Gender and its Effects on Subject Matter Preference in a High School Ceramics Class

by

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ABSTRACT

Adolescents’ clay sculpture has been researched significantly less than their drawings. I spent approximately six weeks in a ceramics class located at a high school in a suburb of Phoenix, Arizona in order to explore how gender affected subject matter preference in students’ three-dimensional clay sculpture. Gender studies on children’s drawings reveal that males favor fantasy, violence, aggression, sports, and power, while females favor realism, domestic and social experience, physical appearance, care and concern, nature and animals. My three main research questions in this study were 1) How did gender affect subject matter in adolescents’ three-dimensional clay sculpture? 2) What similarities or differences existed between females’ and males’ subject matter preference in sculpture and their subject matter preference in drawing? 3) Assuming that significant gender differences existed, how successful would the students be with a project that favored opposite gender themed subject matter? I found that although males and females had gender differences between subject matter in their clay sculptures, there were exceptions. In addition, the nature of clay affected this study in many ways. Teachers and students need to be well prepared for issues that arise during construction of clay sculptures so that students are able to use clay to fully express their ideas.
DEDICATION

To Mom, Dad, and Michael
Thank you for never asking me what I was going to do with a degree in ceramics.
I love you.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>v</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIST OF FIGURES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>vi</td>
</tr>
</tbody>
</table>

## CHAPTER

1. INTRODUCTION

   - Statement of Problem
   - Purpose of the Study
   - Research Questions
   - Review of Literature

2. CONCEPTUAL FRAMEWORK AND DEFINITIONS

   - Definition of Terms

3. METHODOLOGY

   - Description of Study
   - Data Collection Procedures
   - Content Analysis Procedures
   - Setting
   - Participants
   - Ethical Issues
   - Limitations

4. DESCRIPTIVE UNFOLDING OF PROJECTS AND CONTENT

   - ANALYSIS
   - First Observations
   - Self Portrait Objects
   - Aggression and Nurture
CONCLUSIONS AND IMPLICATIONS ........................................ 67

Limitations ............................................................................. 79

Implications for Future Research............................................. 79

REFERENCES ........................................................................ 81

APPENDIX

A SELF EVALUATION: ART CRITICISM QUESTIONNAIRE ........ 85

B INSTITUTIONAL REVIEW BOARD

CONSENT LETTER.................................................................... 88

C SELF PORTRAIT OBJECT PLANNING SHEET......................... 91
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Self Portrait Objects including the Following Popular Themes</td>
<td>38</td>
</tr>
<tr>
<td>2.</td>
<td>Females’ Self Portrait Object Art Criticism Responses</td>
<td>46</td>
</tr>
<tr>
<td>3.</td>
<td>Males’ Self Portrait Object Art Criticism</td>
<td>47</td>
</tr>
<tr>
<td>4.</td>
<td>Number of Aggression Sculptures</td>
<td>58</td>
</tr>
<tr>
<td>5.</td>
<td>Number of Nurture Sculptures</td>
<td>58</td>
</tr>
<tr>
<td>6.</td>
<td>Females’ Aggression and Nurture Art Criticism</td>
<td>65</td>
</tr>
<tr>
<td>7.</td>
<td>Males’ Aggression and Nurture Art Criticism</td>
<td>66</td>
</tr>
<tr>
<td>8.</td>
<td>Similarities and Differences Between Subject Matter in Females’ Sculptures</td>
<td>71</td>
</tr>
<tr>
<td>9.</td>
<td>Similarities and Differences Between Subject Matter in Males’ Drawings</td>
<td>72</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Female Student’s Self Portrait Object, <em>Can o’ Worms</em></td>
<td>39</td>
</tr>
<tr>
<td>2.</td>
<td>Female Student’s Self Portrait Object</td>
<td>39</td>
</tr>
<tr>
<td>3.</td>
<td>Female Student’s Self Portrait Object</td>
<td>39</td>
</tr>
<tr>
<td>4.</td>
<td>Male Student’s Self Portrait Object, <em>Taco Supreme</em></td>
<td>39</td>
</tr>
<tr>
<td>5.</td>
<td>Male Student’s Self Portrait Object</td>
<td>39</td>
</tr>
<tr>
<td>6.</td>
<td>Male Student’s Self Portrait Object</td>
<td>40</td>
</tr>
<tr>
<td>7.</td>
<td>Male Student’s Self Portrait Object</td>
<td>40</td>
</tr>
<tr>
<td>8.</td>
<td>Male Student’s Self Portrait Object</td>
<td>40</td>
</tr>
<tr>
<td>9.</td>
<td>Male Student’s Self Portrait Object</td>
<td>41</td>
</tr>
<tr>
<td>10.</td>
<td>Male Student’s Self Portrait Object</td>
<td>41</td>
</tr>
<tr>
<td>11.</td>
<td>Male Student’s Self Portrait Object</td>
<td>41</td>
</tr>
<tr>
<td>12.</td>
<td>Male Student’s Aggression and Nurture Sculpture combined (Grim Reaper and Infant)</td>
<td>59</td>
</tr>
<tr>
<td>13.</td>
<td>Female Student’s Aggression Sculpture</td>
<td>59</td>
</tr>
<tr>
<td>14.</td>
<td>Female Student’s Nurture (sprout) and Aggression (stump and axe) Sculptures</td>
<td>59</td>
</tr>
<tr>
<td>15.</td>
<td>Female Student’s Aggression and Nurture Sculptures</td>
<td>59</td>
</tr>
<tr>
<td>16.</td>
<td>Male Student’s Aggression Sculpture</td>
<td>60</td>
</tr>
<tr>
<td>17.</td>
<td>Male Student’s Aggression Sculpture</td>
<td>60</td>
</tr>
<tr>
<td>18.</td>
<td>Male Student’s Aggression Sculpture</td>
<td>60</td>
</tr>
<tr>
<td>19.</td>
<td>Male Student’s Combined Aggression and Nurture Sculpture</td>
<td>60</td>
</tr>
<tr>
<td>20.</td>
<td>Male Student’s Nurture Sculpture</td>
<td>60</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

I have been fascinated with ceramics ever since my first grade art class at Shenendoah Elementary school in Clifton Park, New York. One of our first projects was to make a small bird out of clay and then decorate it once it was fired. I still have the little yellow bird, and I still remember the excitement that came over me once my fingers touched the wet clay. This little project was truly what sparked my interest in clay.

I never touched clay again until my first year of college. For my freshman and sophomore years, I attended a community college. It was a small school with a small art department, and the Ceramics room consisted of two electric kilns and ten potter’s wheels. I signed up for beginning Ceramics and hoped for the best. The excitement of working with clay came rushing back to me as soon as I got my hands on the first chunk of clay out of the giant storage bin. I remembered back to the little bird, and I knew that clay and art were things that I wanted to have in my life forever. I eventually earned a BFA in Ceramics at Northern Illinois University. Throughout my graduate coursework in art education at Arizona State University, I remained connected to clay through my personal and teaching experiences, and my research. One of things I am most interested in is why adolescents produce the artwork that they do, especially in ceramics.

Statement of Problem

Adolescents’ clay sculpture has been researched significantly less than drawing. More research in ceramics education is needed to expand the knowledge base of children’s work in clay. Research is also needed to determine what factors influence adolescents’ creativity and abilities while
working with clay. There is a lack of research regarding gender and its effects on subject matter preference in children’s three-dimensional sculptures. Clay is a difficult and challenging medium to which children have limited access. Often times their creative aspirations in clay fall apart when the students are faced with construction dilemmas.

Purpose of the Study

The purpose of this qualitative inquiry was to investigate how gender influenced subject matter preference in students’ three-dimensional clay sculptures in a high school ceramics class. This study was not meant to argue the superiority or inferiority of one gender’s artwork over the other. Information about gender preference and clay sculpture can help art educators better understand children’s work in clay and allow teachers to develop better lesson plans that encourage children to break gender stereotypes in their artwork and engage, challenge and facilitate creativity.

Research Questions

The research questions in this study were, (1) How did gender affect subject matter in students’ three-dimensional clay sculpture? (2) What similarities or differences existed between females’ and males’ subject matter preference in sculpture and their subject matter preferences in drawing? (3) Assuming significant gender differences existed, how successful would the students be with a project that favors opposite gender themed subject matter?

Review of Literature

Adolescent clay sculpture is researched significantly less than drawing, and much of the research has been conducted with preschool and elementary students rather than older high school students. Ceramics is a fundamental
component of history and global cultures, yet remains marginal in school art programs and art education research (Sessions, 1999). Research on gender differences and art has traditionally focused on children’s two dimensional artwork and investigated differences in subject matter and spatial abilities. “More recent investigators have turned their attention away from questions of ‘superiority’ and ‘inferiority’ and have begun examining the more subtle nuances of the relationship between gender and style” (Tuman, 1999, p. 41).

The most notable researcher in clay sculpture is psychologist Claire Golomb, who began her research in the 1970’s and studied how children represent figures in clay and then compared these findings to children’s drawings. Eleese Brown (1984) studied characteristics of clay figures made by children and attempted to identify how they change in children from age three through age 11. These researchers observed that children’s development in a three dimensional medium such as clay is less advanced than children’s two dimensional work because they lack experience and access to clay and they are limited by the technical demands of the medium.

A few studies in clay have reported on the effect of instruction on modeling and construction skills (Brewer and Colbert, 1992; Grossman, 1980) and gender differences are noted, however, they tend to focus on how gender affects construction strategies and quality. Creating a sculpture involves much planning and execution using spatial abilities, and some studies (LaPierre, 1993; McWhinnie, 1997) suggest that males have superior spatial and mental rotation abilities than females.

Boys were more likely than girls to excel with clay and with single-medium tasks; they disliked and performed less competently with verbal tasks;
and they evinced a perpetual fascination with the character of Batman.

The predictable difference in subject-matter preferences could also be discerned (dolls vs. trucks); but exceptions to this trend were sufficiently apparent to undermine the claims of inborn preferences for certain subject matters (Wolf & Smith, 1982, p. 118).

Several studies have been conducted on gender and children's subject matter preference in drawing (e.g., Duncum, 1997; Tuman 1999). These studies reveal that, in general, males favor fantasy, violence, aggression, sports, and power, while females favor realism, domestic and social experience, physical appearance, care and concern, and nature and animals. "Female drawings incorporated more humanistic and social content than male drawings, and feminine content domains employed greater variety of color, harmonious color, organic qualities of shape, and more detailed features" (Tuman, 1999, p. 40).

Researchers are unsure if these differences are biological or if they are a result of our own self categorizations in gender-role traits. Duncum (1986) suggests gendered content is a reflection of children's developmental pre-occupations as they are challenged to conform to social models.

Some researchers believe that atypical or androgynous students who do not succumb to the peer pressures molding other children are more likely to be drawn to the arts and be more successful in the arts. For example, in their study, Flannery and Watson (1995) theorized that an individual's gender role type could influence talent in the arts; for example, an androgynous person may be more open to experiences in the arts that could contribute to later talent. Tuman (1999) argues in her study that children who rely more on their artistically spirited individuality and less on predicted gender appropriate solutions are more likely to
produce artworks that explore expressive properties and formal elements outside of favored gender themes.

In reviewing these studies, I developed two sub-questions about gender and its possible effects on subject matter in clay sculpture. First, how did the nature of clay and the physical challenges of the medium affect the findings of this study? Often times students’ subject matter choices are limited by construction dilemmas. In the past, I have observed students who wanted to construct a particular object, but they had no idea how to construct it. The teacher may ask them to figure it out on their own, or even suggest they build something less difficult. This can result in frustration, or the student giving up entirely and choosing to create a less difficult and perhaps less meaningful object. Secondly, would I find any evidence in support of the idea that atypical or androgynous students are more likely to rely on their artistically spirited individuality and less likely to succumb to the peer pressures molding other children, therefore producing artworks that explore expressive properties outside of favored gender themes?
Chapter 2

CONCEPTUAL FRAMEWORK AND DEFINITIONS

Gender

During the course of this study, I examined how the students’ gender affected their subject matter choice in clay sculpture. Gender has been a highly researched and debated area among researchers from many different fields. Gender may be defined in a physical manner, such as one’s sex category of male or female. Sex is a determination made through the application of socially accepted biological criteria for classifying persons as males or females (West and Zimmerman, 1987). However, to more fully define gender one must go beyond one’s physical sex category. West and Zimmerman (1987) describe gender as an achieved status: that which is constructed through psychological, cultural, and social means. People act with the awareness that they will be judged according to what is deemed appropriate feminine or masculine behavior (Deutsch, 2007). Gender roles and gender expectations become normative through daily experiences that are socially constructed conceptions of social reality (Hoeptner-Poling, 2006). Conceptions of gender may vary across time, culture, and social situations, thus, “gender is an ongoing emergent aspect of social interaction, (Deutsch, 2007, p. 107).

As I mentioned in the previous chapter, there have been several studies on gender and its effects on students’ two dimensional media such as drawings and paintings. In general, these studies reveal that males favor fantasy, violence, aggression, sports, and power, while females favor realism, domestic and social experience, physical appearance, care and concern, nature and animals. However, I have been unable to find any literature that explores gender
and its effects on students’ subject matter preference in three dimensional media, specifically, clay. One of the reasons that drawing and painting may have been researched so much is that the materials are easily accessible to students and researchers. But, it is crucial to explore how students make meaning in multiple productive ways, and students often have more access to expressive media in a classroom setting (McClure-Vollrath, 2006).

Clay

Clay derives from the disintegration of feldspathic or pegmatite rocks which, as they decompose, deposit alumina and silica particles and combine with water (Nelson, 1971). Clay is usually classified into three main categories – earthenware, stoneware, and porcelain – depending on the fired density and strength of the ceramic ware (Mattison, 2003). The students in the observed class used commercially produced white earthenware. White earthenware clay is made primarily from a mixture of ball clays with the addition of other minerals and is usually fired to 1830-1980 degrees Fahrenheit (Mattison, 2003).

Ceramics

Clay becomes ceramic when it is exposed to extreme heat in a kiln, which fuses the clay particles together and hardens the body (Mattison, 2003). In ceramics, the three basic construction techniques are hand building, throwing, and mold making (Mattison, 2003; and Peterson, 2003). Hand building, the most ancient and versatile technique, includes pinching out shapes from soft clay, coiling ropes of clay, and building forms from flat slabs of clay (Mattison, 2003). The students in the observed ceramics class used the hand building methods of pinch, coil, and slab to produce their clay sculptures. Because there was no slab
roller accessible to the students, they created clay slabs by rolling out clay with a rolling pin and wooden slats to determine an even thickness.

