The culture of architectural design studio: A qualitative pilot study on the interaction of the instructor and the student in their culture and the identification of the instructor's teaching styles

by

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DEDICATION

The completion of this masters program has been long awaited, especially from those who have tutored me professionally and spiritually.

First of all I would like to thank God for bringing me through this era of my life. I am also grateful for my advisor, Lynn Paxson, for her help and encouragement through my undergraduate and graduate years in college. I am indebted to the members of my committee, Dr. Nancy Evans and Clare Cardinal-Pett.

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ABSTRACT

This qualitative pilot study was inspired by my interest in the culture of architectural design studio and my earnest desire to be a more effective educator in my field. Since the study of this culture is quite broad, and there are several factors that influence it, the decision was made to focus on an important participant of the culture – the instructor. The social constructivist and symbolic interactionist perspectives became important tools in helping guide this study and understand the participants. After a constant referral, by the participants through their narratives, to the instructors' experiences, roles and influences on the culture of the architectural design studio, possible teaching styles or instructor types were identified, through data analysis methods of narrative analysis and grounded theory. The participants' narratives, also suggested interaction of the instructor with self, the student and the project, therefore having the ability to guide working relationships and influence the studio culture as a whole.

CHAPTER 1

INTRODUCTION

Purpose of the Study

This small case study looked at the architectural design studio using a multi-method, qualitative approach. Using data collection and analysis methods from *narrative analysis* and *grounded theory* (which are approaches to doing qualitative research), within a *social constructivist* perspective and *symbolic interactionist* position, this work begins to describe the studio culture of the architecture department at Iowa State University. Social *constructivism* is a theory used to help understand interaction, or help understand how people understand and make sense of their world, and *symbolic interactionism* is a position that helps researchers study human interaction.

Individual *narratives*, or stories, particularly focusing on *teaching styles* in this milieu were used as data to understand the culture of the architecture design studio. *Participant observation*, where I observed and participated in the participants' activities, also served as a method of collecting data. Although a body of research exists about teaching methods in lectures, seminars, laboratories, and other normative classroom types, similar work has not been done for studio teaching. Therefore I began this work by exploring the architectural design studio, as it currently exists at Iowa State University, with the intention of identifying some *teaching styles*. I also investigated some of the factors that might possibly affect the efficacy of these teaching styles for architectural education and certain key features of architecture studio culture.

Design studio is a setting used by educators and learners in design, to execute design assignments, or projects. Corona-Martinez (2003) said:

Design studio is where a student learns to design; and design is considered the key

activity for an architect. Therefore, the studio is the most important piece in the set of

subjects. It is the essential activity offering the main chance for the future architect to

become a good designer. (p. 42)

Although there have been ongoing disagreements about how design studio functions as the

primary educational mode in architecture, it remains the mode preferred by architectural

departments throughout North America (Corona-Martinez, 2003; Lawrence & Hoversten

1995; Stevens, 1998). The design studio is an environment that teaches design. It also can

be compared to a fraternity or sorority where students have prolonged unmonitored contact

with each other, seeking friendships in their setting. It can also be compared to an

elementary school classroom where the faculty members are role models (Anthony, 1991).

This dichotomy creates an environment where there are friendships and competitors who

seek the approval of their critics (Dutton, 1987; Ward, 1989). Design studio spaces at ISU

are open 24 hours a day and 7 days a week. The activity of design is not limited to designing

activities, especially during the hours outside of the formal class time. At that time, other

socially oriented ventures, such as sleeping, eating, playing and listening to music, can

become more prevalent. These tendencies have defeated the original purpose for the studio,

which was to train future architects to design (Anthony, 1991), but they have become part of

the students' college experience.

The pedagogy, physical appearance and location, as well as the student and faculty

population, describe the architectural design studios at Iowa State University. The freshmen

students in pre-architecture have to go through a one-year application process to determine

their acceptance in the four-year professional program. This makes the whole program five

years. During this time, the freshmen enroll in a semester-long design studio, to learn the basic principles of design. The freshmen, second-year and third-year design studios are located in the Armory – a multipurpose building used also by the Department of Public Safety and the Army ROTC. The space used to be an old gym, and while other departments make use of the auxiliary spaces, and the bleachers remain in place, the gymnasium floor is now converted into studio space for architecture, and other disciplines, such as interior design, and landscape architecture. This was achieved by using low partition walls. The fourth- and fifth-year studios are located in the College of Design building, where the bulk of the Department of Architecture and all the other design disciplines are housed. Unlike the open, interconnected studio space in the Armory, the studio spaces in the College of Design are totally enclosed individual locked rooms. These studio spaces for the upperclassmen are separated and located on various floors. The students are assigned a different professor every semester.

This study describes the state of architecture design studio as it presently exists at ISU, and reveals some important qualities of the relationship that occurs between the instructor and the student. Research on the culture of the architectural design studio is appropriately a longitudinal study, with many participants and a number of venues. Therefore, this study did not attempt to examine all of the potential aspects involved in the culture of the architecture design studio. The aspects studied here in a preliminary fashion are, the interrelationship of the instructor, the student, and the project. By using a narrative analysis and grounded theory approach, the goal of this study was to allow the role of instructors in this educational setting, their teaching styles and their influence on the architectural design studio culture, to emerge.

My long-term goal is to design and conduct a similar study for my dissertation in the Higher Education program.

