THE EFFECT OF CONSTRUCTIVIST LEARNING ENVIRONMENTS ON STUDENT LEARNING IN AN UNDERGRADUATE ART APPRECIATION COURSE

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The purpose of this study was to determine the effects of constructivist methods on student learning in an undergraduate art appreciation class. Three constructivist learning activities were designed and implemented in an undergraduate art appreciation course for non-art majors at Mississippi College. Through these constructivist learning activities, students were involved in their learning throughout the semester in realistic art roles in which they worked as curators, Web page designers, and artists.

Six subjects were selected to participate in this case study. Subject data was collected through three methods: interviews with subjects at three points during the semester, student documents produced during the three activities, and a field journal of observations made during the activities. The multiple data sources were triangulated to reveal nine patterns of learning.

The data evidence that constructivism results in a deeper understanding of art and art processes than in a typical art appreciation course in which learners are merely passive recipients of knowledge. This was not only indicated by the nine patterns of learning which emerged from the data, but also in the students' awareness and regulating of their cognitive processes. Although the research provided an in-depth understanding of this case and should not represent or be generalized to the entire population of art appreciation students, the results of this study suggest that art appreciation instructors have an opportunity to facilitate high levels of student thinking and encourage metacognitive skills through constructivist methods such as the ones used in this study.

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CHAPTER 1

AN INTRODUCTION

Throughout the United States, about 300,000 students register for art appreciation classes each year (C. Ruel, personal communication, February 18, 2003). The average class contains 75 to 100 students with some large universities having close to 1,000 students per year enrolled in the classes. One reason so many universities offer art appreciation is because of accreditation requirements in the United States. Four of the six college and university accreditation associations: the Southern Association of Colleges and Schools (SACS, 1997), the New England Association of Schools and Colleges (NEASC, 2001), the Western Association of Schools and Colleges (WASC, 2001), and the Northwest Association of Schools and of Colleges and Universities (NWCCU, 1998), include the arts in their general education or core curriculum requirements. According to the standards for accreditation published by two of the regional accreditation associations for universities (NEASC, 2005; WASC, 2006), institutions of higher learning should require the arts as a part of the general education of undergraduates to ensure students are introduced to the content and methodology of the primary domains of knowledge, which are the arts, the sciences, and the social sciences. In their policy on general education, the Northwest Association of Schools and of Colleges and Universities (1998) stated "General education introduces students to the content and methodology of the major areas of knowledge and helps them develop the mental skills that will make them more effective learners" (NWCCU, 1998, p. 36).

Art instructors have an opportunity to influence a large portion of the general college population through art appreciation because most colleges and universities offer

some form of the course as an option for students fulfilling their general education fine arts requirement (Efland, 1990). Art appreciation is one of the fine arts courses that can advance a student's ability to think and learn because multiple viewpoints exist when finding meaning in a work of art, for example, and numerous solutions can be offered to problems. For example, students in art appreciation could take a number of stances as they solve aesthetic puzzles such as determining how best to reconstruct a damaged work of art, or deciding if it should even be reconstructed (Battin, Fisher, Moore, & Silvers, 1989). Sayre (2004) explains, "the world of art is as vast and various as it is not only because different artists in different cultures see and respond to the world in different ways, but because each of us sees and responds to a given work of art in different ways as well" (p. 22). In art appreciation, students can develop critical thinking and problem-solving skills by thinking for themselves about artworks and art issues.

At Mississippi College (MC), the university used for this study, the SACS arts requirement was the reason art appreciation became a fine arts option in the core curriculum in 1983. According to Samuel Gore, a former member of the SACS accrediting team, this requirement provided a way for the MC art department and art departments at other universities to justify the inclusion of art appreciation in the core curriculum (Gore, personal communication, May 2003).

What is art appreciation? Is it an ability to analyze a work of art? Some of the early texts used to teach art appreciation emphasized the elements and principles of art. Teachers could use these tools to show students how to "read" works of art (Faulkner, Ziegfeld, & Hill, 1941). Is it a history of Western art? Texts used to teach art appreciation during the 1970s and early 1980s were set up in this way (Dorra 1973;

Elsen, 1981; Gombrich, 1972), and some art appreciation courses today continue to use a textbook that emphasizes a survey of art history (Stokstad, 2005). Is art appreciation a knowledge of basic periods, artists, and materials or an understanding of art theory? Many texts from the late 1970s and 1980s included content related to all these facets (McCarter & Gilbert, 1988; Preble, 1978). Is it an ability to look at and talk about works of art? Recent art appreciation texts include sections on art criticism (Preble, Preble, & Frank, 1999) and some incorporate critical questions for students to respond to within the chapters (Fichner-Rathus, 2001; Sayre, 2003). At least one current text used for art appreciation diverges from these sections on periods, artists, materials, theory, and criticism, and instead presents art using a global thematic approach (Lazzari & Schlesier, 2005). This thematic approach seems to fit well with constructivist methods through which students could examine significant issues and ideas about art.

The question *What is art appreciation*? will be addressed in this chapter by identifying art appreciation content in recent textbooks, reviewing the history of art appreciation, and examining numerous definitions of art appreciation. Once consideration of this literature is made, art appreciation is defined for the purposes of this study as *an awareness of art and its processes from the past and in the present and an ability to think about and respond to art and art theories in order to find value and meaning in art*.

Despite the seemingly disparate art appreciation content mentioned above, recent trends in the course, can be discerned from the current textbooks. *Artforms* (Preble, Preble, & Frank, 2002), *Living with Art* (Gilbert, 2003), and *A World of Art* (Sayre, 2003) are three of the more popular textbooks (C. Ruel, personal communication, February 18,

2003), which can help us clarify these trends. Each of these texts includes a sampling of the material popular in earlier art appreciation books: the elements and principles of art, materials and media, art history, art theory, and art criticism. Instead of an entire book focused on one of these content areas, art appreciation texts currently include a wide selection of content and include more contemporary and multi-cultural works than previous texts. The publishers of the three popular art appreciation texts listed above also offer multi-media teaching supplements. During the last ten years, these supplements have included interactive aids, such as CD-ROMs and Web site activities intended to involve the students in their own learning making them more constructivist than previous versions of the texts.

Because the content provided by many current art appreciation textbooks covers a wide rage of material, instructors can select what is most appropriate for their students and the goals teachers have for their classrooms. This flexibility results in the teaching methods employed in current art appreciation classrooms to vary widely. Researchers should address both art appreciation content and methods for teaching this content in order to consider what is effective for student learning and understanding in an art appreciation class.

What are methods for teaching an undergraduate art appreciation course? A study by Choate and Keim (1997) found that instructors use a wide variety of methods to teach art appreciation. Some instructors they questioned preferred a traditional lecture method with fact memorization and slide recognition tests. Many instructors gave demonstrations of a medium such as watercolor or a technique such as modeling. Others involved the students more in the learning process through oral and written responses to

the works of art and through studio activities. Although the study by Choate and Keim did not include any conclusions about this range of teaching methods, it did prompt many questions including: Are the instructors lecturing too much?, Is there too much reliance on a textbook?, Are the textbooks appropriate for teaching art appreciation?, Are too many slides being used?, and Are students being exposed sufficiently to art museums, art galleries, and guest lecturers?

In my ten years as an art appreciation instructor I have employed many methods in a search for effective ways to teach art appreciation. I have increasingly used teaching methods that involve students in their learning. For instance, the first two years I taught art appreciation in higher education was at Southern Arkansas University in 1995 and 1996. The adopted text, *A History of Western Art* (Adams, 1994), was what the title implied, a chronological survey of western art. The catalog listed the course as a slide-lecture course and I taught it as such to classes with 30 to 50 students enrolled each semester. While I was teaching the course at Mississippi College in the late 1990s, the adopted text, *Experiencing Art Around Us* (Buser, 1995), included theory, media, and history. The course description here emphasized not only art history, but also aesthetics, criticism, and production. I was delighted with this change since it allowed me to include more class discussion, written response, and hands-on activities. From my experience, active learning methods like these lead students to deeper learning than more passive methods such as slide lectures.

As I worked to involve the students more in their own learning, I experimented with online activities, like an aesthetic Listserv, which allowed students to post responses to art theory questions for their classmates to see. I also developed Web pages where

students could respond to questions about works of art found on museum Web sites. I also tried a variety of group and individual classroom activities to determine which combinations appeared to produce the best learning situations for the students. Many of my efforts received a favorable reception, but needed to be re-worked in order to produce the greatest outcomes. Some of the activities, however, were too much trouble or too complicated for students and their frustration level outweighed the learning benefits. For example, one activity required students to respond to works on one Web site using an online response form at another Web site. Students had to keep two pages open and switch back and forth between the two. The lab computers could not meet the demand of the students and thus caused student dissatisfaction and poor responses to the works of art.

These attempts to change my instructional methodology have evolved into an art appreciation curriculum employing many teaching and learning methods (see syllabus in Appendix A) including three learning activities, which will be the focus of this study. These three activities complement the other methods used in the class: lecture, demonstrations, class discussion, written responses to works of art, and art production, and align with what educators currently call a constructivist approach to learning. In constructivism humans, in this case college students, build their own knowledge. Learners use what they already know to interpret new information individually and collaboratively. They make personal meanings from this information and create shared meanings with others. This procedure allows for a dynamic process of learning instead of a passive receiving of information (Gagnon & Collay, 2001). With a constructivist approach, students in art appreciation can actively build their knowledge of art by

evaluating different solutions to relevant problems in a collaborative setting. A thorough discussion of constructivism and the goals for creating the constructivist learning environments used in this study is in chapter 2.

Is constructivism an effective method for teaching art appreciation? If so, how will it affect student learning? What kinds of understandings about art will students gain as a result of constructivist learning in art appreciation? The following study results from my desire to discover the relationship between using constructivism as a teaching method and student learning in an undergraduate art appreciation course.

The Problem

Background to the Problem

The background to this study begins with an examination of recent art appreciation theory and course content. Art appreciation theory is presented here through an investigation of a popular textbook, in order to understand the nature of art appreciation as it currently exists. A history of art appreciation is also important to this study and will be covered later in this chapter. Analyzing textbooks commonly used for teaching the course is one way to determine current art theory related to the teaching of art appreciation. According to Jansen (1991), "art appreciation textbooks represent the lengthiest and most comprehensive effort to explain the nature and the issues of art appreciation" (p. 7). Although texts used for art appreciation classes have been published for over a century, the changes in course content during the last 30 to 40 years are of particular interest to this study. During this time the fine arts became a requirement in undergraduate general education programs and a highly competitive textbook market developed (Apple, 1984).

In order to examine change in the recent history of art appreciation, the history of the text *Artforms* will be discussed. *Artforms* has been a popular textbook during the last thirty years and was the text used at Mississippi College at the time of this study. The first version of *Artforms* by Duane Preble, *Man Creates Art Creates Man* (1973) provided readers an introduction to the visual arts. Chapter content included the elements and principles of art as well as art media, the nature of art, the functions of art, and a brief history of art. Preble intended *Man Creates Art Creates Man* (1973) "to go beyond the usual art appreciation approach by including works and concepts that relate to the environment" (p. 1). He wanted to "close the gap between art and life" by presenting art as significant forms that could "answer our emotional and spiritual needs and help shape our physical environment" (p. 1). Preble considered all of the visual arts environmental since they share space with mankind. Through aesthetic awareness and an ability to recognize quality design, people could better understand the world and make survival worthwhile. With this text, Preble demonstrated a difference in course content from the typical history and analysis, found in other art appreciation texts of the time, to a concern for environmental and social causes.

The second edition of Preble's text published five years later was renamed *Artforms* (1978) reflecting the author's desire to be gender inclusive. Preble (1978) wrote, "The world has changed since 1972, and now the root word *man*, meaning humanity, is more commonly taken to refer to the male of the species" (p. xiii). The author still included art theory, practice, and history in this edition and had similar goals to the first edition. He claimed "We feel there is a great need to present not only the communication and beautification potential offered by art, but also its roles in increasing

awareness and guiding environmental decisions on all levels" (1978, p. xiii). Preble believed by increasing visual awareness the public would understand the importance of art and be less tolerant of visual pollution. The art history sections were expanded in this edition to cover more non-Western traditions, art from the 1970s, and the applied arts. This indicates how the art world was breaking from modernism and becoming more postmodern with its inclusion of diverse aesthetic forms (Barrett, 2000).

In the third edition of *Artforms*, written by Duane and Sarah Preble (1985), the authors mention a desire to help students increase their "understanding and enjoyment of the visual arts" (p. 1). The content of the book had not altered significantly, although the authors did change the art history section from a short survey of art to a longer version demonstrating how the art of today has evolved from art of the past. By placing the works in context they hoped to "open eyes and minds to the richness of the visual arts" and help students "become independent in your continuing experience of the arts" (p.1). This introduction to the arts was designed to give students not only information about art, but also the incentive to seek out art experiences once the course was complete.

By the sixth edition of *Artforms* (Preble et al., 1999), which included contributions by Patrick Frank, the course content had changed significantly. The chapter on the nature of art expanded into two chapters that included sections on visual thinking, perception, looking and seeing, and folk art. The few pages on style and evaluation had been lengthened into two separate chapters, which included a section on art criticism. Biographies of artists such as Louise Nevelson, Romare Bearden, and critic Robert Hughes appeared throughout the text to further illustrate topics presented. The authors also included a pronunciation guide at the back and provided a list of suggested readings

and Web sites to encourage the student and teacher to go beyond the material presented in the text. This indicated a change in art appreciation theory. The new content provides readers the tools to think critically about art for themselves and contribute to a discussion of art issues. Students can be more involved in the learning process, which is more constructivist than previous versions of *Artforms* indicated.

Artforms (Preble, Preble, & Frank, 2006) is currently in its eighth edition. The content has not changed much in the last six years, but the authors have made some additions. More contemporary works by artists from a variety of backgrounds and cultures are included and an additional goal for the course has been added in the eighth edition. In their course description the authors list goals from previous editions that are still applicable. They still want to help readers have "an engaging visual experience," build a foundation for "an individual understanding and enjoyment of art," and lead students to an "expanded awareness of the visual arts," but now their goals also include engaging students "in the process of realizing their own innate creativity" (p. xiii). This implies that the students should have experiences in the classroom or online that allow for personal expression. This approach to teaching art appreciation is more constructivist than traditional lecture-only or lecture-and-discussion methods.

Other additions to *Artforms* in the last six years have been in the form of supplements for teachers and students. Students now receive a CD-ROM with interactive instruction on selected topics such as perspective, videos of processes like lost-wax casting, and an image bank that students can use as flashcards. From the publisher's companion Web site (Prentice Hall, 2006) students have an opportunity to look at chapter objectives for student learning, participate in Internet projects, link to images appropriate

to the chapters, take practice tests, and chat with other students online. The publisher currently provides an audio pronunciation guide to help both students and instructors. Instructors also have access to course management tools which allow them to set up Web pages for themselves or students, track student progress, set up chat rooms, and manage online courses for distance learning (Prentice Hall, 2006).

These Internet supplements indicate an emerging interactive approach, which appears to be more constructivist in nature than the previous historical and analytical methods for learning. The Web page for the Eighth edition (Prentice Hall, 2006) supports this belief, "Visit this site when you want to gain a richer perspective and a deeper understanding of the concepts and issues discussed in *Artforms*, Eighth Edition." These changes in *Artforms* also reflect changes in the undergraduate population from one that receives information and knowledge from a person in authority, to a generation of computer literate students with independent means of receiving information. Twenty-first century students embrace technology (e.g. laptops, MP3 players, and cellular phones) and use technology for everyday tasks (Wallace & Clariana, 2005). These students are able to navigate a world of information and use it to best serve their purposes.

These changes in *Artforms* during the past 33 years demonstrate changes in art appreciation content and theory. Although each *Artforms* edition covers art media, the nature of art, the functions of art, elements and principles of art and a brief history of art, additions were consecutively made adding more art by previously neglected artists such as folk artists and artists from diverse cultures. In addition, the content progressively became more student-centered, encouraging students to not only have an aesthetic

awareness of the world around them, as they did in the early editions, but also to think critically, be creative, and interact with others in order to continue their learning. This current belief that students should participate in their learning, rather than merely gaining the knowledge provided in the text is more constructivist in nature and indicates a need for a study of constructivist learning environments in an undergraduate art appreciation course.

This vast amount of content and supplemental resources provided in *Artforms* (Preble et al., 2006) and other previously mentioned popular art appreciation texts (Fichner-Rathus, 2004; Sayre, 2003) provides a multitude of learning opportunities for students and possibilities for art appreciation instructors. However, some researchers express concern over the disadvantages of such broad course content (Choate & Keim, 1997; Stout, 1999). After a study of art appreciation courses taught by 36 community colleges instructors, Choate and Keim (1997) questioned whether course content was too broad, if too many artists were being studied, and if the instructors were teaching sufficient cultural art. A survey of the instructional approaches of 26 college art appreciation instructors by Stout (1999) revealed an emphasis on breadth of content. Stout, however, advocated depth of content when teaching art appreciation. She observed that, "sacrifices in breadth can be turned into high yields in learner involvement and depth of student thinking about art" (p. 230). She was interested in using what artists have written about art in order to prompt students to write about works of art in the classroom. Stout (1999) believed students should be given time to discover, reflect, probe, and judge in order to learn content in a deep and meaningful way.

Other researchers call attention to the importance of achieving depth in student thinking. According to Craik (1979) from his research on memory, as well as Haller, Child, and Walberg (1988) from their research on metacognitive skills and comprehension, students who spend time processing information learn better and are more likely to retain what they learn. Because constructivist methods encourage students to learn content and process information through discovery and reflection, these might bring about this desired depth of learning.

Over the past twenty years interest in student thinking and in the connection between teaching and learning has increased in higher education, as well as in other levels of education. In higher education, teachers have introduced alternatives to traditional teaching methods such as lecturing, discussion, and laboratory approaches (Theall, 1999) in order to address these interests in thinking and student learning. Daley (2002) found students were able to achieve a depth of thinking using constructivist methods. She views constructivist learning as "a cognitive approach that locates cognition and understanding within the individual" (p. 21). Her study using graduate education students indicated that the use of constructivist learning could contribute to the development of metacognitive skills.

With a constructivist approach students can participate in their learning with other classmates. Although a student can construct knowledge individually, constructivist theory relies on social interaction in the process of making meaning (Tynjala, 1999). McKeachie (1999a, 1999b) has suggested that the most successful techniques for teaching engage students in active learning. Working with others allows students to share their opinions and challenge alternative points of view (Duffy & Cunningham, 1996).

These group processes, often referred to as cooperative learning in K-12 education or collaborative learning in higher education, allow students to work together and help each other achieve one group goal. These team skills are valuable for students to use throughout their schooling, and beyond their education into the work force (Getty Education Institute for the Arts, 1996).

Another alternative to teaching with a traditional lecture format is when teachers allow students to participate in learning through investigation. One popular type of investigative learning is discovery learning (Bruner, 1966; Driscoll, 1994). Discovery learning perceives the learner as an intrinsically motivated problem solver who tests hypotheses and forms conclusions. Bruner felt students learn best through discovery and that curricula should develop these problem-solving skills by providing opportunities to question, explore, or experiment. According to Bruner, problem-based learning (PBL) assignments are one of the best methods for facilitating students' discovery learning because it gives students the opportunity to practice inquiry methods and they can expand their conceptual frameworks. PBLs are well suited to higher education (Stanford, 2002). They are a strategy to engage students' curiosity and initiate their learning related to real world problems. Students learn by thinking critically about possible solutions and evaluating resources, often in a group setting (Dutch, 2005). PBLs drive the curriculum, they do not test skills, they assist in the development of skills. These problems allow for multiple solutions in which students can find their own solution to the problem and formula to solve the problem (Barrows, 1985; Stepien & Gallagher, 1993).

According to Savery and Duffy (1996) problem-based learning assignments are one of the best strategies for putting constructivist theory into practice. Because using

PBLs allows for learning in authentic situations, higher-order thinking is encouraged among students as they actively pursue knowledge in order to solve a problem. Additionally, students reflect on their processes and learning as part of the problem, which involves metacognition. These metacognitive strategies nurtured in PBL classrooms help facilitate future learning endeavors (Bransford, Brown, & Cocking, 2000).

Discovery learning and problem-based learning are two investigative learning strategies that involve students in the learning process. These strategies can constitute constructivist learning and can be effective strategies in higher education. According to Theall (1999) "the essential concept is the active and often cooperative involvement of students in the processes of finding, analyzing, evaluating, synthesizing, and applying information" (p. 34). Again, constructivist learning theory aligns with this desire for active learning as will be discussed in greater depth in chapter 2. With constructivism, students work with small groups to solve problems by analyzing, evaluating, and applying information. They reflect on their solutions in order to expand their learning even further.

Are the changes in art appreciation textbooks and the desire for changes in teaching in higher education evidence of the changes taking place in the instructional methods for art appreciation? Jansen (1991) believes textbooks alone can determine the instructional method. He writes, "teachers pass on to their students the approaches of the texts they use" (p. 9). Choate and Keim (1997), however, indicate that a trend in changes in content does not necessarily mean a change in classroom instruction. Choate and Keim conducted a research project with Illinois community colleges. They found that

most of the art appreciation instructors used a textbook that may or may not affect their course content and/or teaching methods. Although instructors used current art appreciation texts, which suggested involving the students in art criticism, art theory, art production activities, instructors often lectured about these topics instead of involving the students in experiences. Apparently, identifying and implementing effective teaching methods for the contemporary art appreciation course remains a problem.

The university used in this study provides an example of the opportunity and challenge posed by changes in instructional strategies in art appreciation. In 1995 the Mississippi College Art Department received a call to action from the new department chair to bring about change in the course Art Appreciation 125. The course had been "a brief survey of art history periods, styles, major artists and their works," (Mississippi College, 1984) and she wanted it changed to include "the four disciplines of art: aesthetics, art criticism, art history, and studio art" (Glaze, personal communication, May 2003). The textbook for the course *Basic History of Art* (Janson, Janson, & Cauman, 1981) was dropped and the department adopted *Experiencing Art Around Us* (Buser, 1995), which not only included art history, but also aesthetics, criticism, and production. Art instructors on the core curriculum committee wrote a new syllabus reflecting the material in the text and the campus-wide push to involve more writing in all areas of the curriculum. The art department chair encouraged faculty to change their teaching methods to include more studio components, class discussion, and written responses. The chair also limited class size from 40 to 26, thus allowing students to more easily engage in class discussion. Additionally, she added tables to the classroom so students could create art and work in groups.

The department adopted *Artforms* (2002) in 2001 when *Experiencing Art Around Us* (Buser, 1995) went out of print. Although all sections of Art Appreciation 125 were using *Artforms* (Preble et al., 2002) at the time of this study, instructors employed a variety of teaching methods such as lecture, demonstrations, class discussion, written responses to works of art, and art production, since those were each required on the generic course syllabus. Four of the five instructors at Mississippi College were just beginning to change their instructional style from predominantly lecture to one in which the students were more involved in their learning, albeit reluctantly. At the time of this study, I was the only art appreciation instructor using the Internet resources offered by the textbook publisher.

Despite indications that the art appreciation textbooks are changing faster than instructional methods, signs exist indicating that art appreciation instructors around the country are experimenting with change. Several dissertations published in the last twenty years reflect an interest in changes in instructional methods for art appreciation. A quantitative study in the 1980s by Pichayapaiboon (1987), investigated the effects of computer-assisted instruction (CAI) as a supplement for traditional methods of instruction in art appreciation. In the study, students in an experimental group could access slides of selected art works, review their art appreciation materials, and practice for their tests using CAI. As a result of the study, Pichayapaiboon (1987) found that using computer-assisted instruction to supplement traditional methods was more effective in art appreciation than the traditional methods alone relative to student achievement.

Two quantitative studies in the 1990s also investigated the effects of an instructional strategy in an art appreciation course. Shipps (1994) examined the inclusion

of aesthetic/critical theory in art appreciation. His experimental course included three lectures early in the semester designed to get students to think about art and how to understand art. Shipps found that the introductory lectures on aesthetic theory gave students a more highly developed sense of what art was and why it was of relative interest. Seabolt (1995) sought to measure changes in attitudes toward art as a result of implementing art criticism methods in art appreciation courses. Her quantitative study utilized three classes. One class used E. B. Feldman's method of art criticism, another class used Tom Anderson's Structure for Pedagogical Art Criticism, and the third class was not taught a structured method of art criticism. Seabolt found no significant attitude changes among students in any of the three courses.

In addition to these three quantitative studies, two qualitative studies also investigated instructional methods in art appreciation. Mitchell (1995) proposed the use of Howard Gardner's Theory of Multiple Intelligences (MI) as a theoretical foundation for curriculum development in art appreciation. She developed and implemented an art appreciation course theoretically grounded in the MI theory. Mitchell described the model course and discussed implications for art education. Benton (2002) investigated the effects of including five studio activities on students' perceptions of their understanding of art concepts and of their appreciation of art in general. Her qualitative study included interviews with three participants, as well as reflections, questionnaires, and observations. The implication of the study was "that the inclusion of the studio production component of art in the art appreciation course of study holds the potential for providing enhanced understanding and appreciation of art for the adult art appreciation student" (p. xii). My quantitative study on the effects of constructivist learning

environments on student learning in art appreciation extends the work in these five dissertations regarding instruction in art appreciation.

Statement of the Problem

Constructivism offers students the opportunity to involve themselves in their learning in art appreciation. Because students are active participants in their learning, they are able to construct their own meaning about art and art issues individually and with others in the class and make decisions about how to direct their learning. Learners engage in active knowledge construction and interpretation in order to make sense of relationships and phenomena in their world and construct their own reality. Through constructivist methods, learners in Art Appreciation 125D can work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals and problem-solving activities. This instructional approach lends itself to subjects like art appreciation, in which teachers can encourage multiple viewpoints and numerous solutions to problems. Therefore, it seems probable, that students who engage in constructivist learning environments in an undergraduate art appreciation class will build on their current knowledge base and gain an appreciation and some levels of understanding about artworks and art issues. To what degree will students understand art and art issues? Because constructivist learning environments like those designed for this study are a way to "engage students in the most meaningful kinds of learning possible" (Jonassen, Peck, & Wilson, 1999, p.iv) what kinds of learning will the study yield? Will these kinds of learning differ from those found in a more traditional art appreciation classroom?

Research Questions

How does a constructivist based teaching approach in an undergraduate art appreciation class affect student learning? What kinds of understanding are students in an art appreciation class with constructivist learning activities able to achieve?

Learning in Art Appreciation

The research questions invite other questions. How has art appreciation changed during its history in higher education? How is this history relevant to art appreciation today? I previously mentioned that most of the current textbooks provide similar content for teaching the course, but what and how should students learn? Are they simply to memorize the content in the book? Should students be able to analyze and discuss works of art? Should teachers desire that students become more visually aware of the world around them? What is learning in art appreciation? What do I want students to learn in art appreciation? What relationships exist between appreciating and understanding art and art concepts? Many of these questions will be addressed in the next chapter. Here I will take up the history of art appreciation. Since I am primarily interested in the history of art appreciation as an undergraduate course in higher education, its broader history in the United States is most pertinent here.

A History of Art Appreciation

Art appreciation in the late 1800s. According to Jones (1974) and Perkins (1965), art appreciation in higher education formally began in 1874 with the lectures of American scholar and teacher Charles Eliot Norton (1827–1908) at Harvard University. Norton's lectures included art from only the Greek, Gothic, and Renaissance periods because he believed there was no significant art after 1600. Norton "aroused enthusiasm

for the fine arts as a vital part of a liberal education rather than a field for specialists" (Logan, 1955, p. 67). These lectures were designed to "reveal the significance of the fine arts as an expression of the moral and intellectual conditions of the past" (Saisselin, 1984, p. 100), to illustrate "the barrenness of the American experience" and "refine the sensibilities of young men at Harvard" (Vanderbilt, 1959, p. 124-5). In order to meet this last goal, Harvard simultaneously offered a studio-oriented course; *Principles of Design in Painting, Sculpture and Architecture*; which according to Jansen (1991) "is certainly among the earliest ancestors to appreciation courses that combine studio projects with lectures about art" (p. 39). In addition to the nineteenth-century idea that appreciation of art would create a moral society, art studies were sometimes added to the curriculum to increase an institution's image and status.

Art appreciation in the early 1900s. In the early twentieth-century the nation faced problems of social strife and racial conflict. Education was seen as a tool that could help restore a sense of unity and tranquility (Jansen, 1991). This educational goal of social control could be accomplished through involvement in arts and crafts and an interest in art and aesthetic appreciation. Education about art prepared the individual for life by improving character and making each person more stable. Studying art reproductions by "great" artists became popular in the public school curriculum for the purpose of helping students "develop spiritual and practical virtues" (Efland, 1990, p. 146). Picture study helped students appreciate fine art and refined the lives of the students. In the higher education curriculum, art history courses were very popular. A survey conducted in 1912 indicated that in higher education art history dominated courses about art (Smith, 1912). According to Jansen (1991), "Art history became the most

prestigious variant of art appreciation studies acquiring its high status from its initial association with the venerable Classics curriculum" (p. 72). However, courses dealing with the elements and principles of art and courses that paired lectures about art with studio exercises also were expanding, in part due to a new emphasis on analysis of beauty. In van Dyke's (1910) art history textbook, for example, he emphasized the formal qualities of art because they were believed to constitute beauty and he believed that is what students who are striving to appreciate art should be concerned with.

Although these predecessors of current art appreciation courses focused on either art history or the elements and principles of art, they supported the notion that art appreciation could be taught and that by learning about art students could improve their character and become a more stable individual. Appreciation of art, whether considered through its history or elemental structure, offered a supplemental means of social control in times of change and provide a mental diversion from the tedium of industrial labor (Jansen, 1991).

By the 1930s colleges and universities dedicated themselves to a general education program, which restructured higher education (Jansen 1991). Students completed four years of study for an undergraduate degree that did not include a major area of study. Survey courses including art, music, and literature were a part of this general education as a foundation for a well-educated and informed person (Fuhrmann & Grasha, 1994). This reform movement, with its incorporation of aesthetic education into general education, stimulated the development of new art appreciation textbooks. The content of these included art principles as well as art history and art philosophies as they had before, but now the authors included popular and contemporary art, and emphasized

art's personal significance. Art appreciation studies were formalized and related to clearly defined social purposes. For example, the authors of *Art Today* (Faulkner et al., 1941) developed the book with the modernist belief that art appreciation could change a life. The authors attempted to use the elements and principles, as well as art history to increase "understanding of how the arts do, and can, improve contemporary living" (p. xix). They wanted to make readers sensitive to art in their home, community, and workplace as well as offer art as a therapeutic release.

Art appreciation in the mid to late 1900s. Only after educational reforms in the 1960s, which required students to major in a particular area of study, did colleges and universities require core courses (Elkins, 2001). Most universities institutionalized some fairly recognizable types of art appreciation as lower-division general requirements or requirement options for their core curriculum. Studies about art were now not only important for general moral "finishing," but also were a necessary background for the professions (Jansen, 1991). Not all institutions, however, required art in their core curriculum. At Mississippi College, the university used in this study, for example, when the art department began in 1946, art appreciation was offered as a general student elective. Art appreciation, music appreciation, and theater appreciation were added to the core curriculum at Mississippi College in 1983 as a result of a requirement instituted by the Southern Association of Colleges and Schools (Gore, personal communication, May 9, 2003).

In the late 1900s the amount of coverage given to topics in art appreciation textbooks varied. In a study of six popular art appreciation textbooks, Jansen (1991) found that philosophy of art, history of art, and elements and principles were the three

topics commonly covered, but to varying degrees. He determined philosophy was covered in five of the six textbooks comprising about 3% to 20% of their content, art history varied in all six books from around 8% to 100%, and the elements and principles filled from 10% to 34%. These texts not only reflected the history of art appreciation studies, but also current artworld priorities. For example, in the 1970s theories about art appreciation and learning included the modernist notion of the aesthetic experience (Jansen, 1991) or satisfaction to be found in art (Chandler, 1934).

Chandler (1934) believes the goal of art appreciation should be an aesthetic experience. Knobler (1971) is another author who believes art appreciation could lead to an aesthetic experience or to a satisfying encounter with an art object. However, Knobler believes art appreciation cannot be taught. Instructors can only introduce students to works of art and prepare them to appreciate them. He believes the actual appreciation must grow within the observer when he or she is ready. Students can make intelligent evaluations of art, which may be a guide to appreciation, but it should not be considered the ultimate aim of the person who seeks meaning in the arts. Instructors may direct the students' attention to a work of art, which can lead to this aesthetic experience (Knobler, 1971).

Russell also believes art appreciation included aesthetic experience. In his book *Art in the World* (1975), he describes appreciation as not only an understanding of and experience with a work of art, but also a sensual satisfaction received from a work of art. More information about art could heighten students' awareness and therefore their understanding and appreciation.

Texts from the 1980s expanded these notions of learning in art appreciation. In *Living with Art* (1985), McCarter and Gilbert define art appreciation as understanding and enjoying art. The authors believe students could learn to see and take an active interest in their visual world. This process develops in students an aesthetic impulse to experience that which they find beautiful. Gaining knowledge about art brings about understanding of art, which, along with enjoyment, is art appreciation. Therefore, the study of art terms, techniques, and art theory is an important step in the path to appreciation.

In *The Art of Seeing* (1988) Zelanski and Fisher present art appreciation as a skill that has to be learned. Like McCarter and Gilbert, they believe students must learn to look critically at art in order to experience their visual world. Knowledge informs this act of seeing a work of art. Zelanski and Fisher believe knowing about the artists, materials, methods, and nature of art will enrich students' understanding of art and, therefore, their appreciation of art.

Although each of these authors define appreciation in different ways, most include understanding as an aspect of appreciation. If appreciation includes some levels of understanding about art, then what constitutes that understanding? In their book *Understanding by Design* (1998) Wiggins and McTighe discuss the slippery nature and ambiguity of the term *understanding*. They provide six facets of understanding in education, which will be described in detail in chapter 2. These facets of understanding include the student's ability to (1) explain, (2) interpret, (3) apply, (4) have perspective, (5) empathize and (6) have self-knowledge. They believe understanding should go beyond a right answer to a point where students can share an opinion, explain it, and

justify their answer. Although the authors refer to education in general and not to art specifically, their definition of understanding benefits art as well, because students in art appreciation could demonstrate many of these facets of understanding.

Gardner (1991) agreed with this expanded definition of understanding as a quality beyond a right answer. He believes understanding involves an application of concepts and principles to problems and questions posed. Barrow and Woods' (1988) definition of understanding is also about application of knowledge. They believe understanding involves the ability to "relate that which is understood to some wider, more or less determinate framework" or the ability "to link that which is understood to what is already known or understood." (p. 56). In addition, Perkins (1991) concurs that insight or deep understanding entails the ability to use, as opposed to simply possess information. It is hoped that students in art appreciation can solve problems by using information and concepts they have attained. They should be able to share their opinions and support their beliefs about art in class and in their daily lives. If this kind of understanding is possible, it has the potential to enrich not only their art experience, but also their human experience.

Understanding as a defining characteristic of art appreciation is evident in recent research. In his study of six art appreciation textbooks from the late 1900s (*Art Today,* Smagula, 1987; *Purposes of Art,* Elsen, 1981; *The Visual Dialogue,* Knobler, 1980; *Art: The Way it is,* Richardson, 1986; *Artforms,* Preble & Preble, 1985; *Living with Art,* McCarter& Gilbert, 1985) Jansen (1991) found that all six authors agreed that appreciation is a matter of understanding and enjoyment. They all believed students should learn about the vocabulary, materials, processes, and history of art. In addition,

Jansen identified a continuing attention to formalist assumptions in the texts, which have long guided art appreciation studies. Five of the six authors in the study also saw art or the artworld as something good and right, worthy and beneficial to those who study it. This romantic idea of art comes from a history of art appreciation that idealizes art and the art experience. It is similar to that of nineteenth-century authors who saw art or the artworld as something beautiful or true.