Sculpture

Clay sculpture, which is three dimensional, can be constructed in many ways. In this study, we asked the students to make a series of clay sculptures using primarily the previously defined hand building methods such as coil, pinch, or slab. We introduced the first sculpture as a self portrait object, in which we asked the students to construct an object in clay that they believed represented them.

The second project consisted of the students working on traditionally stereotypically gender themed projects. For example, each student constructed a sculpture that interpreted the word aggression in clay and each student created sculpture that interpreted the word nurture in clay. We had the students work in groups to come up with their own definitions and examples of the words aggression and nurture.

Subject Matter

The subject is the image that viewers can easily identify in a work of art (Ragans, 2005). For the purposes of this study, I defined subject matter as what the student chose to sculpt and how the student applied underglazes and glaze for decorating his or her project. Subject matter can be thought of as becoming thematic when it becomes focused in a very decisive way and is the locus for repeated examination (Feinburg, 1979).

Glaze

Students in the observed class were expected to finish and glaze all artwork. The students used commercially prepared low fire gloss glazes. A glaze
is formed by mixing specific amounts of materials [minerals] together in water where they are held in suspension by the viscosity of the fluid (Burleson, 2001). Glazing ceramics means adding a coating of these materials suspended in water to the surface of the pot or sculpture. When heated, the glaze melts to form a glass-like surface that is usually impervious to water (Mattison, 2003). Glazing ceramics adds decorative color and texture.

**Underglaze**

Underglaze colors are commercially manufactured clay pigments that are stable during use and will generally fire to the same or similar color as the raw material (Mattison, 2003). Underglazes are versatile and can be used on wet or dry clay, as well as bisque ware.

**Art Criticism**

Once the students completed a sculpture for the study, I asked them to complete a self evaluation in the form of a written art criticism questionnaire. Art criticism may be defined as a personal encounter with a specific work of art resulting in linguistic analysis and/or interpretation of the work (Anderson, 1991). Art criticism can generally be understood as discourse around topics of description, interpretation, judgment, and art theory (Barrett, 2004). The questionnaire took students through art educator E.B Feldman’s four steps of art criticism, which are description, analysis, interpretation, and judgment. By using these steps, students were able to describe the subject matter of their sculpture, analyze how the work was made and organized, interpret meaning, and evaluate the success of their sculpture. This process allowed students to further reflect on their artwork and also provided more data for me to analyze.
Chapter 3

METHODOLOGY

Description of the Study

I was interested in exploring gender and its effects on subject matter in clay sculpture, so this was a qualitative inquiry, using mostly participant observation in a high school ceramics class. Qualitative inquiry is a process of describing, analyzing, and interpreting insights discovered in everyday life (Wolcott, 1994). Qualitative inquiry broadens our field of knowledge or refutes our accepted beliefs through comparisons with other cases (Stokrocki, 1997). According to Stokrocki, (1997) the four main types of inquiry are ethnography and microethnography, phenomenology, educational criticism, and the case study. This study is also a case study because I collected data on specific ceramics projects by high school students over a period of time. A case study explores in depth a program, event, activity, process, or one or more individuals (Creswell, 2009).

The process of qualitative research involves three stages: data collection, content analysis, and comparative analysis. Data collection is a process of recording an event and gathering important information (Stokrocki, 1997). There are many methods for data collection, some of which include writing down first impressions, taking field notes to record participant interactions, and taking photographs. The stage of content analysis is used in discovering concepts and themes (Stokrocki, 1997). Content analysis includes searching for patterns and themes among the data by using techniques such as categorizing and coding. Comparative analysis is a process of interrelating findings or explanations to form
insights (Stokrocki, 1997). Comparing my findings to evidence put forth by previous studies can help support conclusions in my own research.

**Data Collection Procedures**

Qualitative observations are those in which the researcher takes field notes on behavior and activities of individuals at the research site (Creswell, 2009). I recorded observations about the students’ artwork, comments, and attitudes for all projects using digital photography and handwritten notes. Although photography may be intrusive and disruptive while the students are working, it is an extremely descriptive and accurate way to gather data. To minimize the disruption, many photos were taken of the artwork alone after class.

I used informal observations and interviews as the students created their work. A formal interview in the form of a written art criticism questionnaire (Appendix A) was conducted after the artwork was completed. These written statements may provide more detailed and thoughtful data because students may be less intimidated by written reflection rather than oral reflection.

I asked the students to complete a series of clay sculpture projects over the course of approximately six weeks in an attempt to answer my initial three research questions, (1) How did gender affect subject matter in students’ three-dimensional clay sculpture? (2) What similarities or differences existed between females’ and males’ subject matter preference in sculpture and their subject matter preferences in drawing? (3) Assuming significant gender differences existed, how successful would the students be with a project that favors opposite gender themed subject matter?


**Description of Projects**

We spent one class period at the beginning of each project to introduce the project to the students. For the first project, the Self Portrait Object, the teacher, Miss A., showed the class a Powerpoint presentation with examples of images of three dimensional sculptures made from a variety of materials. Some of the images were of sculptures made by previous students and others were by famous artists, such as *The Dinner Party* by Judy Chicago. As the students looked at the images on the screen, Miss A. asked them to think about their favorite activities or foods. She explained that if a student likes skateboarding, she or he might make a skateboard sculpture. She urged students to go a step further and think about how they could take a simple idea and make it more interesting. For example, she showed an image of a skateboard and then displayed an image of a skateboard sculpture that was twisting and turning in on itself. Miss A. gave the students a Self Portrait Object Planning Sheet (Appendix A) that she assigned as homework. The students needed to sketch several ideas and have their plans approved by Miss A. before they began their sculpture. For this project, we did not limit the size of the students’ sculptures. We gave the students approximately two and a half weeks to complete this project.

For the second project, the Aggression/Nurture project, Miss A. divided the class into small groups according to birth date. We then had the students work together in their groups to come up with a definition of the word *aggression*, and a definition of the word *nurture*, and list five examples of each word. Then we had a spokesperson from each group share their examples with the class. The students then had to interpret each word by creating a clay sculpture no taller
than six inches that represented each word. We gave the students one and half weeks to complete this project.

After each project was completed, students completed an art criticism questionnaire (Appendix A) in which they completed the steps of art criticism and reflected on their own artwork as a post questionnaire. These statements allowed the students to verbally explain and evaluate their artwork, and supplied more information for me to analyze.

*Content Analysis Procedures*

The stage of content analysis is used in discovering concepts (abstract ideas) and themes (Stokrocki, 1997). During content analysis, I illustrated the unfolding of projects in the classroom using a descriptive narrative. Then, I analyzed student sculptures and interpretations by searching for emerging patterns and themes. I created categories for popular subject matter and themes that were evident among the students’ sculptures. Inductive analysis involved discovering patterns, themes, and categories in data (Patton, 2002). Finally, in order to support my findings and help me to form conclusions, I compared my findings to previous research for evidence of similarities or differences using external comparative analysis, the final stage of qualitative research.

*Setting*

The study took place in a small city outside of Phoenix, Arizona, at a Title I high school that had about 1,800 total students enrolled during the 2010-2011 school year. The term Title I is often used to refer to schools or school districts in low income areas that receive entitlement grants from the U.S government. According to the school’s 2008 report card located on the Arizona Department of Education website, the school has a high amount discipline referrals, a high
amount of absences among students, and a four year graduation rate of 65% (http://www10.ade.az.gov/ReportCard/SchoolReportCard.aspx?id=5925&Year=2008&ReportLevel=1). According to the 2000 census, the small city in which the high school was located had a total population of 31,814 with a median household income of $33,170 (http://quickfacts.census.gov/qfd/states/04/0402830.html). The number of residents under age eighteen was 20.5% and the number of residents over the age of sixty-five was 25.3%, with a break up of 51% female and 49% Males. In the 2000 census the population registered 92% White, 8.8% Hispanic, 1% Native American, .06% African American, .05% Asian, and 2.1% other races (http://quickfacts.census.gov/qfd/states/04/0402830.html).

According to the teacher, Miss A., the budget for art supplies at the high school was less than one dollar per student. The high school had a small ceramics room, with six tables for students to work on and only two medium-sized racks for project storage in the back of the room. A large white board was located at the front of the classroom that Miss A. usually wrote lesson objectives and vocabulary words on. The other two walls of the classroom were lined with small cabinets and drawers for the storage of clay tools and smaller projects. The students used low fire commercially prepared clay and glazes that Miss A. fired for them in the classroom’s one electric kiln.

**Participants**

I chose the students, or participants in the study, in a non-random manner. Since I was not a full time teacher at the time of this study, I did not have the convenience of using my own classroom and students for observation. I had the difficult task of finding a teacher who was willing to let me come into his
or her classroom, alter lesson plans, and observe student behavior and artwork. In addition, the teacher and I had to convince administration to allow us to conduct research. Even though the nature of this study is not harmful, it was still difficult finding a school that would let me conduct research within one of its classrooms. After several failed attempts, I reached out to a fellow classmate at Arizona State University, Miss A., who was teaching high school ceramics part-time. Thankfully, Miss A. got approval from her administration and welcomed me into her classroom. The students in her classroom were students who were pre-assigned by school administrators to a beginning ceramics course.

Miss A. was a young teacher with a Bachelors Degree in Art History, a Bachelor of Fine Arts Degree in Ceramics, and a Masters Degree in Art Education. At the time of this study she had six years teaching experience and had been teaching at this particular high school for less than one year. At the time of this study, the school could only afford a part-time ceramics teacher so Miss A. only taught three classes, yet she considered herself very lucky to be teaching in the medium that she loves. According to Miss A., she felt that she did a good job listening to the students and treating them as adults and individuals. I noticed that she never talked down to them and she was accepted by the students almost like she was one of them. She stated she is very laid-back (laissez-faire) and jokes with the students to encourage a fun and easy going atmosphere. She also used sarcastic humor that students could easily relate to.

The observed class met every day for one hour during fifth period right before lunch. There were 22 students in the class, most of whom were Caucasian. There were only a few Hispanic students and no African-American students. Fifteen students were male and only seven students were female.
Unfortunately, one female student had severe disabilities and was unable to participate and another female student dropped the class during the course of the study. Out of the 22 students in the class, 19 participated in the study, five were females and fourteen were males.

Several of the students, just like many teenagers, had part time jobs and hobbies such as sports, writing, or listening to music. Five of the males in the classroom took part in the school’s ROTC program, which is a program that trains students for future military service. Every Wednesday these males would come to class in their military uniforms. However, in addition to seemingly normal teenage activities, some students were dealing with out of the ordinary life situations. Three out of the 22 students in the class were, or were preparing to be, teen parents. One student, a male, had a young infant son, and two more students, one male and one female, were expecting babies. During the course of my study, two students, one male and one female, were suspended for disciplinary issues in other classes. Another female student, mentioned in the limitations section, was absent thirty-six days during the course of the semester.

**Ethical Issues**

In order to insure that there were no violations of ethics during this study, I completed a Social Behavioral Application and submitted it, along with my research proposal, to Arizona State University’s Institutional Review Board. In addition, I was granted approval from the high school at which my study took place. Appendix B contains the letter of permission from ASU’s Institutional Review Board. I obtained student and parent consent because most of the students were under the age of eighteen. The consent letter (Appendix B) given to students and parents made it clear that their participation in the study was
voluntary and at any time the participants could choose to leave the study without penalty to their grade. To protect the students' identities, I removed any names from all questionnaires, sketches, and worksheets that were used in this study. I assigned each student a number, and only the student's number is linked to student data.

Limitations

The limitations of this study are (1) student background and outside influences, (2) student attendance during the course of the study, (3) student motivation and interest level, (4) type of clay, glazes, and materials used, (5) student ability level and challenges of the medium, and (6) my own participation in the study and interpretation of the findings.

In this study I could not control for student background and outside influences. It was difficult finding a teacher and a school that was willing to let me come into the classroom, alter lesson plans, and observe student behavior and artwork. Miss A allowed me to come into her classroom and observe her students, however the students were pre-assigned to the classroom by administrators. Student background in ceramics is a factor that may affect their ability to construct clay sculptures. The observed class was a Ceramics I class, but that does not mean that students have not had ceramics experience in the past. In addition, I could not control for outside influences. Some participants in the study were in the ROTC program or were heavily involved in sports. Some participants had more experiences in the arts than others. These factors may have had influence on their choice in subject matter and overall quality of sculptures.
During the course of the study, some students had a high level of absences, which was out of my control. Miss A. told me that one female in the class had thirty-six recorded absences during the semester. In some instances, students did not finish projects, or omitted a project all together, due to the fact that they were not present to construct their sculpture. Also, student absences may have caused some students to rush through projects. Students may have cut corners on planning and execution of their sculpture, which may have compromised subject matter and other aspects of the sculpture.

I could not control for student motivation and interest level. The ceramics class that I observed counted as an elective for partial fulfillment of the state of Arizona’s Fine Arts credit requirement and mainly students with a strong interest in art chose to enroll. This may affect students’ subject matter and overall sculptures. On the other hand, even though students chose to sign up for the class they still may have been uninterested in the project and did not spend the time needed to construct a successful or thoughtful sculpture.

Students were limited in materials due to the school’s budget and facilities. The school supplied the students with low fire, white earthenware clay and had one electric kiln. The students used low fire commercial glazes and underglazes, which limited their choice of color to those that were included in the class array of glazes and underglazes. This may have affected students’ choice in subject matter for sculptures, or their end result.

I could not control for student ability and challenges of the medium. Often times students’ subject matter choices are limited by construction dilemmas. Students may have wanted to construct a particular object but they had no idea how to construct it. The teacher might have asked them to figure it out on their
own, or even suggested they build something less difficult. This may have caused student frustration and lack of interest in the project. It may have even caused the student to giving up entirely and choose a less difficult and perhaps less meaningful object to create for their sculpture.

