited: student will be enrolled in my class</p>					
Maximum Number of Participants (to be approached with consent)	25	Age Range of Participants:	16-18	Amount of Compensation/ course credit:	N/A
<p>Describe the Informed Consent Process. (Attach a Copy of the Informed Consent Document. See http://irb.ufl.edu/irb02/samples.html for examples of consent.) Students already enrolled in my advanced art class will be asked to participate in this study.</p>					

(SIGNATURE SECTION)		
Principal Investigator(s) Signature:		Date: 7/12/12
Co-Investigator(s) Signature(s):		Date:
Supervisor's Signature (if PI is a student):		Date:
Department Chair Signature:		Date:

Appendix B

Informed Consent

“FUSING ALTRUISM WITH DESIGN THINKING”

Amy Cranfill- Art Teacher

Please read this consent document carefully before you decide whether your child can participate in this study.

<http://irb.ufl.edu/Purpose of the research study>:

The purpose of this study is to observe the effects of having students, create a project using Design Thinking principles, that positively affects their community.

What you will be asked to do in the study:

Your child will participate in an design project. All of the students will do the activities as part of the regular class and after final grades are determined; your child will be asked if their data can be used for research purposes. There will be no “subjective” component to the grade that could be so influenced by your child’s refusal to participate or allow their data to be used for research purposes.

Your child will be exposed to the idea of thinking outside themselves by being introduced to previous successful art projects that were used to promote some sort of social change. We will also be discussing the process of design thinking, and using this process as the pedagogy to complete our project. As a class, we will take the chosen issue and develop it into an art project that can be integrated into the community. Your child will take part in this class developed project.

Time required:

One class per day for 2 weeks

Risks and Benefits:

There are no risks to your child expected with this study. The benefit will be: exposure to the idea of altruism, experiencing the theory of altruism, communicating an altruistic idea to other classmates and seeing other classmate’s altruistic ideas. My hope is that your child will benefit overall from understanding that art can have a use outside of self-expression, as well as seeing a project through from start to finish that positively affects their community.

Compensation:

Your child will not be compensated for participating in this study.

Confidentiality:

Your child’s identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file in my

faculty supervisor's office. When the study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report.

Voluntary participation:

Your child's participation in this study is completely voluntary. There is no penalty for not participating. In order to avoid the coercion or the appearance of coercion by having everyone in the class do some activity or exercise as part of the regular class; then after final grades are determined, ask students if their data can be used for research purposes.

Right to withdraw from the study:

Your child has the right to withdraw from the study at any time without consequence.

Whom to contact if you have questions about the study:

ATTENTION Dr. Craig Roland

School of Art and Art History

University of Florida

101 FAC

P.O. Box 115801

Gainesville, FL 32611-5801

(352) 392-9165

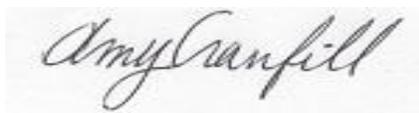
rolandc@ufl.edu

Whom to contact about your rights as a research participant in the study:

IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.



PARTICIPANT:

Date: 7/8/12

Parent or Guardian: _____ Date: _____

Principal Investigator: _____ Date: _____

List of Figures with Figure Captions

Figure 1. Brainstorming as a way to develop ideas.

Figure 2. Students working prototype ideas they later presented to the class.

Figure 3. “Big G.” is feature mascotte of the design project.

Figure 4. Samples of students design posters

Figure 5. Samples of students design posters

Figure 6. Giraffe hoof prints from the stalls to the sinks

.

Author Biography

Amy Cranfill has been an art educator for fourteen consecutive years. She began her career teaching fourth through sixth grade art, and after nine years moved to the high school level where she continues to teach art at the Lexington Christian Academy. Amy Cranfill has a Bachelor of Arts in Art Education and a Bachelor of Arts in Art Studio from the University of Kentucky (1999) and plans to graduate from the University of Florida with a Masters of Art in Art Education in the Fall of 2012. She regularly attends professional development across the U. S. and is very active in the art community where she resides in Lexington, KY. She has plans to continue teaching high school art and is also interested in earning her Ph.D. in Art Education.