Art appreciation textbook authors continue to emphasize understanding and enjoyment as a desirable outcome for the course. The three most recent versions of *Artforms* (Preble et al., 2002, 2004, 2006) were designed to "help readers build an informed foundation for individual understanding and enjoyment of art" (p. xiii). The authors wanted students to gain an expanded awareness of the visual arts and become engaged in the visual experience (2006). The authors explain,

> Beyond fostering appreciation of major works of art, this book's primary concern is to open eyes and minds to the richness of the visual arts as unique forms of human communication and to convey the idea that the arts enrich life best when we experience, understand, and enjoy them as integral parts of the process of living. (Preble et al., 2006, p. xiii)

These goals for the *Artforms* text go beyond mere enjoyment and superficial understanding to a change in perspective for the student, which is one of the goals for constructivism and an indication of understanding and learning used in this study. In art appreciation students can become aware of the arts as individual expressions. They can change their point of view about a work of art as they have their own experiences with it.

Using texts such as *Artforms*, students can construct a foundation of knowledge about art upon which they can build. They can use this knowledge to create individual meanings and have personal experiences. These kinds of understanding surpass the goals previously mentioned for art appreciation in the late 1990s: becoming informed about artworks, enjoying art, and having engaging visual experiences, even aesthetic experiences. This idea of an individual understanding seems much more postmodern than previously mentioned notions, as these recent ideas allow for multiple viewpoints and multiple understandings.

I agree with Preble et al.(2006), that students can create individual understandings and have multiple viewpoints. Although many of the authors mentioned previously list understanding as a defining part of appreciation, I believe understanding goes beyond appreciation, but can occur in an art appreciation course. For the purposes of this study, therefore, I will define art appreciation as *an awareness of art and its processes from the past and present and an ability to think about and respond to art and art theories in order to find value and meaning in art*. Understanding in this study will be given a more constructivist definition as *the ability to use knowledge, make connections among art topics, and justify those decisions and opinions*. Finally, learning will be seen as *an active process of constructing knowledge*.

This study proposes to examine how appreciation and understanding can be facilitated with a constructivist approach in an art appreciation course. By allowing students to individually and collaboratively find meaning in works of art, interact with the works of art in a real world context, and determine what they learn from the interactions, what art learning might they attain? As students evaluate information, gather the

resources they need to achieve their individual and collective learning goals, and present their findings, might they gain not only an appreciation, but also an understanding of art?

Student Motivation

Because of the emphasis on student directed learning in this case study using constructivist learning methods, student motivation becomes an important consideration. According to Davis (1993) effective teachers should consider student motivation. Motivation is what the student brings to the situation, the "will or desire to put forth effort to learn" (p. 72). It refers to processes that can instigate a behavior or give direction to a behavior. Motivation is affected by student attitudes, the types of needs a student brings to the learning situation, and the perceived rewards for the learning. Instructors can influence the variables that motivate students and provide rewards for learning.

The motivational rewards for learning can directly and indirectly affect the academic performance of college students (Paulsen & Gentry, 1995; Pintrich & Schrauben, 1992). This motivation can be extrinsic or intrinsic. Extrinsic motivation is prompted by an external reward while intrinsic motivation is the desire to learn in order to understand. In constructivism, intrinsic motivation is important because students need to have the incentive to learn on their own. External rewards like their grade in the course can be a motivator, but in order for them to get the most from their learning experience they need to have the desire to understand. Intrinsic motivation is associated with higher-order learning (Donald 1999) and critical thinking. As students analyze, apply, synthesize, and evaluate aspects of their learning they build on their current knowledge base and can begin to understand (Bloom, 1956). Although some college

students can balance intrinsic and extrinsic motivators, extrinsic goals are likely to constrain academic performance while intrinsic motivation tends to enhance it (Dweck & Leggett, 1988; Paulsen & Gentry, 1995; Pintrich & Garcia, 1991). In addition, if the student believes he has control over aspects of his learning, his academic success is greater (Lefcourt, 1982).

If students are intrinsically motivated to learn about art and art issues, they may not only have the incentive to understand in the classroom setting, but also continue learning on their own beyond the classroom. Constructivism is a method that can intrinsically motivate students to learn to appreciate and understand art. It involves an active student in their learning instead of merely being a recipient of knowledge. This makes constructivist methods such as the ones used in this study, a logical teaching method to bring about understanding of art and art issues.

Motivation among students in Art Appreciation 125D is an important consideration. At Mississippi College, art appreciation is a core curriculum elective, meaning students taking the course are typically not as interested in the subject as they are in fulfilling a requirement. From past experience I have found that students at Mississippi College are generally motivated to do well in their courses, but do not care about art or learning much from the course. Their motivation generally seems to be extrinsic: parents paying private school tuition, a student's desire for good grades, or fear of losing an academic scholarship, for example.

Paulsen and Feldman (1999) believe instructors have an important role to play in the students' motivation. They studied the epistemological beliefs of students and their motivation for learning. They found a significant relationship between the students'

beliefs and motivation and suggest that instructors can motivate their students by conveying to them how they can improve their ability to learn. In addition, they believe instructors should teach students that knowledge is an evolving process involving more than basic right or wrong information.

Beers (1988) indicated the importance of the students' epistemological beliefs in relation to learning. She suggests teachers provide learning activities that give students opportunities for clarifying their beliefs about learning. These learning activities should allow students to apply and adjust their knowledge as it is applied in a variety of situations. This process allows students to discover that knowledge is complex and adaptable (Paulsen & Feldman, 1999).

Theall and Franklin (1999) believe higher education instructors can enhance the performance of their students by having an awareness of the characteristics of the learners and what motivates them. In order to investigate motivation in teaching and learning, Theall and Franklin (1999) analyzed the models and research on motivation published by thirteen authors. They found a great deal of consistency among the writings, which they categorized as six common themes: inclusion (community, climate, ownership), attitude (interest, awareness, enthusiasm), meaning (relevance, value), competence (confidence, empowerment), leadership (feedback support, structure), and satisfaction (rewards). According to Theall and Franklin (1999), the consistency in contemporary writing about motivation suggests that:

> inclusion in a coherent community can raise awareness and enhance positive attitudes, that these benefits can bring meaning and value to academic and workplace situations, that the effort expended by those who perceive meaning will

result in greater success and heightened levels of competence and confidence, and that a great deal of intrinsic satisfaction will result. (p. 107)

Constructivism is one teaching method that aligns with these motivational consistencies for learners. In particular, the three constructivist activities for art appreciation that I developed for this study involve students in a community of learners. I designed the activities to give students a positive experience that could bring meaning and value to the learning situation. Since the learning in this art appreciation class takes place in real world situations and depends on goals and strategies set by students, they might have more interest in the activity and perceive the learning as something worthwhile. Constructivism also supports the previously mentioned beliefs by Paulson and Feldman, as well as those of Beers regarding motivation and learning. This method for teaching conveys to students that knowledge is an evolving process, that knowledge is complex and adaptable, and allows students to change their knowledge base as needed.

Constructivist Teaching

According to Tynjala (1999), all educational levels can benefit from constructivist teaching methods. However, Jonassen, Mayes, and McAleese (1993) believe the constructivist approach best suits higher education. A number of recent dissertations studying constructivism in higher education indicate an interest in this method of teaching. These areas of research include engineering (Legare, 2002), mathematics (Kelley, 1999), algebra (Chilcoat, 1998), statistics (Miller, 2000), science (Day, 1999), biology (Griffard, 1999; Hodges, 1999; White 1999), botany (Ross, 1990), chemistry (Ealy, 1998), physics (Ibrahim, 2001), business (Braathen, 2000), technology (Ulmer, 1999), teacher education (Abbas, 1997; Jin, 1997; Koubek, 2002; Saleska, 2000), and

music (Buehrer, 2000). Although none of these dissertations address constructivism and art appreciation in higher education, the lack of dissertations on the topic points to the pertinence of this study.

Not only is the number of dissertations studying constructivism in higher education increasing, but also the number of books and articles on the subject are on the rise. Mahoney (2004) charted the frequency with which terms such as construct, construction, constructivism, and constructivist have been used in the titles or abstracts of articles on psychology since 1974. He counted approximately 2000 uses of the terms for the year 1990 and nearly 5000 uses for 2000. In 1994 Driscoll believed it was the dominant epistemology in the field of education (Bichelmeyer & Hsu, 1999). My study of the effect of constructivist methods in an undergraduate art appreciation class furthers the research within the field of constructivism and higher education by extending it to art education.

Constructivist theories lend themselves to learning in the arts and are being applied in art education situations across the country. Stewart (1997) suggests many of the characteristics of constructivist learning in relation to teaching aesthetics in an art classroom:

> When students are asked to think about the nature of art and their experiences with it, they are moved to probe the conceptual structure through which they understand the world. In the process, they make distinctions, see connections, and often ask new questions. The process is enhanced by conversing with others who, in similar attempts to make sense of experience, articulate their beliefs and present reasons for holding them. (p. 14)

Although Stewart made these statements about art learning in elementary and secondary education, the same constructivist characteristics—considering problems, making connections, posing questions, working collaboratively, and clarifying solutions—can be applied to art appreciation in higher education. These and other characteristics of the art appreciation student as an adult learner will be discussed in chapter 2, as will a more in-depth look at constructivism.

I believe a constructivist approach could be an effective method for teaching art appreciation. Students can consider problems, determine their goals for their learning about these problems, and decide how to achieve their learning goals. They can learn about artists and works individually or collaboratively, as well as make connections among the information they collect. They can investigate actual art issues and problems, which allows them to evaluate multiple solutions. Students can assess their own learning about art and learn from their assessment. What might be the results of such an approach to teaching? If students are thinking deeply as a result of constructivism, what does that mean to learning in art appreciation? My study focuses on these questions. The effects of a constructivist approach on student learning in an undergraduate art appreciation class are worthy of investigation.

Purpose of the Study

The purpose of this study is to determine the effects of constructivist methods on student learning in an undergraduate art appreciation class. Constructivism affects learning by allowing students to be active participants in the process. As students individually and collaboratively interpret new information and work to find connections

among art concepts, they should find meanings and acquire knowledge, appreciation and some understanding of artworks and art issues.

Methodology

This case study researching three constructivist learning activities in an undergraduate art appreciation class was conducted during the Spring 2004 semester. It involved six students in Art Appreciation 125D at Mississippi College. The six subjects were selected using a criterion-based selection process which included the gender and major of the students. The constructivist learning activities were designed using the seven goals for constructivist learning outlined by Cunningham, Duffy, & Knuth (1993) to be discussed in chapter 2. These activities involve the students in their learning throughout the semester in realistic contexts such as the Mississippi Museum of Art, and should provide adequate data in order to investigate the effects of this method in an undergraduate art appreciation classroom.

Through three methods of data collection: individual interviews with the subjects, observations I made during the activities, and student documents, the effects of constructivist methods on student learning were investigated. I analyzed the data and looked for patterns of learning and understanding. These patterns were influenced by the six conceptions of learning clarified by Marton, Dall-Alba, and Beaty (1993) and the six facets of understanding presented by Wiggins and McTighe (1998), which will be discussed in the following chapters. I presented the results of the study in relation to these patterns, and presented the findings, many of which are in the form of narratives, in chapter 4. This analysis will help determine what kinds of learning and understanding students in Art Appreciation 125D were achieving.

Significance of the Study to the Field

Today, most undergraduate degrees programs at colleges and universities require students to major in an area of study and take a certain amount of general education or core courses. These core courses include a sampling of classes in the arts, sciences, and social sciences (Stevens, 2001). Because the majority of schools offer art appreciation as one of the arts choices (Efland, 1990), thousands of students enroll in the course each year (C. Ruel, personal communication, February 18, 2003). These students typically bring little or no art experience to the course (Kelley, 2002). In addition, art appreciation often proves to be the last formal encounter these students have with art (Shipps 1994). This course, therefore, could be the first and last opportunity during their education for students to become aware of art and its processes, think about and respond to art and art theories, and experience art in the visual world. These experiences not only may help students understand and enjoy art, but could also deepen their capacity for thought and enable them to become more visually aware so that they can make greater contributions to their world.

These factors make studies in art appreciation worthwhile. In addition, the importance of research in art appreciation also manifests itself in the number of dissertations published during the last twenty years on teaching methods and art appreciation content (Benton, 2002; Jansen, 1991; Mitchell, 1995; Pichayapaiboon, 1987; Seabolt, 1995; Shipps, 1994; Welter, 1989). This study on how a constructivist approach in an undergraduate art appreciation class affects student learning adds to this body of research.

Can constructivist learning activities make a difference in student learning in an undergraduate art appreciation course? This study will provide evidence to indicate how constructivist methods in an art appreciation class promote learning and understanding. The chapters that follow address learning and understanding specific to this case study. Chapter 2 is an overview of the literature on constructivism and adult learning. A history of constructivism preceeds a discussion of goals for creating constructivist learning environments. This demonstrates how the activities used in this study are a well thought out application of the constructivist theory. The cognitive development of the adult learner will be presented and how the college student is well suited to a constructivist method for learning. Facets of understanding as presented by Wiggins and McTighe (1998) are also given in chapter 2 in order to provide a thorough, multi-faceted view of understanding that supports the goals set for constructivist learning environments. Additionally, the conceptions of learning as clarified by Marton, et al. (1993) will be discussed as a structure for data analysis.

The methodology for the case study is presented in chapter 3. A description of qualitative research and the methods used for this case study are given, followed by a section on the context for the study and description of the subjects. The three data collection methods: interviews, observations, and documents are described next. The final section of chapter 3 is a discussion of the methods of data analysis and how the results of this study will be grouped and aligned for discussion.

Chapter 4 reports what transpired during the course of the study and discusses the resulting data in relation to the three constructivist learning activities in order to determine what kinds of learning and understanding occurred. Within each activity, the

results of the interviews, observations, and documents are grouped by patterns found among the data. Here quotations by the subjects are given to help the reader understand the case. Conclusions of the study and implications for art appreciation classes in other contexts are addressed in chapter 5. Findings are synthesized and reflections are also presented.

CHAPTER 2

LEARNING AND UNDERSTANDING

In order to understand how a constructivist based teaching approach in an undergraduate art appreciation class affects student learning and what kinds of understandings these students are able to achieve, an examination of the nature of learning and understanding for an art appreciation student should be conducted. What does the history of constructivism indicate about learning and understanding? How might constructivism be an effective method to teach college students? How can the constructivist theory be put into practice? Once the theory is put into practice, how do I determine the students' success? Since college students are adult learners, I also need to consider what an adult learner is and the most effective strategies to facilitate that learning. The following constitutes that examination.

This chapter provides the rationale for this case study involving constructivist learning environments in a postsecondary art appreciation class. The literature that follows informed the development of this study and the analysis of the data. This literature demonstrates that the present study is important to undertake at this time and should advance or refine what is known regarding constructivist learning by taking the theory into practice in an undergraduate art appreciation class.

In the following sections, the history of constructivism, current constructivist theory, and a practical application of the theory in the form of constructivist learning environments are first reviewed. These are followed by a discussion of adult learners and their cognitive development. Models for understanding and learning are also described in this chapter with applications to this study.

Constructivism

History and Types

The history of constructivism provides a foundation for current constructivist theory. Throughout this history there are consistent connections between the philosophy of constructivism and constructivism as a methodology. Although constructivism can be traced back as far as Socrates in the 5th Century B.C.E., most applicable to this study is the work by theorists in the more recent past. The views of several significant philosophers from the past two hundred years whose work supports current constructivist principles will be addressed in the section that follows, along with a discussion of various forms of constructivism. Although the constructivist methods employed in this study do not align with a specific form of constructivism, they are informed by the many types presented and do align with the commonalities among them.

During the late 18th and early 19th centuries, philosopher Emmanuel Kant held two views of knowledge (Kant, 1960). One view was that knowledge grows through a logical analysis of actions and objects. This type of knowledge occurs after a learning experience. The second view he held was that knowledge can be generated by one's experiences. This type of knowledge occurs with an event or experience. Kant felt both views were valid and that they each depend on a knowledge base in which to organize these new views and experiences. The type of knowledge base individuals have affects how they interpret and use new information (Kant, 1960). This theory, that learners use what they already know to interpret new information they experience, is one of the commonalities among constructivism as it is currently viewed. Having a priori views

through which new information can be interpreted was essential to Kant's theory and to current constructivist theory in order to create new knowledge from learning experiences.

During the 20th century Swiss scholar Piaget (1896-1980) was one of the most influential proponents of constructivism (Brooks & Brooks, 1999). Piaget was concerned with cognitive development and how knowledge is formed. He determined that knowledge grows in a learner through individual construction, which allows the learner to make sense of her world. As learners acquire new information it is modified according to the concepts stored in their memory. The information in the memory is also adapted once the new information is assimilated. As a learner matures the cognitive structures that interpret new information become more complex and continually mature allowing assimilation of further information (Piaget, 1950).

According to Sutherland (1999) in an article on the application of Piagetian theory in higher education, Piaget's theory of learning and stage theory applies to adults, as well as to children and adolescents. Piaget's stage theory suggests that learners typically go through two stages of operational thought, concrete operations from about ages seven to eleven and formal operations which involve the separation of thought and reality (Riegel, 1973) after age eleven. Peel (1972) also believed formal operational involves the ability to predict outcomes in various situations. Other researchers (Shayer, Kuchemann, & Wylan, 1976; Sutherland, 1983) have found that concrete operations did not happen until age fifteen or later. Although Piaget did not extend his stages into adulthood, his stages are applicable and have been extended into the adult years by academics such as Kohlberg (1969) and Labouvie-Vief (1980). Students in higher education are not consistently formal operational thinkers (Sutherland, 1999). The capacity of an adult

student must be ascertained before giving her abstract or formal operational assignments. Adult learners are better able to apply their abstract or formal operations to real life. They are generally more committed and responsible than younger learners and have a greater knowledge of possibilities and logical choices (Labouvie-Vief, 1980).

The work by Piaget is the basis for one type of constructivism termed cognitive constructivism. It places emphasis on the individual's cognitive structuring process; What can the students learn and how do they learn? Cognitive constructivism assumes that humans must construct their own knowledge through experiences. They cannot automatically use information that is given to them. In cognitive constructivism the teacher provides learning experiences that encourage the learner to construct their own knowledge through exploration and experiences in meaningful contexts (Epstein, 2002).

A second type of constructivism is social constructivism, which focuses more on the social effects of learning. In social constructivism students can understand concepts from others that they cannot grasp individually. Students need to be guided by adults through the learning processes, but their learning needs to be influenced by their peers opinions and actions. Group work, as well as individual discovery, are important in social constructivism (Epstein, 2002). According to Heylighen (1993) social constructivism provides the opportunity for learners to judge knowledge based on numerous viewpoints. The "truth" will often be determined by what the group members agree on.

An important concept for social constructivists is that of scaffolding (Murphy, 1997) which is a process of guiding the learner from what is presently known to what is to be known. Scaffolding allows students to perform tasks that would normally be

slightly beyond their ability, if they did not have assistance and guidance from the teacher and support from a group. Teachers can facilitate the student learning in a way that allows students to function at the edge of their individual development making it an important characteristic of constructivist learning and teaching (Murphy, 1997).

Social constructivism emphasizes the importance of context for understanding what occurs in the world. Knowledge is a human product that does not exist in the world without social intervention. Humans must construct knowledge when engaged in social activities (Kim, 2001). Social constructivism is based on a theory developed by psychologist Lev Vygotsky (1896-1934). Vygotsky's sociocultural theory of learning emphasizes that individuals learn first through interpersonal means such as among members in a group, then through intrapersonal means which internalizes the content. Vygotsky believed peer interaction, scaffolding, and modeling were important ways for learners to gain knowledge and grow cognitively (Vygotsky, 1978). The social constructivism teacher is a guide, encourager, and supporter. Teachers can set up learning situations and watch students explore with their classmates in the process of gaining new knowledge (Epstein, 2002).

The psychologist Bruner (1915-) also had an influence in the theory of social constructivism. His theory, like Piaget's, was based on cognitive development studies. He also believed learning was an active, social process in which students construct new knowledge based on what they already know. The learner selects and applies information, making hypotheses and decisions, which he organizes based on his cognitive structure. These experiences encourage students to go beyond what is required of them. Bruner believed instructors should structure their curriculum in a way that students

continually build on what they have already learned. Bruner also believed teachers should involve their students in active dialog and encourage their students to make their own discoveries (Bruner, 1966, 1973).

Psychologist Ernst von Glasersfeld (1917-) is typically associated with a third type of constructivism, radical constructivism (1984). It is termed radical since it is so different from conventional constructivist learning theory, which assumes there is a reality that one must discover. With radical constructivism, knowledge does not fit an ontological reality, it is an individual ordering of the world based on personal experience. Learners organize their world, rather than discovering realities within it. What is known is not a passive receiving of knowledge, but the results of a participant's actions (von Glasersfeld, 1984). Von Glasersfeld was influenced by the theories of Piaget. He also believes knowledge is actively received either through communication or through the senses and connects to previous knowledge (von Glasersfeld, 1989). A learner takes new material and makes comparisons with previous knowledge until the new information is determined to be similar or different. As Piaget showed, these concepts of equivalence and individual identity rely on a foundation of knowledge previously built by the learner (von Glasersfeld, 1984). Instructors must recognize that there are different forms of knowing: knowledge and understanding are individually constructed and diverse.

Cognitive, social, and radical constructivism are not the only types of constructivism. Other forms include physical, evolutionary, postmodern, and information-processing to name a few (Heylighen, 1993; Prawat, 1996; Steffe, 1995). Each theorist emphasizes different components of constructivism, which allows for seemingly limitless forms. According to Ernest (1995) "there are as many varieties of

constructivism as there are researchers" (p. 459). Ernest believes that all the variants of constructivism are radical because they break with more traditional learning theory. He warns not to spend too much time with analysis because "there is the risk of wasting time by worrying over the minutiae of differences" (p. 459).

Even though there are numerous types of constructivism, there are characteristics common among most. Dunlap and Grabinger (1996) describe the constructivist approach as a "rich environment for active learning" (p. 66). They have outlined three building blocks that help clarify the characteristics of constructivism including: generative learning, anchored instruction, and cooperative learning. Jonassen et al. (1993), Lebow (1993), and Simons (1993) have similar lists making this a fairly reliable set of characteristics.

Generative learning. One typical characteristic of constructivism is generative learning. This occurs when students make or generate usable knowledge from information they receive (Dunlap & Grabinger, 1996). Constructivism involves students taking action to create meaning from the material under investigation. Here students reflect on their previous knowledge and refine it in order to make sense of views presented by their peers and other sources like textbooks and the Internet. In my study those other sources of information include artists and the art itself. In generative learning situations, students are investigators and problem solvers. They learn to use knowledge in a variety of contexts.

Anchored instruction. This characteristic of constructivism means that learning occurs within a realistic and meaningful context. In anchored instruction students use the same skills and abilities that are required during a real-world activity. These contexts

should be appealing or meaningful to students so that they will take ownership of their learning processes and solutions. An example from my case study would be when the students work in the role of a curator in an art museum in order to create their own virtual exhibition. Authentic learning environments like this example not only develop richer knowledge structures in learners, but also they lend themselves to collaborative work, which benefits student learning as well (Dunlap & Grabinger, 1996).

Co-operative support. Collaboration with fellow students can have several benefits to learning including facilitating generative learning. Students can encounter different points of view, which may identify ineffective solutions to problems, help them refine their knowledge, clarify misconceptions, and provide new insights. With the support of the group students are more likely to take greater risks and achieve goals they would not have been able to meet on their own, thus scaffolding their learning. Group members must be active learners involved in reciprocal teaching, understand their different roles, and learn to accommodate conflicting ideas. This reinforces individual responsibility and has been shown to benefit learning (Grabinger & Dunlap, 1996).

According to Riel and Fulton (2001) knowledge is rarely constructed in isolation. Learning increasingly takes place in communities, which in a school setting is a learning community. A community of learners is a group of people who share a common interest in a subject, such as art appreciation, or a topic like the themes in this study. In these communities learners share information about a topic, a set of practices, and together build collaborative knowledge. Each student in a learning community contributes in some way to the outcome. Students learn to work in teams and how teams work best.

These three commonalities of constructivism: generative learning, anchored instruction, and cooperative learning were incorporated in the design of this study. They are foundational in the constructivist learning goals outlined by Cunningham, Duffy, and Knuth (1993) which were used to create and implement the three constructivist activities in Art Appreciation 125D. The following section is a review of current constructivist theory, which provides additional explanation of these commonalities and gives the rationale for this case study involving constructivist methods in a college art appreciation course.

Constructivist Theory

Constructivism is a theory of learning as well as a strategy for education, which basically refers to the idea that learners build knowledge for themselves. Learning is not a process of passively receiving information from the instructor or text, but an active process. Duffy and Cunningham (1996) describe learning as "an active process of constructing rather than acquiring knowledge and instruction as a process of supporting that construction rather than communicating knowledge" (p. 171). Constructivists differ in their beliefs about the mental structures of the learner and their relation to reality. Some believe these structures reflect reality, while others, like the radical constructivists, believe no reality exists outside of the mind of the learner (Schunk, 2000).

The constructivist theory, that includes learning as an active process, is in keeping with historical trends in epistemology, which takes into account the genesis and nature of knowledge and includes learning (Ernest, 1995). In the history of epistemology from ancient times on, "The whole trend moves from a static, passive view of knowledge towards a more and more adaptive and active one." (Heylighen, 1993, ¶2). Since

students involved in constructivist learning methods are active participants in their learning, they are able to construct their own meaning individually and with others in their learning community (Anderson, 1996) and make decisions about how to direct their learning (Thorsen, 1998). In art appreciation, for example, students can work with their peers to cultivate their learning by clarifying a problem such as making a traditional theme in art relevant in their time and culture, determining how to solve the problem of creating a new work of art based on their view of the theme, and assessing the efficacy of the solution. When students actively process new material and construct new knowledge they make meaningful learning (Chiesi, Spilich, & Voss, 1979; Masters & Mislevy, 1993; Spiro, 1980). In addition, researching, organizing, and constructing knowledge engages learners in critical thinking (Tynjala, 1999).

Constructivism is concerned with the knowledge construction process. Here learners use what they already know to interpret new information. The knowledge base depends on what experiences the learner has had, how they have organized those experiences, and what they believe about those experiences (Jonassen, 1996). Once the learner has made connections with past understandings they can modify and apply the new information according to the previous knowledge. These prior conceptions can also be adapted, if they are not accurate (Gagnon & Collay, 2001). This learning process involves making personal meanings and building individual understandings (Anderson, 1996; Murphy, 1997).

Constructivism contrasts with a more traditional lecture model, consisting of a single way of knowing which the instructor conveys to the students who memorize the given information and repeat it. Here learning is seen as increasing one's knowledge;

gaining knowledge, storing it, and using it for a testing situation. In contrast, when students engage in constructivist learning, they can focus on what they currently know, receive new information, add the new information to their current knowledge structure, and become aware of what they know and are able to do (Zahorik, 1995).

Learners engage in active knowledge construction and interpretation in order to make sense of relationships and phenomena in their world (Bednar, Cunningham, Duffy, & Perry, 1995; Brooks & Brooks, 1999; Duffy & Cunningham, 1996; Jonassen, 1996). The learner does not copy reality, rather, he constructs her own reality. This belief allows for multiple realities (Driscoll, 1994). Learners construct much of what they learn and understand as a function of their experiences (Schunk, 2000).

Constructivism emphasizes understanding (Tynjala, 1999). Constructivism involves understanding instead of merely memorizing and recalling information. Understanding is one of the intended outcomes in this study. Since constructivism emphasizes understanding will students move beyond appreciation of art to an understanding? If so, what kinds of understanding will they be able to achieve?

Once learners have interpreted and applied new information, they can then reflect on that learning experience in order to gain further understandings (Gagnon & Collay, 2001; Grabinger & Dunlap, 1995), which is a typical characteristic of adult learners (Ference & Vockell, 1994). According to Gagnon and Collay (2001) constructing knowledge hinges on reflection. Reflections capture what students are actually thinking and learning, not merely reiterating the material presented. Through reflections teachers can both perceive student understandings and restate concepts that were not covered

adequately. These reflective processes can also involve metacognition when the students are aware and regulate their own cognitive processes.

Constructivism relies on social interaction and collaboration in the process of making meaning (Tynjala, 1999). With collaborative or cooperative learning, students are exposed to alternative viewpoints (Murphy, 1997). Students share their opinions and challenge alternative points of view (Duffy & Cunningham, 1996).

Working with others can be a very effective method for engaging students in learning (McKeachie, 1999a, 1999b). Davis (1993) stated, "Researchers report that, regardless of the subject matter, students working in small groups tend to learn more of what is taught and retain it longer than when the same content is presented in other instructional formats" (p. 147). This support for collaborative methods also strengthens the hypothesis that constructivist learning methods in art appreciation might effectively create deep thinking about art topics and result in significant student learning

Another important element in constructivism is the learning context or environment. Since constructivism starts with the view that knowledge must be built within the cognitive structure of every individual, this process of learning is fundamentally personal, however, constructing learning is dependent on experiences in the learning environment and on social interactions (Grabinger & Dunlap, 1995; Lebow, 1993). This makes the learning context dependent. Students are able to address content in a particular context in order to gain understanding (Anderson, 1996). Because learning is a construction of meaning in context and is context dependent, students learn best in an authentic or real world situation. (Duffy & Cunningham, 1996). Contexts for art appreciation learning are numerous. Students could benefit from exercises in actual or

virtual museums, by creating their own works of art, or through written responses to aesthetic puzzles, to name a few.

Instructor Role

The role of the instructor is important to understand when putting the constructivist theory into practice. In a constructivist classroom teachers serve in the role of coordinators, guides, advisors, monitors, coaches, tutors and facilitators (Cunningham, 1992; Duffy & Jonassen, 1992; Murphy, 1997). This is in contrast to the more traditional role in which the teacher is the dispenser of knowledge and students are passive recipients of information. In a constructivist classroom the instructor provides students with opportunities and incentives to build knowledge (von Glaserfeld, 1996). Students should have initiative, responsibility, and control in their learning (Ference & Vockell, 1994). Teachers introduce new ideas and design learning situations that guide and support students in their sense-making process. Instructors also observe students in order to modify instruction and classroom activities (Driver, Aasoko, Leach, Morimer, & Scott, 1994).

Instructors should create environments in which students are encouraged to think and explore. This may require a paradigm shift for many educators. They may need to abandon traditional ways of teaching in order to adopt new ones. (Brooks & Brooks, 1999). As mentioned in chapter 1, instructors have often used lecture to convey to the students a history, elements and principles, or processes of art. In contrast, with constructivism students can be actively involved in these topics by employing the elements of art in creating works of art that utilize a particular printmaking process, for example.

Constructivist learning requires the use of multiple methods of teaching (Anderson, 1996). Many instructional methods can be applied including: apprenticeship which involves learning in a physical activity where learners can see the work processes, authentic learning in real world situations, and cooperative learning (Bichelmeyer & Hsu, 1999). Each of these teaching methods is applicable in art appreciation. Students can work as artists to create art, make critical analysis of works of art as a critic, or design Web pages with a group of classmates. Teachers should not be concerned with rigidly following a textbook, but should plan meaningful activities that involve the student in their learning in order to meet learning objectives set by students and teachers (Henderson, 1996). In constructivist learning, the student's ability to take ownership in the learning process adds to his learning and motivates him to continue. As seen in the discussion of current art appreciation texts in chapter 1, teachers can choose a variety of instructional methods when implementing this content. In the art appreciation class in this study multiple modes of instruction were used in addition to the three constructivist activities (See Syllabus in Appendix A), allowing for course objectives to be met.

Small group discussions are one way for students to actively process new information (McKeachie, 1994). Teachers should build community among their students by designing small group discussions and other collaborative learning assignments in a way that allows groups to utilize their corporate perspectives and knowledge to solve problems that they would not be able to as individuals (Reid, Forrestal, & Cook, 1989). In the activities designed for Art Appreciation 125D, students have numerous opportunities to work with their classmates. They offer viewpoints, make decisions, design solutions, and reflect on their work as a group. These collaborative strategies for

learning help students construct their learning and help them understand art better than they would in a more traditional learning environment.

Presentations are an effective constructivist learning method as well because they encourage complex interactions between learners and content (Siegle & Foster, 2000). In the three activities that are the focus of my study, presentations are a component of the learning. Students work with their peers to prepare and present virtual exhibitions, Web pages, and artworks to the class. In each activity students also reflect with their peers on their processes and learning. Creating opportunities for students to reflect on knowledge is a valuable learning method because it captures what students are thinking and learning which benefits student learning (Gagnon & Collay, 2001). Guided learning opportunities such as these encourage students to take some responsibility for their learning. This active processing of information motivates students to continue to learn on their own (McKeachie, 1994). These types of activities can be effective in promoting meaning and understanding among learners.

Assessment

In constructivist learning environments assessment needs to be authentic, meaning from a realistic task or activity. According to Baker and O'Neil (1994) in order to be authentic the learners involved in the task should perceive it as valuable and should be motivated to participate in it. Authentic assessment methods must test the learning objectives and must involve using skills rather than merely recalling information (Gagne, 1985). Assessment must require students to use their knowledge and demonstrate deep understanding. It needs to be varied to allow for the differences in the students' intelligence and strengths (Wiggins & McTighe, 1989). In constructivism, these

assessment methods are integrated into the learning process itself. The purpose is to promote the learning process and to find out what kind of changes are occurring in students' knowledge base (Tynjala, 1998).

This type of assessment should look very different from traditional testing and be as varied as the constructivist learning activities themselves. In constructivism instructors are interested in understanding and application of knowledge over memorization. Traditional assessment methods measure inert knowledge, not learning involving deep understanding (Reeves & Okey, 1996). Entwistle, Entwistle, and Tait (1993) concluded from empirical data that:

> Assessment procedures have a profound effect on the way in which students learn. Providing a constructivist teaching environment will have little effect on the quality of learning while conventional assessment procedures remain in place. The principle of constructivism will have to be applied to the design of new forms of assessment, perhaps relying much more on self and peer assessment than in the past. (p. 353)

Performance assessment is a form of testing that requires students to perform a task rather than select an answer from a list. It is one kind of authentic assessment that requires that learners demonstrate what they can do. By engaging in an activity or producing a product of some kind, the students create a tangible form, which can be assessed by the instructor or by the students themselves. In most work environments people are evaluated based on their work performance. Therefore, it makes sense that students would be assessed on their performance as well. One example of a performance test would be an essay written in response to a poem (Reeves & Okey, 1996), or in the

case of art appreciation, an essay written in response to a work of art. This essay can reveal the students' understanding of the work of art and their ability to express that understanding. Key attributes for performance-based assessment listed by Linn, Baker, and Dunbar (1991) includes that it: (1) focuses on complex learning, (2) engages higher order thinking and problem-solving skills, (3) stimulates a wide range of active responses, (4) involves challenging tasks that require multiple steps, and (5) requires significant commitments of student time and effort. The three constructivist learning activities that I designed for this study meet these attributes for performance assessment.

The constructivist philosophy is attractive for art appreciation because it engenders learning independence in students. As they take responsibility for their own education, they are also developing mental processes that should stay with them throughout their lives, processes such as critical thinking skills, and an appreciation for learning strategies, and team skills (Micken & Cutting, 2000). The students in the art appreciation class in this study are not art majors. They can take their knowledge of art and continue it on their own. They might visit virtual or actual art museums, purchase works for their homes, support the visual arts in their communities, be more creative in their careers, or simply be more aware of art in their visual world.

Learning Environments

Constructivist learning environments can connect the constructivist theory to practice in art appreciation. Brent Wilson, professor in information and learning technologies at the University of Colorado at Denver, defines the constructivist learning environment as "a place where learners may work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals

and problem-solving activities" (1996, p. 5). Wilson encourages educators to think of instruction as an environment where learning occurs rather than a product to be delivered. Effective instruction requires a degree of student initiative and choice in an environment where teachers give students the freedom to explore and determine goals and learning activities.