Finally, my own participation and interpretation affected the study. The students’ sculptures are not self-initiated and instead I gave them specific projects with certain guidelines that affected their subject matter. Also, as the research went on and I gained the students’ trust, I became a participant by taking on a teacher or advisory role. I gave students construction suggestions that may have affected their subject matter. Although I have tried to rely only on student comments and interpretations, my own interpretations and ideas on the sculptures may have influenced my findings and conclusions in some ways.
Chapter 4

DESCRIPTIVE UNFOLDING OF PROJECTS AND CONTENT ANALYSIS

In this chapter, I illustrate the unfolding of the projects in the classroom using a descriptive narrative. I analyzed the content by searching for similarities, differences, patterns and themes among the data, including observations, student plans and sketches, characteristics of the sculptures and construction methods, and interpretations found in the students’ art criticism questionnaires.

First Observations

On the first day, Miss A. introduced me to the class as her friend from Arizona State University that was doing research. The students were working on a slab box project that Miss A. introduced to them a few days before. Many of the students had their slabs rolled out and they were beginning to slip and score and attach the walls to build the box. However, only a few students worked intently on the project, while most of the class seemed to be frustrated and vocally expressed their lack of interest or boredom by saying things like “This sucks” or “This is stupid.” One male student crumpled his project at the end of the class and said it was terrible. I told him he shouldn’t have crumpled it and he replied; “Well now it will be even better tomorrow.”

On the second day, the ROTC students were absent due to their drill, which was a uniform inspection. The students that were in class continued to finish their slab boxes (Miss A.’s previous project) and I walked around the room and helped them when they needed it. The students still seemed bored and were complaining so much that Miss A. lectured them for too much whining. Then, we introduced my thesis by explaining that the following week they would be working on a self portrait, and another sculpture that would be an
interpretation of words. We handed out permission slips and explained that they
didn’t have to participate in the study, but they would still have to complete the
projects for the class. Only about half of the students seemed interested, but a
few students came up to me afterwards and asked about it. One female student
asked me what I was studying at ASU and how I got interested in art.

The following day, the students had Benchmark testing in the morning so
their class was shortened and met an hour later than usual. The ROTC students
were back and I talked to them about the projects they would be working on for
my thesis and handed out permission slips to them. One of the male students
was really interested and told me that he heard that males are usually better at
math than females, but he believes females are better in English. I told him
some researchers believe males are better at spatial reasoning and building
things. He told me that he didn’t agree with that because he “sucks in clay” but
he explained that he is able to put things together well with wood.

The students took longer than Miss A. anticipated in finishing their slab
boxes, which caused a delay in the start of the first project for my research, the
Self Portrait Object. Miss A. tried to rally the students to work faster by voicing
her frustration with their lack of enthusiasm and overall laziness in her class.
One student replied to her by saying, “We just don’t care, Miss A.” He went on
to say that he was referring not just to her class, but to life in general. The
students were apathetic.

Self Portrait Object Observations

We introduced the Self Portrait project on the sixth day of my
observations. Miss A. gave the students a handout (Appendix C) that she
designed in order to get them thinking about a plan for their sculpture. The
handout had spaces for students to write about and draw examples of their favorite activities, foods, career goals and things that were most important to them in life. She gave it to them as homework and told them that the plans must be approved by her before they can begin construction on their Self Portrait Object.

Miss A. started the presentation and said “We’re going to get more sculptural.” She asked the students to start thinking about meaning and symbolism. She talked about the self portrait and explained, “It is not a sculpture of your head” but a “portrait” in the sense that students would pick objects and ideas to represent themselves.

She asked students “What is your favorite activity? Are you a fan of skateboarding?” She showed images of a skateboard and previous student sculptures of a skateboard. She asked, “How can you take a simple idea like a skateboard and make it more interesting?” She showed an image of a skateboard that was spiraling and twisting in on itself and explained that students may alter their designs and colors to make their sculptures more interesting. Miss A asked the students, “What’s your favorite food? Do you like apples?” and showed images and sculptures of apples. She showed The Dinner Party by the artist Judy Chicago and described it as a feminist sculpture and that every place setting represented a famous or powerful woman. She asked students if they liked to travel and showed them images and sculptures of an airplane. She asked the students, “What type of animal represents you?” and some males shouted out animals like giraffe, or chinchilla, but for the most part the students were quiet and seemed interested in watching the presentation.
After the presentation and discussion, Miss A. instructed the students to work on their handout and plans for their sculptures. The students began to work intently and were focused on their plans. They weren’t rushing through it and seemed generally interested in their new Self Portrait Object project. I walked around with Miss A. and started to talk to students about their ideas for their sculptures. One student (Student 1) finished his plans and said that he wanted to make a baseball bat cup. Miss A. asked what that would say about him and he replied, “Because I like baseball and I like to drink.” Miss A. explained that she would let him do it, but she expressed concern about how he would construct it and make the sculpture support itself.

As I walked toward the back of the room, I observed another student (Student 2), still working on his slab box and I saw that he had covered it in mushrooms, what I thought was an obvious hallucinogenic drug reference. He created the stems from little coils of clay and the caps from small balls of clay. I asked him, “What’s up with the mushroom box?” and he started laughing and replied, “They’re not mushrooms. They’re jellyfish.” Another student nearby (Student 3) who wasn’t working on anything started laughing. I ignored the laughter and asked Student 3 if he had any ideas for his Self Portrait Object. He told me his favorite food was sushi and that was all he had so far. Then Student 3 started talking about Sapporo, a type of Japanese beer, and I interrupted him and asked him how he knew what Sapporo was. He replied, “Because my family is alcoholics.”

Miss A. told me that she normally has to censor the students’ projects in a way, by not allowing for drugs, alcohol, weapons, or even copyrighted imagery in their work. She was well aware of the drinking and drug references in some of
the students’ plans and projects, but she decided she was not going to censor the students in any way during my research in order to try and get the most unaffected results.

The next day, Miss A. spent time walking around and talking to each student about his or her project. The students seemed excited and eager to begin a project that served as a statement about them. Many students had finished their plans and were beginning to think about construction strategies. Miss A. was still concerned about Student 1’s baseball bat cup. She asked, “How will you construct this? How will you balance it?” His idea was to use a slab and coil technique. Miss A. suggested making the cup portion by wrapping a slab around a cylinder, but she was still concerned as to how the cup portion would rest on top of the bat handle without collapsing. A female student (Student 4) wanted to make a sphere-like sculpture that was half softball and half peace sign and she wanted it to be see-through. When Miss A. asked the student how she would build it, the student stared at her with a blank stare. Miss A. told the student to come up with more ideas because she thought it would be too difficult to construct.

Another student, (Student 5) started to explain his sculpture plans to Miss A. This student was dressed differently than the other students, wearing a vintage leather jacket, a black fedora hat and a silver skull ring on one of his fingers. He explained that he wanted to make a standing figure with a skull head as his Self Portrait Object. He said he wanted to include a spiral as part of the design on the body. Miss A. asked him what the spiral would represent and he replied, “My favorite activity is inflicting mental distortion on people.” He further explained that the spiral was to represent hypnotism or mental manipulation.
Miss A. chuckled at his idea but told him that it would work. She was concerned, however, with construction difficulties and told him, “Remember it’s difficult to make a person standing. Look at people and sculptures on the Internet. Get an idea of how people approach the human figure out of clay.” I was impressed with Student 5’s idea and wondered if it was not a coincidence that a student who stood out with his unique manner of dress was coming up with one of the more interesting ideas in the class so far.

At Student 5’s table, I found another unique student (Student 6). Miss A. had previously told me that this female student had gender identity issues. This student dressed like a male student, in baggy jeans and a faded Guns N’ Roses t-shirt. She did not wear make-up, but had glasses, long brown hair, and a piercing in her lower lip. Miss A. told me that Student 6 confided in her that she wanted to be a male and was attracted to females. I talked to Student 6 about her plans for her Self Portrait Object. She explained that she wanted to make a can of worms out of clay and when I asked her why she said, “I am a very complicated person. You don’t want to open that can of worms.” She told me that the can would be filled with things that she likes and that these items would be spilling out of the can. She said “Strawberries. I like them. They’re also like a heart. When you squeeze them they smush and bleed.” Miss A. told her to make a slab of clay and form it around a cylinder form to make a tall can shape.

A couple of male students were struggling to take their ideas and turn them into sculptures. One student (Student 7) was explaining to us that he wanted to make a guitar to represent his love of music. When Miss A. asked him how he would make it out of clay, he just looked at her and shrugged. Miss A. told him to keep drawing and working on his plans. Another male student
(Student 8) told us that he wanted to sculpt a hand holding a baseball to represent his love of baseball. Miss A. was interested in the idea but told him, “It’s gonna be hard. Find pictures on the Internet. Draw.”

The following day, a Friday, students started to construct their Self Portrait Objects. A male student (Student 9) was making a football shaped bowl using the pinch pot technique. He told me that he plays football for the high school and that it is his favorite sport. He also told me that he will carve figures into the outside of the bowl to represent his family. Another male student (Student 10) was constructing a rectangular slab box. He told me that he was going to decorate the box with things that are important to him, such as family, school, friends, and love. He was enthusiastic, working very quietly, and putting forth good effort into his project. Miss A. told me that he was a very smart student and that he participated in several academic clubs and challenges at the school.

I observed that two students that I visited with on the previous day were already altering their plans due to construction difficulties. Student 5 started making a solid sculpture to represent his standing figure and skull head but Miss A. told him that it would likely blow up in the kiln. Miss A. suggested instead that he just make shoulders and a head, or a bust sculpture. She told him he would need to combine two large pinch pots for the body, and two small pinch pots for the head. I saw that his actual sculpture was already looking much different than his original drawing plan. At a nearby table, Student 4 was ditching her plan for the softball peace sign, probably because Miss A. told her it would be too difficult, and she was struggling to come up with new ideas. I was trying to get more information from her as well as help her think by asking what she was interested
in. She was always dancing in the classroom and listening to her iPod. She was pretty and popular and sometimes got into small spats with two females who sat in the back of the room. She told me that her favorite activity was softball and her favorite food was pizza. She told Miss A. and me that she was thinking about sculpting the word Faith. Miss A. showed pictures of word sculptures on the Internet, including the Love sculpture by artist Robert Indiana. The student seemed frustrated by the amount of difficulty such a sculpture might present.

The next day was a Monday and by this time most of the students had started constructing their Self Portrait Objects, although about a quarter of the class was still finishing their slab boxes. I observed more students who were running into design and construction problems and they were becoming frustrated. Someone shouted out in frustration, “I hate clay” and Miss A. replied, “You should say I love clay twenty times a day and I promise your projects will be better.” Student 7 was thinking about changing his guitar idea into a cereal bowl because he said he was hungry and food was all he could think about. I suggested that he make a cereal bowl that was shaped like a guitar and he replied, “That’s too hard.” Another nearby male student (Student 11) wanted to construct an American flag and a rifle to show his involvement in the ROTC program, but he was stuck on figuring out how to construct it. He became discouraged and seemed to have a lack of interest in the project.

Two more ROTC males (Student 12 and Student 13) were discussing their projects and altering their designs. Student 12 wanted to construct a realistic soldier with a dog to represent his future career goal as a military police officer in a canine unit. However, he couldn’t figure out how to sculpt a dog or a standing figure so in order to avoid sculpting difficult figures, he was planning on
using a slab technique to construct a mug. He wanted to use a stencil technique with underglazes to get a soldier and dog outline on the outside of the mug.

Student 13 was starting work on an anchor to represent his involvement in the Navy Junior ROTC program. He was rolling a slab to carve the anchor out of, and then he said he wanted to incise the anchor with the words honor, courage, and commitment to represent the Navy core values.

Student 9 was continuing work on his pinch pot football but he was struggling with the clay and the shape of the bowl. I overheard him say, “This sucks” and when I asked him why he replied, “It’s too hard.” His pot was very wet and thin and it was starting to collapse a bit. He kept trying to get the rim perfect and he would smooth areas over again and again but he was starting to overwork the clay. I told him that he should let the pot dry a bit so it would be easier to work with. Student 13 also kept trying to smooth out the bumps and small cracks in his anchor but the clay was too wet and he just ended up deforming the clay further. I advised him to let the clay dry a bit, perhaps a day or so, before going back in and trying to refine it. It was difficult for the students to let the clay go through its necessary stages. They didn’t seem to understand that sometimes it was best to handle the clay or fix bumps and other imperfections in the leather hard stage.

A day later, all of the ROTC students came in to class dressed in uniform. I noticed they were hesitant to work in the clay and they said it was because they don’t want their uniforms to get dirty with clay dust. Student 1 and Student 4 were working at the front table together. Student 4 was helping Student 1 because her hands were small enough to fit inside of his baseball bat cup. His cup was falling apart where the cup portion met the handle, just as Miss A. had
predicted that it might. However, with some assistance from other students and Miss A. he was able to mend the project. I decided to sit with Student 1 and Student 4 as they worked together and asked them some questions. “Do you make things for yourself or other people? Do you care about what people think about your projects?” Student 4 said she was most concerned with making expressive artworks. She makes them with other people in mind, such as past relationships or friendships. She said she felt that her artwork was more emotional. Student 1 said he enjoyed making functional projects, mostly for himself. He called himself “a selfish clay maker” and said he doesn’t really think about others when he makes his projects.

I noticed that still more students were attempting to make functional pieces and even altering their original sculptural idea by turning into a functional one. One male student (Student 14) originally wanted to make a firefighting scene out of clay using a slab and coil method to represent his future career aspirations of becoming a firefighter. But now he was coiling a functional bowl or cup shape. He told me that he wanted to make flames on the side of piece with a hose wrapping around it. When I asked him why he was now making a functional coil pot instead of his original slab sculpture idea he replied, “Because it’s easier.” Student 13 was discussing the possibility of turning his Navy anchor into a small charm for a necklace. Miss A. advised him that it in order to do so he would need to shrink down the size of the anchor and then it would become too small and too difficult for him to carve all the details. She also said there would be a good chance that it would be lost or damaged. Miss A. explained to me that she usually discouraged students from making functional pieces when she taught this project in past classes but she decided to let the students go this time.
because it was for my research. She said she was glad that she let the students make functional pieces as well as sculptural pieces because she was discovering that she actually liked the project better when the students were left with options. She was enjoying seeing what were coming up with.

I noticed that by now all of the females, except for Student 6, had either hearts or music notes on their sculpture. One female (Student 15) was making a rectangular slab box with a softball, music notes, and the word Art in raised clay letters on the side of it to represent her favorite things. The female sitting next to her (Student 16) was working on a heart shaped clay slab with little clay coils in the shape of iPod earphones. The clay heart fit neatly into a small, solid clay base that had her and her boyfriend’s first initials carved into it. Student 16 was absent for several days in a row because she said her parents wouldn’t let her go to school. I asked if she was okay and she told me she found out that she was pregnant. I was caught off guard by her response and I did not really know what to say to her. I asked her when she was due and she said August. She said that her parents wanted her to have an abortion but she wanted to keep the baby. Several of the students were distracted by the news and were trying to comfort her.

As I floated around the room and watched the students work, I noticed that Student 5 and Student 6 were having a discussion about some papers they had on their table. The papers had printed lyrics from songs by the hard core German band, Rammstein. I told them that I used to listen to that band when I was in high school and their eyes lit up. Student 6 told me that she was teaching herself German because she liked the band so much. She showed me a small coin shaped piece of clay that she made to fit inside of her can of worms. The
little piece had a word that started with a W carved into it. When I asked her what the word was she told me that it meant water in German. She wanted to have the three elements, water, wind, and fire, written in German on part of her sculpture. When I asked her what the three elements meant to her she said it was because she identified with them. I asked her she wanted the words in German and she replied “Because I like German. German is cool.”

There was a group of students, two males and one female, at one of the back tables that appeared to spend most of their time goofing off. One of these males, Student 2, took what seemed like forever to finish his slab (mushroom) box, but I noticed that it had excellent craftsmanship. The other male at the table, Student 3, was working on a slab portrait of a Star Wars character, but spent most of his time trying to distract other students by throwing balls of clay around the room. The female at the table, Student 17, was working on two cherries with music notes and her friend’s names carved into them, but she put forth little effort into her project and spent most of her time listening to her iPod and talking to Student 3. She often told me that her project sucked and most of the times I tried to give her advice on how to improve it she would just shrug her shoulders.

Just when I thought Student 2 would never begin his Self Portrait Object, he did. He rolled out a thin slab and shaped it into what looked like a taco shell. Over the course of the next few days, he slowly added a baby’s head and feet in the taco shell. When I asked him what his sculpture meant, he told me that he worked at Taco Bell and that the baby was his son. He eventually cut out many little hearts from a thin slab of clay and covered the baby with these hearts. He said this was the lettuce in his taco. Miss A. and I thought his sculpture was very
creative and well done and the more positive reinforcement we gave him, the faster he worked and the more developed his sculpture became.

One day, towards the end of the Self Portrait Object project, there was a buzz in the air about the new *Harry Potter* movie. Many of the students stayed up late the night before to go to the midnight showing. Two male students, Student 1 and Student 9, spent the class period making magic wands out of clay and then pretended to cast spells on one another. Another student, Student 13, kept trying to tell me about scenes from the movie. Earlier this same day, there was a school lockdown and drug sniffing dogs were brought into the classrooms. The students were cracking jokes about this playfully accusing each other of getting sniffed out by the dogs. The students were distracted and didn’t work much on their projects this day. However, I observed one male student (Student 18) intently carving a tree into the bottom of his coil bowl. Student 9 asked him, “Dude why are you putting a tree in there? You’re not eco-friendly! Put a spaceship in there!” Student 18 was a shy, quiet student in the ROTC program. He reluctantly told me that the tree represents landscaping but he wouldn’t elaborate. I found out later, through his art criticism questionnaire, that he wants to be a landscaper when he is older.

As the days went on I noticed that the students trusted me more and more. I would give them advice about their sculptures and they would take it and discover that I actually knew what I was talking about. This caused them to seek out my advice more and more and they became more willing to share their ideas and thoughts with me. One male student (Student 19) often avoided talking to me early on during my research. He always wore a baseball hat, a baggy sweatshirt, and jeans that sagged way below his waist. He hadn’t brought in his
permission slip and didn’t seem to care much about the project or my study. I 
had no idea what he was constructing until late into the Self Portrait Object 
project. Eventually I realized that he was making handle bars and the front 
portion of a motorcycle or dirt-bike. He was having trouble connecting a coil for 
the brake to the larger coil handle bar. I told him to slip and score it well and then 
prop the brake coil up with a sponge until it was dried and set into place to avoid 
slumping and cracking. He looked at me and told me thank you and then started 
doing what I told him to do. Miss A. stopped by and told him that he was doing a 
great job. It was as if he immediately decided that I was cool and he could now 
share things with me. I told him that I really liked his project and that I would like 
to include it in my study. He seemed a bit surprised and almost flattered. A few 
days later he brought in his permission slip.

*Plans and Sketches for the Self Portrait Object*

To get the students to open up about themselves and plan for their 
sculptures, Miss A. gave the students a planning worksheet (Appendix C). The 
sheet asked students to list certain things about themselves, such as their 
favorite activities, favorite foods, what they wanted to be when they were older, 
the most important things in their lives, and what makes them unique. In addition, 
the students were to draw or sketch symbols that could represent their answers. 
On the back of the sheet there was room for the students to sketch their ideas for 
their sculptures. The students were required to turn the worksheet in, but not 
every student did. Some students lost the sheet and turned in plans on a piece 
of scrap paper. One male student (Student 2) did not draw any plans at all and 
just started sculpting his project. Out of 19 students that participated in the 
study, 13 students turned in the planning worksheet. Four out of the five females
in the study turned in the planning worksheet and nine out of the fourteen males in the study turned in the planning worksheet.

Under favorite activities, males listed things like baseball, working on cars, playing guitar, dirt-biking, ceramics, and watching movies. One male, Student 5, listed his favorite activity as “Inflicting mental distortion upon another” and he drew a spiral as a symbol for this activity, which he later incorporated into his sculpture. Females listed things like volleyball, softball, and listening to music for their favorite activities.

Almost every student listed family as one of the most important things in their lives. Only two male students listed something other than family. One male, Student 8, listed baseball as the most important thing in his life and another male, Student 18, gave no answer.

Seven of the student’s planning sketches on the worksheet matched up with their final sculpture. For example, Student 1 drew his baseball bat cup on the back of his planning worksheet and his final sculpture closely resembled his sketch. Student 19 drew his dirt bike handle bars as his planning sketch, and his final sculpture looked like his sketch. Student 15 sketched out a rectangular box with the word Art drawn in bubble letters on the side of the box and her final clay sculpture closely matched her planning sketch.

However, five out of the thirteen students who turned in the worksheet had planning sketches that did not closely match their final sculpture. Student 3 drew three sketches of his face on his planning sheet. One face had a halo and he wrote, “I’m an angel” underneath of it, while another face was wearing an army helmet and had “Future Soldier” written underneath of it. However his final sculpture was a slab portrait of a Star Wars character that he said represented
his love of *Star Wars*. In his planning sketch, Student 5 drew a very detailed figure that was standing upright with outstretched arms. The figure was drawn with a hat, a demonic face, wings, and was holding a heart in one hand and drumsticks in another. The figure’s clothing was covered in lines and spirals. However, Student 5 was unable to make a standing figure, so he constructed a bust without wings and only shoulders and a head. His final sculpture (Figure 11) is wearing a hat and holding drumsticks but it is far less detailed than his original sketch. Another male student, Student 10, drew something that almost looked like a blueprint, with many different written words and separate sketches. This student said he wanted to be an engineer when he was older, so he drew a rocket launch pad and a robot claw on his planning worksheet. He also drew a mountain to represent his life and determination, with his date of birth at the base of the mountain and things like school, family, and college moving up the mountain with the word *Life* at the very top. He omitted the engineering and mountain references from his final sculpture. Student 4 drew a softball, peace sign, and music notes on the back of her planning sheet but her final sculpture was four connected slabs that had the words *Love, Hope, Faith,* and *Believe* carved into them. She altered her plans when Miss A. told her that her original idea of a half baseball half peace sign sphere might be too difficult. Student 14 drew a firefighting scene on the back of his planning sheet that he wanted to construct using clay slabs. However he was suspended due to discipline issues and missed multiple days of school. When he came back from suspension he made a much smaller and less difficult project, a small, coil-built cup with a fire hose wrapped around it.
Characteristics of Females’ Self Portrait Objects

Four out of the five females who participated in the study included either hearts or music notes in their sculpture. The females said that the hearts represented their love for family, friends, or boyfriends, while the music notes represented their love of music. The female that did not include hearts and music notes was Student 6, who made the *Can of Worms* sculpture (Figure 1). Interestingly, she views herself as a male instead of a female and checked male on both art criticism questionnaires, writing “Do I have to choose?” on one of them. Some elements of her sculpture included a pencil that she said represented her love of drawing and writing. She also included chess pieces and a die, which she said represented chance in life. Student 4 had originally planned on making a sphere that was a softball and peace sign combined, but changed her plan due to four connected slabs that had the words *Love, Hope, Faith, and Believe* (Figure 2) carved into them construction difficulties. However, the sketch for her original plan included music notes.

One female, Student 15, included a softball as part of her sculpture to represent her favorite activity, softball. Student 4 originally planned to include a softball as part of her design, but it was omitted in her final sculpture. Although many of the females listed some type of sport as their favorite activity, sports themes were not popular in their final sculpture.

Characteristics of Males’ Self Portrait Objects

Two out of the 14 males included hearts in their final sculpture. Student 2 made many little clay hearts as the lettuce in his taco that covered up his infant son (Figure 4). Student 10 carved a heart into one side of his clay box to represent his love for his girlfriend. Student 5 originally sketched his sculpture
holding a heart, but omitted the heart in his final sculpture by replacing it with drumsticks to represent his love of music and the drums.

Four out of the 14 males included sports themes in their final sculpture. Student 1 constructed a baseball bat cup to represent his love of baseball and Student 8 sculpted his hand holding a baseball to symbolize his love of the sport (Figure 5). Student 9 made a pinch pot football to show his love of football. Student 19 sculpted the handle bars and front end of his dirt-bike to represent his involvement racing dirt-bikes (Figure 7).

Three out of the five males in the ROTC program included military imagery in their sculptures. Student 11 sculpted an American flag attached to a rifle for his Self Portrait Object using clay slabs (Figure 6). Student 12 used a slab technique to create a mug with a soldier and dog silhouette to represent his future career goal of being a military police officer in the canine unit (Figure 8). Student 13 carved out a Navy anchor from a clay slab and incised it with the words honor, courage, and commitment to symbolize his involvement in the NJROTC program (Figure 9). Two males in the ROTC program did not include military imagery in their sculptures. Student 3 originally included a soldier in his planning sketch but omitted it in his final sculpture, which ended up being a slab portrait of a Star Wars Character. Student 18 made a bowl using a coil technique and carved a tree into the bottom to represent his future career goal of becoming a landscaper.

Two other males included imagery in their sculpture that was intended to represent their future career goals. Student 7 sculpted a small guitar and drum kit using a slab and pinch technique in order to symbolize his love of music and future goal of becoming a music teacher (Figure 10). Student 14 constructed a
cup using a coil technique and wrapped a fire hose around it to symbolize his aspirations of becoming a firefighter.

Only three out of 14 males included symbols for family and friends in their sculptures. In his taco sculpture, Student 2 represented his infant son with a baby’s head at one end and feet at the other and covered them in little ‘lettuce’ hearts. Student 9 carved stick figures in the side of his pinch pot football to represent his family. At one end of his clay box, Student 10 depicted a camping scene with a camping trailer and footprints in the sand to symbolize his family’s favorite activity.

Table 1 illustrates popular themes and subject matter that were evident in students’ sculptures. The chart lists the number of times a particular theme could be seen in females’ sculptures, as well as males’ sculptures.

Table 1: Number of Self Portrait Objects including the Following Popular Themes

<table>
<thead>
<tr>
<th></th>
<th>Love [Hearts]</th>
<th>Music References [Music Notes, instruments, etc]</th>
<th>Sports [baseball bats, baseballs, footballs, etc.]</th>
<th>Family and Friend References</th>
<th>Future Goals</th>
<th>Hobbies and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females’ Sculptures</td>
<td>2 out of 5</td>
<td>3 out of 5</td>
<td>1 out of 5</td>
<td>2 out of 5</td>
<td>0 out of 5</td>
<td>4 out of 5</td>
</tr>
<tr>
<td>Males’ Sculptures</td>
<td>2 out of 14</td>
<td>1 out of 14</td>
<td>4 out of 14</td>
<td>3 out of 14</td>
<td>2 out of 14</td>
<td>10 out of 14</td>
</tr>
</tbody>
</table>

Note: Some sculptures fit into more than one subject matter category
Figure 1. Female student’s Self Portrait Object *Can o’ Worms*

Figure 2. Female student’s Self Portrait Object

Figure 3. Female student’s Self Portrait Object

Figure 4. Male student’s Self Portrait Object, *Taco Supreme*

Figure 5. Male student’s Self Portrait Object
Figure 6. Male student’s Self Portrait Object

Figure 7. Male student’s Self Portrait Object

Figure 8. Male student’s Self Portrait Object
Figure 9. Male student’s Self Portrait Object

Figure 10. Male student’s Self Portrait Object

Figure 11. Male student’s Self Portrait Object
Art Criticism Questionnaires for the Self Portrait Object

All but one of the 19 students in the study completed an art criticism questionnaire for the Self Portrait Object project. The questionnaire (Appendix A) asked students to follow the four steps of art criticism and describe, analyze, interpret, and judge their sculpture. Miss A. warned me that in general, the students do not like to write and will put little effort into any writing assignments she gives them. I observed that many of the students had difficulty answering the questions.

The students had a hard time describing their pieces even though I explained to them that they should describe in detail what their sculpture looks like. I told students to pretend they were describing their sculpture to a person that used to be able to see, but now is blind. Yet I often got answers that were simple and off the mark. For example, when asked to describe her sculpture, two cherries with hearts, music notes, and her friends’ names carved into them, Student 17 wrote down, “I see myself.”

The students did not know what geometric or organic meant when selecting what types of forms were present in their sculpture. The students often did not elaborate on their answers for forms or pattern and texture, sometimes even writing “N/A” or leaving the question blank. However, all but one of the students correctly listed coil, slab, pinch, carving, and incising under techniques used to create their artworks.

Females’ Interpretations and Judgments for the Self Portrait Object

When interpreting meaning, the females wrote that their sculptures were intended to show their interests or explain who they were as people. Student 4 wrote “[The sculpture] means everything to me because when I feel like giving up
these words help me back to me.” Student 6 wrote “I’m a can of worms that shouldn’t be opened.” Student 15 wrote, “I like art and music and softball.” Student 16 wrote “[The sculpture] is how I am. My heart and interests.”