Wilson's definition of a constructivist learning environment aligns with the seven pedagogical goals for constructivist learning environments to be used in this study. The goals have been summarized by Peter Honebein (1996) to guide facilitators in this knowledge construction process. These goals were previously outlined by Cunningham et al. (1993) who believe instructors should create constructivist learning environments that:

1) provide experience with the knowledge construction process,
2) provide experience in and appreciation for multiple perspectives,
3) embed learning in realistic and relevant contexts,
4) encourage ownership and voice in the learning process,
5) embed learning in social experience,
6) encourage the use of multiple modes of representation, and
7) encourage self-awareness of the knowledge construction process. (p. 11)

With these goals, the instructor/facilitator can organize learning opportunities and assign tasks in order for students to merge their existing knowledge with new knowledge. This learning often takes place in an environment with other classmates. This collaboration contrasts with the more traditional approach to teaching, in which the instructor conveys knowledge to the student.

Constructivist learning environments are a method that has proven worthy for educators to engage students in meaningful learning. Many educators and theorists have applied constructivism to the development of learning environments (Jonassen, 1991). Jonassen et al. (1999) see constructivist learning environments as a way to "engage students in the most meaningful kinds of learning possible" (p. iv). They believe teachers should design constructivist learning environments in which students can work together and help each other use a variety of tools and resources to solve problems and reach the students' learning objectives. In art appreciation, for example, students can read about a contemporary style of art in their textbook, find quotes and recent works by a contemporary artist on the Internet, brainstorm with classmates on new ideas for contemporary work, create their own collage, and present their findings to the class. Learning environments should provide learners with personal control, authentic or real-world learning contexts, and opportunities to collaborate with classmates (Bostock, 1998). Micken and Cutting (2000) condones this strategy for instruction by writing,

> An environment that motivates students to take an active role in the learning process, allows them to apply their newfound knowledge to real problems, and encourages them to push the limits of their understanding certainly is one that enhances education. (p. 7)

Constructivist learning environments can be designed by instructors with the seven goals outlined by Cunningham et al. (1993) described below. These goals served as a guide for creating the three activities for the art appreciation class (see Appendix B) used in my study.

Provide experience with the knowledge construction process. In this first goal for constructivist learning environments, students take primary responsibility for determining the topic they pursue, the method for their learning, and the way in which to solve their problems. The instructor facilitates this self-directed learning process by guiding students to pursue topics that are relevant and of interest to the learners. The students should also be encouraged to experiment with various methods of solving their problems (Honebein, 1996). Constructivism is concerned with the knowledge construction process because it allows learners use what they already know to interpret new information (Gagnon & Collay, 2001).

Goal one was implemented in the design of all three activities. For example, in the first activity in this study, students take responsibility for determining the theme, art, location, and text for a virtual exhibition they create from works in a local museum. In order to do this they use the information and guidelines I provide in the introduction and then determine how to make their decisions, what other information they need to know, and how to find the applicable information. Students should be able to direct their own learning and construct meanings about art and art issues. Will students believe determining how to solve the problem contributed to their learning? If so, how? What are the benefits of this activity in relation to the students' appreciation of art?

Provide experience in and appreciation for multiple perspectives. The second goal suggests that students solve their problems by evaluating different solutions or approaches. This tests and enriches their appreciation since there are typically many different ways of thinking about an issue in the real world and many solutions to a problem (Honebein, 1996). Students can see how others solve problems and can learn

not only what their classmate's solution is, but also how they arrived at that solution. This is consistent with theory by Schunk (2000), which states that learners construct much of what they learn and understand as a function of their experiences. By addressing content in a variety of contexts learners are able to gain further understanding (Anderson, 1996).

The three activities provide numerous opportunities for students to experience and gain an appreciation for multiple perspectives. As students read and assess information from their text, the Internet, and works of art, they come in contact with different perspectives. Their group members and classmates also contribute their own perspectives to the situations presented through the activities. In the second activity, for example, students can evaluate information from Web sites and their textbook. They then can consider the opinions of their classmates concerning their particular topic before determining how to create a group Web site. How will the students' evaluation of these various opinions and solutions test and enrich their appreciation of art?

Embed learning in realistic and relevant contexts. To reach the third goal, teachers should design the learning tasks with activities derived from real life. These learning tasks allow students to solve problems and give order the complexity of their world outside the classroom (Honebein, 1996). Because learning is a construction of meaning in context and is context dependent, students learn best in an authentic environment. An authentic or real world activity does not need to be the actual job, but can be a simulation. Teachers should design environments where students can use their minds and bodies as if they were working in this situation, "so that their thinking is related to actual practice" (Honebein, 1996, p. 20).

The three art appreciation activities in this study include realistic contexts. As students work as a curator, a Web page designer, and an artist, they will be involved in situations that occur daily in the art world. As subjects think and act in similar ways to those working in these careers, they will construct knowledge of not only that job, but also of art and art processes. Learning in these real world situations is designed to encourage the subjects' interest in art, as well as their appreciation and understanding. How will this learning in a real world situation encourage the students' interest and therefore their awareness and appreciation of art? What kinds of understandings will result from learning in realistic contexts?

Encourage ownership and voice in the learning process. Constructivist learning centers on the student as opposed to the teacher. Goal four encourages this focus by giving students ownership and a voice in the learning process, which means they take some responsibility for their learning. This goal ties in closely with goal one, in which teachers give students experience with the knowledge construction process (Honebein, 1996). Ownership is important in constructivism as it stimulates learning independence in students. As they take responsibility for their own education, they are also developing long-term mental processes such as critical thinking skills, and an appreciation for learning strategies, and team skills (Micken & Cutting, 2000).

According to Honebein (1996) the instructor's role is a key indicator that a learning environment is student-centered. She should serve as a guide in the process. In each of these three art appreciation activities I should act as a facilitator or consultant. I will encourage students to take control over the virtual exhibition, Web page, and artwork. For example, in activity 1, students have control over the exhibition they create.

Before groups select themes for their exhibitions I will involve the students in exercises to become familiar with the museum and the works on display. I will offer examples of strong and weak themes and lead them in a discussion of what the curator's role was in the three exhibitions. Students need to generate several ideas for their theme and consider the possibilities for each before deciding on one to be used throughout the semester. As groups work in the galleries they will justify their selection of theme and how they plan to create a virtual exhibition based on the idea. How will this kind of ownership for their learning contribute to the students' appreciation of art?

Embed learning in social experience. Goal five reminds curriculum designers to encourage learning as a collaborative process. The social interactions between the student, teacher, and peers influence intellectual development (Honebein, 1996). This group work allows for the exchange of different perspectives and participation in real-world interactions such as negotiation, teamwork, and leadership. According to Grabinger and Dunlap (1995), not only does working in peer groups help students refine their knowledge through argument and reciprocal teaching, but it also gives students the support to take on more complex problems than they would as individuals. According to Tynjala (1999) constructivism relies on social interaction and collaboration in the process of making meaning. It is one way to bring about and challenge alternative points of view, which can contribute to the students' appreciation and understanding of art.

Since all three art appreciation activities involve working with pairs and groups of students, the goal of learning in social experience is an integral part of the design. The subjects will work with other students to clarify problems, set goals, gather information, share opinions, answer problems, present findings, reflect on their learning, and assess

the efficacy of the solution. Will this collaborative work prompt multiple viewpoints? How will working in a collaborative setting affect the students' ability to work with problems? How can cultivating their learning with others contribute to their appreciation of art?

Encourage the use of multiple modes of representation. In the sixth goal teachers must utilize a variety of forms for students to get and use knowledge. They should supplement oral and written communication with media such as video, computer, and audio. This supplementation helps students experience multiple perspectives and makes the students' learning rich and multi-faceted (Honebein, 1996). In Wilson and Lowry's (2000) article "Constructivist Learning on the Web," they discuss how the Internet can help adults build meaningful understandings and competencies by allowing the learners to construct meaning. With the Web, students do more than process information about art; they begin to build an understanding of art and art issues. The Internet is not only a tool to use in a constructivist learning environment, but a learning environment in itself. Using the Internet to explore the World Wide Web, learners can find, assess, and acquire new knowledge. As students locate and discern material needed for their Web page in this study, they receive instant feedback and make adjustments in order to create the page they envision. Using this technology also allows students the opportunity to present their knowledge to others using this mode of representation.

Jonassen et al. (1999) are supporters of this type of learning strategy. They believe that "students-as-producers-of-technologies engage in much more meaningful learning than students-as-receivers-from-instructional technologies" (p. 112). De Garcia and McGlynn (1999) also believes technology is a good fit with constructivism. He had

students work in groups to develop Web projects and found among other things that it encouraged active participation. According to Abita (1999) and Batty-Hotz (1999) students need to be inspired to solve a problem and giving them the opportunity to post their results on a Web page may provide the needed motivation. Slavin (1991) also had students involved in Web projects. In his study students enjoyed creating their own Web page. They felt finding information, "navigating" the Internet, creating a Web page, and using email lists were beneficial to their learning.

Each of the three art appreciation activities in this study includes multiple modes of representation. Students can gather knowledge not only from lectures and their textbooks, but also from works of art, print media, and the Internet in order to complete their assignments. They will be able to transmit their knowledge to other learners through their virtual exhibitions, Web sites, and own artwork. Considering this constructivist learning goal and its implications in this art appreciation classroom prompts the following questions: How will engaging these students in a variety of ways affect student learning in an art appreciation course? What will indicate that students were not only appreciating, but also understanding art concepts?

Encourage self-awareness of the knowledge construction process. The final goal emphasizes that the student should have an awareness of the knowledge construction process. Students should exercise their understanding of the process by explaining why or how they solved the problem. Instructors can encourage this metacognition by creating activities that require learners to show their work, explain the validity of their solutions, and defend their decisions orally and in written form. Teachers should encourage learners to analyze their construction of the learning process since how a

learner knows can be more valuable than what he or she knows (Honebein, 1996). Evidence that students *know how they know* can be a good indication that the students in this study are going beyond mere appreciation to understanding.

Honebein is not alone in his belief that knowledge of the learning process is important. Grabinger and Dunlap (1995) find the process of reflection just as important as thinking on high levels. Reflection gives students a chance to evaluate their high-level thinking performance and use this new knowledge to adjust future work. Gagnon and Collay (2001) also believe reflection is critical in constructivist learning. Reflections are helpful in revealing what students are actually thinking and learning. In addition, reflecting on the learning experience allows students to gain further understanding. In what ways will an analysis of their own thinking affect the students' learning?

These seven pedagogical goals offer a framework for the design of constructivist learning environments. Designers can interpret the goals and translate them into learning activities, which puts theory into practice. For this study, I used these goals for constructivist learning environments to create three learning activities (see Appendix B), which were employed in a college art appreciation course. I designed a matrix (see Appendix C) that aligned the three activities with the seven constructivist goals in order to determine whether these met the qualifications Honebein (1996) set for the design of such activities. Through these activities, students had the opportunity to construct their own knowledge in order to gain an appreciation for art.

Adult Learning at the Undergraduate Level

Before investigating what students might learn in an undergraduate art appreciation course using constructivist learning activities, consideration must be made

for the adult learner. According to Knowles (1980) adults differ from children and adolescents in that they bring different attitudes and characteristics to the learning situation. Knowles developed a theory of adult education, which he called androgogy, that differs from pedagogy, the traditional theory of teaching children. In pedagogy the teacher is responsible for the learning. The children and adolescents bring little experience to the learning situation and rely on the teacher for materials and experience. Students of the same age are taught a fairly similar, sequential curriculum which they will apply later in life.

In androgogy, the teacher serves as a facilitator of self-directed learners. These learners have vast experiences to bring to the learning situation and learn best through practical experiences that include discussion, laboratories, cases, more than direct instruction. These real-life situations provide a readiness to learn and further learning is driven by a desire. With adult learners the learning can be applied to their current life situation (Knowles, 1980). A constructivist teaching strategy such as the one used in this study, supports Knowles' theory of the adult learner. With these constructivist learning activities in art appreciation, students will build their art knowledge on what experiences they bring to the learning situations.

Other theorists (Chiesi et al, 1979; Masters & Mislevy, 1993; Spiro, 1980) share this belief that students view new knowledge in relation to what they already know and understand. In addition, each student's personal understanding of subject matter is significant in the learning process. This active process in which students interpret new material and construct new knowledge constitutes meaningful learning. Anderson and Reder (1979); Farr (1987); Feltovich, Spiro, and Coulson (1993); concur with this theory

of learning. They describe good learners not as passive receivers of knowledge, but active participants who process material, combine it with their own ideas, and question their own understanding.

One difficulty in pursuing the uses and applications of learning theory in higher education is the difficultly in defining learning. In a chapter of *Teaching and Learning in the College Classroom* titled "Learning Theory and Research," researcher Cameron Fincher (1994) described his difficulty in finding a definition relevant for learning at the university level. He offered one definition:

> [Learning is] a process of acquiring and integrating through a systemized process of instruction or organized experience varying forms of knowledge, skill, and understanding that the learner may use or apply in later situations and under conditions different from those of instruction. (p. 48)

Fincher goes on to elaborate on the definition stating that learning can result from instruction or other educational experiences, that learning includes cognitive, behavioral, and experimental components, that it should be considered in relation to how it can be used in future situations and that learning should be considered in conjunction with teaching. This definition views learning as a more than a change in performance as does a definition by Gagne (1977): "Learning is a change in human disposition or capability, which persists over time, and which is not simply ascribable to processes of growth." (p. 3). These definitions of learning seem appropriate for the teaching and learning strategies mentioned in this chapter, however, they do not account for the active processing employed in constructivist methods. For the purposes of this study, learning will be defined as *an active process of constructing knowledge*.

Cognitive Development

Cognitive theory refers to mental activities including thinking and learning that focus on understanding and relies on the contention that learners actively construct their knowledge (Svinski, 1994). Learners have a knowledge base to which they add new knowledge (Koroscik, 1993). Cognitive learning begins with receiving information then arranging it for further processing. The learner should then be able to recall and interpret that information later and integrate it with other information (Fincher, 1994). Since learners view new knowledge in relation to what they already know and understand, learning is for the most part active and constructive in nature. This active process in which students interpret new material and construct new knowledge constitutes meaningful learning (Chiesi et al, 1979; Masters & Mislevy, 1993; Spiro, 1980). When learners are aware of these mental actions and monitor or control them, they are not only using cognitive processes, but metacognitive ones (Haller et al., 1988).

Cognitive development refers to changes in the student's cognitive structures and processes. As mentioned previously in this chapter, Jean Piaget developed a theory of cognitive development, which included four major stages: sensorimotor, preoperational, concrete, and formal. He considered his view constructivism because he believed knowledge acquisition is a continual process of construction by the learner (Silverthorn, 1999). Piaget's theory of cognitive development relied on four factors: biological maturation, experience with the physical environment, experience with the social environment, and equilibration. The first three factors depend on the fourth, which is an internal need to make adaptations or create a state of equilibrium between cognitive structures and the environment (Duncan, 1995). Thus, knowing is an active process that

involves adding new information and measuring it against what is already believed in order to understand a situation. This theory is constructivist since it supports the idea that learners impose their beliefs on the world to make sense of it (Byrnes, 1996).

In the book *Fostering Critical Reflection in Adulthood*, Kitchener and King (1990) outline seven stages of cognitive development. These stages are patterns of progression that students go through as they become more complex thinkers. Stage one, found in young children, characterizes knowledge as an absolute. If something appears to be true, it is true. In stage two, knowing becomes more complex. Here truth is accessible, but not to everyone. The learner must find the authority for answers, which could be a teacher or the Internet, for example. Young adolescents and some college students are at this stage. Kitchener and King believe typical college freshmen and sophomores, like those in this study, are at level three where authorities have the answers most of the time and it is still beyond the student to question authority. In level three students begin to understand that knowledge is relative to context and open to interpretation. Interestingly, Kitchener and King also found that students entering college, whether or not they were of a traditional-age or older scored similarly on their tests in cognitive development. This leads me to conclude that educational level was more significant than age in determining cognitive development in their study.

Stage four is when one acknowledges uncertainty in knowing and that those in authority have limitations. When students accept uncertainty as a part of knowing it is a significant part of their cognitive development. Kitchener and King typically see stage four in college seniors. Stage five, six, and seven are most often found in learners beyond the undergraduate level. In stage five, learners believe that knowledge must be in

context since interpretation is involved in the learner's perception. In stage six the learner sees that in order to know something one must evaluate the possibilities and determine which are better than others. In addition to these characteristics, stage seven involves the learners constructing aspects of their knowledge through inquiry and by synthesizing available evidence leading them to believe there are better or best solutions to the problems.

Kitchener and King (1990) suggest that college instructors should challenge and support students in order for them to become more complex thinkers and advance to higher stages of cognitive development. They should give students problems to solve that do not have a right answer, but more of a better or best answer for them so they are able to think critically. In this manner students can challenge old perspectives in their search for new ones. The activities designed for this study are in accordance with these principles. In the activities students affront uncertainty in their knowledge and are encouraged to find answers to problems and think critically.

Kitchener and King's (1990) research was influenced by earlier research conducted by William Perry (1970) who advocated understanding students' perspectives by listening to them. In his study he interviewed predominantly male college students and outlined a series of categories based on his interviews to describe the way students think. Perry described how students' epistemological development and their understanding of themselves as knowers, changes over time. In Perry's first position, dualism, the student sees the world in terms of opposites such as right or wrong. Here passive learners depend on authorities to give them the answers and teach them right from wrong. Perry's second position, multiplicity, is reached as students begin to

understand that authorities hold opinions and perspectives. At this time, students understand that authorities might not always have the right answer. The students become more independent in their thinking and learn that each person can hold his own opinion and that many different opinions are often valid. The third position is relativism subordinate in which evidence and support must be provided for an opinion. This analytical approach to knowledge can be actively cultivated in educational settings such as art appreciation as students gather information on works of art, give opinions of the works, and provide support for their beliefs. The final position is when the student completely comprehends that truth is relative, thus the position relativism. Here the meaning of an event depends on the context and on the framework used to understand the event. In this position the student realizes that knowledge is constructed by an individual, not given by a person in authority.

Another study influenced by Perry's work was conducted by Belenky, Clinchy, Goldberger, and Tarule (1986). They interviewed 135 women in order to examine women's epistemic assumptions or "ways of knowing" and drew conclusions based on their findings. Building on Perry's scheme, they grouped women's perspectives on knowing into five different epistemological categories. They came to feel that "The women's epistemological assumptions were central to their perceptions of themselves and their worlds" (1997, pxiii). The five perspectives from which women know and view reality described by Belenky et al. (1997) include (1) silence, in which the women were under an external authority and were not able to think or speak for themselves, (2) received knowledge, in which the women were listeners and gained knowledge from others, but could not create their own knowledge, (3) subjective knowledge, in which the

women listened to their internal voices as a means of understanding truth, (4) procedural knowledge, in which women learn and apply procedures for obtaining and communicating knowledge, and (5) constructed knowledge, in which women judged evidence in context in order to construct their own knowledge. Although Belenky et al. found many similarities between Perry's positions and the women they studied, the perspectives they describe are somewhat different than the positions described by Perry (Baxter Magolda, 1992). Some of these gender differences will be addressed in chapter 5 in the discussion of the art appreciation subjects in this study.

A further study on understanding ways of knowing was conducted by Baxter Magolda (1992). She conducted a longitudinal study, interviewing 70 male and female students about their intellectual development, over a five year period and identified assumptions about knowing in each interview. Baxter Magolda found four qualitatively different ways of knowing including: (1) Absolute knowing in which knowledge is gained from an instructor. Here students can explain what knowledge they have gained. (2) Transitional knowing in which knowledge is partially certain and partially uncertain. In this way of knowing the student understands and can apply knowledge. (3) Independent knowing in which knowledge is uncertain. At this level the student can think for himself and has his own view which he shares with others. (4) Contextual knowing in which knowledge is dependent on the context. Here the student can think through problems, compare perspectives, apply knowledge in context, and support his choices with evidence. Instead of every view being equally valid, with contextual knowledge some knowledge is better, depending on the context.

These four ways of knowing match some of Perry's (1970) positions relatively closely, coincide with Belenky et al.'s (1986) descriptions of women's development, and have some consistency with Kitchener and King's (1990) model (Baxter Magolda, 1992). In regard to gender differences, overall Baxter Magolda found more similarities than differences in the male and female ways of knowing. Both genders progressed through the four levels similarly, however, gender patterns did emerge in the first three ways of knowing. For example, men favored impersonal and individual ways of knowing while women generally preferred interpersonal and interindividual ways. Despite these patterns of learning, Baxter Magolda determined, as did Belenky et al., that no way of learning is inherently masculine or feminine. The students' stories revealed that reasoning patterns are related to gender and equal in complexity, but cannot, and should not be defined by gender. An unexpected finding from the Baxter Magolda study was that students are constructors of knowledge. She found that students can construct knowledge when learning is situated in their own experience.

These aforementioned studies on ways of thinking and knowing involve metacognitive skills. Metacognition refers to the ability of a learner to reflect on and control their learning (Schraw & Dennison, 1994). The difference in cognition and metacognition is that one uses cognitive skills to perform a task and metacognitive skills to understand how it was performed (Rivers 2001; Schraw 1998). Metacognitive skills are generally divided into two types: self-assessment and self-management (Rivers, 2001). Self-assessment is knowledge about one's own cognition, which is an awareness of one's mental strengths, weaknesses, and thinking strategies. Self-management is regulation of cognition, which includes planning, implementing, monitoring and

assessing how strategies are used (Brown, 1987; Flavell, 1987). According to Rivers (2001) self-assessment is a more critical skill than self-management.

Learners who are aware of these metacognitive processes are more strategic and perform better than other learners (Garner & Alexander, 1989; Pressley & Ghatala, 1990). These students can plan, monitor, and assess their learning in a way that directly improves performance (Schraw & Dennison, 1994). Imel (2002) sees a relationship between metacognition and constructivist learning theory. Because of the emphasis on self-reflection and knowledge construction, a constructivist approach to teaching and learning can locate cognition and understanding in a learner and contribute to the development of metacognitive skills (Daley 2002). By asking the students in this study to determine their course of action, implement their strategies, and assess their progress, it is hoped that they will use metacognitive skills to improve their art learning and understanding in this course.

Facets of Understanding

Before designing the constructivist learning activities for this study, I considered the outcomes I desired. Because I believed that students involved in these constructivist learning activities would go beyond appreciation of art to understanding of art and art issues, I needed a model for understanding. In their book, Understanding by Design, Wiggins and McTighe (1998) outlined six facets of understanding. Wiggins and McTighe are educators who have published numerous books and articles on understanding and assessment. They serve as educational consultants to the Association for Supervision and Curriculum Development (2005) who promote their Understanding by Design materials. The ASCD provides training online, and in courses, conferences

and workshops in order to help instructors write materials to gain multi-faceted understanding in their students. Although these facets were not specifically designed for use in constructivist classrooms, they are being used by many educators, to help design constructivist curricula. According to McKenzie (2002) since Wiggins and McTighe first published Understanding by Design (1998),

> their work has steadily increase in popularity as it fills many of the blanks for educators striving to meet new state and national standards while maintaining their belief in constructivist teaching pedagogy. While Understanding by Design is not exclusively a model for constructivists, it lends itself to sound instructional design principles. (¶1)

The six facets of understanding developed by Wiggins and McTighe (1998) were used in the design of the three constructivist activities and the results of the study were later analyzed in light of them. The six facets, which will be described in depth in the following section, include: explanation, interpretation, application, perspective, empathy, and self-knowledge. The first three facets signify understanding demonstrated through a performance while the other three denote a type of insight the student has (Wiggins & McTighe, 1999). Together these represent a multifaceted view of understanding, which is mature or insightful.

Explanation

This facet of understanding is revealed as students give a knowledgeable account of an event or action. These explanations should be clear and justified. This kind of understanding clarifies ideas or data from the learning activity. It can be demonstrated as students explain how or why things happen and where information connects to other

knowledge. When explaining, students might share their opinions and present evidence to support their stand on an issue. This facet is part of a mature understanding, because a naïve view would merely show the student has knowledge of the facts. In order to facilitate explanation, teachers should give assignments with questions, issues, and problems that allow students to explain in order to determine whether they understand. The constructivist learning environments in this study encourage explanation since students are continually asked to share their views with their classmates, provide support for their theories, and justify their processes. As these students reveal the *how* and *why* related to art topics through explanation, they should be able to demonstrate not only appreciation or awareness of the topic, but also an understanding of it.

Interpretation

In this type of understanding students give a narrative or translation of an event that provides meaning. A good interpretation might bring significance to an occurrence or idea or allow others to see things in a new way. Students can demonstrate understanding by making sense of facts or ideas that seemed foreign before. These interpretations should illuminate and engage other students. Students need to be able to build stories and interpretations instead of merely taking things at face value. Teaching situations that give students interpretations and teach about those interpretations lead to forgotten information and lack of understanding. Instructors need to support students in order for them to make these interpretations and see how knowledge is built. Interpretation is central to constructivism, especially in this case study, when it involves the visual arts. Students demonstrate understanding as they interpret works of art and their themes throughout the constructivist activities.

Application

Students demonstrate this facet of understanding as they use knowledge in a variety of situations. Bloom (1956) believed application, the ability to use knowledge, was central to understanding. Gardner's (1991) definition of understanding held application as a central component, when he asserted,

> I mean simply a sufficient grasp of concepts, principles, or skills so that one can bring them to bear on new problems and situations, deciding in which ways one's present competencies can suffice and in which ways one may require new skills or knowledge. (p. 18)

Application should reflect real-world situations such as ones found in professional conditions. Not only do Wiggins and McTighe (1998) believe that learning in realistic and relevant contexts is important, but also they think it is one of the goals for a constructivist learning environment as set forth by Cunningham, et al. (1993). The activities I designed for this study continually require students to apply their current and new knowledge to real-world learning situations. In the three learning activities, students work as a curator, Web page designer, and artist, respectively. They are able to learn through performance in an authentic task.

Perspective

As students develop critical and insightful points of view they gain perspective. In this type of understanding the student tries to see the point of view of another person. It is significant when the learner recognizes that there can be several different positions related to a particular problem or issue. Gardner (1991) also saw perspective as important:

> An important symptom of an emerging understanding is the capacity to represent a problem in a number of different ways and to approach its solution from varied vantage points; a single, rigid representation is unlikely to suffice." (p. 13)

As students gain perspective they can be conscious of what might be taken for granted or overlooked and draw attention to questionable conclusions. They can create new theories and applications. Teachers need to allow opportunities for students to question the obvious, explore why it matters, what it means, and view problems from different perspectives. Since one of the pedagogical goals of a constructivist learning environment is to "provide experience in and appreciation for multiple perspectives" (Honebein, 1996, p.11), students have ample opportunity to evaluate alternative solutions to problems as a way to question and enhance their understanding. In contrast to immature learners who only have one point of view, mature learners understand that answers to complex questions have multiple vantage points. Instruction should give students the opportunity to use several theories and points of view to solve problems. In the activities designed for this study, students in Art Appreciation 125D have the opportunity to gain the perspective of their classmates in small group discussions in the art museum, computer lab, and classroom. They can also consider the views of the curator, artists, and authors of Web pages and their text in order to further their understandings of art and art issues.

Empathy

This facet of understanding is to grasp another person's feelings and worldview. Empathy goes beyond sympathy, which is an incomplete understanding. Instead of merely seeing another's point of view, as they do when they gain a new perspective, this open-minded approach to a situation involves a change of heart. Empathy is a learned

ability to step outside one's own feelings and emotions in order to understand another different from oneself. As students attempt to see and feel as others do and make sense of the ideas and actions of others they gain empathy. Teachers need to encourage students to have respect for others and other viewpoints. Although empathy is not specifically addressed in the goals for constructivist learning environments used in this study (Honebein, 1996), this type of understanding can be facilitated by encouraging students to step into the shoes of their classmates and those contributing to their activities. For example, as students consider the intent and context of the artists they encounter, they have an opportunity to demonstrate empathy and an insightful view.

Self-Knowledge

In order to understand the world around them students must also understand themselves. In self-knowledge, students realize where their ignorance lies and how their knowledge and thoughts change their understanding. In contrast, an immature mind is unreflective and does not gain understanding from analyzing what and how something was learned. The process of self-analysis is key to a complete understanding as students must question their own understandings in order to advance them. The goals for constructivist learning (Honebein, 1996) also include knowing how we know as an essential component to learning and understanding. In a constructivist learning environment teachers encourage self-awareness of the knowledge construction process by having the students analyze their construction of knowledge. They must determine why and how they solved the problem as they did. In all three activities used in this study students can respond to questions about what they did, why they worked in that manner,

and what they learned from the experience. These prompts should encourage students to gain even greater understanding.

This multi-faceted view of understanding is well suited to the constructivist methods used in this study. According to Wiggins and McTighe, constructivist teaching approaches are vital for prompting understanding in students. In their text on understanding, they cite constructivist methods as one of the three methods teachers should use, along with didactic teaching, or direct learning, and coaching. They believe teaching for understanding should involve all three approaches depending on what the learning objectives for the lessons include. If the desire is for students to learn concepts, strategies, or make connections, a constructivist teaching approach is essential for understanding.

Because this study employs a constructivist teaching approach for the purposes of determining the kinds of understanding students in an art appreciation class might be able to achieve, these facets are an appropriate structure to reference when analyzing the data from the documents, interviews, and observations and looking for patterns of learning. This multi-faceted perspective of understanding also fits with the definition of understanding used in this study: *the ability to use knowledge, make connections among art topics, and justify those decisions and opinions;* and goes beyond the view of art appreciation: *an awareness of art and its processes from the past and present and an ability to think about and respond to art and art theories in order to find value and meaning in art.*

Conceptions of Learning

An additional structure that will be used to determine how a constructivist based teaching approach in an undergraduate art appreciation class affected student learning, are the conceptions of learning clarified by Marton et al. (1993). These conceptions of learning are from the student's point of view. They were selected for this study because of their ties to constructivism in higher education. One proponent of these conceptions of learning is Noel Entwistle, who has conducted extensive research in the areas of student learning and understanding in higher education (Entwistle, 1984; Entwistle, 1987; Entwistle, 1988; Entwistle, 1991; Entwistle & Ramsden, 1983; Entwistle & Tait, 1990). He believes constructivist learning environments are needed in higher education to promote higher-order skills and advanced knowledge. In the text *Designing Environments for Constructivist Learning* (1993) Entwistle, Entwistle, and Tait discuss constructivism and research on student learning in higher education. They refer to Marton's work on the student's ability to actively construct knowledge and describe their own learning experiences (Marton & Säljö, 1984; Marton, Hounsell & Entwistle, 1984). Entwistle et al. believe these conceptions of learning have implications for teaching and learning in higher education:

> This research has a particular strength in that the concepts derive directly from students' descriptions of their own learning experiences, and so tend to be expressed within a set of concepts and categories immediately communicable to teachers and students alike. It has also identified contextual influences on the quality of learning outcomes, and so can be used to suggest ways of designing learning environments to enhance one form of constructivism—conceptual

> understanding—within academic courses. By considering these ideas and their implications, alongside those derived more directly from the emerging forms of constructivism with cognitive psychology, more firmly based conclusions should be possible. (p. 332-334)

These researchers are interested in what students learn and how that learning takes place in higher education. Trying to understand learning from the student's point of view is in contrast to more traditional teacher centered approaches (Entwistle, 1984). They believe looking at learning from the student's point of view should provide a better understanding of learning processes. These conceptions distinguish between an "absolutistic concern with facts and a pluralistic view of knowledge as alternative pathways towards meaning" (Entwistle & Marton, 1984, p. 222). Students involved in the learning should determine the meaning. They should consider what they are doing and why they are doing it. Marton and Säljö are also interested in the learner's perspective on the content, context, and outcome of learning (Entwistle & Marton, 1984).

Marton et al. (1993) clarified these six conceptions of learning through a study in which they asked university students about their view of learning. The first five of these conceptions were identical to those identified in an earlier study by Säljö (1979). Studies using these conceptions have been conducted by other research groups (Martin & Ramsden, 1987; van Rossum & Schenk, 1984) and are well established in higher education conditions.

According to Marton et al. (1993), students saw learning as (a) increasing one's knowledge, (b) memorizing and reproducing, (c) applying, (d) understanding, (e) seeing something in a different way, and (f) changing as a person. The first three conceptions

view knowledge as something available and acquired by the learner. Information in these conceptions is given by the instructor, textbook, or another source and it is picked up by the learner and stored for later use. There is no meaning in the first three conceptions, making it distinct from the second three in which meaning is central. In the second three conceptions students understand the information and may change as a result of that understanding. Entwistle et al. (1993) see these second three conceptions of learning as transforming knowledge, which is central to constructivist theory as applied to education:

> All these first three conceptions imply that information is presented to learners whose task is seen as reproducing information on demand, effectively in the same form as it was originally learned. This is not unreasonable when facts are being learned, but understanding depends on transforming the knowledge presented, by relating it to what is already known and making sense of it in personal terms. The more sophisticated conceptions stress that learners have to be active in making sense of the material and in the process the cognitive structure may change in ways which not only transform understanding, but may also cause fundamental shifts in values, which imply changing as a person. (p. 335)

Marton and Säljö (1984) also see these second three conceptions as paramount in the learning process: "It is exactly in transitions between preconceived ideas of the phenomena and an improved understanding of those phenomena, where the most important form of learning in higher education is to be found" (p. 54). The conceptions *understanding, seeing something in a different way,* and *changing as a person* stress that learners have to be active in making sense of the material and in the process the cognitive structure may change in ways which not only transform understanding, but may also

cause fundamental shifts in values, which imply changing as a person (Entwistle et al., 1993).

In my study, the first two conceptions, *learning as increasing one's knowledge* and *learning as memorizing and reproducing*, are not desired outcomes. In these conceptions learning is unrelated to past experiences, there is no relationship among the bits of knowledge, and the knowledge is merely reproduced. These conceptions are anti-constructivist and will not be considered when I interpret patterns of learning during data analysis. Not surprisingly, however, these first two conceptions were mentioned by all the subjects during their first interview at the beginning of the semester as they described their expectations for learning in Art Appreciation 125D. These conceptions will be discussed further in chapter 4.

The third conception, *learning as applying*, is of more interest in this study, since students use knowledge in a real-world situation, such as the ones designed for this study in which they work as a curator, Web page designer, and artist. In the three learning activities, students applied what they learned previously. This application occurred as they used the knowledge about their artist to write text for their Web page or used their knowledge of how to make a Web page to create one. This application may be in a life situation like seeing an artwork they recognize while playing a video game or knowing the answer to the art questions on Jeopardy. Another reason for my interest in this conception of learning, is that application is one of the facets of understanding outlined by Wiggins and McTighe (1998). Wiggins and McTighe believe as students apply knowledge they demonstrate one aspect of understanding. Similarly, although

application alone does not constitute student learning in itself, it can be a lower level indication of learning, if it emerges as a pattern of learning in this study.

The second three conceptions of learning (Marton et al., 1993): *learning as understanding, learning as seeing something in a different way*, and *learning as changing as a person*, are of particular interest to this study. They represent that students are able to actively construct their knowledge, make meanings, and change their views.

Learning as Understanding

The conception *learning as understanding* involves gaining meaning. In this type of learning the student develops, grasps, or discovers some new meaning in or from what he is learning. The learner is the focus of this conception, not the material being learned. The learner examines relationships among the material and connects it with other ideas and knowledge. In this conception the learner wants to do something with this understanding: use the information in a new way. Because constructivism involves students taking action to create meaning from the material under investigation, students in this study had many opportunities to demonstrate *learning as understanding*. For example, one could understand how a curator works or the meaning in a painting. Understanding is one of the desired outcomes of this study and the focus of the second research question.