Three out of the five females listed their piece as fitting into the Emotionalism category and explained that their sculptures represented them symbolically or emotionally. Student 4 felt that her sculpture fit into the Emotionalism category “Because it shows the emotions I was having when I would think of these words.” Student 6 wrote that her artwork best fit into the Emotionalism category because “It’s describing [her] symbolically, not in the feminine way though.” One female felt that her sculpture was Formalistic, or experimented with the art elements of line, shape, form, space, color, and texture. However, when asked to explain why she felt her cherry sculpture best fit into this category, Student 17 simply wrote “because.” Student 15 felt that her sculpture was Imitative or Representational, or tried to accurately represent the subject, but she did not elaborate as to why.

The females tended to judge the success of their pieces based on craftsmanship or degree of skill. For example, when asked what the most successful part of her work was and why, Student 6 wrote, “The shape of the can, it has a perfect-like shape.” Student 15 wrote, “The box. [It is] put together well.” However, when asked what the most successful part of her work was and why, Student 16 wrote, “My heart. It shows what kind of a person I am.”

Males’ Interpretations and Judgments for the Self Portrait Object

When interpreting meaning in their sculptures, the males often wrote that their sculptures were intended to show their hobbies, interests, and in some cases, relationships with family and friends. Student 1 wrote, “[The sculpture]
means a lot because its theme is my favorite interest.” When explaining the meaning behind his taco sculpture, Student 2 wrote, “It means that my family is always on my mind.” Student 2 also wrote that he would title his piece “Taco Supreme. Because at Taco Bell where I work the taco supreme has everything in it. And now in this case my family is everything.” When interpreting meaning behind his Star Wars character, Student 3 wrote “It represents my childhood because I love Star Wars as a child.” Student 9 wrote about the meaning behind his pinch pot football as “It’s everything. My birth date, family, hobby.” Student 10 wrote about his slab box with family, friendship, love and school references, “This artwork means a lot to me because it shows who I am and why I’m successful.” When explaining the meaning behind his demonic sculpture, Student 5 wrote, “It’s like a mirror. A constant reminder of who I am.”

Eight of the 13 males who completed the art criticism questionnaire said that their sculptures fit into the Imitative or Representational categories because they tried to accurately represent the subject. Two of the thirteen males felt that their sculptures fit into the Emotionalism category because their sculptures emphasized mood or symbols. Student 2 categorized his taco sculpture into the Emotionalism category and explained “It doesn’t make much sense when you glance at it. It has symbols and meaning behind it.” Student 11 felt that his American flag and rifle sculpture fit into Emotionalism because “It symbolizes pride, perseverance, and patriotism.” Two males, Student 1 and Student 14, felt that their sculptures fell into the Formalism category because their sculptures were both cups and were intended to be useful.

One male, Student 10, felt that his sculpture fell into both the Emotionalism and Functionalism categories. He wrote about his sculpture, “It fits
emotionalism because I use people and symbols to represent a part of me. It fits functionalism because I’m going to use it to hold office supplies.”

Similar to the females, the males tended to judge the success of their pieces based on craftsmanship or degree of skill. Student 1 wrote that the most successful part of his baseball cup was “The barrel because it is very accurate looking.” When explaining what the most successful part of his hand holding a baseball was, Student 8 simply wrote, “Looks very realistic.” Student 9 wrote that the most successful part of his pinch pot football sculpture was “The bowl shape, ‘cause it’s smooth and hole-less.” When explaining what the most successful part of his American flag and rifle sculpture was, Student 11 wrote “I like the way I got the flag to dry as if it were flying.” Student 13 wrote that he felt that the most successful part of his Navy anchor was “Creating a life-like mini anchor.” Student 10 wrote that the most successful part of his slab box was “The faces of my teachers because they are distinguishable.”
Table 2 illustrates the females’ written responses for the Self Portrait Object’s art criticism questionnaire and Table 3 illustrates males’ written responses for the Self Portrait Object’s art criticism questionnaire.

### Table 2: Females’ Self Portrait Object Art Criticism Responses

<table>
<thead>
<tr>
<th>Description: Subject Matter</th>
<th>Analysis: Materials, Techniques, Patterns, Texture</th>
<th>Interpretation: Meaning</th>
<th>Interpretation: Title</th>
<th>Judgment: Category</th>
<th>Judgment: Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 4</td>
<td>The words Love, Faith, Hope, and Believe</td>
<td>Slab, Carving, surface decoration</td>
<td>“When I feel like giving up these words help me back to me”</td>
<td>The Inspiration of Life</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 6</td>
<td>A can of worms</td>
<td>Slab, Carving, pattern for tin can effect</td>
<td>“I’m a can of worms that shouldn’t be opened”</td>
<td>Can O’ Worms</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 15</td>
<td>A slab box with the word art inscribed</td>
<td>Inscribing, slab, relief texture</td>
<td>“I like art and music and softball”</td>
<td>Art Piggybank</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 16</td>
<td>A heart, an ‘S’, and headphones</td>
<td>Slab, coils, carving</td>
<td>“It’s how I am. My heart and my interest.”</td>
<td>“I’m not sure.”</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 17</td>
<td>“I see myself”</td>
<td>‘I sculpted things about me’</td>
<td>“I’m very impressed with myself”</td>
<td>Kate’s Cherries</td>
<td>Formalistic</td>
</tr>
<tr>
<td>Student</td>
<td>Description: Subject Matter</td>
<td>Analysis: Materials, Techniques, pattern</td>
<td>Interpretation: Meaning</td>
<td>Interpretation: Title</td>
<td>Judgment: Category</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------</td>
<td>------------------------------------------</td>
<td>------------------------</td>
<td>----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Student 1</td>
<td>A giant cup formed like a baseball bat</td>
<td>Slab, coil, tape texture on handle</td>
<td>“Its theme is my favorite interest”</td>
<td>Da Bat Cup</td>
<td>Functionalism</td>
</tr>
<tr>
<td>Student 2</td>
<td>“I see my entire life wrapped into one thing”</td>
<td>Coils, slab, heart texture</td>
<td>“My family is always on my mind”</td>
<td>Taco Supreme</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 3</td>
<td>Star Wars Character</td>
<td>Slab, carving, surface decoration</td>
<td>“It represents my childhood. I loved Star Wars”</td>
<td>Awesome</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 5</td>
<td>“I see a demonic appearance of myself”</td>
<td>Slab, carving, modeling</td>
<td>“It is like a mirror. A constant reminder of who I am”</td>
<td>Demonic Me</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 7</td>
<td>Guitar, amp, drum set</td>
<td>Coils, incising</td>
<td>“It means Metal”</td>
<td>Set Your Clocks to Rock O’ Clock</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 8</td>
<td>“A hand holding a two-seam baseball”</td>
<td>“Slip and Score” Coils, hand texture</td>
<td>“I love baseball so it resembles me”</td>
<td>2-Seamer Or Baseball hand</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 9</td>
<td>“I see a bowl in the shape of a half football.”</td>
<td>Pinch pot, incising</td>
<td>“It’s everything. My birth date, family, hobby.”</td>
<td>The Whole Me</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 10</td>
<td>“I see a box that displays different people or events that affect my life”</td>
<td>Slab, incising, embossing, texture for hair</td>
<td>“This artwork means a lot to me because it shows who I am and why I’m successful”</td>
<td>Building Blocks</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 11</td>
<td>American Flag with a rifle for a flag pole</td>
<td>Slab, stenciling, carved stripes</td>
<td>“It represents patriotism and duty”</td>
<td>Cause and Effect</td>
<td>Emotionalism</td>
</tr>
<tr>
<td>Student 12</td>
<td>Mug with soldiers and American Flag</td>
<td>Slab, coil, stencils, smooth surface decoration</td>
<td>“It means that it is life and it is what I’m going to live with”</td>
<td>Army MP Mug</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 13</td>
<td>Anchor with Navy core values</td>
<td>Slab, incising</td>
<td>“Memories of high school NJROTC”</td>
<td>NJROTC Anchor</td>
<td>Imitative or Representational</td>
</tr>
<tr>
<td>Student 14</td>
<td>“I see a cup with what is supposed to be a hose”</td>
<td>Coiling and pinch</td>
<td>“To be a fireman one day”</td>
<td>Fire Hose Cup</td>
<td>Functionalism</td>
</tr>
<tr>
<td>Student 18</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 19</td>
<td>“I see a dirtbike that resembles me”</td>
<td>Coils, engraving, smooth texture</td>
<td>“Dirtbiking is what I love to do”</td>
<td>Ride for Life</td>
<td>Imitative or Representational</td>
</tr>
</tbody>
</table>
Aggression and Nurture Observations

When we introduced the Aggression and Nurture project, we explained that the students would interpret each word by making a sculpture that represented the word *aggression* and another sculpture that represented the word *nurture*. One male shouted out, “I don’ know what that means!” and some of the males started holding up their fists and play fighting. Miss A. told the students to line up according to their birthdates, so for example, if a student was born in January then that student would be towards the front of the line and if a student was born in December then that student would be towards the back of the line. Miss A. then broke the students into groups of four or five and asked each group to come up with a definition for each word and then list five examples for each word. One person from each group would be the spokesperson and report to the class. Unfortunately, that day only three of the five females were present in class so there ended up being two groups of all males.

I walked around the classroom and listened to the students define the words *aggression* and *nurture* and list examples of each. Some examples that I heard for aggression were fighting, road rage, and not helping people. Some examples that I heard for nurture were mother and baby, charity, and giving money to the poor. One group of all males had an easy time with aggression but stalled on nurture. One male said, “Nurture is the hard one.” When I asked why they were having difficulty, I just got shrugs.

Miss A. and I noticed that the students seemed to be enjoying themselves. They were working well together in their groups and they were focused on the tasks of defining the words and listing examples. Miss A. told me that the students were handling the assignment much better than she thought.
they would. She had never asked them to do an activity like this before and she was worried about the students being mature enough to put forth thoughtful definitions and examples.

After about 15 or 20 minutes, Miss A. asked the students to get into a larger circle as a whole class and she explained that the spokesperson from each group would share their group’s definitions and examples with the class. Overall, Miss A. and I were impressed with the student’s examples. The students defined *aggression* as “acts made out of anger and emotion” and “anger” and “violence derived from anger.” One group did not list a definition, but did list examples. Some of their examples for aggression were fighting, trash talking, not helping people, destroying public property, road rage, drive-by shootings, murder, verbal abuse, war, and rape. One group even listed genocide as an example of aggression. When I asked the group what they meant by genocide one student said, “Killing whole groups of people, like what the Nazi’s did.” The students defined *nurture* as “to raise, grow, or care for” and “to care for” and “to care for something or someone.” Some of their examples for nurture were mother and child, farmer and crops, teacher and student, animal shelters, hugs, compassion, volunteering, and giving birth. One group listed my name, Miss A., and “grandma” under examples for nurture.

When the students were done giving their definitions and examples, Miss A. explained that the students would make two small sculptures each, one that represented nurture and one that represented aggression. Miss A. also explained that for this project they would be allowed to make weapons and use copyright imagery. Normally Miss A. censors the students by not allowing them to use drug, alcohol, weapons, or copyrighted imagery. Miss A. told the students that
their sculptures should not exceed six inches and the students let out a collective groan. To my surprise, the students were disappointed that their sculptures could not be bigger and they were upset that they were being limited. Miss A. explained that we didn’t have enough time left in the semester for the students to make larger sculptures.

The very next day, students began sketching their ideas and discussing their plans with Miss A. and me. I was surprised to see some students designing nature themes to symbolize nurture. Student 7 told me that he was thinking about making a tree to represent nurture. When I asked him how a tree would represent nurture he said it “saves the world.” He also said he wanted to make flames for aggression to represent destruction. I suggested that he might combine the tree and the flames to symbolize aggression destroying nurture by showing the flames destroying nature. Another male, Student 10, was drawing up a water fall and tree with leaves for nurture because he felt that, “nature nourishes us.” One female, Student 6, was creating a sprout to represent nurture and a stump with an axe sticking out of it to represent aggression. Her original design was a baby bottle for nurture and a bottle of the strong alcohol, Everclear, for aggression but she changed to the nature themed design because she felt that too many of her class mates were going the baby bottle route for nurture. She explained “Everyone is doing [baby bottles]. It’s so lame. I want to do something different.”

I noticed that the rest of the females were getting started on nurture designs that included heart shapes. For example, Student 17 was thinking about making a three dimensional heart shape to represent nurture. For aggression, she wanted to sculpt a three dimensional human head with an angry face. One
male student, Student 19, was also incorporating hearts into his design for nurture. He was going to make a solid slab heart shape with the word Love on top of it to represent nurture. For aggression, he said he would make a heart breaking down the middle.

I noticed that many males seemed to be hesitating with the nurture sculpture. They were talking about sculpting different types of weapons for aggression. However, I observed two males starting on their designs for their nurture sculptures. Student 3 drew a happy doughnut with arms and legs to represent nurture “because it feeds you.” He didn’t yet have a plan for aggression but was thinking about sculpting something to represent his ex-girlfriend. I explained to him that he could make a symbol, or something that stands for her. He just looked at me and shrugged. Another male, Student 13, was drawing an awareness ribbon for nurture but didn’t yet have a plan for aggression. I asked him what type of awareness ribbon he was creating and he said he wasn’t sure. He told me that he was thinking about a breast cancer awareness ribbon but then said, “But people would think that’s weird because I’m a guy.”

The following day I observed another male student, Student 9, sculpting a fist with an extended index finger and a small monkey. He told me that the monkey would fit onto the finger to represent nurture, but he wasn’t sure what he was going to create for his aggression sculpture. I asked him how his sculpture represented nurture and he responded, “I like monkeys. It’s the first thing that popped into my head.” He went on to tell me that this represented nurture because the monkey will be cared for by the human hand.
That day I also noticed that some of the ROTC males seemed to be influencing each other with their sculptures. Student 12 came up with the idea to make a magazine and bullets for an AK-47 rifle to symbolize aggression, and then Student 13 explained that he wanted to make a similar project for his aggression sculpture. Student 13 originally wanted to make a Rubiks cube for his aggression sculpture because he said that he gets frustrated with his Rubiks cube so that represents aggression for him. He tried making a solid cube but Miss A. told him to start over because it might blow up. He said this made him frustrated and decided to copy Student 12’s idea for a magazine and bullets. Another ROTC male, Student 18, sculpted what looked like a very realistic hunting knife to symbolize aggression. When I asked him what he was thinking about for his nurture sculpture he shrugged and said, “What’s the easiest?” He ended up copying another student’s nurture sculpture by making a plaque with the word Love carved into it.

Some of the male students and one female student, Student 4, made incredibly realistic weapons such as knives, a grenade, and a pair of brass knuckles. Miss A. told me that she did not think about the fact that students would not be able to take their weapon sculptures out of the classroom for fear that they might be mistaken for real weapons or used in some way against others. Miss A. said that she would have parents come in with students to pick up the weapon sculptures.

The next day students continued working on their aggression and nurture sculptures. Student 3 finished his happy doughnut sculpture but was now goofing around and was not focused on working on his aggression sculpture. He was standing up thick coils of clay in such a way that they looked like a saguaro
cactus. Finally he told me that he was going to make a cactus to represent aggression because “it hurts.” Student 2, who was sitting next to Student 3, finished his aggression sculpture, which was a hollowed out ball of clay turned into a person’s head with two arms coming out from the head. The little head had its mouth open to appear like it was yelling something and its arms were outstretched and it was giving the middle finger. For his nurture project, Student 2 said that he was sculpting “a hippie” using a similar technique. I asked him how a hippie represents nurture and he replied, “Because they love shit.” I asked him where he came up with the ideas for his sculptures and he replied, “My brain. It just popped into my head.” I was impressed with Student 2’s increased effort in the class and I thought that his sculptures were thoughtful and well crafted. I asked him if ceramics was his favorite class and he said, “Almost.” Then he went on to explain that a teen parenting class that he was taking was his favorite class because it counted for credit and he was able to spend the class with his girlfriend and baby and that they could learn about parenting. I told him that he should continue in art, especially ceramics, and he told me that he wanted to but his guidance counselor advised him to take a different class. When I asked him why, he told me that he wasn’t sure.

That day I also observed two males who were creating projects just because they felt they were easy ideas. Student 7 changed his nature themed aggression and nurture project to a simple upside down pinch pot to represent a hut, or a home, to symbolize nurture. For aggression, he sculpted an axe or hatchet. He felt badly about his projects and admitted that he didn’t spend much time on them. When I asked him why he changed his ideas he told me that his original one was just too hard. Another male, Student 14, was making what
looked like a cute caterpillar by rolling out small balls of clay and putting them on a stick. When I asked him why he was making a bug for nurture he replied, “It’s easy.”

I stopped by and talked to the pregnant student, Student 16, who was turning a pinch pot into a baby carriage with a heart in it to symbolize nurture. She made two simple coils and formed an X with them to symbolize aggression. I asked her how this symbolized aggression for her and she said, “People don’t like stuff in life. They just cross things out.” I asked her if she liked this project and she said she really liked the Self Portrait Object project because “It’s relevant to me. It shows who I am. If it’s not relevant to me I don’t care as much.”

The next day was one of the last days of my research so I tried to go around and ask the students some final questions about themselves and their projects. Earlier during the Aggression/Nurture project, Student 5 asked Miss A. and I if he could combine his interpretation of aggression and nurture into one project. We both agreed that he could combine his interpretations, and he ended up sculpting the Grim Reaper cradling a baby and feeding the baby poison (Figure 12). He explained that the baby represented nurture and the Reaper feeding it poison represented aggression. I asked him how he got the idea to combine the words and he said, “It just popped in there.” He said he was “a fan of the grim reaper” and that he wanted to create a unique project. He said that he felt that he was “thinking outside of the box” by putting the two ideas together. I asked him what he thought of the other students’ sculptures and he said replied, “I haven’t seen many that stand out.” He said that a lot of students were making tools, “props” or weapons. He explained, “A weapon doesn’t stick out as aggression to me. It’s too simple.” When I asked him what he thought about the
projects overall, he replied “They made me think hard.” He went on to say that he was “impressed with [his] own creativity.” I also asked him what he learned and he said that he was “more aware of [him]self” and “better at molding pieces.” I finished the conversation by asking what he wanted to be when he grew up and told me that he wanted to be a geneticist, psychiatrist, or videogame designer.

I noticed on Student 6’s aggression/nurture project that she carved the Latin word for nurture into the sprout and the Latin word for aggression into the stump. She told me that she did this because “Most English words come from Latin. It’s a nice language; a lost language.” She also told me that the aggression/nurture project was her favorite project because, “They turned out the best. The way they look and the idea behind them.”

**Characteristics of Females’ Aggression Sculptures**

For aggression, the subject matter for the females’ sculptures was varied. Student 4 was the only female to sculpt a weapon by carving brass knuckles out of a clay slab (Figure 13). Student 6 originally wanted to sculpt a tree stump with an axe sticking out of it, but the axe kept breaking off so she just made a small stump with the Latin word for aggression carved into it (Figure 14). Student 15 sculpted a clenched fist, Student 16 sculpted an ‘X’ made from two small clay coils (Figure 15), and Student 17 sculpted a small head with an angry face.

**Characteristics of Females’ Nurture Sculptures**

For nurture, the subject matter for the females’ sculptures was very similar. Student 6 was the only female to not include a heart in her sculpture and instead sculpted a small sprout with the Latin word for nurture carved into it. The rest of the females included hearts in their sculptures. Student 4 carved a heart shape out of a clay slab and carved the words “Love you” into it. Student 15
carved a hand out of a clay slab and attached a heart shaped clay slab to the palm of the hand. Student 16 made a pinch pot to create a baby carriage and place a small clay heart inside (Figure 14). Student 17 hollowed out two solid heart shaped pieces of clay and then joined them together to create a three dimensional heart shape.

*Characteristics of Males’ Aggression Sculptures*

For aggression, many males sculpted realistic and detailed weapons. Student 1 and Student 18 both created realistic knives by attaching pointed slabs of clay to solid coil handles (Figure 15). Student 7 created an axe and Student 8 sculpted a highly realistic grenade by hollowing out a solid piece of clay, carving lines for texture, and adding small coils for the pin (Figure 16). Student 12 and Student 13 created magazine clips from a gun by carving and shaping thick slabs of clay.

Three males sculpted figures with aggressive expressions. Student 2 created a figure using a hollowed out clay ball. The figure is wearing a hat that reads ‘420’ and is extending both middle fingers (Figure 17). Student 10 sculpted something that resembled an angry devil’s head with sharp pointed teeth and horns. Student 11 created two figures fighting with swords and weapons.

Student 9 never made a separate sculpture for aggression and later explained that his finger monkey sculpture (Figure 18) represented both nurture and aggression. He explained that the monkey was angry, representing aggression, until it found its owner and a permanent home, which made the monkey happy and therefore, represented nurture. It is possible that the student
simply ran out of time and conveniently twisted his concept to fit the requirements of the project.

One male, Student 19, made a small clay heart that he carved from a slab. He carved a crack down the middle of the heart to represent a broken heart, which symbolized aggression.

*Characteristics of Males’ Nurture Sculptures*

Hearts were not as prevalent in males’ sculptures as they were in females’ sculptures. One male, Student 19, sculpted a heart from a clay slab and carved the word *Love* into it to represent nurture. Another male, Student 8, told me that he hastily carved a heart shaped slab of clay for nurture because he spent too much time working on his grenade for aggression. Two other males made oval plaques from clay slabs and carved the word *Love* into them, but did not include hearts in their imagery.

Most males’ nurture sculptures had varied subject matter. Student 1 hollowed out a solid piece of clay and made it look like a baby bottle to symbolize nurture. Student 2 symbolized nurture by creating “a hippie” from a hollowed out ball of clay. The hippie has long hair, is smiling, and holding up his hands to form peace signs. Student 3 made a happy doughnut to symbolize how food can nourish us emotionally and physically. Student 7 turned an upside down pinch pot into a small hut and carved the words “Home Sweet Home” into the roof. Student 9 said that his finger monkey represented nurture because it symbolized the love an owner can have for its pet and vice versa. Student 10 created a nurture sculpture that depicted a waterfall and leaves because he wanted to express how nature sustains human life. Student 11 created a mother and child sculpture. Two ROTC males, Student 12 and Student 13 created military related
imagery for nurture. Student 12 created a cross from small coils of clay to symbolize the Red Cross organization and Student 13 made an awareness ribbon.

Tables 4 and 5 illustrate popular themes and subject matter that were evident in students’ Aggression/Nurture sculptures. The charts list the number of times a particular theme could be seen in females’ sculptures, as well as males’ sculptures.

### Table 4: Number of Aggression Sculptures including the Following Popular Themes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Females’ Sculptures</td>
<td>1 out of 5</td>
<td>1 out of 5</td>
<td>2 out of 5</td>
<td></td>
</tr>
<tr>
<td>Number of Males’ Sculptures</td>
<td>1 out of 14</td>
<td>7 out of 14</td>
<td>4 out of 14</td>
<td>1 out of 14</td>
</tr>
</tbody>
</table>

### Table 5: Number of Nurture Sculptures Including the Following Popular Themes

<table>
<thead>
<tr>
<th>Love [hearts]</th>
<th>Nature [Plants and Animals]</th>
<th>Food and/or Shelter</th>
<th>Expressive Figures</th>
<th>Community Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Females’ Sculptures</td>
<td>4 out of 5</td>
<td>1 out of 5</td>
<td>0 out of 5</td>
<td>0 out of 5</td>
</tr>
<tr>
<td>Number of Males’ Sculptures</td>
<td>3 out of 14</td>
<td>3 out of 14</td>
<td>3 out of 14</td>
<td>2 out of 14</td>
</tr>
</tbody>
</table>
Figure 12. Male student’s Aggression and Nurture Sculpture combined (Grim Reaper and infant)

Figure 13. Female student’s Aggression Sculpture

Figure 14. Female student’s Nurture (Sprout) and Aggression (stump and axe) sculptures

Figure 15. Female student’s Aggression and Nurture Sculptures
Art Criticism Questionnaire for Aggression and Nurture

We asked the students to fill out the art criticism questionnaire just as they had done for the Self Portrait Object. The questionnaire (Appendix A) asked students to follow the four steps of art criticism and describe, analyze, interpret, and judge their aggression and nurture sculptures. The number of students that turned in the art criticism questionnaire for the aggression and nurture project was much smaller than the number of students who filled out the questionnaire for the Self Portrait Object. Out of 19 students who participated in the study, only 12 of the students completed the art criticism questionnaire for the aggression and nurture sculpture.

Interestingly, all of the 12 students who filled out the art criticism questionnaire for aggression and nurture did a much better job describing their sculptures than they did for the Self Portrait Object project. The students also had an easier time with identifying the forms in their shape as geometric, organic, or both, with 11 out of 12 students responding. The students listed techniques such as carving, incising, slip and score, pinch, and slab to create their artworks. The students responded that they used materials such as clay, loop tools, wire cutting tools, canvas, rolling pins, fettling knives, paddles, brushes, and glazes.

Females’ Interpretations and Judgments for Aggression and Nurture

Unfortunately, only three females filled out the questionnaire for the aggression and nurture project and one of these females gave minimal answers. When asked what her heart and angry face sculpture meant to her, Student 17 simply wrote, “It means loving and angry.” Student 16 went into a little more detail when explaining the meaning behind her baby cradle and red “x” sculpture. Student 16 wrote, “The cradle means nurture and also I’m pregnant so it means
a lot. The “x” is just all of the bad things in life that I regret or wanna cross out.”

Student 6 wrote that her sprout and stump sculpture meant, “Nurture to world.
Aggression to world.”

Student 17 did not provide an answer as to what category she felt that her aggression and nurture sculptures fit into. However, Student 16 felt that her piece fit into Emotionalism, and emphasized mood or symbols and she explained, “The cradle hits me hard emotionally because I think of my baby. The “x” makes me angry about my past mistakes.” Student 6 also felt that her sculpture fit into the Emotionalism category and wrote, “It’s for Earth [and] what we do to it.”

Unlike the Self Portrait Object, in which females tended to judge the success of their sculpture based on craftsmanship or skill, one female mentioned symbolism and meaning when discussing the most successful part of her aggression and nurture sculptures. When describing what she felt the most successful part of her sculpture was, Student 16 wrote, “My heart in the cradle. It symbolizes how much my baby means to me.” Another female, Student 6, felt that her creative approach to the assignment was what made her sculpture successful. She wrote that the most successful part of her sprout and stump sculpture was, “The idea of it. Everyone was thinking practical things and I went outside of the box.”

Males’ Interpretations and Judgments for Aggression and Nurture

Nine males filled out the questionnaire for the aggression and nurture project. When interpreting meaning behind their aggression and nurture project, three of the males simply said that their sculpture meant “aggression and nurture.” However some males went into more detail. When discussing the
meaning behind his clay figure holding up its middle fingers in an obscene
gesture and the other “hippie” figure holding up its fingers in a peace sign,
Student 2 wrote “I wanted to do something different. Everyone in the class chose
weapons. I personally don’t think that weapons should show aggression. To me
that makes no sense. By my aggression piece, you can see aggression in his
action and facial features.” Student 2 also interestingly titled his aggression
sculpture *Mr. Nice Guy* and his nurture piece *Mr. Lonely.* When I asked Student
2 to clarify why he titled the pieces the way he did, he explained “People often
aren’t what they seem. Just because you act a certain way, or look a certain
way, doesn’t mean you are that way.” Student 10 also went into a little more
detail when he wrote about the meaning behind his angry, devil-like figure and
his waterfall sculpture. Student 10 explained that his aggression sculpture
“Shows the fury of misguided emotions” and that his nurture sculpture “means life
and nourishment.” Student 11 wrote about the meaning behind his nurture
sculpture and explained, “I made the mother and child [sculpture] thinking of my
mom.” Student 11, however, did not explain the meaning behind his aggression
sculpture.

Unlike the females, most of the males felt that their aggression and
nurture sculptures fit into the *Imitative or Representational* category because they
tried to realistically depict objects. Even though these objects were
interpretations or representations of emotions, five out of the nine males
categorized their sculptures as *Imitative or Representational.* Additionally, two
more males categorized their sculptures as *Imitative or Representational* but also
selected *Emotionalism* because they felt their pieces were realistic but also
conveyed emotion. Student 2 explained, “I tried my best to accurately represent
the subject given. Also I think they show moods and all that emotional stuff.”