Learning as Seeing Something in a Different Way

When a learner sees something in a certain way and then sees it differently, her conception has changed. *Learning as seeing something in a different way* is similar to the previous conception except here instead of understanding an idea, the change is in the way of thinking. Students see something from one perspective and then their perspective

changes as a result of something new they understand. This type of learning does not happen as students are studying for an exam, but it can happen during a classroom activity like the three designed for this study. Many perspectives are valid in art, especially in the contemporary art world where, although artists have their view of their art and their intentions in creating a particular piece, each viewer can bring a new perspective to the work (Barrett, 2000). As a result of gaining meanings from other students in the class and an artist's perspective, students can gain a new perspective on a work they previously did not understand, or see how an artist communicates with his art. As a result of these new understandings students may also change their definitions of art and begin to see all art from new perspectives, which will allow them the confidence to have experiences with many types of art.

Learning as Changing as a Person

In this final conception of learning a student believes he has changed as a person. This change happens during the process of learning. The student changes and then the phenomena look differently to that student. Because the learner is in charge of what happens to him, he allows the change to occur. Marton et al. (1993) rarely found this conception in their research. Although it is possible for a student in Art 125D to conceive of this kind of change in themselves, it is doubtful that the conception of learning as changing as a person will emerge as a pattern of learning among subjects in this study.

These four conceptions of learning and the previous facets of understanding will be used as structures I can refer to as I interpret the data in order to find patterns of

learning. The patterns that emerge should provide the evidence to investigate the two research questions in this study.

In conclusion, the literature on constructivism and adult learning provides the rationale for this case study in an undergraduate art appreciation class and supports my previous beliefs that teaching methods involving the students in their learning through a constructivist approach can cause meaningful learning experiences. The three constructivist learning activities designed for Art Appreciation 125D provide an environment for learning and understanding. These activities combined with the literature on constructivism, constructivist learning environments, adult learning, cognitive development, the facets of understanding, and conceptions of learning should provide a foundation for the following study to discover the relationship between using constructivism as a teaching method and student learning in an undergraduate art appreciation course. I believe constructivism results in a deeper understanding than in a typical art appreciation course in which learners are merely passive recipients of knowledge.

CHAPTER 3

METHODOLOGY

Research Method

Because this study focuses on *how* a constructivist approach affects student learning, qualitative research methods prove the most appropriate. Qualitative research utilizes open-ended questions such as those posed in this study: *How does a constructivist based teaching approach in an undergraduate art appreciation class affect student learning? What kinds of understanding are students in an art appreciation class with constructivist learning activities able to achieve?* Qualitative research is also flexible and generally conducted under "natural" conditions, making it ideal for use in schools and classrooms. Through qualitative research, the complexity of students and schooling can begin to be understood (Grady, 1998). This understanding strives to provide a complete or holistic view of an issue like the use of constructivism as a teaching method in an undergraduate art appreciation class.

Although there are many benefits to qualitative research, limitations also exist. According to Grady (1998) consistency is problematic because the researcher has her own experience, values, and perspectives that she brings to the analysis. In addition, it typically takes longer for the researcher to gather and analyze data in a qualitative study than it does in a quantitative study using a statistical test. Despite these limitations qualitative research methods remain the most appropriate to this study on the effect of constructivist learning environments on student learning in an undergraduate art appreciation course.

In qualitative research, the results from data such as interviews, observations, and document analysis, are almost always expressed in words rather than statistics (Grady, 1998). Unlike quantitative research, which typically produces consistent but thin data, qualitative research produces rich and descriptive results, results true to students' perspectives. Qualitative research also indicates the reasons for the results, not just the results themselves. These reasons behind the results can generate further questions to investigate during the study or cause the researcher to refine the original questions based on the new information.

The results of a qualitative study like this one lend themselves to narratives that are easier to understand than those produced by quantitative research (Grady, 1998). Instead of a list of percentages and figures, results could include observations or a discussion of similarities found among subjects. An inductive process, such as finding connections among pieces of evidence, is typical in qualitative research (Bogdan & Biklen, 1982). In this study, for example, the results were analyzed to find patterns of learning, which emerge from the data. The results include quotations from student interviews, reflections written by students, and observations I made during the activities.

Qualitative results give the reader a clearer sense of what actually occurred during the study. Thus, not only scholars, but also art appreciation instructors can make their own interpretations of the data presented, draw their own conclusions about constructivism in art appreciation, and apply aspects of their insight to their practice. Interestingly, this process of interpreting the data for oneself and using the new information to adapt one's own knowledge structures, makes the reader of qualitative research such as this study, involved in a constructivist learning process.

One type of qualitative research is case study. Yin (1989) finds the case study to be the generally preferred strategy when addressing how or why questions. This research method allows study of a real life situation in which multiple sources of evidence are used with the resulting data being analyzed.

Case study is a particularly appealing design for education and has informed educational practice for nearly thirty years (Merriam, 2001). The examination of educational processes, problems, and programs brings about understanding that in turn can affect and perhaps even improve practice. Sanders (1981) writes that, "Case studies help us to understand processes of events, projects, and programs and to discover context characteristics that will shed light on an issue or object" (p. 44). Bromley (1986) states that case studies "get as close to the subject of interest as they possibly can, partly by means of direct observation in natural settings and partly by their access to subjective factors (thoughts, feelings, and desires)" (p. 23). Case study looks at actual situations and results in a rich and holistic account of a phenomenon offering insights and illuminating meanings that expand its readers' experiences. These insights from case studies can directly influence policy, practice, and future research (Merriam, 2001).

Case study is most appropriate for my research because I am interested in examining a teaching method, constructivism, and understanding its effects on students in a college art appreciation class. In this study, therefore, the case is a particular class, Art Appreciation 125D in which constructivist methods are employed. A descriptive type of case study will be used to investigate this class during the Spring 2004 semester.

According to Yin (1994) there are three types of case studies: explanatory, descriptive, and exploratory. Although there is often overlap among the types, this case

aligns most closely with the descriptive type because it is has a narrow focus on a particular class and learning theory. Descriptive cases allow for the researcher to thoroughly describe the case in order to add realism and in-depth examples as part of the results of the study. This investigation of constructivist methods in an art appreciation class should provide insight, to influence changes at Mississippi College, and other universities and possibly prompt future research.

In order to study constructivism in art appreciation, I designed three constructivist activities (see Appendix B) and created a matrix (see Appendix C) to align the constructivist learning activities with the seven constructivist learning goals as summarized by Honebein (1996) and discussed in chapters 1 and 2. Student documents, interviews with the subjects, and my observations, are the research tools to investigate learning by the subjects. As subjects engage in these three constructivist learning activities, adequate data in the form of written explanations, reflective quotations, and interpretive observations, should emerge in order to investigate the effects of this method in an undergraduate art appreciation classroom.

The case study researcher takes on many different roles during the study (Stake, 1995). Three of the roles I played during this study were the roles of teacher, interviewer, and participant observer. According to Stake, researchers make continuous decisions about how much emphasis to give each role. These decisions can be conscious or unconscious. As teacher, I designed the opportunities for student learning in the form of constructivist activities and guided the students through their learning processes: being an advocate and consultant as needed. As interviewer, I tried to build rapport with the subjects and help them feel more comfortable during the interview process. According to

Grady (1998), “the researcher who builds solid rapport will be able to obtain richer data, because subjects who are encouraged by good rapport often are willing to contribute more information to the study” (p. 8). As participant-observer, I was able to notice aspects of the student activities and ask informal questions of the subjects, as I was involved in the classroom. The students knew I was making observations, but that role was subordinate to my role as a participant in the class. Merriam (2001) believes this involvement in classroom activities is a strength in case study research, “The participant observer sees things firsthand and uses his or her own knowledge and expertise in interpreting what is observed” (p. 96). The challenge was to combine participation and observation so that I understand the course and activities as the instructor while collecting the data needed for the study as researcher. According to Patton (2002) the degree of participation by the observer, and the nature of that observation can vary along a wide continuum of possibilities. He continues:

> The ideal in evaluation is to design and negotiate that degree of participation that will yield the most meaningful data about the program given the characteristics of the participants, the nature of staff-participant interactions, the sociopolitical context of the program and the information needs of intended evaluation users. (p. 267)

The possibilities for observer participation and nature of observation range from complete immersion in the setting as a full participant, to the position of spectator, in which the observer is separated from the setting. Those observers who fully participate in the setting appear the same as the subjects. This type of observer often analyzes documents, interviews respondents and reflects on her observations as she participates in

the setting. Conversely, the observer as spectator does not participate in the activities. He looks at the scene from the outside and separates the interviews from the observations. Most participant observers fall somewhere along the continuum between these two end points employing overlapping data collection strategies. These researchers often make field notes, which combine their observations with descriptions of the setting and discussions with the participants (Patton, 2002). According to Bogdan and Biklen (1982), the amount of participation depends on the study. In this case study I fell somewhere between the end points of the continuum. I was not a full participant in the study as I was instructing the class and not enrolled in it, however, I was able to participate in such a way as to develop the perspective of an insider. I made field notes as I observed the students, which included not only their comments during the activities, but also the context in which they were made and my reflections of those observations as time allowed.

Critics of the participant observer method of collecting data believe it to be highly subjective and therefore unreliable (Merriam, 2001). However, according to Patton (2002) reflection and introspection are important in case study research. The feelings and impressions of the observer become a part of the data, which is used to understand the case. In addition, as a participant observer I was able to pay attention to actions and conversations that an outside observer might not perceive as being significant to the study. The students were comfortable with me, and I was able to be relatively passive and unobtrusive when I needed to be. In this way I was able to get a depth of information.

Another concern with the participant observer method is the extent to which the observer investigator affects what is being observed (Merriam, 2001). In qualitative research involving the researcher as primary data collector, subjectivity and interaction are assumed. My observations may bring about changes in the subjects behaviors, however, Merriam believes the affect the observer has on the subjects is not a drawback to the method, just a part of the method, which needs to be addressed in data analysis. She stated, "The question, then, is not whether the process of observing affects what is observed but how the researcher can identify those effects and account for them in interpreting the data" (Merriam, 2001, p.103). According to Patton (2002) "Evaluators and researchers should strive to neither overestimate nor underestimate their effects but to take seriously their responsibility to describe and study what those effects are" (p. 568).

Because the researcher is the instrument in qualitative research such as this study, information about the researcher including experience and training should be included. According to Patton (2002), the researcher should report any personal and professional information that may affect data collection, analysis and interpretation. I am a Caucasian female with a lot of energy and enthusiasm. I enjoy teaching art appreciation and I especially enjoy getting to know the students, seeing their interest in art grow, and sharing art experiences with them. During the Spring 2004 semester when I conducted this study my energy level was not as high as usual, however, because I was pregnant and often had headaches and nausea. Despite these setbacks, my enthusiasm for art and teaching remained strong and I only had to miss one day of class for sickness.

As for my education and experience, I hold an undergraduate degree in art education from Arkansas State University and a master's degree in art education from

The University of Georgia. I taught elementary and secondary art for six years in a variety of settings from 1989 to 1996. My art appreciation instruction experience in higher education is somewhat varied as well. For several semesters I taught art appreciation as a lecture course covering the history of Western art at Southern Arkansas University. While attending the University of North Texas I worked as a graduate assistant in an art appreciation class of 400 art majors in which the instructor used a similar lecture style covering art theory, art methods and materials, as well as art history. While at UNT I also had the opportunity to serve as an editor for a study guide, which accompanied the art appreciation text we were using in the course. At Mississippi College, where I am currently employed, I have been teaching art appreciation since 1998 through a variety of methods which were mentioned in chapter 1. In addition to these higher education settings, I have also taught two "continuing education" art appreciation courses for non-traditional age adult students: one in a school of the arts in which I collaborated with a music education instructor, and one in an art museum. This personal and professional information, which may affect data collection, analysis, and interpretation, is presented to give a more holistic understanding of the case, and will be further discussed in chapter 5.

Participants/Location of Research

According to Creswell (1998), in case study, analysis also includes making a detailed description of the case and the setting. I conducted this study in Art Appreciation 125D at Mississippi College during the Spring 2004 semester. Mississippi College, the oldest college in Mississippi and the largest private university in the state, is a Christian university that seeks to be "recognized for academic excellence and

commitment to the cause of Christ." (Mississippi College, 2005). Mississippi College, or MC, enrolls approximately 3000 undergraduate students each year. In 2004, the year of the study, 59% of the students at Mississippi College were female while 41% were male. The majority of students at MC were Caucasian (77%) with the remainder primarily African-American students (21%).

Mississippi College attracts a population of Protestant students with good academic records. In 2004, the average incoming ACT score was 23.5. This score was 2.6 points higher than the national average, which was 20.9, and 4.7 points higher than the Mississippi average of 18.8 (ACT, 2004). More than half of the students enrolled in 2004 considered themselves affiliated with the Baptist faith, while the remaining students indicated that they were connected with various other religions including Methodist, Catholic, Presbyterian, Pentecostal, and Church of Christ. This undergraduate population also is of traditional age. Ninety-three percent of freshman who responded to a Welcome Week survey in 2004 were in the typical 17-19 age group (C. Sessom, personal communication, August 10, 2005).

At Mississippi College, Art Appreciation 125 is one of the core curriculum offerings for the fine arts requirement, with five sections typically offered each semester. During most semesters three full-time faculty each teach a section of Art 125 while two adjunct instructors, myself included, teach the other two sections. The art department limits art appreciation classes to 26 students, thus enabling them to sit at tables where they can engage in class discussion, work in groups, and create works of art. MC enjoys an advantageous location only 15 minutes from downtown Jackson and the Mississippi Museum of Art.

Art Appreciation 125D met three times a week for 50 minutes per session. Twenty-five students were enrolled in the class: nine freshman, ten sophomores, four juniors, and two seniors, with all but one student being in the traditional 18-22 age range. Ten females and fifteen males completed the course; twenty-three of them were Caucasian and two of the students were African-American. Three of these students were majoring in the arts, twelve in the sciences, nine were social sciences majors, and one student was undecided.

I selected six students as subjects for this study from the 25 students registered for Art Appreciation 125D. According to Merriam (2001) no certain number of people or percentage signifies a sample in qualitative research. Sample size is more than mere numbers: the adequacy of the sample is how the case is thoroughly explored. This thoroughness is also referred to as saturation, which is a point when my research is considered complete, when the patterns were recurrent and no new patterns were apparent. In order to adequately answer the questions posed, six participants should represent a class of 25 students. That number should answer the questions posed at the beginning of the study and allow for a point of saturation or redundancy to be reached.

In order to select the six subjects, I used a criterion-based selection process, which is a common form of nonprobability sampling. According to Merriam (2001), nonprobability sampling is the preferred method for most qualitative research. In this type of sampling the investigator wants to understand the problem and benefits by selecting a sample from which the most can be learned. In criterion-based sampling the researcher selects attributes desired for the study and finds subjects that match. In this case study, the criteria for sampling included the gender and major of the student. I

wanted to use one male and one female student in each of the three primary domains of knowledge: the arts, the sciences, and the social sciences. These criteria allow the investigation of any differences in learning between male and female students and among students with different majors.

In order to select these students I divided the student information cards completed on the first day of class by gender and knowledge domains. Since there was only one male and one female student in the arts domain attending the first two days of class, they were selected for the study. Because the sciences and social sciences included many subject choices, I selected students who did not seem to be inhibited when asked to share basic information about themselves on the first day of class. Although race was a criterion I was interested in, the only non-Caucasian student attending the first two days of class was also the only male arts major, and was selected for the study because of his gender and major, not his race.

The subjects were assigned a subject number when they were selected for the study. When data analysis began these subjects were also given fictitious names.

Table 1. Subject data.

Subject number	**Fictitious name**	**Major**	**Year**	**Religion**	**ACT score**	**Art background**
1	Hank	Computer Science	Sophomore	Protestant	23	No art background
2	John	Psychology	Freshman	Protestant	25	Limited art background
3	Anna	Music Education	Junior	Baptist	24	Strong art background
4	Kim	Psychology	Freshman	Protestant	19	No art background
5	Sara	Accounting	Sophomore	Methodist	25	Limited art background
6	Kyle	Communications	Sophomore	Baptist	22	No art background

All six of the students agreed to be subjects for the study. They granted consent on a form (see Appendix D) that included general information about the study and other requirements stipulated by the Institutional Review Board for the Protection of Human Subjects (UNT, 2003). In addition, this form provided assurance to the students of the confidentiality of their responses, reminded them of their voluntary participation, and guaranteed the independence of their grade in the course, regardless of their participation. All six students participated in the study throughout the semester.

From my past experience with students at Mississippi College I have observed that typically they are from stable homes and are dependable persons who attend and participate in class and want do their best in college. The six subjects selected for the study evidenced this observation. The subjects were all from Protestant families and were still active religiously, though not necessarily in their parents' denomination. All six subjects' birth parents were still married to each other, although one set had recently separated. Five of the six students lived on campus and were involved in the school community. Although constructivism is well suited to learning in higher education and does not require that the student be dependable or stable, having subjects that attended class regularly, were willing to participate, and confident in their ability to work with these constructivist methods, was beneficial. I believe these factors were influenced by the subjects' background and environment.

The six subjects came into Art Appreciation 125D with very different knowledge bases for art appreciation, which, from my past experience, is typical at Mississippi College. Among this sample most had little to no art background. Subject #1 "Hank" was one of the three subjects who claimed to have no art background. He chose to take

Art Appreciation 125D because he heard it was easier than his other two fine arts choices, theater and music appreciation. Conversely, subject #3 "Anna" had the greatest knowledge of art before the class. Anna had taken six years of art classes and had family members who were knowledgeable in the visual arts and had taken her to art museums. She had a good knowledge of art periods and styles and was interested in learning more about art and art history. Regardless of their entry-level knowledge, the understandings held by all the subjects were modified as new information was added and as each student was involved in art experiences. In this way the six subjects made personal meanings and gained individual understandings about art.

When asked about their motivation to do well in core classes such as Art Appreciation 125D subjects in this study gave answers that indicated extrinsic motivation. Subject #2 "John" said his motivation for non-major classes like Art Appreciation 125D was to earn a good overall grade point average to get into medical school. An additional motivation for him was financial; if his grades dropped his parents would no longer pay for the portion of his tuition not covered by his scholarship. Surprisingly, subjects also gave indications of intrinsic motivation. Subject # 6, "Kyle," said something new always motivates him, and subject #1 "Hank" said his family always told him " 'Whatever you do, do your best;' even if that was cutting the grass. If I missed a spot they made me go out and re-do it. So I am never able to settle [for less than my best]."

I selected the subjects before the first activity took place at which time the class divided into smaller working groups. I allowed the students to form their own groups so they could take ownership of the project early on, and be motivated to learn with

classmates of their choosing. Students selected a partner for the preliminary activity at the museum. "Sara" and "Kim" chose each other as partners and the rest of the subjects paired with a non-subject. During the second part of the activity each pair joined with another pair. "Sara" and "Kim" joined with "Anna" and her partner making one group comprised of all three female subjects. The three male subjects and their partners joined with other pairs of non-subjects, making the male subjects in three separate groups.

Instructional Design for Art Appreciation 125D

The three constructivist learning activities designed for the study (see Appendix B) took place throughout the semester. The first activity, *Experiencing Art in a Museum Setting*, was conducted at the beginning of the semester; the second activity, *Creating Art History Web Pages*, occurred during the middle of the semester; and the third activity, *Encountering Contemporary Art*, took place at the very end of the semester. All three activities utilized themes chosen by students at the beginning of the semester when students were involved in the first activity at the Mississippi Museum of Art. In the permanent collection galleries each group of students found commonalities among the works and selected a title for their exhibition in order to connect these pieces. This title for their exhibition became their theme for all three constructivist learning activities. By using the same theme for all three lessons, students could unify their learning about art, artists, and the art world. Since these activities involved the students two or three times each month, they constructed their learning not only at the beginning and end of the study, but also throughout the semester. In this way, students should have had a broader knowledge base as they participated in each successive activity.

In addition to the three constructivist learning activities several other methods of instruction were utilized during the semester, although the other methods were not a part of the study. Combining constructivist methods with other teaching strategies, such as lecture and demonstration, is an acceptable and supported practice. Entwistle et al. (1993) support this belief, "constructivist techniques can run in parallel with more conventional approaches and that for some purposes more direct instruction may still be the most effective" (p. 354). Throughout the semester I used lecture to cover basic terminology related to the nature of art, methods and materials, and periods in art history. I used slides to introduce many of the art history images, while students utilized small prints during group work as they learned about the purposes and categories of art. Students worked with a partner on several assignments including one in which groups determined whether certain objects qualified as works of art. Individually, students completed studio projects designed to improve appreciation and understanding of non-objective art, contour line drawing, perspective, and printmaking. Demonstrations were given to introduce painting materials and printmaking methods. Students watched three short videos during the semester to provide additional information on sculptors and sculpture methods. A syllabus for Art Appreciation 125D is available in Appendix A.

Method of Data Collection

I collected the data through the three main strategies for qualitative research (Grady, 1998): interviews, observations, and documents. Interviews allow researchers to learn about individuals and their thoughts and actions. Through observations researchers can take note of actions and reactions in given situations, such as the classroom activities in this study. Documents such as student reflections and artworks can provide insights

based on hard evidence. This data collection provides a means for a detailed description of the case to emerge and allow for a holistic analysis of the entire case (Creswell, 1998).

These three data collection methods: interview, observation, and documents enable triangulation in this research design. Triangulation is the use of at least three types of data to converge on the same issue or question (Grady, 1998). Each method provided data in order to investigate how a constructivist approach in an undergraduate art appreciation class affects student learning and understanding. The information gathered from each source of data corroborates the results of the other two methods. Corroboration increases the credibility and strengthens the accuracy of information because it derives from several sources and was gathered with various methods. Each of these three methods of data collection can produce rich information. Triangulation can be far more powerful than only one or two of the methods and give a complex picture of the case (Grady, 1998).

Interviews

According to Grady (1998) interviewing is one of the most useful methods for collecting information. The three types of interviews generally used in case studies include: unstructured, semi-structured, and structured. The unstructured interview rarely helps the novice researcher because it is more like a conversation than an interview. The semi-structured allows the interviewer to begin with a set of questions, and then deviate from those questions in order to acquire more thorough responses. The interviewer can expand on questions, ask follow-up questions, seek clarification, or change the direction of the interview when necessary. The structured interview is an oral administration of a written questionnaire.

For this study I used the semi-structured interview. This approach allowed for two-way communication with the subject and enabled me to probe for more thoughtful responses to the questions. All six subjects were interviewed three times: at the beginning of the semester before the first activity, after the second activity, and end of the semester after the third activity. This allowed for student learning and understanding to be analyzed throughout the semester as the subjects built on their previous knowledge through the constructivist learning environments. I was interested in seeing if there was evidence of increased understanding throughout the semester or if the subjects' perceptions of their learning changed as they learned more about art and art processes. The first interview at the beginning of the semester included questions designed to determine the subjects' beliefs about art appreciation, learning, and understanding:

- What do you believe it means to appreciate art?
- What do you expect to learn in this class?
- How do you learn best? Lectures? Reading? Group work?
- How do you know when you have learned something?
- What does it mean to understand something?

The second interview, which took place after activity 2, focused on group work and learning processes. It included the following questions:

- Tell me about your experience with your group at the museum. How did your group determine the theme?
- When you met to decide who was going to write about which artist, what happened then?
- What insights have you gained about the theme?

- How has working with the theme affected your understanding of art?
- How do you make connections best?

The third interview occurred following activity 3 at the end of the semester investigated the subjects' conceptions of their learning and understanding:

- How did working with others this semester affect your learning?
- How did determining how to solve each assignment affect your learning?
- How did the process of reflecting on your learning affect your learning?
- How did using the Internet to find images and artists affect your learning?
- How did these three theme-based activities contribute to your understanding of art this semester?
- How has your appreciation of art changed this semester?

The interviews were tape recorded and transcribed by the researcher in order to find evidence of learning and understanding. They should be the most important source for data because the subjects were allowed to explain their processes and thoughts, and reflect on their learning.

Observations

The second data-collection method used in this study was observations. Here I was able to look with a purpose in order to note what was happening. In this way, I observed not only conversation, but also facial expressions and other nonverbal information. Because these silent indicators carry meaning, I could obtain a more holistic sense of the situations than with only interviews and document gathering, therefore, strengthening the data collected. Working as researcher, I wrote in my field journal what was happening while observing learning situations, attempting to separate trivia from

significant detail. I looked for significance in those occurrences and redirected observation to refine or substantiate the meaning in the learning that was taking place. This process is typical for a researcher observer. Researchers often conduct qualitative data analysis simultaneously with data collection. The researcher actually begins to analyze the information during collection (Grady, 1998).

As mentioned previously, although qualitative research assumes subjectivity and interaction, concern still arises as to the extent to which the observer/investigator affects the observation process (Merriam, 2001). The observer must be sensitive to the effects she might have on the situation and account for those effects. In this study, I made unstructured observations throughout the semester, primarily during the constructivist learning activities. I observed the subjects working with their groups in the museum, in the classroom, and in the computer lab as they developed their virtual exhibitions, research papers, Web pages, and contemporary art. These recorded observations were made in a field journal, which I later transcribed and reviewed in order to find evidence of learning and understanding. I used these observations to triangulate emerging findings in conjunction with interviewing and document analysis.

Documents

Although sorting through documents consumes a large amount of time, this type of analysis allows a clear, tangible record of thoughts and events (Grady, 1998). In this study, all students developed documents with a partner or in a group during each of the constructivist learning activities. The written documents were worksheets completed during the activities. The data that appeared on these worksheets included student goals, responses to works of art, analyses of procedures, beliefs about art, and reflections on the

constructivist method. Other documents included the Web sites composed by the students, works of art created by the students, and video recordings of the group presentations. All the documents produced were class assignments. Because of the collaborative nature of the constructivist activities, none of the documents were specific to individual subjects. Although every document was assessed in order to assign grades in the Art125D, only the documents created by a subject and their partner or group were analyzed for indications of learning and understanding. Because these documents were obtained through normal educational practices and the non-subjects were not identified in any way, I did not need to receive individual consent in order to analyze them (Code of Federal Regulations, 2005). These documents should provide relevant data, which will corroborate findings from the interviews and observations.

Method of Data Analysis

Analyzing case study evidence is the least developed aspect of case study methodology (Tellis, 1997). Most often qualitative research follows an inductive process in the early stages when the researcher observes specific instances and makes generalizations in order to find themes or patterns in the data. This process involves being grounded in the data and open to meanings and themes which may emerge. Once patterns have emerged, qualitative analysis may become more deductive as when an analyst examines the data in terms of theory-derived concepts or a framework The researcher can look for undiscovered patterns throughout the deductive process as well or as a follow-up to the deductive process (Patton, 2002).

This case study followed these general procedures described by Patton. Both inductive and deductive methods were employed. In the beginning stages I used an

inductive process, reviewing data in order to discover emerging patterns. Once the patterns were revealed and described, I aligned the themes by frequency, levels of thinking, and metacognition, using deductive processes when it was necessary to compare the patterns with a previously developed theoretical framework.

As a part of my inductive process of reviewing data in order to reveal underlying patterns of learning, I referred to theory on student conceptions of learning (Marton et al., 1993) and understanding (Wiggins & McTighe, 1998) so that I would have a strategy for these potential patterns. According to Yin, in case study, the researcher should have an analytic strategy that will lead to conclusions. Linking the data to criteria for interpreting findings is one of the least developed aspects of case study research (Yin, 1994). This "pattern-matching" is a major mode of analysis in which a pattern is found in the data and compared with a potential one. The internal validity of the research is enhanced when the patterns found among the data and the patterns from the theoretical framework match (Yin, 1994). Patton (2002) agrees that using theories adds quality control to a case study and can allow for the researcher to be seen as a fair and serious thinker. Campbell (1975) and Stake (1995) also asserted that relating data to theory through pattern-matching can be a useful technique and enhance the quality of the research.

During this process of data analysis I interpreted the collected information. According to Grady (1998) the researcher must read the data critically in order to find connections among the data, form judgments, and answer research questions. Interpretation limits qualitative research since the interpretations of the data depend somewhat on the personal history, experience, and perspective the researcher brings to the analysis. However, as mentioned previously, these values of the researcher comprise

an integral part of this kind of research despite the problems with consistency (Grady, 1998). In the analysis of this case I was able to interpret the data and find connections among the data in order to answer the research questions. Although I am close to the subjects in this study and the art appreciation class, I was able to provide insight into what is atypical for this class and get better participation from the students than an investigator from outside the classroom.

Erickson (1986) agrees that qualitative research emphasizes interpretation. He believes this interpretation should be done by the researcher and by those being studied. In this study, not only did I analyze data and make interpretations, but also the subjects analyzed their own learning processes and outcomes. As mentioned in chapter 2, the learners determined much of their own assessment as they decided how to meet their goals and in what ways they were successful in meeting them. This type of assessment is very constructivist in nature and fits the constructivist learning activities described in this study as well. The subjects' ability to assess their learning emerged as a pattern in this study. According to Honebein (1996, p. 22) *how* a learner knows is more valuable than *what* a learner knows. Evidence that students know how they know can be a good indication that the students in this study are going beyond mere appreciation of art and art processes to an understanding.

As researchers examine the data to find themes that respond to the research questions they bring meaning to first impressions as well as to the end products, thus making sense of the data collected (Stake, 1995). As the researcher searches for patterns and draws conclusions about the data, he begins to understand the case. By examining

the data with a critical eye and finding connections among that data, the researcher can suggest answers to the research questions.

In searching for answers to the research questions in this study: *How does a constructivist based teaching approach in an undergraduate art appreciation class affect student learning?* and *What kinds of understanding are students in an art appreciation class with constructivist learning activities able to achieve?*, I believed I would find indications of learning and understanding, but what kinds? How did the students view learning? What patterns of learning would emerge? Could students assess their own learning? Did students know how they know? Would students be able to demonstrate empathy for the artists and curator? Could they not only appreciate art, but also understand the nature of art? Would patterns emerge indicating this understanding?

As mentioned previously, in order to find answers to these questions, I referred to theory on student conceptions of learning (Marton et al., 1993) and understanding (Wigging & McTighe, 1998) so that I would have a strategy for these potential patterns. I reviewed the six conceptions of learning clarified by Marton et al. (1993), which served as a model for identifying learning patterns and themes in this case. The conceptions of learning provide a structure for analyzing learning from the student's perspective. This structure was selected because of the strong connection to constructivist learning environments. Four of the conceptions: applying, understanding, seeing something in a different way, and changing as a person, were of particular interest to this constructivist study. In these conceptions students use and understand the information and may change as a result of that understanding. I also used the six facets of understanding presented by Wiggins and McTighe (1998) as a guide for analysis. The matrix in Appendix F aligns

the constructivist learning activities with these facets. They too have strong ties to constructivist learning. The facets of understanding: explanation, interpretation, application, perspective, empathy, and self-knowledge, are a good model for what makes up a mature understanding of a discipline.

These conceptions of learning and facets of understanding share some of the same emphases. For example, Marton et al. (1993) list *understanding* as a conception of learning, while Wiggins and McTighe (1998) consider all six of their facets, parts of understanding. Another overlap involves *application*, which is included in both sets. Additionally, the facet called *perspective*, in which a student considers the views of others, is similar to the conception Marton et al. (1993) call *seeing something in a different way.* This overlap of emphases reaffirms the use of both the conceptions and facets in this study. By referring to these conceptions of learning and facets of understanding as a guide, I could be better aware of possible patterns as I analyzed and interpreted the data. In turn, the patterns of learning revealed through data analysis would help determine what kinds of learning were occurring, if students were achieving a shallow understanding, or if they were gaining a thorough, multi-faceted understanding of art.

To begin the data analysis process, I gathered the student documents, transcribed the interviews, and compiled the observations. I then analyzed and interpreted the data in order to answer the research questions, concentrating on the interviews with the subjects first. The first interview held data related to the students' beliefs about art appreciation and understanding at the beginning of the semester. Although this interview would not be used to identify patterns of learning since it took place before the first constructivist

learning activity, interesting information about their perceptions at that time were provided. These perceptions will be discussed in Chapter 5. Interviews 2 and 3 (see Appendix E), which were conducted after the students were involved in the constructivist learning activities, were analyzed next. I analyzed the meaning of each sentence or phrase according to the context within which it had been made. Sections of the interviews were color coded according to the patterns that began to emerge. The data suggested nine patterns of learning, which were triangulated with the data in the student worksheets, Web pages, artwork, and my field journal. In order to merit a pattern of learning, evidence of that pattern was indicated in the data from at least three subjects. These patterns will be revealed in chapter 4 along with supporting evidence from the interviews, documents, and observations.

This process of interpreting the data brought some sense to the data and allowed me to begin to understand the case. According to Grady (1998) "competent analysis can endeavor to make sense of the complexity, but it cannot —and should not—render the complexity simple" (p. 27). In the final analysis in this paper, I should provide the reader with enough information about the effect of constructivist methods on student learning in this art appreciation class for the reader to make interpretations and draw his or her own conclusions (Stake, 1995). The interpretive knowledge that results from this study is not technical or prescriptive knowledge, but relates to a particular context (Entwistle & Marton, 1984). It is intended to improve an understanding of how these constructivist methods affected student learning in this case.

CHAPTER 4

RESULTS AND DISCUSSION

While preparing the proposal for this study in the spring of 2003 I was sitting in the student center at the University of North Texas thinking constructivist learning methods in my art appreciation class were going to generate not only appreciation of art among the students, but also bring about understandings of art and related issues. I had great hopes that students would enjoy working in groups with their peers on realistic, but unfamiliar tasks, such as the one I had planned in the Mississippi Museum of Art. While I was sitting in the student center, I overheard a conversation between two undergraduates in which they were complaining about having to work in discovery groups during their next class. One student spoke as though she was talking to the instructor about her dissatisfaction with her teaching method and said, "Like, get up and teach witch!" Apparently this student preferred a more traditional teaching approach and was not interesting in participating in her own learning: at least in that particular course.

This conversation prompted me to further assess the activities I designed for Art Appreciation 125D. I wanted students to construct their knowledge individually and with others as they learned about art and art issues in an enjoyable environment where they could control aspects of their learning. I did not want any of the students in my class to despise group work or dislike participating in their own learning, which is so central to constructivist theory. I wanted to make sure every aspect was well thought out so my students did not perceive me as the witch.

As I looked through each of the activities and aligned them with the goals for constructivist learning environments, I continually asked myself questions about their

design: What were my goals for student learning in art appreciation? Did these activities achieve the goals? Would students be willing to participate in the activities? Which aspects of the activities could be improved? Although I had ten years experience teaching art appreciation and spent five of those years developing and piloting the three constructivist activities for this study, changes and improvements still needed to be made. From past experiences I knew what students were willing to do and what excited them about learning. I tweaked the lesson plans to make sure they employed constructivist theory and that they were practical for my art appreciation classroom. These three constructivist activities that I developed will be described later in this chapter and analyzed for patterns of learning that emerged.

In order to introduce students to constructivist processes and get them familiar with their art appreciation class as their learning community, I began the semester with four sessions during the first two weeks, that focused on the nature of art and engaged students in their own learning. I assigned a studio activity, which I hoped would begin to involve the students in thinking about art in a new way and prepare them for the constructivist activities to follow. These introductory activities will be described before the discussion of the three constructivist learning activities in order to provide the flavor of the beginning of the semester and how the students were prepared for the activities designed for the study.

Before I concentrate on the introduction to the semester and the three constructivist learning activities, however, it is important to look at the class environment and give a sense of the setting. As I mentioned in chapter 3, the art appreciation classroom is set up with tables where students can engage in class discussion, work in

groups, and create works of art. Generally two or three students sit at each of the twelve tables facing the front of the room, but the room is often reconfigured to accommodate group work and studio projects. Built-in cabinets full of art supplies including paint, paper, glue, scissors, magazines, newspaper, wallpaper books, and more line the walls. Teaching materials like art reproductions are also stored in the cabinets, while other art appreciation necessities such as a slide projector, data projector, dry erase board, sink, and bulletin board, fill other prominent places. The bulletin board typically displays work by non-art majors enrolled in the courses Art Appreciation or Art for the Classroom Teacher. This classroom setting is, therefore, quite conducive to teaching art appreciation using constructivist methods.