Only two males felt that their sculptures fit into the Emotionalism category. Student 10 felt that his sculptures fit into Emotionalism because “The anger and hate of the monster is shown through its expression” and for nurture, “The leaves symbolize food and the waterfall is water.” Student 10 further explained to me that nature nurtures humans and Earth because “Everything we have comes from nature. Without nature we couldn’t exist. We use food and water for nourishment.”

On the following pages, Table 6 illustrates the females’ responses to the Aggression/Nurture art criticism questionnaire, and Table 7 illustrates the males’ responses to the Aggression/Nurture art criticism questionnaire.
<table>
<thead>
<tr>
<th>Student 4</th>
<th>No response</th>
<th>No response</th>
<th>No response</th>
<th>No response</th>
<th>No response</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 6</td>
<td>“Stump cut up” [nature]</td>
<td>“Sculpting” Carving, “cuts in the stump”</td>
<td>“Aggression to the world” and “Nurture to the world”</td>
<td>Our Matter [vague]</td>
<td>Emotionalism</td>
<td>“The idea of it. Everyone was thinking practical things and I went outside of the box”</td>
</tr>
<tr>
<td>Student 15</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 16</td>
<td>“A baby cradle with a little heart inside with carving blankets on the side and an “X””</td>
<td>Pinch pot, slab, slip and score, coil, blanket texture, carving in cradle</td>
<td>“The cradle means nurture and also I’m pregnant so it means a lot. The “X” is just all of the bad things in life that I regret or wanna cross out”</td>
<td>“I do not know.”</td>
<td>Emotionalism</td>
<td>“My heart in the cradle. It symbolizes how much my baby means to me.”</td>
</tr>
<tr>
<td>Student 17</td>
<td>“I see a heart and angry face”</td>
<td>Pinch pots</td>
<td>“Loving and angry”</td>
<td>Love and Angry</td>
<td>N/A</td>
<td>“When I finished”</td>
</tr>
<tr>
<td>Description: Subject Matter</td>
<td>Analysis: Materials, Techniques Patterns, Texture</td>
<td>Interpretation: Meaning</td>
<td>Interpretation: Title</td>
<td>Judgment: Category</td>
<td>Judgment: Success</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------</td>
<td>-----------------------</td>
<td>------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Student 1</td>
<td>A knife and a baby bottle</td>
<td>Slab, coil, pinch</td>
<td>“Aggression and Nurture”</td>
<td>K-Nife and Baby Bottle Nipple</td>
<td>Imitative</td>
<td>“The bottle nipple was most realistic”</td>
</tr>
<tr>
<td>Student 2</td>
<td>“I see an angry, mad, aggressive ball of chaos and a easy, loving, peaceful ball of joy”</td>
<td>Hollow clay spheres, pinch pot, hair texture</td>
<td>“I wanted to do something different. Everyone else chose weapons”</td>
<td>Aggression: Mr. Nice Guy Nurture: Mr. Lonely</td>
<td>Emotionalism, Imitative</td>
<td>“Showing the subjects of aggression and nurture…in a more unique way than anyone else”</td>
</tr>
<tr>
<td>Student 3</td>
<td>I see a donut”</td>
<td>Slab, carving, sprinkle texture</td>
<td>“A tasty treat”</td>
<td>A Tasty Treat</td>
<td>Emotionalism, Imitative</td>
<td>“Completing the glaze”</td>
</tr>
<tr>
<td>Student 5</td>
<td>“A Grim Reaper holding a baby”</td>
<td>Pinch, Carving</td>
<td>“It means a good grade”</td>
<td>Son of a Reaper</td>
<td>Imitative</td>
<td>“I like the creative blend of aggression and nurturing”</td>
</tr>
<tr>
<td>Student 7</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 8</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 9</td>
<td>“I see a well constructed hand but some of the fingers are a little small”</td>
<td>Incising, Carving, Modeling</td>
<td>“Nurture and aggression”</td>
<td>The Caring Hand</td>
<td>Emotionalism [realism]</td>
<td>“I think the hand because it looks like a hand”</td>
</tr>
<tr>
<td>Student 10</td>
<td>“A monster with a large horn…slant eyes, a tongue, and fangs” and “A cone of leaves with a waterfall”</td>
<td>Pinch, embossing, slab, incising, rippled and leaf texture</td>
<td>“It shows the fury of misguided emotions” and “It means life and nourishment”</td>
<td>Aggression: Blind Fury Nurture: Nature’s Growth</td>
<td>Emotionalism</td>
<td>“The leaves on the nurture sculpture…be cause of the layering and order”</td>
</tr>
<tr>
<td>Student 11</td>
<td>“A mother and child and a sword”</td>
<td>Modeling, stencils, wrinkled texture</td>
<td>“I made the mother and child thinking of my mom”</td>
<td>Aggression and Nurture</td>
<td>Imitative</td>
<td>“It turned out like I wanted”</td>
</tr>
<tr>
<td>Student 12</td>
<td>Rifle magazine and red cross</td>
<td>No response</td>
<td>“Difference between anger and nurture to the military”</td>
<td>Anger and Nurture</td>
<td>Imitative</td>
<td>“The magazine because I took my time with it”</td>
</tr>
<tr>
<td>Student 13</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 14</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 18</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>Student 19</td>
<td>“A heart that says love and a cracked heart”</td>
<td>Carving, slab, slip and score</td>
<td>“Love and heartbreak”</td>
<td>Love Lost</td>
<td>Imitative [expressive]</td>
<td>“The broken heart”</td>
</tr>
</tbody>
</table>
Chapter 5

CONCLUSIONS AND IMPLICATIONS

In order to reflect on my findings and form conclusions in my study, I attempt to answer my original research questions, which were (1) How did gender affect subject matter in students’ three-dimensional clay sculpture? (2) What similarities or differences existed between females’ and males’ subject matter preference in sculpture and their subject matter preferences in drawing? (3) Assuming significant gender differences existed, how successful would the students be with a project that favors opposite gender themed subject matter? While reviewing the literature in preparation for this study, I developed two evolving sub questions about gender and its possible effects on subject matter in clay sculpture. First, how did the nature of clay and the challenges of the medium affect the findings of this study? Secondly, would I find any evidence in support of the idea that atypical or androgynous students are more likely to rely on their artistically spirited individuality and less likely to succumb to the peer pressures molding other adolescents, therefore producing artworks that explore expressive properties outside of favored gender themes?

I also compared my findings to previous studies using external comparative analysis. The process of including evidence from related research or experts to support findings is referred to as external comparative analysis (Stokrocki, 1997). My findings are exploratory and more research is needed on the subject in order to form more complete conclusions. I discuss follow up questions and issues in the final section on future implications.
How did gender affect subject matter in students’ three-dimensional clay sculpture?

Females’ subject matter explored emotions and favored themes such as external relationships with friends or boyfriends. In addition, the females' sculptures investigated how they felt about their own identities by symbolizing their hobbies, activities, interests, and personal values. In the Self Portrait Object sculpture, females were more likely than males to include images of hearts, love, and music. In her article about children’s drawings, Feinburg (1979) notes that females’ subject matter is more apt to be associated with beauty, nurturance, and tranquility. The females were less likely than males to include images and symbols for sports and future goals, although such imagery was visible in some original plans and sketches but was omitted from the final sculptures due to construction difficulties, design dilemmas, or other unknown reasons.

Almost all of the females’ Self Portrait Object sculptures were not realistic in the sense that they were not meant to serve as replicas of an object. In other words, the females favored sculpting personalized, expressive objects instead of trying to make an object look true to life. In fact, most of the females judged their sculptures by categorizing them into Emotionalism, or as emphasizing moods or symbols. Even the female who created the realistic can sculpture categorized it as Emotionalism because she felt that it described her symbolically since she saw herself as “A can of worms [that] shouldn’t be opened.” The females were more likely than males to explore emotions, relationships, and activities to create a sculpture that represented their ideal selves. In a study (1994) about gender and visual culture, Kerry Freedman found that females often responded to
advertisements by integrating their own idealized conception of the characters, creating ideal identities for themselves.

Overall, males’ subject matter was more diverse and varied than the females’ subject matter but this might be due to the fact that there were more males in my study than females. Some males’ subject matter was similar to the females’ in that it explored family relationships, hobbies, and interests, but males also included future goals and career references in their Self Portrait Object sculptures, whereas the females did not. Military imagery was also popular among the males, due to their involvement in the ROTC program. The males were more likely than females to include sports related imagery and were less likely than females to include images of hearts, love, and music. Hearts and music notes were visible in some of the males’ original plans and sketches but were omitted from their final sculptures, possibly due to time constraints or design complexities, or peer influence.

Unlike any of the females, some males created functional sculptures such as cups or bowls. Most of these mugs and bowls had imagery carved into the surface or painted on with underglaze. The fact that the females in my study did not produce any functional hand-built wares contrasts from Moira Vincentelli’s (2000) argument that, historically, hand-building and functional vessels are often connected to female tradition due to the relationship between women and domestic activities such as cooking and water-collecting. However, most of the males who created a functional sculpture such as a bowl or mug did so as a backup plan and commented on how they perceived functional pieces to be easier than trying to create the actual object in clay. In other words, it was much easier to make a slab mug and stencil a soldier on the side with underglaze than
it would have been to sculpt a soldier. Some males were drawn to function as a way to escape construction difficulties.

The males tended to have more original concepts, complex ideas, and more complicated forms based on their subject matter preferences. Many of the males in my study were able to overcome construction difficulties and issues of support caused by having multiple parts to their sculptures’ subject matter. They tended to use numerous techniques of slab, coil, and pinch in a single sculpture and devised support systems of sponges and ceramic tiles to prop up delicate parts as they dried. One male student made a clay taco from a small, thin slab and sculpted his newborn son’s head and feet and put them inside the taco and then covered the baby in tiny “lettuce” hearts. Another boy in my study created a slab box similar in shape to the slab box piggy bank created by one of the females, but unlike the female, the boy covered all four sides of his box with detailed, symbolic images that reminded him of school, friends, family, and his girlfriend. These findings are both supported and refuted by previous studies regarding gender and abilities in clay. Wolf and Smith (1982) found that males were more likely than females to excel with clay and with single-medium tasks. In contrast, Brewer & Colbert (1992) found that gender did not affect student achievement in the construction of ceramic vessels.

Unlike the females who favored emotionalism, the males favored realism by striving to create realistic objects that were accurate representations of certain objects. Most of the males categorized their sculpture as *Imitational* or *Representational*, because they felt that they tried to accurately represent the subject in clay. In judging the success of their sculpture, the males said things like, “It looks very realistic,” or “It’s life-like.” Males were less likely to categorize
their sculpture as *Emotionalism*, or as emphasizing mood or symbols. Some males, unlike the females, categorized their sculptures into *Functionalism*, because they made sculptures such as cups and bowls that they intended to be useful.

*What similarities or differences existed between females’ and males’ subject matter preference in sculpture and their subject matter preferences in drawing?*

Studies conducted on subject matter preference in drawing (Duncum, 1997; Tuman 1999) reveal that in general, females favor realism, domestic and social experience, physical appearance, care and concern, and nature and animals. Similarly, in my study, females’ sculptures explored emotions and favored relationship themes by signifying connections with girlfriends or boyfriends. In addition, the females’ sculptures investigated how they felt about their own identities by symbolizing their hobbies, activities, interests, and personal values, which might be an effect of the studied age group. In contrast to the subject matter often observed in females’ drawings, their sculptures did not favor realism, nature, animals, or organic shapes but instead favored fantasy and geometric shapes, such as boxes, spheres, and cylinders. Their sculptures were personalized, expressive objects that were not highly realistic or representational.

**Table 8: Similarities and Differences between Subject Matter in Females’ Sculptures and Drawings**

<table>
<thead>
<tr>
<th>Females’ Sculptures (My Study)</th>
<th>Females’ Drawings (Previous Studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotionalism</td>
<td>Realism</td>
</tr>
<tr>
<td>Geometric Forms</td>
<td>Organic Forms</td>
</tr>
<tr>
<td>Less Detailed</td>
<td>Detailed</td>
</tr>
<tr>
<td>Scenes of social experience, hobbies and interests, care and concern, identity issues</td>
<td>Scenes of social experience, domestic life, care and concern, physical appearance, nature, animals</td>
</tr>
</tbody>
</table>
Studies conducted on subject matter preference in drawing (Duncum, 1997; Tuman 1999) reveal that, in general, males favor fantasy, violence, aggression, sports, and power. Similarly, in my study, males’ sculptures included sports, violence, power, and heroism themes. Pinch pot footballs, baseball cups, dirt-bike parts, military weapons, soldiers, and a Star Wars character were some of the observed imagery in the males’ Self Portrait Objects. In her article on children’s drawings, Feinburg (1979) notes that elements of war pictures remain quite constant: situations of combat, planes, bombs, artillery, etc. Males have also been reported to favor geometric shapes in drawing, which was also evident in their clay sculptures that were spheres, boxes, and cylinders. Duncum (1989) reported that males’ drawings are less detailed than females’ drawings and that they favor images of fantasy. In contrast, I found that males’ sculptures tended to favor highly realistic and detailed subject matter, especially weapons and sports related objects.

Table 9: Similarities and Differences Between Subject Matter in Males’ Sculpture and Drawings

<table>
<thead>
<tr>
<th>Males’ Sculpture (My Study)</th>
<th>Males’ Drawings (Previous Studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realism</td>
<td>Fantasy</td>
</tr>
<tr>
<td>Detailed</td>
<td>Less Detailed</td>
</tr>
<tr>
<td>Geometric Forms</td>
<td>Geometric Forms</td>
</tr>
<tr>
<td>Scenes of sports, hobbies and interests, family relationships, future goals, heroism, mechanical objects</td>
<td>Scenes of danger, power, aggression, violence, heroism, sports, mechanical objects, humor</td>
</tr>
</tbody>
</table>
**Assuming significant gender differences existed, how successful would the students be with a project that favors opposite gender themed subject matter?**

Previous research suggests there is some evidence that males and females perform better on and pay more attention to tasks that are labeled gender appropriate. For example, Herzog, Enright, Luria, and Rubin (1982) found for both first and second grade males and females that performance and attraction were significantly higher when the activity was labeled by the experimenter as gender appropriate than when it was labeled gender inappropriate. Additionally, Tuman’s (1999) study on subject matter preference in children’s drawings reported that when presented with masculine and feminine content themes, males and females rarely incorporate subject matter choices outside predicted gendered content domains in their drawing. Feinburg (1979) created a study in which she asked elementary students to make two pictures, one about fighting and one about helping. She found that males construed fighting as violence and armies, whereas females portrayed fighting as interpersonal conflict (Feinburg, 1979). I found similar results in my study with the Aggression and Nurture sculptures.