An Introduction to Art Appreciation

I began the semester in Art Appreciation 125D with lessons designed to introduce students to the nature of art and give them a taste of constructivism. Even though this study focuses on constructivism, I wanted to use activities that involved some constructivist aspects at the beginning of the course to get them comfortable taking control of their learning and working with others in a safe environment.

Day 1. Art Appreciation 125D began in January with students arriving early for class. They sat very quietly. Only two students who previously knew each other were having a conversation. I distributed the course syllabus and schedule, and information sheets for students to complete about themselves. After I introduced myself, each student in turn introduced himself and gave some general background information. We reviewed the information on the syllabus and schedule in some detail and I gave them a brief summary of my research plans during the class and what would be required of those

students participating in the study. Although no one responded when I asked for questions, their faces indicated they were concerned about some of the course requirements, such as the museum work, Web page design, and the creation of their own artwork. Before the class ended, students were given their homework assignments: Read chapter 1 of *Artforms* (Preble et al., 2002) on the nature of art, and ask any three people for a definition of art. Because students were collecting definitions of art rather than simply reading them in texts they were taking some responsibility for their learning. They were thinking like a researcher or investigator. This seemed to make the assignment more interesting for the students and prepared them for a classroom discussion the next day on the meaning of art.

Day 2. Before the second class meeting I reviewed the student information sheets and selected one male and one female student in each of the three primary domains of knowledge, which are the arts, sciences, and social sciences. This totaled six subjects for my study. On day two, each of the six students agreed to be a participant. *What is art?* was the topic of discussion during the class. As students shared the definitions they gathered, I wrote commonalities among the definitions on the board. These included words such as: creativity, skill, expression, and beauty. Students were very involved in the discussion and seemed to feel free to share their definitions, perhaps because they had obtained them from someone else which made their willingness to share less risky.

Four of the six subjects had schedules that allowed them to participate in their first interview before the next class session. These interviews produced data on the subjects' beliefs about art appreciation, learning, and understanding (Refer to chapter 3 for interview questions). Although the subjects were not asked specifically about their

definitions of art, the four interviewed on this day mentioned many of the terms discussed in class including creativity, skill, expression, and beauty. In addition, three of the four subjects talked about how art has a meaning. One subject, Hank, who couldn't be interviewed that day, had a significantly different perspective on art appreciation, learning, and understanding than the other subjects, which will be discussed later in this introduction.

Day 3. A studio activity comprised most of the class time on the third day. We began with a discussion of Wassily Kandinsky, his non-objective paintings, and some of his philosophy, which they had read for class. I discussed Kandinsky's inspiration for his synaesthesia paintings for which he could hear as well as see color, and showed them a few of Georgia O'Keeffe's paintings which she considered interpretations of music. After a brief introduction to left and right brain thinking and the requirements for the activity, students listened to music composed by Toru Takemitsu. In the same way that Kandinsky and O'Keeffe created paintings by seeing the color and shapes that they heard, Takemitsu composed music inspired by an Isamu Noguchi non-objective sculpture he saw. Students created non-objective interpretations of the Takumitsu compositions using oil pastels. The class was quiet during the entire exercise. Students seemed to be either focusing intently on hearing the color or looking around with no idea where to begin. As they worked, some students had their eyes closed or focused intently on the pastels in order to determine which color they heard. More than half of the students seemed to be drawing the lines and shapes they heard while the other half was just drawing lines and shapes. At the end of class students had given a valiant effort and eagerly shared with me the titles of their compositions as they turned in their works.

Day 4. Students entered the classroom on the fourth day of class to find their works prominently displayed. The class buzzed as they discussed the works among themselves. One student commented aloud, "I saw [the movie] *Double Jeopardy* this weekend. It had a Kandinsky in it." (B. Lewis, personal communication, January 21, 2004). As the session opened, I lead the class in a critique of the student work, which began by asking them to really look at the compositions and determine which piece best fit the music. This was not a question to determine the best work of art, but get their opinions on who could listen and see the music, as Kandinsky did. The students did not seemed inhibited by my request, which was evident when many students, including the subjects, shared their selections and justified their answers. The study subjects gave the following opinions on their choice of the most synaesthetic work:

> [That work is] choppy and unconnected and random like the music. (Anna)
>
> [That work] seemed kind of dreary. Reminds me of the heart monitors and that's what the music was like. (Kim)
>
> Lines were everywhere. [There was] something about the yellow. [Like the] sharp points in the music. (Kyle)

In turn, the student artists shared their intentions for their own non-objective works:

> I used jagged lines because it [the music] seemed to be jagged. At one point it sounded like a bell—orange. (John)
>
> For me it was the ugliest I have ever heard. I wanted to make ugly art. (Hank)
>
> [My title is] *I love life*. The lines were from the music. (Sara)

Students were then asked to consider which piece was the best work of art, in their opinion, or held the greatest aesthetic value. The students, again shared their opinions on why a certain piece had the greatest aesthetic value. The study subjects said:

> [That work] caught my eye. It looks like three crosses. (Anna)

> I realized they were expressing themselves. I might not get what they are trying to express, but I know they are trying to express themselves. (Hank)
>
> Looks like New Orleans music—bold—and gives you some space. (John)

This discussion which involved students as critics, gave them opportunity to assess the works of art in order to gain more understanding of the student artwork, Kandinsky's work, and non-objective art in general. This critique lead into a conversation on aesthetic value and the purposes of art, which students read about in Chapters 1 and 2 of the textbook. My goal, for students to begin to view art in a new or different way, seemed to have been met.

These introductory activities involved some of the goals for constructivist learning such as determining how to express the music in another mode of representation and viewing the music from the perspectives of classmates. These beginning processes seemed to get students excited about learning in Art Appreciation 125D. After this class, I completed preliminary interviews of the final two subjects, because this was the earliest their schedules allowed. One subject, Hank, was already demonstrating many of the patterns of learning I would interpret from data gathered later in the semester. He had this to say when asked what he expected to get out of the class:

> Before I went into this class I expected to just have to memorize some old artist's life and paintings they painted and What type of brush is this? What kind of color is this? How many colors are there? Stuff I really don't know. And I thought we would just have to learn this artist lived in this period and that is what they painted in that period. But after today's class I expect to *understand* more of art through the hands-on. I haven't been asked to draw a picture or color anything in a really long time. Since then I have been exposed to different types of art. Number one in particular is this abstract art. I really didn't understand it. I thought it was ridiculous to be honest. It didn't make any sense. I was doing this in kindergarten. Why is this guy famous? But today I saw—I can't quite look at Kandinsky's paintings and see what he meant, but I can understand that he was trying to express something to me through the paintings. Because I was trying to

> express that—I honestly didn't like the music—I was trying to express that. And I would hope that if someone were to look at it they would understand—I have poor art skills, but I would hope that they would understand that what I did was actually intentional. I would want them to look at that and say 'That is hideous! What is wrong with this?' That is what I got out of the music. That is the idea I was trying to express. Now when I look at abstract art I can see that there is an idea there. I may not catch it, but I know he is trying to express something to me. I am actually kind of excited because that puts a whole new light on art. I read in the book about a painting that the guy drew. He painted a pipe and it says "This is not a pipe." And he meant this is a picture, a painting, it is not a pipe. That is how I used to look at all art. Just as he was trying to express that this is a picture, other artists are trying to express other ideas. I expect to maybe tell, maybe see what they were trying to express in this class. (Hank)

Statements in this interview indicate that Hank was already connecting the textbook knowledge to his hands-on experience, interpreting modern art, empathizing with Kandinsky, and changing the way he viewed art. Connecting meanings, interpreting art, empathizing with artists, and viewing in a new way, are four of the commonalities I later found among the data from the three constructivist learning activities. Was Hank more insightful than the other subjects or did he have significant change as a result of these introductory constructivist activities? Although this quote from the first interview seems exceptionally insightful for a beginning art appreciation student, additional evidence of these themes is presented in the interpretations of the three constructivist learning activities that follow.

Results of the Constructivist Activities

The results of these constructivist learning activities are described in relation to the three constructivist learning activities designed for this study. This data is considered in light of the research questions: *How does a constructivist based teaching approach in an undergraduate art appreciation class affect student learning?* and *What kinds of understanding are students in an art appreciation class with constructivist learning*

activities able to achieve? Additionally, the six conceptions of learning presented by Marton et al. (1993) and the six facets of understanding designed by Wiggins and McTighe (1998) were kept in mind as I looked for patterns of learning among the data.

As mentioned in chapter 3 challenges exist with data analysis in this case study involving constructivist learning methods, especially in regard to the student documents. Because constructivism relies on social interaction and collaboration in the process of making meaning (Tynjala, 1999), subjects worked with others on their worksheets, Web pages, and artworks. It is impossible to interpret the data in these student documents as the work of the subject alone, since the ideas were generated together. In order to address this limitation, I will first interpret the results of the interviews in each activity as they are the work of the subjects alone and provided the strongest sources of data. I will then triangulate the data with the student documents and my observations.

The activities designed for this study connected the constructivist theory to practice in Art Appreciation 125D. They were designed to more actively involve the students in their learning as the semester progressed. I analyzed the data, looking for patterns of learning or similar outcomes. The three activities produced a total of nine patterns of learning, which appear in different configurations. In the first activity four patterns of learning were revealed, in the second activity an additional three were revealed, and in the third activity I found two additional patterns of learning.

The following analysis of the data is aligned with the three constructivist learning activities. Each of the three sections includes daily accounts of the activity and the patterns of learning interpreted from the interviews, observations, and student documents. The subjects themselves also made interpretations as they analyzed their learning

processes as one aspect of constructivist learning. Quotations from the interviews, observations, and documents are presented not only as interesting comments, but also because they exemplify the defining features of the patterns of learning. Not only will the data be triangulated among the sources of data in each of the three activities, but also the results of the three activities will be triangulated at the end of the chapter. I will draw conclusions from the research in chapter 5.

Activity 1: Experiencing Art in a Museum Setting

The first activity began during the third week of class, which was a week after the introductory lessons described previously. As explained in chapter 3, this activity took place at the Mississippi Museum of Art. Students worked as curators to generate a theme based on the works displayed and created a virtual exhibition using these works.

Daily Accounts

Day 1. Students seemed somewhat interested in going to the Mississippi Museum of Art in place of a regular class meeting. We went late in the afternoon in order to accommodate everyone's schedules. I allowed students to select the person they wanted to work with in order to motivate them to participate fully in the activity. Most of the students were paired off when they arrived at the museum. The few students who had not partnered with someone were assigned a partner as they came into the museum. Two of the female subjects paired together while the other four subjects selected partners who were not subjects. Students eagerly participated in the first part of their assignment, finding works of art that corresponded to the terminology on their worksheets (see Appendix G1). These included terms such as portrait, still life, genre, fantasy, abstract, non-objective, and folk art, which we had studied in class. Students also found artworks

that aligned with the purposes of art such as spiritual sustenance, visual delight, and day-to-day living, in order to bring application to their reading of chapter 2 in the textbook.

After everyone in the class arrived we met as a group where I introduced the exhibitions, discussed the role of the curator, and explained the rest of the assignment. I reviewed the second page of the worksheet (see Appendix G1) and gave examples of strong and weak themes. This part of the assignment called for groups of four or five students. Each pair of students from the previous assignment joined with another pair. The pair of two female subjects paired with another subject and her partner making one group comprised of all three female subjects. The three male subjects joined three separate groups. The newly formed groups walked around the galleries discussing the works of art they were interested in and those works that lent themselves to themes. Within a few minutes groups had generated several theme ideas and were narrowing their choices based on available works in the galleries. At this point in the activity students still seemed enthusiastic. Once their themes and works were selected each group eagerly explained their theme and artworks to me. Because their selections consisted of works from the museums permanent collections, museum policy permitted each group to take digital photos of their selected works. After the exhibition photos were taken, students sat at tables in the atrium with their group members in order to write their wall text and complete their sheets. They seemed to enjoy the process of selecting the theme, works, location, and even the wall text. Once they started the reflection questions, however, their attitude seemed to change from “This is a fun class assignment” to “just get this over so we can go eat”. Since students were given a week to complete their assignment and prepare for their virtual exhibitions, some groups decided to postpone their reflection

questions until another time and planned to meet outside of class in order to finish working. Before leaving the museum, several male students commented that having class at the museum "wasn't as bad as they thought it would be". No one was absent during this portion of this activity.

Day 2. Before the second day of the activity one week later, each group decided how they would present their exhibition. In the classroom an appointed spokesperson for each of the groups came to the front of the class at the appropriate time to present their virtual exhibition. The themes/exhibitions varied from simplistic to insightful. These included

Man and the Sea

The Progression of Love

Proud to be an American

Come Sail Away

Southern Delight

Trust

Some presentations were of course more dramatic than others making it pleasant at some points and boring at others. Two students were absent for this portion of the activity. Overall the project seemed to be a positive one for the students. They appeared to enjoy the assignment and benefit from it. Surprisingly, I did not hear any complaints that one student was doing most of the work for a group. The students I observed seemed to feel it was an enjoyable assignment.

This first constructivist learning activity met all seven goals for constructivist learning environments (see Appendix C), although, to varying degrees. *Experiencing Art*

in a Museum Setting engaged students in their learning with their classmates in a realistic setting. Students took responsibility for their learning and had experience with the construction process. They evaluated different solutions suggested by their group members and reflected on their learning at the end of the activity. In addition, students worked with many modes of representation including oral and written communication, visual artworks, and digital images. Although all seven of the constructivist learning goals were met, some were more significant to the results than others. The significance of each constructivist learning goal to the outcomes of the study will be further analyzed in chapter 5.

After analyzing the data from the first activity I found four patterns of learning among the subject data. The subjects *explained their processes*, *applied their knowledge*, *viewed art in a new way*, and *assessed their learning*. Examples from the interviews, student worksheets, and my observations at the museum and during the student presentations are presented below as they align with these four commonalities.

Patterns of Learning

Explain their processes. In this first constructivist activity, students were able to provide thorough accounts of their thinking processes and group work. Evidence of this pattern of learning came from the second and third interviews; observations made at the museum and during the presentations; and the student response sheets, which include the design of their virtual exhibition, location and wall text, and reflections on the exercise. This was an easy pattern of learning for students to demonstrate, as they were required to fill out response sheets and present their exhibitions. Every interview answer and response on the worksheets could be categorized as an explanation, however, some were

more revealing than others. There was variety in the kinds of explanations the subjects demonstrated, with some explanations on a surface level, such as when they explained where they would exhibit their works, while other explanations were on a deeper, metacognitive level, such as when students explained their awareness of their cognitive processes. During the second interview, for example, all six subjects described how and why they selected their theme and art, as the following examples indicate:

> We are in Mississippi for one. We looked around and saw several things. The most evident was southern lifestyle culture. We could see several ways that was depicted. We saw cotton in several locations. We saw southern lifestyle and country, things of that nature, and we connected them. (John)

> We sort of just went with what they thought the easiest topic would be as far as subject and artists. Most of them [group members]—the boats and the water just appealed to them. They liked the paintings. Those were their favorite paintings. They knew that they would be an easy subject matter to cover so that is pretty much what it came down to. (Hank)

> We just kind of looked at most of the paintings and tried to figure out how each of them could be linked together. Our theme was *Come Sail Away* with the boats and there were about three or four that had boats in them. So we decided since there were more of them we would do them; it would be an easy subject to do. One of them really struck me the one with the—the Nocturne, that is the one I really liked. We didn't even use that one for our project. (Anna)

Only a surface level of explanation was demonstrated by all the groups, including those containing subjects, as they justified their selection of exhibition locations and told about the goals they set for the museum assignment. For example, Kyle's group explained their choice of location in their presentation:

> Provine Chapel on the Mississippi College campus. Trust is so important in life and no trust is more important than trust in God. (Observation)

and described their goal for their exhibition and justified the works they selected:

> To show how trust is expressed through art and how important trust is in life. Each work symbolizes trust in different situations. (Student Worksheet)

I also observed the subjects in the galleries explaining their views on works and themes for their exhibition to their group members. In addition, subjects told me about their selections while they were working in the galleries. These observations and student documents triangulate data suggesting explanation as a common pattern in the first activity.

Explanation is one of the facets of understanding developed by Wiggins and McTighe (1998) and described in chapter 2. Explanation in this activity also demonstrates that students are learning how a curator works to create exhibitions. Working in a realistic context is an important goal for constructivist learning. These examples of explanation also show that students met other goals for constructivist learning. They took ownership for their learning and demonstrated their experience with the knowledge construction process as they determined their theme, works of art, location, and the text for their exhibition.

Apply their knowledge. This commonality among the data in Activity 1 is a facet of understanding and a conception of learning in which students use their knowledge in different situations. This performance-based learning is also an important goal for Bloom (1956) in his frequently referenced taxonomy, and in constructivism. In the galleries all the subject groups applied their knowledge of art and art museums as they worked like curators to select a theme and works for their exhibition. Each group sorted their works in a logical order and took digital photographs of them. A location for the exhibition was discussed and determined. Students also wrote wall text based on knowledge gathered from the art, the wall text, and their textbook, and presented their virtual art exhibition to the class. Although subjects indirectly discussed how they applied the knowledge in their

second interview, this pattern was mainly evident through my observations of them working and the responses on their worksheets. For example, in the trust group, Kyle and his partner learned about the various purposes of art in class and applied that knowledge in the preliminary exercises, as they found works that exemplified the six purposes of art discussed in class. Once they looked for the meaning and purpose in various works of art they were able to generate a theme, trust, that focused on a purpose. The trust group then applied their knowledge of the theme to the selection of works and create a virtual exhibition for the class which applied their new knowledge of a curator's role in an art museum.

View in a new way. As students look at art or art issues from someone else's point of view they gain a new perspective. This pattern of learning was evident in the data collected with all three methods. At least three subjects recognized the valid views and interpretations of other group members during the discussion in the museum and when preparing for their presentation. This was evident in the student interviews:

> When we were in the gallery like looking at the works she would give me a completely different opinion about the art than I had. So we talked about it like that. (Kim)

> Some things you didn't see in the painting that a person in your group saw that gave you a different outlook on the piece of work or the artist. (Anna)

> I think I learn better in a group when we are working on a project because everybody can put in their ideas. I might be missing a certain idea and this guy he might have a better idea for this certain aspect of the project. You have a better understanding because so many people are throwing in so many different ideas and you can see like a bigger picture with a whole lot of different ideas. (Kyle)

> I enjoy working in groups a lot better than by myself most of the time because they have different ideas than me and add so much to the project. (Anna)

Each subject's group also demonstrated a change in perspective as they considered the curator's role in creating an exhibition. This was evident in the student worksheets:

> It [working like a curator] helps you pay attention. You must understand the feelings and emotions put into the painting. (Group with Anna, Kim, and Sara)
>
> It [working like a curator] helped me appreciate the time and effort it takes to put together an exhibition. (John's group)
>
> Being a curator is not as boring as we originally thought. It can be exciting and fun. It helps you get a closer look at the meanings of the art. (Kyle's group)

I also observed students viewing art in a new way as they worked in the galleries. One student would suggest a theme or a work that aligned with the theme, while the other group members listened and attempted to see his point of view. For example, in John's group, works such as an oil painting of canning jars filled with vegetables, did not need any explanation or justification in order for all students to accept it in their exhibition titled *Southern Delight*. A photograph of a folk artist's home, however, required an explanation and the support of a group member, in order for John to accept it in their exhibition. Changing perspective or viewing something in a new way is a facet of understanding and a conception of learning. It is significant in art appreciation when students need to be open to art that is unfamiliar or difficult to understand.

Assess their learning. This pattern of learning involves the students questioning their understanding in order to have greater understanding. Assessment or self-knowledge is also a facet of understanding. All six subjects determined how this activity affected their learning during the interviews:

> It helps you choose things that you like and are interested in. We just brainstormed the whole time we were in the gallery, in the museum. We pretty much just came up with something that we liked and things that we enjoyed looking at. Some of the artists we kind of knew about. So we just picked out things that were appealing to our taste. (Anna)

> Well for our theme when we were walking around we loved just the pictures of the boats cuz it kind of did just make us happy kind of thinking about summer. We noticed that there were a lot of boats in all the pictures so *Come Sail Away* was a fun way to express the boats…No, I think we wouldn't have learned as much if you had just assigned it. It made us think and try to relate all the works and the artists and I think that was a big part of the learning was making us do it on our own. (Sara)

> I think with us picking out our own, like, topics and stuff, that had an influence on the material that we were learning because trust—I think it kind of just stands out there, out there to go get it. A topic that you would give us it really wouldn't be that—I am not saying it wouldn't be interesting to us, but with us coming up with our own topic, that means it is something that is going to be interesting to us. Since we were able to pick our own topics, that helps us. (Kyle)

This pattern of learning was also evident as subjects discussed how this activity contributed their understanding:

> Going to the museum I think contributed. It is a huge difference between seeing a painting in a book and seeing it in person. In person you can get close and you can see the brushstrokes. You can see everything the book talks about. (Hank)

> The museum gave me a hands-on experience like looking at exhibitions and how exhibits display the art. (John)

> The museum—it's kind of different looking at things that aren't as famous and it helped me just see that there is art besides what I have seen or what we talked about in class. (Anna)

Assessing their learning was also demonstrated by subjects as these afore-mentioned statements from the worksheets indicate. All the groups, including those with subjects, determined how working as a curator affected their understanding and appreciation of art:

> It helps you pay attention. You must understand the feelings and emotions put into the painting. (Group with Anna, Kim, and Sara)

> It helped me appreciate the time and effort it takes to put together an exhibition. (John's group)

> Being a curator is not as boring as we originally thought. It can be exciting and fun. It helps you get a closer look at the meanings of the art. (Kyle's group)

The four patterns of learning found among the data show that students *explained their processes, applied their knowledge, viewed art in a new way,* and *assessed their learning*. These patterns are evidence of student learning and understanding, which will be discussed further in chapter 5.

Activity 2: Creating Art History Web Pages

The second activity began during the week following the virtual exhibition presentations, which was the fifth week of class. Students used the themes they generated at the museum to find related artists in their textbooks and chose one upon which to write a paper. Once the papers were completed near the midpoint in the semester, students worked as Web page designers to create group pages based on their theme and the artists researched.

Daily Accounts

Day 1. During the fourth week of class, students began working on the second constructivist learning activity. As a homework assignment they were to locate ten works of art in their textbook that aligned with their theme, and then meet with their group during class to select the works that best exemplified that theme. On day one of this activity, students seemed eager to share with their group members the images from the textbook that fit their theme. Some themes like Man and the Sea were very straightforward while other themes like Trust were more open to interpretation. I assigned each group a separate meeting space (hall, gallery, office, etc.) in order for them to have some quiet time to work in their group and keep them from competing with the others. I suggested that each group make a list of the top ten works of art that fit their theme and then let each group member select an artist from the list as their term paper

topic. Four of the six groups were working very well together, but Hank's group was not. While Hank was very interested in this process, he had four other male students who were less motivated than he was, which caused him some frustration. In the second interview Hank described the group's processes when they selected artists for their papers:

> I actually didn't like that part. I kind of waited until last because they were very anxious to get their artists. They saw a wealth of information to make their paper easier that we had to do. Rather than interest in the artist and his works. Most of my group, they didn't even read about the guy, they just looked at a name, knew that they had heard it before, and it was like, OK. So it didn't really translate over. They picked the painting about liking them and it interested them. Although they knew there would be a lot of information on them. They solely picked the artist on the amount of information and ease of writing the paper.

Despite this strain among this group, they all appeared to contribute their findings from the textbook and share their opinions. I observed the *Come Sail Away* group containing the female subjects Anna, Sara, and Kim, taking turns listing a work of art from the text while the other members turned to the same page in their textbook, where they agreed or discussed the selection. After listing an obvious group of works by Monet, Homer and Cassatt, I overheard this discussion:

> "Do you want to stretch it [the theme] or"
>
> "This says *The Boating Party*, but it doesn't show a boat."
>
> "There is another one by Monet on page 398—*Impression Sunrise*."
>
> "There is one with a boat in the background. That one is our stretch"
>
> "Most of them are Impressionists that we picked"
>
> "Here is Mickey Mouse in *Fantasia* 'sailing away' on a book."
>
> "[pointing at an image] Is that a boat? Would this count?"
>
> "Yeah, page 141"

"And there's another one, Hakusai on [page]141."

"*Wave at Kanagawa*"

"What page was yours?"

"It is hard to tell until you start looking at it."

"Here's another one."

"Alright!"

"There is another one on [page] 124. It is by Homer."

"Maybe it is the same painting. It looks the same."

"We need one more."

"Is this a boat? [pointing to an installation image]"

"Yeah."

"What page is that on?"

"243."

"I think it is a boat."

"No, it's a building."

"It is not a painting."

"It could be a boat. It's made of straw and bamboo."

"We could use that."

This group of four female students worked very well together and seemed excited and happy about working together on this assignment. By making suggestions, sharing their interpretations of the works, and listening to the others in the group, each student broadened her view and contributed to a richer overall group perspective. As Belenky et al. (1997) discussed in Women's Ways of Knowing, this is collaborative exploration in a

connected-knowing group. Connected knowers see each member's personality and perception contributing to the group's understanding. They try to see and understand the other person's view. In a connected-knowing group, members share their visions which contributes to a greater vision for the group than an individual could achieve on her own. All the students in the class were present on this first day of activity 2.

Day 2. As we began creating group Web pages several weeks later, students seemed excited about beginning the process. One indication of this was the perfect attendance. Each student brought a disk containing images of works by their artist and a paragraph they wrote about the artist. All of the students in the class were computer literate and many of them had created Web pages in a core-curriculum computer course with a less user-friendly program. Once students were given their first assignment sheet (see Appendix G2) they began to assess pages created by students during previous art appreciation classes. Groups discussed the goals for their page and how best to convey their theme. Each group began pasting their prepared paragraphs about their artists on the page and comparing them for consistency in form. After I demonstrated the mechanics for putting everything together using Microsoft Word, they began selecting backgrounds, fonts, and colors. Some groups were able to begin pasting the images each student had saved to a disk and typing in the links each had planned for the page.

In the computer lab there is enough space for four or five students to gather around one computer and a sufficient number of computers for some to work independently. In this way, one student could find a better image or determine what was wrong with a link while others in the group were adding information to the page. This made for an efficient work process. Some groups included computer science majors who

wanted to take over all the work. I had to monitor each group to make sure all members were able to contribute and that they were not giving most of the work to one member.

Day 3. Students continued adding images and links to their page. Most of the groups wrote an introductory paragraph connecting their artists with their theme. Since each group needed to find an additional artist they listed several and then sent one or two students to adjacent computers to determine which would be the best based on the information and the quality of available Web pages. Students, including the six subjects, were still enthusiastic about this activity and only two students were absent.

Day 4. This was the last day to work on Web pages during class time. Most of the groups had completed the enjoyable parts of the assignment, like selecting colors and images, leaving the tedious detail work of solving link and image problems. Students appeared less enthusiastic about this phase of the assignment. The number of absences also indicated this. Five students were absent leaving the work to the more responsible or qualified students. Each group was given another assignment sheet (see Appendix G2) on which they listed questions to generate interest or discussion from their classmates during the presentations.

Day 5. Despite some technical difficulties everyone seemed proud of their completed Web pages, as if they had accomplished something important. Each group planned their Power Point presentation before the class began. Some groups had one spokesperson while others included all members in their presentation. All six of the research subjects were involved in their group presentation. Some of the presentations were more entertaining than others, but all were able to create and present a quality Web page that met the assignment criteria. No one was absent on presentation day.

The seven goals for constructivist learning were met in activity 2, again with varying emphases on each. Students constructed meaning as they took primary responsibility for the design and construction of their Web page. As a group and individually they evaluated different solutions to the problem and considered the opinions of their group members. They worked as Web page designers and once their page was complete, assessed their work and reflected on their learning.

After analyzing the data from *Creating Art History Web Pages,* I found seven patterns of learning among the subject data, including the four revealed in the first activity. Students *explained their processes, applied their knowledge, viewed art in a new way, assessed their learning, empathized with artists, connected meanings,* and *continued on their own.* Examples from the interviews, student worksheets, and my observations in the computer lab are aligned with the seven patterns of learning in the following analysis.

Patterns of Learning

Explain their processes. Again, explanation was easy to achieve since students were required to make a presentation and fill out response sheets. Once again, there was a variety in the kinds of explanation the subjects demonstrated. Some of the explanations were on a surface level, such as when they explained a process, while some were on a deeper level revealing metacognition. During the second interview, for example, all six subjects gave an explanation beyond a surface level. These three examples are in response to a question on what insights they gained about their theme:

> It [*Come Sail Away*] is not a very deep theme. We just tried to find something that would work. I guess the different scenes—one of them is placid one of them it is raining and stormy. I guess there are different depths of turmoil. One is real placid, sailboats sitting on the side of the beach, just real calm, and the other is

> real tumultuous. I guess the different levels. How the painter felt, that is how he painted it. (Anna)
>
> My artist was Eudora Welty and I learned a lot about her that I didn't know before. I learned all the artists and how they grew up and depicted their lives in their artwork. You could see their lives in their work. (John)
>
> Our theme isn't very strong so there is not too many insights to gain. But, there are the obvious relationships between the man and the oceans, the seas. They have been proposed to me before. The sea has been just incredible for trade and food and water of course without which we couldn't live. The Mediterranean Sea, you know, armies fought over land to be close to it. Our project hasn't necessarily brought insight to that. But that is an insight that one could see. (Hank)

In these responses, subjects seem to have an awareness of their cognitive processes. In contrast, the explanations on the worksheets seemed to be on more of a surface level as students gave more straightforward responses. Three of the four subject groups composed an introductory paragraph for their Web page through which they demonstrated understanding by explaining their page topic and intentions for the page:

> The southern lifestyle is something that we are lucky enough to enjoy everyday. There are those who do not have the chance to experience what the South is now and the history of it. We would like to bring a small aspect of it to those people in art. Each of these works has some sort of a southern influence in them. (John's group)
>
> Our theme, *Come Sail Away* includes five works with the ocean or boats as the main subject. Each painting shows various nautical settings and communicates its own story in a unique way. (Group with Anna, Kim, and Sara)
>
> Webster defines trust as a firm reliance on the integrity, ability, or character of a person or thing. We have chosen these pictures to represent our meaning of trust. (Kyle's group)

In addition, on their worksheets every subject group told about their goals for the Web assignment and justified their selection of artists, images, and links:

> [Our goals were] to convey our theme in a creative way. To portray the aesthetic values of *Sail Away*. All the artists we chose used the theme of sailing (boats, water, harbors) as their means of creating something aesthetically appealing. The

> links were the Web sites that we felt gave the best information about our artists. [We achieved our goals by] using bright colors, clever expressions, and adequate information. (Group with Anna, Kim, and Sara)
>
> [Our goal was] to show the different levels of trust through portraits. (Kyle's group)
>
> Our artists are from different eras and cultures. All the artists have painted pictures that deal with the sea. (Hank's group)

On the worksheets and in the presentations, students described their problems and successes, told what they learned from the exercise, and explained how this activity affected their understanding and/or appreciation of art. The presentations did not go beyond the explanations written on their response sheets, however, they did generate an interest in the pages and demonstrate how the students enjoyed the project. As was evident in activity 1, *explaining their processes* is clearly a pattern of learning in this activity as well.

Apply their knowledge. Each group applied their knowledge of their theme when they found an additional artist for their Web site. In addition, every student applied their learning as they synthesized an artist's information for the Web page as is evident in the following example:

> Lea Barton is a local artist who was born in 1956 in Yazoo City, Mississippi. She graduated from Millsaps College in 1996 and went on to the Pratt Institute in New York where she earned a Masters of Fine Arts degree in 1998. Her experience growing up formed her social conscience, and may have defined her earlier pieces. Social issues and Lea's experiences in Mississippi continue to influence her work today. Lea uses text and collage to explore new and effective ways to present her ideas visually. (John's group)

I observed the students applying their knowledge in the computer lab as they designed and created their Web pages using Microsoft Word. Students also demonstrated this pattern of learning when they wrote questions for their classmates to respond to during

the presentation and when the Web page was posted online. The following questions were posed by the *Different Levels of Trust, Come Sail Away and Southern Delight* groups respectively:

- How do you see trust conveyed through these paintings?
- What does trust mean to you?
- Which artist do you think best conveys trust? (Kyle's group)

- How do the different paintings make you feel?
- Which picture do you think is the most aesthetically stimulating?
- Each of these paintings is an example of classic art, and all are timeless. What characteristics contribute to this? (Group with Anna, Kim, and Sara)

- How do you see *Southern Delight* in these works of art?
- What do you think of when you think of the South?
- In your opinion, which artist most conveys *Southern Delight*? (John's group)

As in the first activity, applying knowledge was found primarily among the data from the student documents, which in this activity were the worksheets and Web pages, and my observations. These examples clearly indicate this pattern of learning in the *Creating Art History Web Pages* activity as students worked like Web page designers.

View in a new way. Subjects in the second activity demonstrated that they were gaining a new perspective when they listened to the opinions of others in their group, considered various interpretations suggested by their peers, and as they recognized approaches by other group members and other groups. This was evident in interviews with the subjects:

> With the Web page and stuff I would just do it my way but then they all had such other good ideas that it made it even better. (Kim)

> In the paper I learned about an individual artist, which helped me understand an artist's specific perspective. Then working with the group on the Web site helped me understand how difficult and how fun it is to like put art together into your own exhibit. (John)

On the student worksheets (see Appendix G2), every group commented on how their page compared to others in the class, which also indicates students gained a new view:

> We had more background information, a brighter color, but it was slower. (Kyle's group)
>
> Our page compared well with the others, it successfully conveyed our theme to the class. (Hank's group)
>
> All of the pages were well done and we think that ours was very well compiled. (Group with Anna, Sara, and Kim)

Students were able to *view in a new way* when completing their Web assignment as well as think about individual works of art in a new way. I observed subjects in the computer lab discussing the additional artist they would select for their Web pages. They gathered information on artists from the Internet and discussed the merits of each with group members. The *Trust* group, for example, had several choices from which to select. They determined their choice based on views of others in the group, selecting the artist who represented a different interpretation of trust than the other artists on their page.

Assess their learning. Students in the second activity also demonstrated they could assess their own learning, which is most evident in the interviews and student worksheets. Every interview included some assessment or self-knowledge as is evident in these responses to a question about how this activity affected the students' learning:

> Yeah, it did [affect my learning] because to find the best Web page, like, you had to look at all of them. So by looking at all of them, like, pictures that they did would pop up that I hadn't seen before. So now I have seen them, you know, like what Homer does. I think I read through a lot of them. So even though I didn't pick them, I still learned some about them just by reading everything to find the best Web page. (Kim)
>
> That [using the Internet] also contributed [to my learning] because first of all you have to think of the right words to type in to find the Web site and then you read about each artist on the Web site to decide whether or not it is a good Web site and also as you read you are learning about it and you need to know what you are

> going to put on the Web site, the paraphrase, just the little summary of the artist. (Sara)
>
> On the Web site—I would never even put computers and art together at all. So doing a Web page was real interesting to see how you could use something totally non-art to talk about art. (Anna)

Every subject's group also demonstrated self-knowledge when they were asked specifically on response sheets to consider the process of creating a Web page and what they learned:

> We learned how to do a Web page and how a theme can be throughout many artists. (John's group)
>
> We learned more about our artist. We also learned how to work with each other. (Kyle's group)
>
> We learned how to put together a Web page and work through all the details. (Group with Anna, Kim, and Sara)

In addition, every subject group assessed the success of their Web page, which included the identification of problems:

> We did not have many big problems with the Web page because we had computer science majors in our group. We think our Web site successfully conveys our theme and the way our artists fit in to the theme. (Hank's group)
>
> One problem we had was with the font (Algerian) we chose because some of the older computers did not include this font. A couple of our links would not connect and therefore we changed them. (Group with Anna, Kim, and Sara)
>
> Loading on the disk was very difficult, but finding the artwork and information was fairly easy. (John's group)

On the worksheets students also determined how this activity affected their appreciation and/or understanding of art:

> It gave us a greater knowledge of the artists that we chose to research. We learned about individual artists and had to view many of their pieces of artwork in order to do our research. Both of these factors led to a greater appreciation of art. (Group with Anna, Kim, and Sara)

> We researched a theme that crosses many different time periods. This caused us to learn more about art history in general. The assignment increased our appreciation because we needed to research artists and their works. (Hank's group)
>
> It gave us a chance to find out more about our artist. We appreciated five different styles of art for each group. We saw a wide array of artwork. (John's group)

I observed students assessing their learning as they were making the final adjustments to their Web pages and filling out their student worksheets, which gives additional validity to interpreting *Assessment of learning* as a pattern of learning.