Most of the males in my study expressed frustration with the nurturing theme. One group of all males had an easy time defining aggression but stalled on nurture. One boy said, “Nurture is the hard one.” When I asked why they were having difficulty, I just got shrugs. My gender may have affected male responses. A male teacher and researcher may have elicited different responses. The males tended to stay away from nurture themes that included love or emotion, and instead focused on several themes such as nature, food and shelter, community service. In Feinburg’s study (1979) on fighting and
helping, she found that both sexes portrayed helping as something which was apt to take place within the home, but males focused primarily on the task itself as opposed to the females who created pictures showing themselves lending assistance to another person. Females’ drawings suggest they are preoccupied with their feelings and relationships with significant others (Feinburg, 1979). All but one of the females in my study had nurture sculptures that used hearts in some way as a symbol for love and/or emotion. Interestingly, the only female who did not include a heart in her nurture sculpture was the student with gender identity issues who felt that she was more masculine than feminine. Her nurture sculpture had a nature theme, in that it was a tiny sprout growing from the ground.

The males seemed to have an easier and better time working on the aggression sculpture than they did nurture. Over half of the males made weapons to represent aggression, with many of them putting forth a great deal of effort into these projects which resulted in hyper-realistic clay sculptures. Contrastingly, only one female made a weapon for her aggression sculpture, and the rest of the females had varied subject matter themes for aggression, just as the males had varied subject matter themes for nurture. In a similar study in which males and females were asked to draw a picture in response to the word fighting, Feinburg (1979) found that males produced drawings that “were frequently of a qualitatively different nature with more instances of significant bodily harm and weapons represented” (p. 68) than did females.
How did the nature of clay and the challenges of the medium affect the findings of this study?

The physical challenges of clay had a significant impact on this study. Many students had preliminary plans that did not match their final sculpture, most likely due to construction difficulties, time constraints, or laziness. For example, some students had complex and varied two-dimensional sketches, but did not have the skill or time to turn them into a three-dimensional sculpture. Therefore, the students often resorted to a simple, flattened clay slab method which was much easier to construct. Many students cut down, or scaled back, their two-dimensional plans when it was time to construct the three-dimensional sculpture, sometimes even at the request of the teacher. One student drew a very detailed figure that was standing upright with outstretched arms for his preliminary sketch, but he did not know how to make a standing figure from clay and Miss A. had concerns about the level of difficulty, so instead the student constructed a bust with only shoulders and a head.

Many students used the clay more two-dimensionally by creating simple objects from clay slabs and scratching into it as if they were drawing on a sheet of paper. Miss A. told me that she usually prohibited students from using the clay in a two-dimensional way, but I wanted to see how the students solved construction problems with as little restriction and interference as possible. We would, however, suggest ways that the student could make the sculpture more three-dimensional, but often the student would reply by saying, “That’s too hard,” or “It’s just easier this way.” In her research (1974, 2004) Claire Golomb found that older children and often treated clay as a two-dimensional medium as a way to solve construction or representational problems.
Once the figure becomes more differentiated in the number and proportions of its parts, the spindly legs cannot support the head, neck, and torso, at which point horizontality provides a reasonable solution to the task the child has set herself. The adults in our sample face the same technical problem and they adopt a similar solution in regard to posture (Golomb, 2004, p. 344).

Students also ran into construction issues when they tried to create more three-dimensional sculptures, which caused them to become frustrated and may have resulted in a lack of interest or feelings of hopelessness with their projects. For example, the student who created the baseball bat cup had his project collapse on two different occasions and he was not able to spend time to refine the clay bat in a way that he would have liked to because he spent most of his time repairing and reinforcing his sculpture. Several other students had pieces crack or break during the drying and firing process, due to poor design, construction, or carelessness. The rate of sculpture collapse or breakage might be reduced by the teacher suggesting a less complicated idea to the student, but then the teacher affects, or restricts, the student’s choice in subject matter. Finally, some students, as well as teachers, simply may not have the ability, skill, patience, or interest to create a well crafted sculpture.
Did I find any evidence in support of the idea that atypical or androgynous 
students are more likely to rely on their artistically spirited individuality and less 
likely to succumb to the peer pressures molding other children, therefore 
producing artworks that explore expressive properties outside of favored gender 
themes?

Although I found that, in general, males and females in my study tended 
to stick with predictable gender themes when creating their sculptures, there 
were several exceptions that proved otherwise. Specifically, four students come 
to mind when I think about atypical or exceptional findings in my study. I found 
some evidence that supports the idea that atypical or androgynous students are 
more likely to rely on their artistically spirited individuality and produce artworks 
that explore expressive properties outside of favored gender themes.

The most atypical student in my study had gender identity issues and 
labeled herself as androgynous in the art criticism questionnaires, not wanting to 
choose between male or female. Her sculptures stood out from the other 
females’ sculptures because she did not include images of hearts or other 
symbols for love and emotion. She felt that her ideas were original and that is 
what made her sculptures successful. In discussions that I had with her and also 
on her written art criticism questionnaire, she frequently referenced the need to 
be different and create sculptures that stood out from the rest.

The students that I found to be atypical often stood out from the crowd in 
their manner of dress or artistic style. They were not into strong gender themed 
activities such as sports or cheerleading, but instead focused on academic 
endeavors, art, or music. They all stressed the need to be unique and think 
outside of the box when developing ideas for their projects. They judged the
success of their sculptures and their classmates’ sculptures based on the originality of the concept. One student asked us to allow him to combine his interpretation of aggression and nurture into one sculpture, not because of laziness but because he wanted to be innovative and do something different from the other students. He said that he felt that he was “thinking outside of the box” by putting combining aggression and nurture by depicting the Grim Reaper feeding a baby poison.

In my earliest observations of the class, I inaccurately judged a student as being lazy and apathetic and I anticipated that he would not take the projects seriously. Early on in the study, I saw him goofing off, wasting time, and working slowly on completing his previously assigned slab box project. However, my presumptions about this student and his abilities were wrong, and he created some of the more successful sculptures in the class. Ironically, this student explained to me that his Aggression/Nurture project was all about how people tend to judge others based on their appearances. He explained “People often aren’t what they seem. Just because you act a certain way, or look a certain way, doesn’t mean you are that way.” This student also mentioned the need to do something different from everyone else. When discussing the meaning behind his clay figure holding up its middle fingers in an obscene gesture and the other “hippie” figure holding up its fingers in a peace sign, he wrote “I wanted to do something different. Everyone in the class chose weapons. I personally don’t think that weapons should show aggression. To me that makes no sense.” His idea to wrap his infant son in a taco and cover him in lettuce hearts was very original. It is likely that his atypical life experiences of being a teenage parent, working to support his young son, and intense feelings of responsibility have
caused this student to mature beyond his physical years and begin to explore these aspects of his life through his artwork.

Limitations

These conclusions cannot be generalized due to the small number of participants and the nature of my study. There were many more males in my study than females, and this could explain why I saw more varied subject matter among the males’ sculptures. Also, the teacher and I selected topics for their sculptures, so the sculptures were not unsolicited. Peer influence could have also affected the students’ work and caused students to copy ideas from one another. While some students specifically expressed the need to be different and create unique sculptures, many students might have been afraid to do so and instead chose to stick with subject matter that was popular among their classmates of the same gender. The fact that the teacher and I are both females might have affected the study. For example, when I asked males why they were having difficulty with the nurture theme, I just got shrugs. My gender may have affected male responses. A male teacher and researcher may have elicited different responses.

Future Implications

Although males and females had differences between subject matter in their clay sculptures, there were exceptions. Moving forward with another similar study, I would be fairly confident in a hypothesis that atypical and/or androgynous students would be more likely to produce artworks that explore expressive properties outside of favored gender themes. However, even among these atypical students, I believe exceptions will be found. In the words of one of the students from my study, “People often aren’t what they seem. Just because you
act a certain way, or look a certain way, doesn’t mean you are that way.” As educators, we should be cautious in having certain presumptions about our students, but we need more research on these atypical students to find out why they create the artworks that they do.

The four students in my study whom I labeled atypical pushed their artworks further than other students in terms of concept, subject matter, craftsmanship, and effort. They marched to the beat of their own drummer and they all expressed the need to think outside of the box or have a unique concept or artwork that stood out from the rest of the sculptures. Perhaps this is what Donna Tuman (1999) meant when she said that children who rely more on their artistically spirited individuality and less on predicted gender appropriate solutions are more likely to produce artworks that explore expressive properties outside of favored gender themes.

I believe we should keep investigating why adolescents create the artworks that they do, especially in clay, because there is simply not enough research in ceramics education. The nature of clay affected the findings of this study in many ways. If students try to take the easy way out and choose to represent less challenging subject matter in the simplest way possible, then teachers should push students to create more thoughtful and unique works of art that express innovative ideas and feelings. Students in my study often treated the clay as if it were a two-dimensional media by creating simple, flat, slab artworks. As ceramics educators, we need to insist that students not treat clay this way and instead show them how to incorporate three or more levels or layers of clay to make it more three-dimensional. Teachers and students need to be well prepared for issues that arise during construction of clay sculptures so that
students are able to use clay to express their own wishes and worries, and the happiness and struggles of life, regardless of gender.
REFERENCES


Self Evaluation: Art Criticism

Are you a: Male _____ Female_____

Please do your best to answer the following questions:

Description:

1. What do you see? Describe the subject matter.

2. What colors did you use, or how will you glaze your piece?

3. What types of forms do you see most in your artwork? Geometric? Organic? Both?

Analysis:

4. How did you create your artwork? What techniques did you use?

5. What materials and tools did you use to create your artwork?

6. Identify any patterns and textures in your artwork.

Interpretation:

7. What does this artwork mean to you?

8. What title would you give this piece?
Judgement:

9. Circle the category that best describes your intention:

Imitative or representational: tried to accurately represent the subject
Formalistic: experimented with art elements (line, shape and form, space, color, texture)
Emotionalism: emphasized mood or symbols
Functionalism: intended for the work to be useful

Describe why you feel your artwork best fits into this category:

10. What problems did you encounter when creating this piece? How did you solve them?

11. What do you feel is the most successful part of your work and why?

12. What could you do to improve your results if you did this project again?

13. What type of art materials do you prefer working with? (drawing, painting, woodworking, clay, 2-D, 3-D, etc.)
APPENDIX B

INSTITUTIONAL REVIEW BOARD LETTER OF PERMISSION

CONSENT LETTER
To:        Mary Schenck
          ART

From:     Mark Purcell, Chair
          Gov. Board RB

Date:     10/01/2010

Committee Action: Expedited Approval

Approval Date:  10/01/2010

Review Type:    Expedited F7

IRB Protocol #:  100005229

Study Title:   Ovarian and its Effects on Subject Matter in Scripture

Expiration Date:  09/30/2011

The above-mentioned protocol was approved following expedited review by the Institutional Review Board.

It is the principal investigator's responsibility to obtain review and continuous approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or adverse reactions should occur as a result of this study you are required to notify the Gov. Board RB immediately. If necessary, a member of the IRB will be assigned to look into the matter. If the situation is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your suggested changes to the Gov. Board RB. The new procedure is not to be initiated until the IRB approves the amendment.

Please retain a copy of this letter with your approved protocol.

89
Gender and Its Effects on Subject Matter in Sculpture

PARENTAL LETTER OF PERMISSION

Dear Parent:

I am a graduate student under the direction of Professor Mary Stokrook in the Department of Art Education at Arizona State University. I am conducting a research study to examine the effects of gender on subject matter choice in sculpture.

I am inviting your child's participation, which will involve three clay projects and an art criticism questionnaire that will be completed during your regular Art class over the next three weeks. Your child's participation in this study is voluntary. If you choose not to have your child participate or to withdraw your child from the study at any time, there will be no penalty and it will not affect your child's grade. Likewise, if your child chooses not to participate or to withdraw from the study at any time, there will be no penalty. The results of the research study may be published, but your child's name will not be used.

Although there may be no direct benefit to your child, the possible benefit of your child's participation will be increased understanding of their own artwork and creativity. Possible benefits of this study include increased awareness of gender preferences in subject matter and a better understanding of students' creativity, which can help art teachers create more interesting and engaging lesson plans. There are no foreseeable risks or discomforts to your child's participation.

Pictures will be taken during the course of the study, but only of students' artwork. Responses to the art criticism questionnaire will be confidential. The results of this study may be used in reports, presentations, or publications but names will not be used.

If you have any questions concerning the research study or your child's participation in this study, please call Dr. Stokrook at (480) 985-3468, or myself at (503) 881-5241.

Sincerely,

Teresa Marsili

By signing below, you are giving consent for your child ________________ (Child's name) to participate in the above study.

Signature: __________________________ Printed Name: __________________________ Date: ______________

If you have any questions about you or your child's rights as a subject/participant in this research, or if you feel you or your child have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the Office of Research Integrity and Assurance, at (480) 985-4788.
APPENDIX C

SELF PORTRAIT OBJECT PLANNING SHEET
**Name:**

**Hour:**

**OBJECTIVE SELF PORTRAIT PLANNING**

Respond to the statements below, to help you think about yourself. Besides each of your answers draw at least 1 symbol that could represent the answer you gave.

<table>
<thead>
<tr>
<th>My favorite activity is ______________________________.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>If I could only eat one food for the rest of my life it would be __________________________.</td>
<td></td>
</tr>
<tr>
<td>Three words to describe me are ________________________, ________________________, and ________________________.</td>
<td></td>
</tr>
<tr>
<td>When I grow up I want to be __________________________ because ______________________________.</td>
<td></td>
</tr>
<tr>
<td>The most important things in my life are __________________________. __________________________.</td>
<td></td>
</tr>
<tr>
<td>I am the best at _________________________________.</td>
<td></td>
</tr>
</tbody>
</table>