Empathize with artists. This pattern of learning, which is also a facet of understanding, is an ability to go beyond sympathy for someone's view to see and feel as others do. Empathy was primarily demonstrated during the presentations and interviews with the subjects in this activity. It did not emerge as a pattern in activity 1. Many students, including three of the subjects, demonstrated empathy when they considered the intent and context of their individual artists:

> Well like my artist was Homer and he used a lot of watercolors and stuff and you explained the watercolors in class. It is such an intricate process and I hadn't appreciated it before. Now I can look at a piece and be like wow! especially because I am artistically challenged. [laughing] That is the way it feels so that makes me appreciate it a whole lot more. (Interview with Kim)
>
> He [Turner] loved what he did so it kind of makes me appreciate that he did—that he loved what he did and that is why he did it. As far as I know he wasn't necessarily big in his time, but it didn't matter so much to him. He loved to do it. And so I think that's incredible. (Interview with Hank)
>
> He [Tanner] puts a great deal of emotion in this painting since you can obviously see the love and affection that is being shared. (Observation of John)

Empathy was more evident in this activity than in the previous one since students were able to gain in-depth knowledge about one particular artist when writing their papers.

Connect meanings. Although this pattern of learning was not found from the data in the first activity, subjects in this activity demonstrated an ability to make connections among the information they learned. This application of knowledge goes beyond merely using what the student knows, as in the previous pattern of learning. It involves a more constructivist application, which uses current knowledge and builds on it by attaching it to something new. This pattern of learning was evident in the interviews with all six subjects when they were asked how they make connections:

> I really think I have [made connections among art knowledge] a lot. Like I knew that Degas—just from that time that we went to the museum when you are walking in—there were prints of Degas before you even enter—just right there. We mentioned that he did the ballerinas so when I saw ballerinas I just remembered that that would be Degas. I think maybe *Anna* said that. So I made connections like that. Now I know Starry Night, I recognized the painting. I may not have known who it was but now—I think I have learned to appreciate it a lot more. Also, just by practicing it and realizing that it is a lot harder than it looks. (Sara)

> The way they [artists] paint or using the material because they are all so different. You know like we were talking about Impressionism today—that is really easy to pick the artist out because they are so different. That is how it is for me. (Kim)

> Just the fact that—I kind of don't know what I'm doing. I'm a computer science major, but I'm taking all these French classes that have nothing to do—but it is because it's what I love to do. It is such a beautiful language. It is almost art to me. It helps me to—it's sort of a connection between me and them because I understand, the best I can understand. They work so hard because they create their works of art and they studied so much. That is kind of what I am trying to do with French. Because I am not very good at any art. When I look at their paintings I try to understand, especially the realism, just painting people. I have the same fascinations with what people do in their daily routines and how people act. These artists painted their fascinations. I sort of wish I could. That's a connection I definitely see. (Hank)

Subjects also demonstrated that they were connecting knowledge gained in the classroom to their daily life:

> I work in an interior design shop. We have a picture—now I know what the picture is because it's a Madonna and Child. But at first I would have people

> come in there and ask me about Madonna and Child and I would have no idea of what they were talking about. But now I know exactly what they are talking about. (Kyle)
>
> Like we have that picture hanging in our house from the Sistine Chapel. I wrote it on the test. Me and Mom were re-hanging it the other day and she was like, "I just love this picture." and I said, "You know that is Michelangelo's". She was like, "OK, I am so impressed with you!" (Kim)

I observed other connections as subjects were selecting possible artists for their papers from their textbooks. For example, in the previous discussion among the *Come Sail Away* members, Anna connected the artists they were selecting in the text to her knowledge of Impressionism, before we had covered the periods of art in class. Hank's group also made connections as they determined an additional artist for their Web page. One student suggested Dali and his work *The Discovery of America by Christopher Columbus* from a class assignment, which led to a discussion of Dali and a Web search of his work. Some of the questions posed by the students during the presentations also encouraged other students to make their own connections:

> Who are other artists who use man and/or the sea as a subject? (Hank's group)
>
> How do you see *Southern Delight* in these works of art? What do you think of when you think of the south? (John's group)

The ability to make connections to and among art and art topics demonstrates greater learning and understanding than a mere application of knowledge. As students connect new information to knowledge they construct new knowledge and generate greater understanding.

Continue on their own. In this constructivist learning activity I also found evidence of students continuing to learn on their own. As mentioned in chapter 2,

constructivism encourages an active processing of information and affects intrinsic motivation for continued learning (McKeachie, 1994).

I observed the subjects *continuing on their own* as they worked in the computer lab. On several occasions one student would be looking at a Web site about an artist related to their page, which they found interesting. The Web site and student's interest in it seemed to cause other students to either stop and watch him surf the site or look up the same site and read the information and view the artworks posted. For example, students in Hank's group found a Dali Web site with images of Dali works that faded in and out of the screen. Group members gleaned the required information from the site and continued to navigate it long afterward, looking up additional Dali images and odd facts. Students in the nearby groups also looked up the Web site even though it had nothing to do with their assignment. They read about Dali and viewed works they had not seen in class because they found them interesting. Two subjects even mentioned this process of *continuing on her own* in an interview:

> …with the Web pages we had to look at a bunch of different artists to find which our fifth one was going to be. We didn't study all those artists but we at least looked at other ones. I just know so much more about art than I did when I started. It is really interesting to me so when I would find something different on the Internet when I was looking for the artist I would just read it. (Kim)

This pattern of learning was also evident in the number of students who chose to attend a traveling exhibition from the Museum of Modern Art in Paris. Although students received bonus points for attending the exhibition, a significantly greater number of students attended this exhibition than students had in previous semesters. 16 of the 25 students in Art Appreciation 125D, including 5 of the 6 subjects, completed a worksheet (see Appendix H) at the *Paris Moderne* exhibition in which they answered questions

related to the works in the exhibition and gave their opinions on the works. In addition, two of the subjects attended an art exhibition when they were traveling out of town providing further evidence that they were continuing to learn about art on their own.

Seven patterns of learning emerged from the data related to activity 2. Students *explained their processes, applied their knowledge, viewed art in a new way, assessed their learning, empathized with artists, connected meanings,* and *continued on their own*. These patterns provide evidence of student learning and understanding which will be discussed in chapter 5.

Activity 3: Encountering Contemporary Art

This activity took place during the last two days of the semester after a chronological review of the history of art. In this activity students interpreted works by Barbara Kruger (1945-) and Jenny Holzer (1950-), determined a contemporary approach to their theme, and created contemporary art that included text, based on the theme.

Daily Accounts

Day 1. Students seemed eager to work on another hands-on project. One indication of this enthusiasm was the attendance for this final constructivist learning activity; only one student was absent. In addition, it was the very end of the semester when other instructors were reviewing and final exams. Participating in another art appreciation activity seemed like a good alternative for the class. Students met with their original partner from the first activity at the museum. They selected a photocopied work of art by either Barbara Kruger or Jenny Holzer and received additional information on the artwork. Each pair of students worked together to answer questions on their worksheet (see Appendix G3) in which they interpreted the contemporary artwork they

selected. Once they finished answering the questions, the partners determined how the theme they had worked with throughout the semester is relevant in contemporary society and how they could use their theme to create a contemporary artwork that incorporates text. Students used any collage materials for this assignment including the scattered piles of magazines, newspapers, wallpaper, and colored paper distributed around the room. Students searched for images, text, and materials to fit their theme. By the end of the class period every group had made some progress on their collage and had a new version of their old theme, many of which were improvements on the original:

Man and the Sea	*Man's Interaction with the Sea*
	The Ransom of the Sea
The Progression of Love	*Types of Love*
	Lust
Proud to be an American	*Irony*
	Tribute to the American Working Man
Come Sail Away	*Lose Yourself*
	Purposes of Boats
Southern Delight	*The Diversified South*
	Southern Style
Trust	*Symbols of Trust*
	Images of Trust

The images students were gathering seemed to relate to their new theme. I was pleased to see that no one in the *Man and the Sea* group was looking for images of boats, neither were the *Come Sail Away* students with the new theme *Lose Yourself*. The other *Come*

Sail Away group, however, was still focused on the boats, since their new theme was the *Purposes of Boats*.

Day 2. As it was the last day of the semester, groups were relaxed and seemed to enjoy spending time completing their pieces as they talked to their classmates. Each pair of students was eager to show their work to the class and presented their piece with confidence at the end of the period.

As in the first two activities in this study, all seven goals for constructivist learning were met in the third and final activity. Once again, each goal for constructivism was met with a varying degree of emphasis. *Encountering Contemporary Art* engaged students in their learning with others in their class. They took responsibility for their learning as they thought and worked like artists and art critics. Students used various modes of representation including oral and written communication, and visual artworks. Each pair of students had experience with the knowledge construction process as they interpreted contemporary art, evaluated different approaches to their theme, and suggested possibilities for their artwork. At the end of the activity, students reflected on their assignment and learning. As will be seen in the following discussion of the patterns of learning gleaned from this activity, although all seven of the constructivist learning goals were met, some were more significant to the results than others.

I found seven patterns of learning among the data produced by the subjects in the third activity. These patterns once again include the four found in the first and second activities: *explain their processes, apply their knowledge, view in a new way,* and *assess their learning*. Only one of the other three patterns from the second activity was gleaned from the third activity: *empathize with artists*. I did not see much evidence of students

continuing on their own as they *Encountered Contemporary Art*. I did see some evidence that subjects were making connections related to their theme and making connections among their knowledge of art history, however, there was not sufficient evidence to suggest it as a pattern of learning. I did find two additional patterns of learning in the final activity. Subjects demonstrated an ability to *interpret works of art* and *judge quality*. Examples from the interviews, student worksheets, and my observations in the classroom are aligned with the seven patterns of learning in the following analysis.

Patterns of Learning

Explain their processes. Once again, all six groups, including the four groups containing subjects, demonstrated this pattern of learning. This was evident in their interviews, on their worksheets, and during their presentations. As in the previous two activities, many of these explanations demonstrate some metacognitive processes. On the worksheets, for example, every group, including those containing subjects, also explained how this assignment affected their understanding and/or appreciation of art:

> It shows us how difficult or how simple creating a work of art can be. It allows words to direct you in a certain way of looking at it. (John and his partner)
>
> This activity shows that art can be useful and informative through history. [It does not change how we appreciate it because] text explains the artist's concept without the viewer having to question it. (Anna and her partner)
>
> You can make anything art. It gives you more of a creative outlook. (Kyle and his partner)
>
> It showed us how the concept of past art is still expressed today through contemporary methods. (Sara and Kim)

This pattern of learning was also evident as students explained the title and intent of their original artwork during their presentations and told how their work was a contemporary approach to their theme:

> *Lose Yourself*. The intent is to show different ways of losing yourself through images and colors. We wanted to use *Come Sail Away* to mean more than just sailboats. (Group with Anna, Kim, and Sara)
>
> *The Diversified South*. To show the viewer some of the different sides of the South. It forces the viewer to look at each side of the South in a world where most people's view is very closed-minded. (John's group)
>
> *Man's Interaction With the Sea*. To show untraditional images of man and the ocean. We also put images of pollution in our work to show how man is destroying the sea. We thought about what man gives to the ocean instead of what the ocean gives to man (like fish to eat and a mode of transportation) and we came up with pollution. (Hank's group)

All six subjects through their interviews also demonstrated their ability to explain. These examples are from the interview conducted the day after the third activity, when students reflected on the semester:

> Well I took classes in high school and it was kind of like draw something. But in this course it was like learn about the history, learn about where artists get their ideas, why artists today draw what they draw, why they did it back then. It was just cool to be able to look at a painting and say, "I know who drew that." or "I know what he is thinking." or "[I know] what he was trying to say in that painting." and it was cool to learn like all the different types of art, not just painting but like photography, architecture and what not. (John)
>
> I love this class. I didn't realize that—I didn't know anything about art when we started learning and I think I told you before that I am artistically challenged. [laughing] So like looking at the artists and learning about how they actually go about doing it, like Impressionism and Seurat and stuff like that. It just makes it that much better just because I have tried to do it myself. (Kim)
>
> Unfortunately I didn't go to a high school that cared very much about art. I took an art class in like 6th grade and that was it. I would say it was more or less ignorance about art that I was pretty much apathetic and that is what led to it. I have always liked Starry Night, you know, the ones everybody likes, of course I like. Now even the ones that I think are ridiculous, I take the time to look and I try to understand what the artist was trying to do. It has changed quite a bit. (Hank)

These examples provide sufficient evidence to determine *explain their knowledge* as a pattern of learning in activity 3.

Apply their knowledge. As in activities 1 and 2, students demonstrated that they were able to *apply their knowledge* in the final activity. Students applied their knowledge of art and art history as they critiqued the work by Kruger and Holzer on their worksheets. They demonstrated their knowledge of the nature of art and purposes of art as they considered how works by these artists could be considered art. This pattern of learning was also observed as students used their knowledge of text art, their theme, and collage to create of their own work. For example, Hank and his partner applied their knowledge of contemporary text art to a work of their own. They were interested in how works by contemporary artists like Barbara Krueger, Jenny Holzer, and Christopher Wool conveyed a message, but the message was not an obvious one: the viewer had to "figure it out." They wanted to convey a message that caused the viewer to think about their theme, Man and the Sea, in a new way. They created a college titled *Ransom of the Sea* using only text cut from newspapers that read, "He trusted her. He told her his story. Then she wrapped her arms around him and they settled at the bottom of the sea." In their presentation they said it showed a different relationship of a man and the sea. It was the story of a man drowning.

View in a new way. In the third activity, most of the evidence that students were viewing in a new way was gathered through my observations. I observed students gaining the perspective of their partner as they brainstormed together: suggesting contemporary alternatives to their theme. Students also viewed art in a new way as they gained more knowledge from reading about the artist, and then determined possible meanings for the artwork they selected by Kruger or Holzer. In addition, students considered the view of their partner as they thought about why this work could be

considered art and what it said about society. Although I observed every subject sharing and weighing the suggestions and opinions of their partner, only one subject mentioned the view of their partner in the final interview.

> We had a lot of different ideas [when working on the contemporary assignment]. It was interesting. Before a lot of us had the same ideas, but she and I had a lot of different ideas about what we wanted to do. We worked it out and kind of integrated both of the ideas into it, the collage. (Anna)

> She is better at answering those questions than I am so it helped me a lot. She could figure out things a little easier than I could. (Anna)

Subjects were able to share their opinions and think about the view of their partner as they completed their worksheets and created their text art. The view of other class members was also presented when students presented their art giving further evidence that students were able to *view in a new way*.

Assess their learning. Subjects in the final activity also demonstrated an ability to *assess their learning*. This pattern of learning was evident from the data from the interviews, worksheets, and observation. Students exhibited this pattern as they decided how their work was a contemporary approach to their theme, reviewed the problem-solving process, and determined how this affected their understanding and/or appreciation of art.

> It [this assignment] gives you more of a creative outlook. You can make anything art. (Kyle and his partner)

> It [this assignment] showed us how the concept of past art is still expressed today through contemporary methods. (Sara and Kim)

> This activity shows that art can be useful and informative through history. (Anna and her partner)

All six subjects demonstrated self-knowledge in their interview as they reflected on how the process of learning affected their learning:

> Yeah [the process affected our learning], because we solved the problem this way, but then you made us say why we solved it this way. It really made you think about it. (Kim)

> That [the process of reflecting on learning] helps too cuz I mean you really do just have to think about what you learned and then it helps you realize what you learned. (Sara)

> Yes, because repetition. I had to think about what I learned. Thinking for a second time about it. (John)

Assessment was an important pattern of learning in this activity. The reflections demonstrated by the subjects were not only helpful in revealing what they were actually thinking and learning, but also the process allowed them to gain further understanding.

Empathize with artists. Although students in the second activity demonstrated this pattern of learning, when students were *Encountering Contemporary Art* I sensed a real effort to understand the contemporary artist's views. This attempt to understand could be attributed to the fact that it was the end of the semester and students had a greater understanding of art and artists by this time or that they were more challenged by the contemporary art than works they had seen previously. Five of the six subjects demonstrated empathy as they considered the intent of the contemporary artists:

> The main one [activity] for me was the contemporary art that made me have to kind of [think]—how the other artists, real artists, are expressing themselves through their art. That the contemporary art made us actually kind of make a work of art that expressed ourselves through our theme. (interview with Sara)

> Artists use text to more starkly convey the message they are trying to get across. (Hank and his partners)

> This is Kruger's way of expressing herself about the issues of today's world. (Kim and Sara's worksheet)

After studying Kruger and Holzer's work, each pair of students also demonstrated empathy as they listed questions they would like to ask the contemporary artists in order to further understand their works:

> Why would you consider your work art? (Kyle and his partner)
> Are you also good at drawing? (John and his partner)
> Would you rather be a writer if you could? (John and his partner)
> How did you get started in this form of art? (Hank and his partner)
> Why do you think this is art? (Anna and her partner)
> Why do you feel it is necessary to explain meaning using text? (Sara and Kim)

These indications that students were *empathizing with artists* justify it as a pattern of learning in this activity.

Interpret works of art. This pattern of learning involves translations that provide meaning. Interpretation often is illuminating and engages others. According to Wiggins and McTighe (1998), students who think intelligently learn to interpret, not merely accept someone else's interpretations. Although subjects in the first two activities interpreted artworks in the galleries and online, it was primarily a shallow level of interpretation by the *Man and the Sea*, *Come Sail Away*, and *Southern Delight* groups since they merely needed to find certain content in the work. Although the *Proud to be an American* and the *Progression of Love* group demonstrated more interpretation in the first two activities, Kyle's group, *Trust*, was the only group containing a subject that provided data for this pattern of learning in the first two activities. In the contemporary art activity, however, all the subjects demonstrated their ability to make interpretations. Students demonstrated this pattern of learning by suggesting new possibilities for the group themes and interpreting the artworks by Holzer and Kruger. Interpretation was evident on the student worksheets, in the interviews, during their presentations and in their works of art.

In the following examples from the student response sheets, every pair of students determined the meaning in works by Holzer or Kruger and decided how the text art may reflect current society:

> *Untitled (When I hear the word culture I take out my checkbook*) by Kruger
>
> It means that most people think that in order to experience culture you must buy some of it like clothes or souvenirs. It seeks to make fun of culture. Culture today is concerned with one's own self and not with all aspects of people's lives. We are too materialistic and we need to experience people in life and not people's stuff. (John and his partner)
>
> Untitled marble footstool by Holzer
>
> [This work could be about] death. It reflects contemporary culture [and says that] we consider anything to be art. (Kyle and his partner)
>
> *Untitled (When I hear the word culture I take out my checkbook*) by Kruger
>
> Culture should be something you learn and live, not something you buy. By making popular their views of culture, [Kruger and Holzer] can actually shape the culture in which they live. Many people today believe they can buy culture. (Hank and his partner)

Students also demonstrated their ability to make interpretations when they interpreted their theme in a new way. For example, one of the weakest themes in the beginning, *Man and the Sea*, became two of the strongest text art pieces with the new topics: *Man's Interaction with the Sea* and *Ransom of the Sea*. In contrast, *Trust*, which was a strong theme in the beginning, did not produce topics that indicated a new interpretation: *Words Related to Trust* and *Symbols of Trust.* This could be due to the fact that the *Trust* group already used critical thinking to generate this rich theme, and therefore, did not need to change the theme, only the text and images they selected to represent *Trust*.

Judge quality. This pattern of learning involves making aesthetic judgments about the works of art. Students used their knowledge of art history and how the

definitions of art change throughout time to judge works by Kruger and Holzer. They assessed the work based on what they considered important on their "aesthetic value scale," which was their list of values such as creativity, skill, message, and beauty, which they determined earlier in the semester. All six subjects made aesthetic judgments, which were recorded on their worksheets when they determined how the contemporary text art by Kruger and Holzer could or could not be considered art:

> Kruger's *I shop therefore I am* [might be considered art because it is] contemporary. She wrote the quote and put it together. [It might not be considered art because it is] not original. [There is] no skill involved. (Anna and her partner)
>
> Kruger's *When I hear the word culture I take out my checkbook* [could be considered art because] It makes people think about how stupid their ideas about life are. [It might not be considered art] because it is not very beautiful or pleasing to the eye, but that does not make it non-art. (John and his partner)
>
> Kruger's *When I hear the word culture I take out my checkbook* [could be considered art because] It is creative and conveys a message. [It might not be considered art because] It's just typing. It looks like an advertisement. (Hank and his partners)

As students worked on their own text artworks, I observed them making judgments about the quality of their message, composition, and craftsmanship. They would even hold the work back a few feet from them in order to assess it and make appropriate improvements which further demonstrated their attempt to judge the quality of their work.

Summary

Through these constructivist learning activities, students had the opportunity to construct their own knowledge in order to gain an appreciation and understanding of art. In addition, the seven pedagogical goals for the constructivist learning activities, as discussed at length in chapter 1, were met through these three activities. My interpretation of the data collected from the three constructivist activities revealed a total

of nine patterns of learning in various configurations. These patterns are placed in the order in which they were found in the data. Subjects in this study were able to:

Explain their processes	Found in activity 1, 2, and 3
Apply their knowledge	Found in activity 1, 2, and 3
View in a new way	Found in activity 1, 2, and 3
Assess their learning	Found in activity 1, 2, and 3
Empathize with artists	Found in activity 2 and 3
Connect meanings	Found in activity 2
Continue on their own	Found in activity 2
Interpret works of art	Found in activity 3
Judge quality	Found in activity 3

Students in all three activities demonstrated an ability to *explain their processes* and *apply their knowledge*. These two patterns of learning were demonstrated through a performance or on their worksheets. All the subjects in all the activities were able to perform these tasks, which was not only expected, but required for the course. Subjects were also able to *view in a new way* and *assess their learning* in each of the three activities. Although some insight was demonstrated as subjects *explained their processes*, *viewing in a new way* and *assessing their learning* required more insight than the first two patterns.

The five other patterns of learning found in the data collected from activities 2and 3 far exceed merely gaining and using knowledge. In the second two activities students *empathized with artists, connected meanings, continued on their own, interpreted works of art,* and *judged quality*. Implications of these five patterns of learning will be further

discussed in chapter 5 at which point I will further analyze the patterns and draw conclusions pertinent to the research questions. Because six of these patterns of learning which emerged are similar to the facets of understanding developed by Wiggins and McTighe (1998) (explanation, interpretation, application, perspective, empathy, and self-knowledge) the analysis of the three constructivist learning activities in relation to those facets/patterns is a good indication that students were indeed understanding. Additionally, two of the patterns of learning found among the data: *apply their knowledge* and *view in a new way* are also conceptions of learning (Marton et al., 1993). According to Marton et al., as students see something in a different way, they understand the information and may change as a result of that understanding.

As expected, the conception of learning, *learning as changing as a person*, did not emerge as a pattern in this study, however, there were indications that students were having a significant change. For example, two of the subjects, Kim and John, demonstrated changes in their appreciation and how they perceived those changes. The greatest indications of appreciation and life change were shown by Hank. As indicated in his long quote at the beginning of chapter 4, Hank perceived a change in himself after the introductory assignments. He seemed to really understand art and the artist's perspective after that initial activity and had a great interest in it. Hank did very well on the constructivist activities in the class, however, he did not do as well on the more traditional tests in the class, such as when students listed the periods of art and applied their knowledge of the periods to a series of artworks. He did not study the characteristics of the periods and prepare for those classes. Hank did continue learning about art on his own. He brought me articles he found on the Internet discussing current

art issues which he found interesting. For example, one article Hank gave me discussed a man who bought an iceberg and painted it red to express himself. Even though this was not something Hank liked, he could now appreciate this artist's effort and see this iceberg painting as art! This kind of interest and understanding of art is, I believe, a result of constructivist methods. The activities in Art 125D engaged Hank in "the most meaningful kinds of learning possible" (Jonassen et al., 1999, p. iv), and I believe he will continue to have experiences with art as a result of this kind of learning.

The subjects in this study were able to assess their own learning and learn from the process. They could interpret works of art, judge the quality of it, and demonstrate empathy for artists. Subjects made connections among the knowledge gained and continued to learn on their own. It appeared that these subjects built on their current knowledge base and gained an appreciation and some levels of understanding about artworks and art issues. Students in this study also seemed to enjoy the three constructivist learning activities and feel as though they gained learning and understanding in the process. Thankfully, I did not hear anyone refer to me as a witch when expressing dissatisfaction with my teaching processes. I did, however, hear about a conversation regarding the constructivist methods in Art 125D, which took place outside of class. One of the male students was complaining to a female student that another art appreciation class only had to sit and listen to a lecture and take notes instead of doing a bunch of activities. She responded with enthusiasm about Art 125D "Yeah, but this is art *appreciation*!" (K. Bailey, personal communication, April 7, 2003). as though it was obvious that those students were not learning to appreciate art, they were only being told about art. She seemed to imply that this was so much better. In the following chapter, I

will draw conclusions based on the patterns of learning, which were revealed from the data analyzed in this chapter.

Discussion of Subject Commonalities by Gender and Major

The data collected from the interviews, observations, and documents indicated few commonalities by the gender of the student. The three female subjects in the group, Anna, Sara, and Kim, however, did demonstrate similar perspectives on their learning. This could be due to the fact that they joined the same group and worked together during all three activities. Additionally, the three female subjects became good friends during the class and spent time together even when they were not working on the activities, which could also contribute to their having similar perspectives. This commonality is again characteristic of collaboration in a connected-knowing group as identified by Belenky et al. (1997). The female subjects valued the other group members and their views. They worked to see from another person's perspective. Examples of Kim and Anna gaining the perspective of another group member were listed in the previous sections demonstrating how they were able to *view in a new way*. Although Sara did not mention gaining another member's perspective in her interviews, she did refer to an activity as fun "because we got to visit" which again indicates her connection with the group. According to Belenky et al. connected knowing works best when the group members meet together and get to know each other well over a period of time, as they did in this case.

An additional commonality among the female subjects was their interest in doing their best during the interviews. Anna, Kim, and Sara were all very conscientious students and sometimes seemed to be searching for a right answer to the interview

questions as though they wanted to please me. This was evident by the lack of insight in many responses and questions they asked such as, "Is that OK?" or "Is that what you are looking for?" at the end of an interview session. Interestingly this desire to help or "get it right" was not evident when the subjects were working collaboratively. Knowing these subjects, I did not interpret these questions as an indication of their self-doubt, which, according to Belenky et al. (1997) is common among women. I believe there is a greater similarity between these female subjects' actions and a theme in *Women's Ways of Knowing* described as the desire to care and empower others while remaining "self-less." Belenky et al. mention "That they can strengthen themselves through the empowerment of others is essential wisdom often gathered by women" (p. 47). This characteristic of helping others is also consistent with beliefs and practices in the protestant faiths of which these subjects were active participants.

I was surprised by how insightful the male responses were. Kyle, John, and Hank seemed to really be aware of their cognitive processes and try to express that to me during the interviews. From what I observed, they did not merely want to please me, but wanted to determine what actually happened during the activities. Although Hank had a greater ability to monitor and articulate his thought processes, Kyle and John were no less genuine in their desire to express their beliefs. Since the three male subjects were in different groups, they each had different perspectives on their learning. Not only had they worked with different themes, but they had also worked with different classmates, which affected their learning and perception of it.

There were only minor differences among the Sciences, Social Sciences, and Arts majors. The most significant one was their response to interview questions about group work. The two subjects with majors in the Sciences said they work better on their own:

> I do enjoy some group projects, but more often than not I do better individually. (Hank)

> I don't think it [working with others] really contributed to the learning because I think the learning I do better individually. Actually, I did learn more in a sense that I learned about their artists when we were putting the Web site together. So I guess it [working with others] actually was [helpful]. I just learned the shallow level about their artists. Yeah, so I guess it did help. (Sara)

The Social Sciences subjects, both psychology majors, also said they typically prefer working individually:

> When there is groups it's more of a hassle. (John)

> Normally I do better working by myself because I usually end up doing everything. (Kim)

The arts majors were the only ones who believed they learned best in groups:

> I'm a people person. I like to interact with a group of people more than one-on-one because I work better in a group. (Anna)

> I think I learn better in a group when we are working on a project because everybody can put in their ideas. I might be missing a certain idea and this guy he might have a better idea for this certain aspect of the project. You have a better understanding because so many people are throwing in so many different ideas and you can see like a bigger picture with a whole lot of different ideas. (Kyle)

The arts majors also seemed more passionate in their interview responses as these examples indicate:

> I chose Cassatt because she is one of my favorite artists and she was a woman and an Impressionist. I have always loved her. Someone else did Monet and someone else did the—I can't remember his name. She just struck me. I have always loved her stuff. I really wanted to write about her. Everybody just kind of agreed on what they wanted to do. (Anna)

> Oh my goodness! It [appreciation] has changed a whole lot, because when I came into art I didn't know anything about art. I couldn't tell you what was art and what wasn't. I have learned a lot. I work in an interior design shop—we have a picture—now I know what the picture is because it's a Madonna and Child. But at first I would have people come in there and ask me about Madonna and Child and I would have no idea what they were talking about. But now I know exactly what they are talking about. (Kyle)

These commonalities according to gender and major were the only noticeable ones in the subject responses.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

Study Summary

I began this study with an investigation of art appreciation; its history, definitions, and current texts that supply art appreciation content. As a result of that investigation, I defined art appreciation for the purposes of this study as *an awareness of art and its processes from the past and present and an ability to think about and respond to art and art theories in order to find value and meaning in art*. I also determined that if students were to attain this kind of appreciation in a core curriculum course, then teaching methods beyond the traditional lecture need to be employed. In addition, because I wanted students to not only appreciate art, but also understand it, I needed to use methods that gave students the *ability to use knowledge, make connections among art topics, and justify those decisions and opinions,* which is how I defined understanding.

In chapter 2 I reviewed literature on constructivism and adult learning and justified the potential of constructivism as a teaching method in an art appreciation course. Through constructivist methods, students could potentially gain an appreciation and some levels of understanding about artworks and art issues. Constructivism affects learning by allowing students to be active participants in the process. As they work individually and collaboratively to interpret new information, and make connections among art concepts in a real world context, they acquire knowledge and make meanings.

To this end, I designed three constructivist learning activities using the seven goals for constructivist learning outlined by Cunningham, et al. (1993). These activities involved the students in their learning throughout the semester in realistic art roles

allowing them to work as curators, Web page designers, and artists. According to Jonassen et al. (1999), constructivist learning environments, like those designed for this study, are a way to "engage students in the most meaningful kinds of learning possible" (p.iv). The constructivist learning activities seemed to offer great potential for learning in art appreciation.

In order to investigate the effects of these constructivist methods on student learning in an undergraduate art appreciation class, I implemented these activities in Art Appreciation 125D at Mississippi College during the Spring 2004 semester. Six subjects were selected to participate in the case study. Data was collected through three methods: interviews with subjects at three points during the semester, student documents produced during the three activities, and my field journal of observations made during the activities.

Once the semester was completed, I analyzed the data and looked for patterns of learning in order to understand the effects of constructivist methods on student learning. These patterns were influenced by the six conceptions of learning clarified by Marton et al. (1993) and the six facets of understanding presented by Wiggins and McTighe (1998). I interpreted the data and found the subjects in this study demonstrated nine patterns of learning. The subjects could: *1) explain their processes, 2) apply their knowledge, 3) connect meanings, 4) interpret works of art, 5) judge quality, 6) empathize with artists, 7) view in a new way, 8) assess their learning,* and *9) continue on their own*. I presented the results of the study in relation to these patterns, and offered the findings, many of which are in the form of narratives, in chapter 4.

This analysis of the data will help determine *how a constructivist based teaching approach in an undergraduate art appreciation class affected student learning*, and *what kinds of understanding students in an art appreciation class with constructivist learning activities were able to achieve*. The following sections provide a discussion of data gathering devices, outcomes of the study, an analysis of the patterns by frequency and level of thinking, and a metacognitive perspective on the results. Implications for art appreciation instructors, suggestions for further research, limitations of the study, and my conclusions are given in this chapter as well.

Discussion of Data Gathering Devices

The data gathering devices gave me the kind of data I needed to answer the questions in this study. They provided evidence of learning and understanding as a result of constructivist methods. The interviews were helpful in gaining thorough, thoughtful responses to questions about the constructivist learning activities since I was able to ask follow-up questions and get clarification from subjects as necessary. During the first interview the subjects were very cautious. I found talking casually with them about their outside interests before turning on the recorder helped them relax and respond to the questions easier. All the subjects were more relaxed during the second and third interviews. Being teacher and researcher was a benefit during the interview process. I feel I was able to get more information from the subjects than an outside researcher could have because I knew them so well.

Not only were the interviews helpful, but the observations also provided evidence of learning and understanding. I was able to observe the workings of the groups, and capture their facial expressions and the level of interest of the subjects. I could record

conversations, summarize the content of a discussion, and note the direction of the group, without obstructing the activity. I was disappointed, however, in the frequency with which I was able to make uninterrupted observations. Making observations of the subjects was often difficult because other class members needed my assistance as the instructor. Thus, observing and teaching was one of the challenges of being the teacher as well as the researcher. I was, however, pleasantly surprised by how independently groups worked. Students were not trying to get the outcome they thought I desired for them in the activities, which is sometimes the case. I observed all six groups, not only the ones containing subjects in them, because I was interested in seeing how all the groups were working. In hindsight, I would have spent less time with groups that did not have subjects in them or designated one subject to each group during the first activity when the groups formed.

The documents provided strong evidence of appreciation and understanding, especially on the worksheets through which students were asked to assess aspects of their learning. Unfortunately, not all group members worked together to answer the worksheet questions. Instead of discussing the questions and responses in the group, some of the groups divided the tasks so that individual group members answered the questions for all the members. I discovered this while observing activity 3 and during an interview with one of the subjects:

> Actually we split things up between group members and I never answered those questions. As far as learning, I never answered those questions so I never really reflected on them until I was asked about it a minute ago. (Hank)

Despite these drawbacks with some aspects of the data gathering, strong indications of learning and understanding exist among the three data gathering devices.

Discussion of Outcomes

The outcomes of this study are the patterns of learning which emerged from the data. These nine patterns of learning provide evidence that students were able to not only demonstrate learning about art, but also show the kinds of understanding students in an art appreciation class with constructivist learning activities were able to achieve. In order to determine *how* a constructivist based teaching approach in an undergraduate art appreciation class affects student learning and further investigate *what kinds* of learning and understanding students in an art appreciation class with constructivist learning activities able to achieve, further analysis of the patterns of learning is needed. The following two sections provide such an analysis. In these sections, I rank the patterns in order to answer the research questions and suggest the reasons behind the phenomena.

Patterns of Learning by Frequency

I began my analysis of the patterns of learning with the first research question: *How does a constructivist based teaching approach in an undergraduate art appreciation class affect student learning?* In order to answer this question, I ranked the patterns of learning by the frequency in which they occurred in the study. As I determined which patterns were the most frequent I formulated additional questions:

Why did each pattern happen as often as it did?

Why did all nine patterns not emerge in all three activities?

Since four of the patterns of learning (*explain their processes, apply their knowledge, view in a new way, and assess their learning*) emerged in all three constructivist learning activities, I began with their analysis and ranking. I looked at the frequency in which they occurred in the five activities and the number of subjects who demonstrated this

pattern. The other five patterns were then ordered according to frequency and discussed following the first four.

Apply their knowledge. All subjects applied their knowledge in all three constructivist learning activities. Subjects discussed their application of knowledge during the interviews, on their worksheets, and in their presentations. Additionally, I observed every subject constantly applying his or her knowledge during the activities. The frequency of their application makes it the most common pattern of learning. This frequency was primarily due to the instructions on the worksheets. In activity 1, for example, when students worked as curators to create and present a virtual exhibition to the class, they used information from my introduction of the curator's role, the exhibition wall text, and their textbooks. They were given specific directions for applying their knowledge on the worksheets, which directed:

Create an exhibition from the works in the permanent collection galleries. As a group you should:

- Generate ideas for a theme and choose one
- Select the four most appropriate works to include
- Take digital photographs of the selected works
- Write wall text for your exhibition, and
- Determine the ideal place to hang the exhibition.

Students were, therefore, able to *apply their knowledge* throughout all three activities. This was an expected result and was planned as a part of the course requirements. In order for students to construct their knowledge they must *apply their knowledge* in an authentic environment.

Explain their process. Subjects were also able to *explain their processes* in all three constructivist learning activities in this study. The interviews with the subjects provided the most evidence of explanation. Every interview answer could be interpreted as explanation. This frequency justified its ranking second in this list demonstrating how these activities affected student learning. Additionally, the design of the activities required students to *explain their processes* on their worksheets and during the presentations. For example, in the worksheets for the second activity, students were required to answer the following questions in order to work through and *explain their processes*:

- How is the theme evident in the artists we selected?
- What other information do we need to know about this theme?
- How do we convey this on a Web page?
- What additional artists should we include?
- What goals do we have for our Web page?
- How do we achieve these goals?

The combined data from the interviews, worksheets, Web pages, and presentations makes explanation one of the most common patterns of learning. Although all students in the course could *explain their processes*, when subjects explained their thought processes and reflected on their strategies, it demonstrated metacognition.

Assess their learning. Subjects in every activity also demonstrated an ability to *assess their learning.* Every subject made these assessments as they reflected on their learning during each interview. Additionally, this pattern of learning was required on the

worksheets. In the third activity, for example, students exhibited this pattern of learning as they decided:

- What is the title and intent of our piece?
- How is it a contemporary approach to our theme?
- Why did we solve the problem in this way?
- How does this activity affect our understanding of art history?
- Does creating art with text change how we appreciate it?

Because students were reflecting on their learning throughout the activities and during the interviews, I ranked it third among the patterns of learning for frequency. This pattern is an important part of how the activities in this study affected student learning. In constructivism, assessment is an important part of the learning process for the students. The students' ability to *assess their learning* is helpful not only in revealing what they are actually thinking and learning, but also the process allows them to gain further understanding. Additionally, as with the previous pattern, this awareness of their cognitive processes demonstrates the students' use of metacognitive processes.

View in a new way. I listed *view in a new way* fourth in this ranking because although it was demonstrated by the subjects during all three activities, this pattern was not as common as the first three I listed. Students were not required to *view in a new way* in order to complete their worksheets or participate in the interviews. Instead, subjects looked at art or issues from someone else's point of view as a means to an end in these activities. Viewing in a new way is an important outcome of constructivist learning because it tests and enriches their appreciation and understanding of art. Students can gain further understandings by addressing content from various perspectives. In the first

activity, for example, subjects recognized the valid views and interpretations of other group members during the discussion in the museum and when preparing for their presentation. According to Grabinger and Dunlap (1996), as students encounter different points of view, they can assess solutions to problems, refine their knowledge, clarify misconceptions, and provide new insights.

Empathize with artists. Subjects demonstrated that they were able to go beyond sympathy for someone's view to see and feel as others do in activities 2 and 3. Since empathy did not emerge as a pattern of learning in the first activity, I ranked it fourth on this list of frequency. Empathy was more evident activities 2 and 3 because in these students were able to gain in-depth knowledge about particular artists. In activity 2, empathy was demonstrated as students gave their Web page presentations and as the subjects reflected on their individual artists during their second and third interviews. In the third activity, students demonstrated that they could *empathize with artists* on their worksheets when they answered questions such as:

- Why do you think artists use text?
- Does the art by Kruger and Holzer reflect contemporary culture or help shape it?
- What questions would you like to ask artists who use text?

The responses to these questions were insightful and demonstrated a real attempt to see as these artists were seeing and determine the artist's intent. With these constructivist methods students were able to *empathize with artists* with some frequency because of the design of the activities. This pattern of learning demonstrates the subjects' ability to adapt their knowledge structures as they gain other perspectives and see and feel as an artist.

Interpret works of art. Subjects demonstrated that they could interpret works of art consistently in only one of the constructivist learning activities. Because of the infrequency of this pattern of learning, it ranks sixth on the list revealing how the activities affected learning. Only two of the subjects, John and Kyle, demonstrated an ability to *interpret works of art* in all three activities. This was due to the fact that these were the only subjects in groups with themes that required interpretation, *Southern Delight* and *Trust*. The other subjects were in groups with themes that did not require them to interpret their theme or art in the first activity. Activity 2 required these subjects to give some meaning to works of art, but only on limited occasions when they were selecting works from their text or from the Internet. This issue of theme quality is an interesting outcome of this study and will be discussed in the conclusion of this section. All the subjects interpreted works of art in activity 3 as they interpreted their theme in a new way and determined answers for the following questions about their contemporary art selection:

- What are the possible meanings of this work?
- What does this work say about our society?

Interpreting the text art of Kruger and Holzer required students to use their knowledge of the progression of art history and try to understand how these works related to that history and determine what each artwork meant to them. This required a depth of thinking in students. The constructivist methods in this study furthered the connection of text art and contemporary life and allowed for a deepening of understandings.

Connect meanings. Students made connections among all three activities throughout the semester as they utilized the same theme. Once again, the groups with the

themes that required more interpretation had to make more connections in activities 1 and 2 as they interpreted their theme and works of art. In the third activity, however subjects in groups with weaker themes made good connections to contemporary life, which allowed them to demonstrate a depth of thinking. Subjects also demonstrated they were making connections among the knowledge gained in the classroom, aspects of their learning activities and to daily life beyond the classroom. This pattern of learning ranks seventh in this list because it was not demonstrated verbatim on the student worksheets and therefore was less frequent. The ability to make connections to and among art and art topics demonstrates greater learning and understanding than simply applying knowledge. As students connect new information to knowledge, they construct new knowledge and generate greater understandings.

Judge quality. The subjects in this study only demonstrated they were able to *judge quality* as a pattern of learning during the final activity. Because it was less frequent than the previous patterns it ranks eighth on this list indicating how the activities affected student learning. Subjects did not demonstrate that they could *judge quality* during activities 1 and 2, because of the nature of the questions posed in the interviews and on the worksheets. Students demonstrated they could *judge quality* during the preliminary constructivist activities at the beginning of the semester. At this time the nature of art was being addressed. It was not until the end of the semester that the focus once again was on making aesthetic judgments about works of art. In the final activity, students used their knowledge of the progression of art history and its changing definition of art, to judge the works by Kruger and Holzer. These judgments were observed and recorded on their worksheets when students determined how the contemporary text art by

Kruger and Holzer could or could not be considered art. The subjects also judged the quality of their own works in the final activity and works by their classmates.

Continue on their own. The pattern of learning seen least frequently in this study was the students' ability to *continue on their own*. The subjects primarily demonstrated an ability to *continue on their own* in the second activity. This pattern emerged principally as subjects used the Internet to locate and navigate Web sites about artists related to their themes. Although constructivism encourages an active processing of information, which affects intrinsic motivation for continued learning (McKeachie, 1994), *continuing on their own* was an unplanned and unexpected outcome of the study which raises additional questions: What caused the students to look at art Web sites that were not required for the assignment? What motivated these students to learn about art and artists beyond what they needed to know to complete their work? What does the student's desire to *continue on their own* imply for learning with constructivist methods? The subjects themselves could not explain this phenomenon. They realized that they were learning beyond what was required, but did not indicate reasons for their actions. The Web sites that I observed students searching were all related to information they learned in class during the lectures or in one of the learning activities. For example, the students searching the Dali site seemed interested because they already knew some basic history of Dali and had seen and analyzed some of his works. This knowledge provided a base for the new knowledge about Dali allowing students to construct new knowledge. Students were perhaps motivated to learn more about Dali because they were interested in his other works and wanted to learn more about them. Whatever the reasons for

students to *continue on their own*, it is an exciting outcome for art appreciation when teachers only have time to introduce students to art.

This ranking of the patterns of learning by frequency demonstrates how the three constructivist learning activities affected student learning. These activities frequently prompted students to *explain their processes, apply their knowledge*, and *assess their learning*; since they were required for the completion of the activities. The design of the constructivist learning activities and questions asked during the interviews also facilitated the majority of the other patterns including: *view in a new way, empathize with artists, interpret works of art, connect meanings*, and *judge quality*. Although the design of the activities and method of data analysis contributed to the patterns, which emerged, many indications of these patterns were a byproduct of the students' participation in these constructivist environments. One pattern of learning, *continuing on their own*, was completely unexpected in this study, it was also the pattern of learning demonstrated the fewest number of times in the study.

An additional unexpected result of these constructivist learning activities was the way the themes were so significant to the students' learning. The two subjects in groups with stronger themes that required interpretations, *Trust* and *Southern Delight*, allowed the students to make more interpretations and connections than the subjects in the groups with weaker themes, *Come Sail Away* and *Man and the Sea*. This importance of the themes is an interesting point to examine. Why did this happen? What does this quality issue imply for student learning through constructivism and for the constructivist teacher of art appreciation? Although I gave the class examples of strong and weak themes in their introduction to the first activity, two of the groups generated these two weak themes.

Should I have required them to create another theme? If I had required different themes then the contemporary approaches to the themes in the third activity would not have been so exciting. Were these students able to make these stronger versions of their themes later in the semester because of the change in their ability to think deeply about art and construct their knowledge? Despite the inconsistency in the theme quality at the beginning of the semester, students were able to produce strong titles and content in their final works of art in activity 3 at the end of the semester.

Another aspect to consider in retrospect is my effect on the results. How did who I am effect the results? In chapter 3 I mentioned my experience and background. I believe my experience did contribute to the success of the three activities. The three constructivist learning activities were well-thought out and aspects of them were piloted during several semesters. If this had been the first time I taught Web page construction, for example, there would have been numerous issues to deal with, such as problems setting up the data projector in the lab we were using, and quirks with our Microsoft Word program. These were both issues I resolved during previous semesters. I believe my enthusiasm and energy contributed positively to the results as well. I do not know exactly what affect it had on the students, but they seemed to be energized during the activities and enjoy the process. An outside researcher might have seen the effects I had on the results more clearly than I can. Despite these perceived advantages, I believe any competent art appreciation instructor using constructivist learning methods such as these would get positive results if the activities were well planned using the goals for constructivist learning environments summarized by Honebein (1996) and strategically implemented.

Patterns of Learning by Level of Thinking

How did the students come to understand? How did we know that we know? In order to thoroughly answer the second research question *What kinds of understanding are students in an art appreciation class with constructivist learning activities able to achieve?* I needed to analyze the patterns of learning further. Although the nine patterns that emerged from this study provide evidence that students were able to not only demonstrate an appreciation of art, but also show that students were achieving a multi-faceted understanding of art, I needed to know more about the *kinds* of learning and understanding resulted from these constructivist methods. Which patterns imply appreciation and understanding? Which patterns demonstrate a greater depth of thinking? Does higher level thinking lead to understanding?

In order to investigate these questions I needed to rank the patterns of learning by level of thinking. To do this, I needed to know what constitutes a depth of thinking and how the patterns of learning reflected that depth. I referred to Bloom's Taxonomy of Educational Objectives (1956) to assist in evaluating these patterns of learning as the Taxonomy is a common interpretation of higher order thinking (Ennis, 1992). Not only are the upper three levels of Bloom's taxonomy (analysis, synthesis, and evaluation) considered higher order thinking, depending on the application, the two levels below those three (comprehension and application) can also be considered higher order. The following is a ranking of the patterns of learning from the lowest to the highest level of learning.

Explain their processes. As mentioned in the results of this study in chapter 4, the kinds of explanations demonstrated by the subjects varied. Many of the explanations

were on a surface level, such as when students explained a process, while other explanations demonstrated a deeper, more metacognitive, level. These richer explanations emerged primarily when students were explaining thought processes or reflecting on their learning. The surface level explanations when students recalled and described methods and processes, align with Bloom's lowest level, knowledge, which does not demonstrate much understanding. The explanations that demonstrated a deeper level of understanding, however, could be related to Bloom's second level, comprehension, since students were able to explain, paraphrase, and summarize. Some of the more reflective explanations even align with Bloom's sixth level, evaluation, because students were able to defend, discuss, and support their thoughts and processes.

Apply their knowledge. Application is the third level of Bloom's taxonomy. I ranked *apply their knowledge* second in this listing because students found it relatively easy to do. Although application in these activities required some thinking as students used, arranged, compared, and demonstrated, the thinking processes were fairly straight forward and supported by more than one person. In constructivism, application is central to learning. As students make new knowledge from information they obtain, they generate new learning and understandings (Grabinger and Dunlap, 1995).

Interpret works of art. As students engaged in interpretation they made sense of art and its relationship to their world. According to Driscoll (1994), there are multiple realities. The student constructs her own reality as she makes interpretations. Interpreting works of art as a pattern of learning, aligns with Blooms second level, comprehension. I ranked interpretation higher in this study because students were using

greater levels of thinking as they made interpretations, and drew conclusions about the meanings in works of art.

Connect meanings. As students connected meanings in this study, they compared, ordered, and related. These activities align with Bloom's third level, application, or fourth level, analysis. In constructivism, learners connect new information to past understandings. They can adapt the new information to fit the previous knowledge or change their previous conceptions (Gagnon & Collay, 2001). This learning process involves making personal meanings and building individual understandings which is central to constructivist theory (Anderson, 1996; Murphy, 1997).

Continue on their own. I ranked the students' ability to *continue on their own* in the middle of this hierarchy because it goes beyond a mere application of knowledge and the ability to make connections. It also requires a motivation to encounter art beyond the classroom. This pattern of learning demonstrates that students have had a depth of learning and are inspired to *continue to learn*. They can apply their knowledge and connect it with life outside the classroom.

View in a new way. In these constructivist activities students were exposed to alternative viewpoints, suggested their own opinions, and challenged other views. These processes required analysis, synthesis, and evaluation, which are the top three levels in Bloom's Taxonomy. Students used higher order thinking and thought about issues critically in order to *view in a new way*. This is typical for constructivist learning in which students can encounter different points of view. These perspectives can lead students to identify ineffective solutions to problems, refine their knowledge, clarify misconceptions, and provide new insights (Grabinger and Dunlap, 1996).

Empathize with artists. In order for students to demonstrate empathy for an artist they must think critically about the works created by the artists, their content, and context. Students must take on the view of the artist and see as he sees. This point of view requires higher level thinking similar to the previous pattern, *view in a new way*. Both patterns of learning require analysis, synthesis, and evaluation of the art concepts, however, demonstrating empathy for the artist goes beyond seeing the view of another, to a point where the learner's structure is changed to feel as the artist feels.

Judge quality. At the top of Blooms taxonomy, the sixth level, is evaluation. In the constructivist learning activities in this study, students were able to judge the quality of works of art. These evaluations demonstrated a depth of student thinking about art as they appraised, assessed, criticized, decided, and even disagreed about the artworks with members of their group. This depth of thinking is a high level application of knowledge in this constructivist study as students must use what they know to make these aesthetic determinations.

Assess their learning. The pattern I perceived as demonstrating the deepest thinking was *assess their learning*. As students appraised, assessed, concluded, decided, and evaluated, they constructed new learning. According to Gagnon and Collay (2001) constructing knowledge hinges on reflection. As the students engaged in the constructivist learning activities they added new information to what they currently understood. They became aware of what they could do as they reflected on their learning which allowed them to gain further understandings (Gagnon & Collay, 2001; Grabinger & Dunlap, 1995)

This ranking of the patterns of learning demonstrates which patterns were the most significant in regard to the students' depth of thinking, which leads to *how* the constructivist learning activities affected this depth. How did the activities affect appreciation and understanding? What do the patterns mean to that appreciation and understanding? For this study I defined art appreciation as *an awareness of art and its processes from the past and present and an ability to think about and respond to art and art theories in order to find value and meaning in art*. I reviewed this ranking with this definition in mind and found that that eight of the nine patterns imply that students could achieve part of the definition of art appreciation: think about and respond to art. The pattern of learning *continue on their own* is the only pattern that does not indicate students were *thinking about and responding to art.* The second half of the definition of art appreciation: *find value and meaning in art* was implied in seven of the patterns as students were able to explain, interpret, connect, view, empathize, judge, and assess. The ability of students to *apply their knowledge* and *continue on their own* do not indicate that students could *find value and meaning in art*. Based on these conclusions, patterns of learning indicating higher levels of thinking do not indicate a greater ability in students to appreciate art as a result of these constructivist learning activities.

Understanding in this study was defined as *the ability to use knowledge, make connections among art topics, and justify those decisions and opinions*. With this definition in mind I reviewed this ranking of patterns of learning by depth of thinking and found similar results to appreciation. Eight of the nine patterns imply that students were *using knowledge, making connections among art topics, and justifying those decisions, and opinions*. Only the pattern *continue on their own* did not imply that students were

understanding as defined here. Although this does not indicate that when students were using higher levels of thinking they were able to generate greater understanding, it does again demonstrate that students were not only gaining an appreciation of art, but thinking deeply about art issues and gaining considerable understandings in Art 125D.

The depth of thinking resulting from these constructivist activities is credited to the design of the activities, which were based on the goals for constructive learning environments outlined by Cunningham et al. (1993). As mentioned in chapter 2, constructivist learning environments are a method that has proven worthy for educators to engage students in meaningful learning. They are a way to "engage students in the most meaningful kinds of learning possible" (Jonassen et al., 1999, p. iv).

Although all seven goals for the design of the constructivist activities affected the depth of learning produced, some of the goals seemed to contribute more to the higher levels of learning. For example, while it was important for students to *use multiple modes of representation* as this allowed them to *explain their processes, apply their knowledge, connect meanings,* and *continue on their own*, this goal seemed to contribute less to a depth of learning than the students opportunity to *gain experience in and appreciation for multiple perspectives* which facilitated their ability to *view in a new way* and *empathize with artists*. Another example of a goal that resulted in a depth of learning, was allowing the students to *learn in realistic and relevant contexts.* These real world settings permitted students to *apply their knowledge, connect meanings,* and *view in a new way*. According to Grabinger and Dunlap (1996), realistic problems develop richer knowledge structures in learners. Each of the seven goals for constructivist

learning environments used in the design of the three activities in this study, contributed to the patterns of learning, which emerged in data analysis.

A Metacognitive Perspective

As was indicated in the previous sections, two of the patterns of learning, *explain their processes* and *assess their learning,* indicated students were using metacognitive skills. I believe the design of the activities and design of the study led to these indications of metacognition. Because the activities were designed using the goals for constructivist learning environments, I needed to determine which goals were significant in generating these metacognitive results. In addition, I was interested in the type of metacognition each goal produced. As mentioned in chapter 2, there are two types of metacognition: metacognitive self assessment (an individual's knowledge of or ability to assess his own cognition), and metacognitive self-management (the ability of an individual to manage his future cognitive development) (Rivers, 2001).

Three of the goals used in the design of the constructivist learning activities specifically facilitated metacognitive functions in the students. Two of the goals provided for metacognitive self-management, which according to Rivers (2001) is the more critical of the types of metacognition. Goal 1, *provide experience with the knowledge construction process* and Goal 4, *encourage ownership and voice in the learning process* encourage the design of the activities to encourage students to set goals and determined methods to achieve their goals. Metacognitive self-assessment was evident in goal 7: *encourage self-awareness of the knowledge construction process* which encouraged students to determine how they solved the problem and why they solved it in a particular way.

In addition to the design of the activities facilitating metacognitive functions, the data collection methods contributed as well. The worksheets allowed the students to demonstrate metacognitive self-management skills as they determined how best to solve the problems, set their goals, design their strategies for achieving those goals, and evaluate their products. Additionally, the worksheet questions prompted students to demonstrate metacognitive self-assessment skills as they reflected on and assessed their learning processes. Another contributor to the indications of self assessment were the interviews conducted with the subjects. The interview questions allowed for additional reflections on learning and, therefore, the subjects used more metacognitive self-assessment skills than the other students in the class.

Implications for Art Appreciation Instructors

Art appreciation instructors have an opportunity to facilitate high levels of student thinking and encourage metacognitive skills through constructivist methods such as the ones used in this study. Teachers should use the seven pedagogical goals for constructivist learning environments summarized by Honebein (1996) in order to create places "where learners may work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals and problem-solving activities" (Wilson, 1996, p. 5). Instructors can design new activities or adjust their current lessons based on constructivist theory in order to achieve not only appreciation, but understandings of art and art issues as a result. Many educators in other fields have used constructivist methods in order to engage students in the kinds of meaningful learning described in this study (Jonassen, 1991). Art instructors can also

generate meaningful learning through constructivist methods in their art appreciation classrooms.

Interestingly, the art appreciation courses at Mississippi College have changed during the two years since this study began, perhaps as a result of the study. The art department chair and other instructors were aware of some of the activities I was using in my classroom to facilitate student learning. The department purchased a laptop computer and data projector for the art appreciation/art history classroom. I was asked to give the art faculty instruction in Power Point and use of the data projector so that they could use this technology in their classes. Shortly thereafter, the instructors who were using a predominantly lecture style to teach art appreciation were no longer assigned the classes. The Chair then scheduled an annual fall meeting for the art appreciation instructors in order to help the new adjuncts prepare to teach the course. At the 2004 and 2005 meetings three of us shared how we fulfill the requirements for the course and gave teaching suggestions to the new instructors.

Currently, four adjunct and one full-time instructor who include active learning in their curricula are teaching art appreciation. These instructors are using a variety of instructional methods in their classes, which include collaborative learning activities, technological media, art production exercises, critical analysis, aesthetic inquiry, and field trips. In addition, each of these instructors is working to continually improve his or her instructional style as evidenced by their notes and conversations with me about their curricula. Although I have not specifically shared the seven goals for constructivist learning with the art appreciation instructors, I plan to do so at the fall meeting along with the results of this study.

Suggestions for Further Research

The results of this study indicate that these constructivist methods could be successful in other art appreciation classrooms. These activities could certainly be implemented at other universities with similar populations where there is a low student to teacher ratio allowing students to meet in groups, use computers, and create their own work, but would it work in classes with large numbers of students? According to Bostock (1999) adapting constructivist methods to mass higher education is problematic. Mass higher education often has limited resources, increasing student/teacher ratios, and scheduling and assessment systems, which put constraints on the instructors of these courses. Bostock (1998) believes computer-based media may support constructivist learning and allow for some collaborative work in large group classroom settings. One alternative strategy for incorporating constructivist methods in larger universities with problems of class size is breaking the class into smaller classes for portions of the course. At Arizona State University (ASU), for example, students attend the lecture portion of the art appreciation class with hundreds of other students, then break up into groups of 20-30 for the studio and discussion aspects of the course (Kelley, 2002). Although the art appreciation course at ASU was not designed as a constructivist classroom, this solution would lend itself to the constructivist activities designed for this study.

I would be interested to know how these constructivist activities affect learning about art over a period of time. I would like to conduct a longitudinal study using these same subjects in order to investigate what affect these activities had on their learning and understanding of art five and ten years after Art 125D. Will students be interested and continue to have experiences with art as a result of this course and these constructivist

activities? Will constructivist methods motivate these students to learn about art and art topics beyond their college years? Will students continue to build on their art knowledge and make connections among art topics or will this be the end of their art learning? These are questions I would like to pursue.

I would also like to see a comparative study conducted using these constructivist learning activities in one art appreciation class compared to more traditional instructional methods employed in a second class. I would not, however, like to conduct the study myself. Now that I understand how constructivist methods affect student learning in an art appreciation course and what kinds of understanding can emerge as a result, I would not be able to withhold the constructivist teaching methods from the control group.

I am also aware that there could be gender issues beyond those I discussed briefly in chapter 4. Additional art appreciation research in regard to gender differences could be conducted, guided by the research presented by Belenky et al. (1997).

According to Entwistle (1984) educational research attempts at achieving a better understanding of the educational process with the aim of improving its effectiveness. Learning is content and context dependent. Case studies, such as this one, are used to show how learning has been facilitated, and can provide guidance for instructors, but educators must apply the outcomes of the study to their own situations. The results of this case study employing three constructivist learning activities in Art Appreciation 125D indicate that these methods could work in other situations. In an age where students no longer learn by memorization but by application, this holds promise of greater appreciation, understanding and learning in art appreciation classrooms.

Limitations

This study of three constructivist learning activities in an undergraduate art appreciation class has limitations. The main limitation is that this is a case study of six students at Mississippi College. The research provided an in-depth understanding of this case and should not represent or be generalized to the entire population of art appreciation students. Other art appreciation classes using these three constructivist learning activities will not have these exact results.

An additional limitation, mentioned previously, is the challenge of using student documents for data collection. In constructivist activities, students work collaboratively to set goals, decide on their methods, complete their tasks, and assess their learning. The worksheets, Web pages, and art were each produced by the subject and at least one other student, which makes the data less valid than the individual interviews, which are the opinions of the subjects alone.

A third limitation was the number of subjects in each group. I was disappointed that all three female subjects joined the same group. As they worked together on all three activities, they seemed to have similar views about their learning. The three male subjects, however, had more varied views of their learning. This was in part due to the fact that they were in three different groups and had not had the same theme and experiences.

Conclusions

The purpose of this study was to determine the effects of constructivist methods on student learning in an undergraduate art appreciation class. My hypothesis was that

the students would find meanings and acquire knowledge, appreciation and some understanding of artworks and art issues.

The subjects in this case study demonstrated their ability to not only identify and gather information, but also determine which information was significant for their purposes and uses, thereby making it valuable knowledge. As these learners used the new knowledge in relation to what they already knew and made new understandings they were constructing meaningful learning. Because they were aware of their learning goals, processes, and outcomes they took responsibility for aspects of their own learning and achieved greater understanding as a result.

By allowing students to individually and collaboratively find meaning in works of art, interact with the works of art in a real world context, and determine what they learned from the interactions, nine patterns of art learning emerged. As students evaluated information, gathered the resources they needed to achieve their learning goals, and presented their findings, they gained not only an appreciation, but also a multi-faceted understanding of art.

The data evidence that constructivism results in a deeper understanding than in a typical art appreciation course in which learners are merely passive recipients of knowledge. This was not only indicated by the nine patterns of learning which emerged from the data, but also in the students' awareness and regulating of their cognitive processes. According to Jonassen (1991) the metacognitive awareness of learning that can result from constructivism improves learning and the outcomes. This metacognition was evident in the outcomes, which emerged from the study.

Art instructors have the opportunity to reach thousands of students enrolled in art appreciation classes each semester. These instructors each determine what art appreciation content to teach to students and can choose what methods of instruction to employ. Constructivist methods, such as those used in this study, can facilitate not only art appreciation, but also a depth of student thinking and understanding about art. These constructivist methods can challenge students to focus on meaningful tasks, think about significant issues, and construct new understandings of their worlds. According to Brooks and Brooks (1999), when students have these experiences, we, as educators, and they, as students, achieve a meaningful victory.

APPENDIX A

ART APPRECIATION 125D SYLLABUS

ART 125D ART APPRECIATION 2004 SPRING SEMESTER

INSTRUCTOR: Stephanie Busbea
(601) 981-3943
busbea@aol.com
Art Office 925-3231

I. COURSE TITLE

ART 125D Art Appreciation MWF 10:00-10:50 3 semester hours

II. PREREQUISITES

None

III. TEXTBOOK

Preble, D., Preble, S., & Frank, P. (2002). *Artforms: An introduction to the visual arts* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

IV. COURSE DESCRIPTION

"General survey of the four disciplines of art: aesthetics, art criticism, art history, and studio art. Focus is on the relationship of art to contemporary living. Satisfies the core curriculum fine arts requirement. This course may not be used to satisfy requirements for a major in art." *2003-2004 Undergraduate Catalog*, p. 76.

This course introduces the basic elements and principles related to the production and understanding of works of art. Through the text and other sources a historical account of art from cave paintings to the art of today is presented. Styles of art, major artists and their works, and current trends in art are explored, as well as art as a reflection of a culture.

V. RATIONALE

Instruction in the fine arts is essential in order to provide a well-rounded academic experience for the college student. It is difficult to separate a history of civilization and its people from the history of art and its production. The exposure of this information through lecture, discussion, and the sharing of ideas, along with the execution of the student's own creative work, will enable the student to make intelligent and mature observations of works of art; will contribute to an understanding of man's need for creative expression and its place in the past and present; and will assist the student in attaining comprehensive instruction.

VI. COURSE OBJECTIVES

In order to provide a meaningful art experience for the college level student and assist the student in assimilating a balanced program of study the student will:

A. Survey the history of art and acquire knowledge of the periods, styles, and artists and their contributions.

B. Participate in hands-on activities which will provide studio production experiences.

C. Research and report on an artist, art movement, or art-related topic applicable to the course of study.
D. Employ various techniques to critique or discuss art.
E. Receive lecture, multi-media presentations, group discussions, demonstrations, and research efforts that reinforce the class inquiry.
F. Become aware of how the Christian faith impacts the world of art and how the world of art impacts it.

VII. ACADEMIC INTEGRITY

Please refer to the attached *Addendum to 2003-2004 Undergraduate Syllabi.*

VIII. COURSE TOPICS

The major topics to be considered are:

A. The Nature of Art
B. The Visual Elements
C. The Visual Arts
D. Art History

IX. INSTRUCTIONAL METHODS AND ACTIVITIES

A. Lecture and discussion
B. Studio projects
C. Video/slide presentations
D. Gallery experiences
E. Demonstrations
F. Internet assignments

X. EVALUATION

A. **Tests**: Four tests from text material will be given. Each is worth 100 points except the final exam which is worth 150.
B. **Paper**: A 2-3 page (double-spaced typed) paper will be written on an artist whose work is illustrated in our text and fits the group theme. At least three sources must be used and cited in APA style. Papers are worth 100 points.
C. **Projects**: Five art projects will be created during the semester. These are worth a total of 50 points and are graded on participation and effort.
D. **Web**: Group Web assignments will be completed with peers. Each student will receive up to 40 points for the research and design of their page.
E. **Museum:** A virtual exhibition will be created at the museum and presented in class. This digital/written assignment will be worth up to 30 points.
F. **Written:** Other written responses including group reflections and video worksheets will be worth a total of 40 points.

Grading Scale A=93-100 B=85-92 C=76-84 D=65-75	Test 1 100 points Test 2 100 points Test 3 100 points Final 150 points Paper 100 points Projects 50 points Web 40 points Museum 30 points Written 40 points Total 710 points

XI. OTHER COURSE INFORMATION

Please refer to the attached *Addendum to 2003-2004 Undergraduate Syllabi.*

XII. LIST OF MATERIALS

Textbook and writing implement must be brought to each class meeting.

APPENDIX B

CONSTRUCTIVIST LEARNING ACTIVITIES

Experiencing Art in a Museum Setting

Materials:
Textbooks, digital cameras, museum worksheets, paper, pencils, and a television

Time:
2 hours in the museum and 1 classroom session of 50 minutes

Procedures:
The entire class will visit the Mississippi Museum of Art where they will be given a worksheet with individual and group assignments. They will be asked to locate 10-15 works of art from the various exhibitions that correspond to art media and processes discussed in class. If possible, the museum curator will give a brief explanation of how he uses the collection to plan exhibitions, and answer any questions about his processes. After completing their individual assignments, students will work with two or three other class members to create, on paper, an exhibition from the works in the museum's permanent collection. As a group they should:

- Generate ideas for a theme and choose one
- Select the most appropriate works to include
- Take digital photographs of the selected works
- Write wall text for their exhibition
- Determine the ideal place to hang their exhibition.

The course textbook can be used to select additional works for their show and serve as a resource for writing the wall text. Once they have recorded these ideas they will answer the following questions:

- What goals did your group have for your exhibition?
- Why did your group select this theme and these works?
- How did you determine which works to use?
- How does working like a curator help you understand and appreciate art?

Students can meet with their group members outside of class to do any additional research and complete this assignment if necessary. During the next class session, students will present their exhibitions to the class. They will show their digital images on the television, share their wall text and discuss their responses to the assigned questions. Students will turn in their written responses, which will allow the curator to make comments on the students' suggestions and allow for further assessment.

Creating Art History Web Pages

Materials:
Computers with Internet access and Netscape Composer

Time:
4 class sessions – 50 minutes each

Procedures:
Following the *Experiencing art in the museum setting* activity, students will write a research paper on an artist of their choice that relates to the theme selected by their group. Once their papers are complete, the groups will each create a Web page for the Mississippi College art appreciation classes that provides information and links for each of their artists. Each group must determine:

- How is the theme evident in the artists we selected?
- What other information do we need to know about this theme?
- How do we convey this on a Web page?
- What additional artists should we include?
- What questions could we post to further investigation by the viewer?
- What goals do we have for our Web page?
- How do we achieve these goals?

The instructor will give a demonstration on the mechanics of creating a Web page using Netscape Composer and provide some resources for backgrounds and images. Each group will write the text and choose colors, font style, background pattern, images, and links, and add them to their page. Once the page is complete, students will write questions designed to generate interest and or discussion from their classmates and add them to the page as well. The pages are then presented to the class using a data projector. During the presentation classmates can answer the questions generated by the designers and ask questions of their own. The conclusion of the project is a written reflection by each group addressing:

- What factors influenced our decisions on images and links?
- What were our problems and successes?
- How did our page compare to others in the class?
- What did we learn from this exercise?
- How does this activity affect our understanding of art history?
- How does this Web page assignment affect our appreciation of art?

The planning notes, student reflections, and a disk of the Web page will be submitted for further assessment. Web pages will be posted to the class Web site.

Encountering Contemporary Art

Materials:
Computers with Internet access and printers, Kruger and Holzer images, magazines, newspapers, scissors, glue sticks, and tag board

Time:
2 class sessions – 50 minutes each

Procedures:
As a conclusion to the chronological study of the history of art, students are introduced to a sampling of contemporary artists who make conceptual art, installations, site-specific works, environments, as well as artists who employ more traditional forms. Included in this sampling are works by Barbara Kruger and Jenny Holzer. Students will work with a partner to select one of the works by Kruger or Holzer, find additional information on the work and address the following questions:

- What are the possible meanings of this work?
- How could this be considered art?
- Why wouldn't this be considered art?
- Why do you think these artists use text?
- What does this work say about our society?
- Does the art by Kruger and Holzer reflect contemporary culture or help shape it?
- What questions would you like to ask these artists?

After completing their written assignment, students will be challenged to create a work of art using imagery and text related to the theme selected earlier in the semester. The pair must first determine how this theme is relevant in contemporary society and how they will approach the theme from their perspective. Students can gather images from magazines, make copies of these images, use newspaper articles, get images from the Internet, or use other sources available to them.
During the next class session students will determine which images and text to use in their composition, and glue them to the tag board. They will journal their responses to the following questions:

- What is the title and intent of our piece?
- How is it a contemporary approach to our theme?
- Why did we solve the problem in this way?
- How does this activity affect our understanding of art history?
- Does creating art with text change how we appreciate it?

Each pair of students will present their piece to the class and discuss their responses to the previous questions. They will turn in their artwork and reflections for further assessment.

APPENDIX C

ACTIVITIES ALIGNED WITH CONSTRUCTIVIST GOALS

Art Appreciation Activities Aligned with Constructivist Learning Goals

Activity 1-Experiencing Art in a Museum Setting	
Goal 1: Provide experience with the knowledge construction process	Students take responsibility for determining the exhibition theme, applicable art, exhibition location, and wall text. They also determine how their group will achieve their goals.
Goal 2: Provide experience in and appreciation for multiple perspectives	Students consider the opinions of the curator and the endless solutions to the problem. They contemplate the opinions of their group members before determining a course of action and planning the exhibit.
Goal 3: Embed learning in realistic and relevant contexts	Students work as curators in the museum to create an exhibition from the works available to them.
Goal 4: Encourage ownership and voice in the learning process	Students have control over the exhibition that they create. They determine what their goals are for the exhibit and what they need to know from the curator, the textbook, the wall text, and the art itself in order to create it.
Goal 5: Embed learning in social experience	Students work with a small group to create their exhibition and present their results to the class.
Goal 6: Encourage the use of multiple modes of representation	Students view works of art in the museum, and find information in their texts for their exhibition. They receive information from the curator and view art presented by their classmates on the monitor.
Goal 7: Encourage self-awareness of the knowledge construction process	Students will consider how they solved their problem and why they solved it in this way. They will think about their reasons for their choices and how the creation of an exhibit contributes to their appreciation of art.
Activity 2-Creating Art History Web Pages	
Goal 1: Provide experience with the knowledge construction process	Students construct knowledge by assessing information, and discussing their views with a group. They determine a theme for their page, goals for it, and how they will achieve those goals and solve the problem. Students also generate group discussion questions
Goal 2: Provide experience in and appreciation for multiple perspectives	Students evaluate Web sites and information. They consider the endless choices for the appearance and content of their page. They determine the best solution based on the views of the group members.
Goal 3: Embed learning in realistic and relevant contexts	Students work as Web page designers. Their Web pages are posted to the school Web site and made available to other art appreciation students.
Goal 4: Encourage ownership and voice in the learning process	Students determine what they need to know about the theme and what their goals are for the page. They must decide what artists, information, and links are relevant and how to best compile and demonstrate this information.

Goal 5: Embed learning in social experience	Students work with a small group to compose their Web page and present their results to the class.
Goal 6: Encourage the use of multiple modes of representation	Using the Internet, students locate relevant information on their artists and the theme. They employ Netscape Composer and view Web pages projected by classmates during presentations.
Goal 7: Encourage self-awareness of the knowledge construction process	Students will consider why they solved the problem in this way. They will think about the selections they made and determine their successes. They will discuss what they learned from this assignment and how it contributes to their appreciation of art.
Activity 3-Encountering Contemporary Art	
Goal 1: Provide experience with the knowledge construction process	Students select a relevant topic for their art and determine what they need to know about the issue and about the artists. They determine what materials and form will best express their position and how art reflects and/or shapes the culture in which it was created.
Goal 2: Provide experience in and appreciation for multiple perspectives	Students contemplate interpretations of the works of art. They consider views of artists with differences based in gender, politics, and social issues. They reflect on solutions offered during collaboration and reflect on solutions presented by other class members.
Goal 3: Embed learning in realistic and relevant contexts	Students work as artists to create their own art. Text art is also relevant since students experience text everyday in advertising that can be considered art.
Goal 4: Encourage ownership and voice in the learning process	Students determine the topic for their piece and how to better understand the topic. They decide how they will solve the studio problem.
Goal 5: Embed learning in social experience	Students work with a partner to complete the assignment and discuss their creations with the class.
Goal 6: Encourage the use of multiple modes of representation	Students locate materials from magazines, the Internet, or newspapers. They review information related to contemporary artists from the Internet and texts.
Goal 7: Encourage self-awareness of the knowledge construction process	Students will determine why they solved the problem in this way and how they came to their conclusion. They will consider how viewing text as art affects their appreciation and understanding of art.

APPENDIX D

UNT IRB RESEARCH CONSENT FORM

University of North Texas Institutional Review Board Research Consent Form

Subject Name

_____

Date

_____

Title of Study
A study of the effect of constructivist learning environments on student learning in an undergraduate art appreciation course
Principal Investigator
Stephanie Busbea
Co-Investigator(s)
Dr. Melinda Mayer

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and discomforts of the study. It also describes the alternative treatments that are available to you and your right to withdraw from the study at any time. It is important for you to understand that no guarantees or assurances can be made as to the results of the study.

Start Date of Study
01/14/2004
End Date of Study
05/7/2004
Purpose of the Study
The purpose of this study is to determine the effects of constructivist methods on student learning in an undergraduate art appreciation class. Constructivism affects learning by allowing students to be active participants in the process. As students individually and collaboratively interpret new information and work to find connections among art concepts, they find meanings and acquire knowledge, appreciation and some understanding of artworks and art issues.
Description of the Study
This study will be conducted at Mississippi College during the Spring 2004 semester. Six participants will be selected for this study from the students registered for Art Appreciation 125E. Criterion for selection will include the major and the sex of the student. Data will be collected from these six participants through the three main strategies for qualitative research: interviews, observations, and documents.
Procedures to be used
Three constructivist learning activities were designed for Art Appreciation 125E. Through these activities, students will have opportunity to construct their own knowledge in order to gain an appreciation for art. The six subjects will participate in the learning activities along with the other members of the class.

The only additional involvement will be to answer a set of questions during a semi-structured interview following each activity. These questions will include:
What do you believe it means to appreciate art?
What did you learn from this activity?
How did this activity affect your understanding of the artwork?
How did this activity affect your appreciation of art in general?

Description of the foreseeable risks

There are no foreseeable risks to the participants.

Benefits to the subjects or others

The only possible benefits are a greater appreciation for art.

Procedures for Maintaining Confidentiality of Research Records

Each student participating will be assigned a number. All documents used in the research will refer to the student by that number.

Review for the Protection of Participants

This research study has been reviewed and approved by the UNT Committee for the protection of Human Subjects. UNT IRB can be contacted at (940) 565-3940 or http://www.unt.edu/ospa/irb/contact.htm with any questions or concerns regarding this study.

Research Subject's Rights

I have read or have had read to me all of the above.
_____has explained the study to me and answered all of my questions.
I have been told the risks and/or discomforts as well as the possible benefits of the study. I have been told of other choices of treatment available to me.
I understand that I do not have to take part in this study and my refusal to participate or to withdraw will involve no penalty, loss of rights, loss of benefits, or legal recourse to which I am entitled. The study personnel may choose to stop my participation at any time.
In case problems or questions arise, I have been told I can contact _____at telephone number_____.
I understand my rights as research subject and I voluntarily consent to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I have been told I will receive a signed copy of this consent form.

_____ _____
Signature of Subject Date

_____ _____
Signature of Witness Date

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the known benefits and risks of the research. It is my opinion that the subject understood the explanation.

_____ _____
Signature of Principal Investigator Date

APPENDIX E

SUBJECT DATA FROM INTERVIEWS

Second Interview

Question #1-Tell me about your experience with your group at the museum. How did your group determine the theme?

Subject #1-Hank
We sort of just went with what they thought the easiest topic would be as far as subject and artists. Most of them—the boats and the water just appealed to them. They liked the paintings. Those were their favorite paintings. They knew that they would be an easy subject matter to cover so that is pretty much what it came down to.
Subject #2-John
We are in Mississippi for one. We looked around and saw several things. The most evident was southern lifestyle culture. We could see several ways that was depicted. We saw cotton in several locations. We saw southern lifestyle and country, things of that nature, and we connected them.
Subject #3-Anna
We just kind of looked at most of the paintings and tried to figure out how each of them could be linked together. Our theme was *Come Sail Away* with the boats and there were about three or four that had boats in them. So we decided since there were more of them we would do them; it would be an easy subject to do. One of them really struck me the one with the—the Nocturne, that is the one I really liked. We didn't even use that one for our project.
Subject #4-Kim
We picked our theme. It was the boats, the sailboats, because there were so many of them. Lindsay is in our group and she has a thing about boats and she really liked them, and they were different.
Subject #5-Sara
We looked at the subject matter and we just found that there were a lot of sailboats in the pictures or they were just pictures of water. We decided to do *Come Sail Away*, with me. I don't know if we included that part in the title. Just because we saw a lot of sailboats and that was the main reason.
Subject #6-Kyle
Our theme was trust. And there were several different paintings in the museum that dealt with trust but we just went with the ideas of the levels of trust that we have in life such as the trust of a parent and child, trust among friends, trust in your relationship with God. Just the different levels of trust.

Question #2-When you met to decide who was going to write about which artist, what happened then?

Subject #1-Hank
I actually didn't like that part. I kind of waited until last because they were very anxious to get their artists. They saw a wealth of information to make their paper easier that we had to do. Rather than interest in the artist and his works. Most of my group, they didn't even read about the guy, they just looked at a name, knew that they had heard it before, and it was like, OK. So it didn't really translate over. They picked the painting about

liking them and it interested them. Although they knew there would be a lot of information on them. They solely picked the artist on the amount of information and ease of writing the paper.
Subject #2-John
We got the four pictures we wanted and one person chose their favorite I guess. Finding the stuff in the museum was easier because it has more to do with Mississippi and the book was a wide range.
Subject #3-Anna
I chose Cassatt because she is one of my favorite artists and she was a woman and an impressionist. I have always loved her. Someone else did Monet and someone else did the—I can't remember his name. She just struck me. I have always loved her stuff. I really wanted to write about her. Everybody just kind of agreed on what they wanted to do. I enjoy working in groups a lot better than by myself most of the time because they have different ideas than me and add so much to the project.
Subject #4-Kim
Some people like Anna—Anna knows a lot about art. She wanted Monet and the rest of us we just looked back at the paintings and picked ones we liked.
Subject #5-Sara
We just kind of handed it out. We looked at the ones that were the most popular and chose those. And just whoever would pick them—I don't remember. People would say—somebody told me I could take Monet. That was a real easy one and I appreciated that. We worked really well together.
Subject #6-Kyle
I think we were really just—when we picked who was going to write about which artist, we just went on what photograph we picked out ourself because each person went and found a particular type of artist. Like this one would fit up under "parent trust" and this one would fit under "trusting relationship with God".

Question #3-What insights have you gained about the theme?

Subject #1-Hank
Our theme isn't very strong so there is not too many insights to gain. But, there are the obvious relationships between the man and the oceans, the seas. They have been proposed to me before. The sea has been just incredible for trade and food and water of course without which we couldn't live. The Mediterranean Sea, you know, armies fought over land to be close to it. Our project hasn't necessarily brought insight to that. But that is an insight that one could see.
Subject #2-John
My artist was Eudora Welty and I learned a lot about her that I didn't know before. I learned all the artists and how they grew up and depicted their lives in their artwork. You could see their lives in their work.
Subject #3-Anna
It is not a very deep theme we just tried to find something that would work. I guess the different scenes—one of them is placid one of them it is raining and stormy. I guess there are different depths of turmoil. One is real placid, sailboats sitting on the side of the

beach, just real calm and the other is real tumultuous. I guess the different levels. How the painter felt, that is how he painted it.
Subject #4-Kim
Not really. *What about your appreciation of art?* Well like my artist was Homer and he used a lot of watercolors and stuff and you explained the watercolors in class. It is such an intricate process and I hadn't appreciated it before. Now I can look at a piece and be like wow! especially because I am artistically challenged. [laughing] That is the way it feels so that makes me appreciate it a whole lot more.
Subject #5-Sara
I guess my favorite—I really do like the pictures of the water. I just like that subject.
Subject #6-Kyle
I have learned a lot about the theme *Trust*. Trust is a big thing to me. Especially trust among parents and among friends, but I actually have learned a lot dealing with trust. Because it's hard for me to trust any of my friends and my family members. It has been a real good learning experience.

Question #4-How has working with the theme affected your understanding of art?

Subject #1-Hank
My artist—I read on mine there is a letter signed by a very famous impressionist. My artist inspired them. I was kind of in awe. I picked the artist I chose because of the beautiful artwork. I think I changed my background to one of his paintings on my computer desktop. It was incredible. Then I read about him. I didn't know he was, as far as I know—I'm not too incredibly art literate. I'm learning as we go. I found out—I didn't know his name before—but I knew all these other big names who apparently thought he was just this greatest thing in the world. They all wrote a letter and they all signed it. Saying they were studying his techniques and what he did. It's kind of hard to say how it affected my views. I can't necessarily parallel anything to that. That is amazing that all these incredible artists that we know looked to this guy and no one knows his name. But, he loved what he did so—It kind of makes me appreciate that he did—that he loved what he did and that is why he did it. As far as I know he wasn't necessarily big in his time, but it didn't matter so much to him. He loved to do it. And so I think that's incredible.
Subject #2-John
Well I am taking a literature course now and it's kind of like literature, you look at art and you get a lot out of it.
Subject #3-Anna
Well certain artists that you have seen before and you didn't realize painted that painting or did that work. You kind of figure out that was who that was—I didn't even know that. You just learn more about the artists' works just by looking at different types, like the boats. Mary Cassatt—I may have seen that one but—it was the boating party. I hadn't really ever looked at it as closely I did. It makes you look at things closer I guess.
Subject #4-Kim
It relates artists together in a category that you wouldn't think to relate them to and then you asked us to pick another artist on top of the ones you have already chosen and you

end up looking back at art just to get to the artist you want. So not only do you learn about your artist, but also the ones that you come across in the process.
Subject #5-Sara
The picture I keep thinking of is the one—who is it by—the one with the—I don't remember—Is it Petrov maybe,Victor Petrov? Yeah, that is who it was. I liked that one. He made it look so easy. I learned about the painting and the emotions in it. Cause they were tossed by the waves and you can just see the terror in their minds. Are they going to survive it? I guess that—being able to read into the painting. [With Monet] Yeah, cause I liked the haystacks and the cathedrals when I searched into them and the waterlilies. There were only a couple of sailboats. I got more into his style, the impressionists.
Subject #6-Kyle
A lot of the artists that painted, like, I can't remember the title of the painting, but it was the painting of Mary, she was praying to Jesus. I can't remember the title. That was a painting that we used to show relationship and your trust in God. I think that is sort of what the artist was trying to symbolize when I look at the painting and that is what I get out of it. Him symbolizing the trust or the connection or putting your trust and your faith in God.

Question #5-How do you make connections best?

Subject #1-Hank
Just the fact that—I kind of don't know what I'm doing. I'm a computer science major, but I'm taking all these French classes that have nothing to do—but it is because it's what I love to do. It is such a beautiful language. It is almost art to me. It helps me to—it's sort of a connection between me and them because I understand, the best I can understand. They work so hard because they create their works of art and they studied so much. That is kind of what I am trying to do with French. Because I am not very good at any art. When I look at their paintings I try to understand, especially the realism, just painting people. I have the same fascinations with what people do in their daily routines and how people act. These artists painted their fascinations. I sort of wish I could. That's a connection I definitely see.
Subject #2-John
[Can't hear answer]
Subject #3-Anna
I think a lot of it is individual. Some things you didn't see in the painting that a person in your group saw that gave you a different outlook on the piece of work or the artist. The group gives you more ideas.
Subject #4-Kim
The way they paint or using the material because they are all so different. You know like we were talking about Impressionism today—that is really easy to pick the artist out because they are so different. That is how it is for me.
Subject #5-Sara
I really think I have [made connections among art knowledge] a lot. Like I knew that Degas—just from that time that we went to the museum when you are walking in—there were prints of Degas before you even enter—just right there. We mentioned that he did the ballerinas so when I saw ballerinas I just remembered that that would be Degas. I

think maybe Anna said that. So I made connections like that. Now I know Starry Night I recognized the painting. I may not have known who it was but now—I think I have learned to appreciate it a lot more. Also, just by practicing it and realizing that it is a lot harder than it looks.
Subject #6-Kyle
I think it all has to do with your imagination-to just be able to just imagine.

Third Interview

Question #1-How did working with others this semester affect your learning?

Subject #1-Hank
I would say it probably didn't help it very much just because of my particular partners. They are great guys but as far as art they didn't take it very seriously. Art definitely doesn't have to be serious but some of the things—like I was always trying to express a meaning or something. And they were like, yeah that seems easy, lets do that. It didn't help it so much.
Subject #2-John
No, it [working with others] does not contribute to my learning. I do best when I am by myself. Thinking about—are you talking about drawing? Just by myself. When there is groups it's more of a hassle.
Subject #3-Anna
With the whole group it contributed a lot to it, to learning about different things, cause they did different artists than I did so I learned about their artists when we were discussing what we were going to do with our page. With Natalie—She is better at answering those questions than I am so it helped me a lot. She could figure out things a little easier than I could.
Subject #4-Kim
Normally I do better working by myself because I usually end up doing everything, but this time, like Lindsay was my partner so we split it half and half and so when we were in the gallery like looking at the works she would give me a complete different opinion about the art than I had. So we talked about it like that. With the Web page and stuff I would just do it my way but then they all had such other good ideas that it made it even better.
Subject #5-Sara
That was a fun part because we got to visit. I don't think it really contributed to the learning because I think the learning I do better individually. Actually I did learn more in a sense that I learned about their artists when we were putting the Web site together. So I guess it actually was. I just learned the shallow level about their artists. Yeah, so I guess it did help.
Subject #6-Kyle
Working with others I think it contributed a lot. For example, the final exam, the slides for example, me and another partner, Irene, went in the library and went over the slides together and the ones that I had questions about, she was able to answer those. And vise versa, the ones that she didn't know, I did, so I think helping with others helped me a whole lot.

Question #2-How did determining how to solve each assignment affect your learning?

Subject #1-Hank
I would say that was very helpful because in order to pick my artist I think I read about three artists. So I ended up learning about more than just one artist and their aspect on my particular subject. It helped me to learn more in the end. I also liked it because I was able to pick an artist I wanted to do the most. Unfortunately when I don't care about a subject I don't put very much work into it. So I would stay with the artist I liked and I put a lot more effort into it.
Subject #2-John
For our group it was hard to pick the topic. But I think if I was by myself and you would have given me a specific thing to do I could have done it. I guess I had to learn more by searching for all this stuff.
Subject #3-Anna
It helps you choose things that you like and are interested in. We just brainstormed the whole time we were in the gallery, in the museum. We pretty much just came up with something that we liked and things that we enjoyed looking at. Some of the artists we kind of knew about. So we just picked out things that were appealing to our taste. We had a lot of different ideas. [When working on the contemporary assignment] It was interesting. Before a lot of us had the same ideas, but she and I had a lot of different ideas about what we wanted to do. We worked it out and kind of integrated both of the ideas into it, the collage.
Subject #4-Kim
Yeah it did because like I said with the Web pages we had to look at a bunch of different artists to find which our fifth one was going to be. We didn't study all those artists but we at least looked at other ones. I just know so much more about art than I did when I started. It is really interesting to me so when I would find something different on the Internet when I was looking for the artist I would just read it.
Subject #5-Sara
Well for our theme when we were walking around we loved just the pictures of the boats cuz it kind of did just make us happy kind of thinking about summer. We noticed that there were a lot of boats in all the pictures so *Come Sail Away* was a fun way to express the boats and then—we just saw the boats in a lot of the pictures so we did that and then we looked through the book and that is how we decided who our next artist would be because we found artists for ourselves and then from the book we found an extra artist. And then to determine about the Web site we just picked our favorite pictures that were the boats. No, I think we wouldn't have learned as much if you had just assigned it. It made us think and try to relate all the works and the artists and I think that was a big part of the learning was making us do it on our own. And then even more when we had to do the Modern art, that made us pull even further out of it.
Subject #6-Kyle
I think with us picking out our own, like, topics and stuff, that had an influence on the material that we were learning because trust—I think it kind of just stands out there, out there to go get it. A topic that you would give us it really wouldn't be that—I am not saying it wouldn't be interesting to us, but with us coming up with our own topic, that

means it is something that is going to be interesting to us since we were able to pick our own topics that helps us.

Question #3-How did the process of reflecting on your learning affect your learning?

Subject #1-Hank
Actually we split things up between group members and I never answered those questions. It was basically we didn't have any problems working together. As far as learning, I never answered those questions so I never really reflected on them until I was asked about it a minute ago.
Subject #2-John
Yes, because repetition. I had to think about what I learned. Thinking for a second time about it.
Subject #3-Anna
I learned a lot—it is just—I had a lot of help along the way. I am not a very good by-my-self learner. I am a much better group learner.
Subject #4-Kim
Yeah, because we solved the problem this way, but then you made us say why we solved it this way. It really made you think about it.
Subject #5-Sara
That helps too cuz I mean you really do just have to think about what you learned and then it helps you realize what you learned.
Subject #6-Kyle
I guess it made you think about how you did it.

Question #4-How did using the Internet to find images and artists affect your learning?

Subject #1-Hank
It's hard to say. My dad was a computer science major in the 80s. My brother was a computer science major. I am a computer science major. So the computer is nothing out of the ordinary for me to search for something on the Internet. So it is hard to say whether it helped me or not because I honestly don't really know what it is like without it. It was helpful.
Subject #2-John
Yes, because on the Web site it was more descriptive. It had lots of pictures. It only had one artist and lots of text about them. It helped me determine what I was going to do and more about my artist.
Subject #3-Anna
It is helpful in the way that you can find whatever you need on it, but it is also a source of frustration because sometimes it doesn't do exactly what you want it to do. I could find a lot of things about the artists on the Internet that I probably couldn't have found in the library. I could have found them in the library, but it would have taken me a lot longer. Yeah, the computer helped a lot, but sometimes had its downfalls.
Subject #4-Kim
Yeah, it did because to find the best Web page, like, you had to look at all of them. So by looking at all of them, like, pictures that they did would pop up that I hadn't seen before.

So now I have seen them, you know, like what Homes does. I think I read through a lot of them. So I even though I didn't pick them, I still learned some about them just by reading everything to find the best Web page.
Subject #5-Sara
That also contributed because first of all you have to think the right words to type in to find the Web site and then you read about each artist on the Web site to decide whether or not it is a good Web site and also as you read you are learning about it and you need to know what you are going to put on the Web site, the paraphrase, just the little summary of the artist. So, that did help.
Subject #6-Kyle
I think we learned a little bit by that process, as far as the images are concerned, because some of the images that we used—actually I had never seen some of the images before. So I think that helped us a lot. Learning as far as the artists and what they—you know the images or the paintings that they painted.

Question #5-How did these three theme-based activities contribute to your understanding of art this semester?

Subject #1-Hank
Going to the museum I think contributed. It is a huge difference between seeing a painting in a book and seeing it in person. In person you can get close and you can see the brushstrokes. You can see everything the book talks about. I think that contributed more than the paper. I like to experience things more than I like to write about them. So I might be a little biased.
Subject #2-John
The museum gave me a hands-on experience like looking at exhibits and how exhibits display the art. In the paper I learned about an individual artist, which helped me understand an artist's specific perspective. Then working with the group on the Web site helped me understand how difficult and how fun it is to like put art together into your own exhibit. The contemporary thing helped my understanding of art. It was cool to figure out, like, do your own theme instead of taking everybody else's.
Subject #3-Anna
The museum—it's kind of different looking at things that aren't as famous and it helped me just see that there is art besides what I have seen or what we talked about in class. On the Web site—I would never even put computers and art together at all. So doing a Web page was real interesting to see how you could use something totally non-art to talk about art. The contemporary, I don't know.
Subject #4-Kim
Instead of just like reading it out of a textbook and then memorizing it for the test, we actually had to go out there and do hands-on stuff. That always, to me, it makes it stick. When we were at the museum and we had to learn about artists who did like nautical themes and stuff. I always learn better with hands-on stuff. Cuz you can read it and memorize it, but then if you have to apply it, that makes sense. It makes it better for me, easier.

Subject #5-Sara
OK. Big question. The main one [activity] for me was the contemporary art that made me have to kind of [think]—how the other artists, real artists, are expressing themselves through their art. That the contemporary art made us actually kind of make a work of art that expressed ourselves through our theme. That was the biggest thing and that was just by us having to pull stuff out of ourselves and not really just looking at other people's art. And then the other thing that we did as a whole brought all of it together—just the learning.
Subject #6-Kyle
It helped my understanding of art because a lot of the—like for instance the Madonna and Child, or just a lot of the other religious—not only religious paintings. It helps me have a better understanding of some of the paintings because I can see a lot of things being conveyed through the paintings. And trust, on a lot of the paintings, that's what I saw in a lot of other paintings. Trust was being conveyed because it was like either a mother holding her child or a couple embrace or a man out at sea putting his trust in God. A lot of the paintings to me convey trust. So I think it helped a lot.

Question #6-How has your appreciation of art changed this semester?

Subject #1-Hank
It has. Unfortunately I didn't go to a high school that cared very much about art. I took an art class in like 6th grade and that was it. I would say it was more or less ignorance about art that I was pretty much apathetic and that is what led to it. I have always liked Starry Night, you know, the ones everybody likes, of course I like. Not even the ones that I think are ridiculous, I take the time to look and I try to understand what the artist was trying to do. And do. It has changed quite a bit.
Subject #2-John
Well I took classes in high school and it was kind of like draw something. But in this course it was like learn about the history, learn about where artists get their ideas, why artists today draw what they draw, why they did it back then. It was just cool to be able to look at a painting and say "I know who drew that." Or "I know what he is thinking." or "what he was trying to say in that painting" and it was cool to learn like all the different types of art, not just painting but like photography, architecture and what not.
Subject #3-Anna
It has changed as far as—I learned more about like the periods of art which I didn't know before. I knew pretty much about Impressionism and some modern, but not very much. I really appreciated the way it progressed, the progression of the art and how the different periods were so contrasting. That I enjoyed a lot more and it is something I hadn't really studied about or even looked at.
Subject #4-Kim
I love this class. I didn't realize that—I didn't know anything about art when we started learning and I think I told you before that I am artistically challenged. [laughing] So like looking at the artists and learning about how they actually go about doing it, like Impressionism and Seurat and stuff like that. It just makes it that much better just because I have tried to do it myself. Like we have that picture hanging in our house from the Sistine Chapel. I wrote it on the test. Me and Mom were re-hanging it the other day

and she was like “I just love this picture.” and I said, “You know that is Michelangelo’s.” She was like “OK, I am so impressed with you!”

Subject #5-Sara

My appreciation has changed because now I guess I see how even something that might look simple or might look sloppy like the abstract expressionism how that might not look that good, but that there is so much that goes into it and that makes it artistic—makes you appreciate it more.

Subject #6-Kyle

Oh my goodness! It [appreciation] has changed a whole lot, because when I came into art I didn’t know anything about art. I couldn’t tell you what was art and what wasn’t. I have learned a lot. I work in an interior design shop—we have a picture—now I know what the picture is because it’s a Madonna and Child. But at first I would have people come in there and ask me about Madonna and Child and I would have no idea what they were talking about. But now I know exactly what they are talking about. I have learned a lot about several different artists. Dali, the surrealist, and I know the painting that he was famous for, the *Persistence of Memory*. Familiar with Degas—the Waterlilies. Renoir, he was known for the women with the social settings. The list just goes on and on. Pollock, Frank Lloyd Wright. I just learned a lot. I think it is going to help me appreciate art more and now when I am looking at certain paintings I know what they are, far as like Rembrandt or the Starry Night, 1889. It is just things I know now that I didn’t know at first. I could have been looking at it and I didn’t even know what it was. So now I think it has helped me to appreciate art a whole lot. I have learned a whole lot in the class. Now I feel like I’m intelligent and I know something about art, so I think it has helped me a lot.

APPENDIX F

ACTIVITIES ALIGNED WITH FACETS OF UNDERSTANDING

To assess the six facets of student understanding in:	The students will be able to:
Activity 1-Experiencing Art in a Museum Setting	
Explanation	Describe how and why they selected their theme and art Justify their selection of exhibition locations Tell about the goals their group set for the assignment
Interpretation	Suggest interpretations of the group theme Interpret the artworks in the exhibition in order to align them with their theme
Application	Work like a curator to select a theme and works for their exhibition Sort their works in a logical order and photograph them Determine the location of their exhibition and write wall text Present a virtual art exhibition
Perspective	Consider the curators role in creating an exhibition Recognize the views of the group members as valid Contemplate the interpretations of other group members
Empathy	Consider the curators views on the current exhibitions Attempt to understand the artists' intent in the museum works
Self-Knowledge	Consider the process of creating their own exhibition Assess the success of their virtual exhibition Determine how this activity affected their appreciation and/or understanding of art
Activity 2-Creating Art History Web pages	
Explanation	Tell about their goals for the Web assignment Justify their selection of artists, images, and links Describe their problems and successes Record what they learned from this exercise Explain how this activity affected their understanding and/or appreciation of art
Interpretation	Propose interpretations of the original theme to the group Determine what they believe the artworks from the textbook mean Interpret the artworks from the online sources
Application	Find an additional artist for their Web site that fits the theme Synthesize each artist's information for the Web site Use Microsoft Word to create a Web page based on the group theme Present the group Web page to the class Propose questions for further discussion
Perspective	Respect the opinions of others in the group Think about the interpretations of the group members Consider their Web page in relation to others in the class Recognize approaches by other group members and other groups
Empathy	Consider the intent and context of their individual artists

Self-Knowledge	Consider the process of creating a Web page and what they learned Assess the success of their Web page including any problems Determine how this activity affected their appreciation and/or understanding of art
Activity 3-Encountering Contemporary Art	
Explanation	Explain the title and intent of their original artwork Tell how it is a contemporary approach to their theme Explain how this assignment affected their understanding and/or appreciation of art
Interpretation	Determine the meaning of a contemporary artwork that employs text Record why they believe the piece is or isn't art Decide how the text art may or may not reflect our society Interpret their theme in a new way
Application	Design a work of art based on a new approach to their group theme Consider the contemporary text art in order to complete their collage Present their work to the class
Perspective	Respect the interpretations of the other group members Consider many different meanings for the text art Recognize different solutions for solving the same problem
Empathy	Consider the intent of the contemporary artists Suggest questions for the contemporary artists in order to further understand their works
Self-Knowledge	Review the problem-solving process Consider how their work is a contemporary approach to their theme Determine how this affected their appreciation and/or understanding of art

APPENDIX G

CONSTRUCTIVIST LEARNING ACTIVITY WORKSHEETS

APPENDIX G1

ACTIVITY 1 WORKSHEETS

Names: _____

Answers can be used more than once.

Write the title and artist of a work that fits the following categories:

Portrait_____

Still life_____

Landscape_____

Religious_____

Genre_____

Fantasy_____

Find a work that is:

Abstract_____

Non-objective_____

Representational_____

Folk Art_____

Find a work with the following purposes or functions:

Communicating Information_____

Day-to-Day Living_____

Spiritual Sustenance_____

Personal and Cultural Expression_____

Social and Political Purposes_____

Visual Delight_____

Create on paper an exhibition from the works in the permanent collection galleries.

As a group you should:

- Generate ideas for a theme and choose one
- Select the 4 most appropriate works to include
- Take digital photographs of the selected works
- Write wall text for your exhibition
- Determine the ideal place to hang the exhibition.

The course textbook or any other sources like the Internet can serve as a resource for writing the wall text. Once you have recorded these ideas, answer the following questions:

- What goals did your group have for your exhibition?

- Why did your group select this theme and these works?

- How did you determine which works to use?

- How does working like a curator help you understand and appreciate art?

Next Friday, February 6th you will present your exhibitions to the class. You will show the digital images on the television, share your wall text and discuss your responses to the assigned questions.

APPENDIX G2

ACTIVITY 2 WORKSHEETS

Look at pages created by students during previous semesters on our class Web site www.mc.edu/~busbea including the Contemporary art page and the American art pages. These students had a different assignment, but you will get the idea. Determine what is good and bad about those pages and what you would like to do with your page. Some are very nice---some have a low aesthetic value!

Open Word 2000 and begin your Web page by pasting the paragraph from each student into one document. Read each of the paragraphs and determine any additions or corrections that need to be made. They should each be a similar length and give the same types of information.
Now your group needs to answer the following questions in the space below.

How is the theme evident in the artists we selected?

What other information do we need to know about this theme?

How do we convey this on a Web page?

What additional artists should we include? (at least one is required)

What goals do we have for our Web page?

How do we achieve these goals?

Type the name of the artists above each paragraph and begin typing your introductory paragraph. Decide on a font for your text. Ms. Busbea will demonstrate how to insert the images and links, which you can add today as well. If time permits, look for a background for your Web page. You can search on several computers at one time. These are decent sites:
http://desktoppublishing.com/orbackgrounds.html
http://www.webpagebackground.com/texture.htm
or you can appropriate one from most Web sites. Save the tiles the same way you save an image. Right click on the background or tile, select *save image as* and put it on your disk. Save several background tiles to a disk before we return to the lab next week and determine who will get the information and images on the additional artists.

Once the page is complete, you will write questions designed to generate interest and or discussion from your classmates and add them to the Web page. During your Web page presentation next week, classmates can answer the questions and ask questions of their own.

Write possible questions in the space below and add the best 2-3 to your page.

Adding the background is more complicated on this program.
Make sure the image you want for your background is on the disk with the text and images. Click File and Save as Web page. Click Start then Programs then Accessories then Word pad and open your explorer document.
There will be a line that looks like the one below. Add the part that says background=" and type your image name there.

<meta http-equiv=Content-Type content="text/html; charset=windows-1252"background="titleof yourbackgroundimage.jpg">

Save the corrections as an htm file.

Open your file in Internet Explorer and make sure everything works including the links. Let me know when you get to this point so that I can check your work.

Answer these questions before the presentations:
What factors influenced our decisions on images and links?

What were our problems and successes with the Web page?

One or two in your group will present your Web page to the class addressing:

- The theme-Why was it chosen? How do these artists relate?
- Demonstrate a couple of the links that connect to great Web sites
- You do not need to read all the information, but give us the basics and read the discussion questions.
- What problems did your group have? What do you think your group did well? Work together? Good background? Good images?

Once everyone has presented their pages answer the following questions and turn it in with your disk and other two sheets:
How did our page compare to others in the class?

What did we learn from this exercise?

How does this activity affect our understanding of art history?

How does this Web page assignment affect our appreciation of art?

APPENDIX G3

ACTIVITY 3 WORKSHEETS

Contemporary art

Title of work_____Artist_____

- What are the possible meanings of this work?

- How could this be considered art?

- Why wouldn't this be considered art?

- What does this work say about our society?

- Why do you think artists use text?

- Does the art by Kruger and Holzer reflect contemporary culture or help shape it?

- What questions would you like to ask artists who use text?

Create a work of art using imagery and text related to the theme selected earlier in the semester. First determine how this theme is relevant in contemporary society and how you will approach the theme. You can gather images from magazines, make copies of these images, use newspaper articles, get images from the Internet, or use other sources. You can glue your images to the board today or during the first five minutes of class next week before you present your project.

When your text artwork is complete answer the following questions:

- What is the title and intent of our piece?

- How is it a contemporary approach to our theme?

- Why did we solve the problem in this way?

- How does this activity affect our understanding of art history?

- Does creating art with text change how we appreciate it?

Have a great summer!

APPENDIX H

PARIS MODERNE WORKSHEETS

Paris Moderne

Please answer these questions in pencil while viewing the *Paris Moderne* exhibition. Some of the answers are given on the audio guide while other questions ask for your personal opinion. These questions are in order as you move through the galleries.

1. In the *Sports* piece by Dunand what are the figures doing?

   What ship was this piece designed for?

2. Many artists in the exhibition, such as Braque, use cubism. What is cubism?

3. What is the subject of Picasso's *Composition*?

4. Find the non-objective works by Delaunay titled *Rhythm*. He used complementary and conflicting colors next to each other to show movement through the tension of the colors. Locate and describe a section of one of the paintings in which you see movement.

5. Enter the room with the white furniture next and listen to the information on the furniture. What does chaise lounge mean?

6. What is the tabletop made of?

7. There is a ceramic piece in this room. Draw a picture of it in the space to the right.

8. In Modigliani's *Woman with Blue Eyes*, to what does the narrator relate the simplified facial features?

9. How is Daurat's mask piece similar to *Woman with Blue Eyes*?

10. What are the Dufet desk and armchairs made of?

11. Who did Saddier create the giant sofa for?

12. How old was Matisse when he created his *Sitting Dancer*?

    Where does it show rhythm?

13. What story is told in the *Electricity Fairy* by Dufy?

14. What did all the furniture in the exhibition have in common?

15. Do you consider this furniture art? Why or why not?

16. Which was your favorite piece in the exhibition? Briefly describe why.

Thanks for coming! Be sure to see the works in the gallery across the atrium before you leave. Turn this sheet in to your instructor during your next class meeting.

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