Importance of the Study

The role of studio culture in the teaching of design has been the topic of conversation in the architectural arena for the past few years. The key aspects that have been debated are: (a) the tradition of working late nights; (b) competitiveness (Dutton, 1987); (c) steady production of work versus not producing work steadily, and right before deadlines producing the bulk of the work; (d) an environment where students will work together and learn from each other; (e) the star designer versus a cooperative design team, which is related to the focus on individual versus group work; (f) the content of process, which allows students to be integrative or synthetic, pulling together courses across the university curriculum; (g) the cost of low student-teacher ratios; and (h) the strength and depth of student-teacher relationships (AIAS Studio Culture Task Force, 2002).

Following the death of a Savannah College of Art and Design architecture student who had a car accident while driving home[1], tired, very late at night after leaving studio, the importance of, or the role of, studio in the education of an architect was once again was hotly debated. Such discussion of studio-based education seems stagnant as key aspects are

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[1] This story was said to be the main reason why the AIAS Studio Culture Task Force wrote about the design studio. I have not been able to find any information about it from all possible sources. I even called the Savannah College of Art and Design, and personally asked them if they could give me information about the incident. Their representative said that nothing like that ever happened, and I might have been misinformed. I also called the Association of Collegiate Schools of Architecture, which was said to be the main source for this incident. After a long search, there was still no information available. Several students have told stories about "the all-nighter," but this particular incident (if true) was one that started the debate about the architectural design studio culture and the identification of the design studio culture.

assumed rather than identified, as are their value for education, and with little if any implementation of changes.

While this debate is occurring in architectural education, professionals in the higher education arena are pursuing an agenda that seeks to eliminate or reduce teaching that occurs only to inform. They are attempting to support learning through the use of individual teaching and learning styles, fostering a learner-centered education, which enhances the experiences that students have in college (Huba & Freed, 2000). Although teaching and learning styles researched extensively in higher education, these styles usually are based on the lecture-type classrooms, laboratory settings and even distance learning settings as suggested by, Crow (1980), Elbe (1980), Glassman (1980), Mosston (1990), and Grasha (1996, 2002), however this research does not take into consideration those individuals in the design studio setting whose teaching format varies greatly because of the current nature of the design studio (Dillon, 1998).

Although there may be differences in teaching in a studio as opposed to a lecture, a seminar, or a laboratory, in all of these cases there is a differential in the power structure between student and teacher. In most instances the professor, regardless of the setting not only has more power, but also adopts the role of directing the teaching and learning (Knight, 2002). Some educational cultures have overcome this by incorporating different techniques of teaching, such as fostering discussion, student-to-student presentation, group work and hands on experimentation (not in a lab setting). This application of techniques is quite similar to the techniques used in the design studio; however using the techniques does not guarantee that the students are positively experiencing college, or learning much. These techniques have been part of the studio tradition and therefore instructors may have become

desensitized or less than critical, to the effect that they (these techniques) may have on the culture. Teaching styles and techniques seem to have become routine, potentially stifling the learning environment in the design studio.

Although this study shares certain features with existing studies from the higher education field about *teaching styles,* it reveals the different teaching styles that occur in the architecture design studio, investigates the reasons why they may occur, and analyzes how they affect the architecture studio culture both in the individual studio itself and design studios as a whole. The nature of qualitative research challenges the researcher and the participant to become aware of self and the meaning that they give to their surroundings (Denzin & Lincoln, 2002).

Challenging design educators to become self-conscious of their teaching styles related to student learning styles, and issues or aspects of studio education that are clearly articulated, will permit faculty members to be more proactive in reducing negative and increasing positive aspects as they define their value of studio education. The symbolic interactionist and social constructivist frameworks become important tools in addressing the interaction of people, reflexivity (the intentional act of reviewing thoughts and actions and what they mean to the individual), the meaning that is assigned by these participants, and interaction in a learning setting (Bruner, 1966; McMahon, 1997). Awareness of teaching and learning styles in an educational culture therefore can be beneficial to the culture, in that the teachers become more conscious of the actions that occur in their surroundings and adjust their styles to fit those actions.

In light of these issues, the questions that guided this study are as follows:

1. What is the culture of the architecture design studio at Iowa State University?

    a. How did it become this way?

    b. How does this culture of architecture design studio impact the teaching of architecture students today?

2. Are the grounded theory and narrative analysis approaches of qualitative research appropriate to use in this study?

3. Who are the participants and what roles do the participants, particularly the instructors, of the architecture design studio culture play?

4. What can be learned from the participants of the design studio culture?

    a. Will important issues and qualities emerge from open-ended interviews and participant observation?

    b. How do the participants understand and what meanings do they attach to the design studio?

    c. What do the participants value with regard to the design studio?

    d. Are the participants conscious about teaching and learning styles?

        i. Do these issues emerge spontaneously, or do they arise though probing?

Conclusion

So far, I have introduced the reader to the goal of this pilot study, which was to test a multi-method qualitative approach, specifically narrative analysis and grounded theory methods, in explaining the culture of architecture design studio at Iowa State University. These approaches are framed using a constructivist perspective and symbolic interactionist framework. I also have briefly described what the architecture design studio is in general,

and what it is in the Architecture Department at Iowa State University. Also, I have described the key aspects of the design studio that have been under a microscope for the past three years. I have also mentioned why the symbolic interactionist perspective is important in determining teaching styles, and in encouraging narrative reflexivity to make studio instructors aware of their studio environment, which in the long run can positively influence architectural education.

In chapter 1, I introduce the ideas and focus of this work. In chapter 2, I will review the relevant literature from both higher education and the design disciplines. Following that, in chapter 3, I will provide an overview of how the study was organized from the data collection phase through analysis and introduce the participants/narrators/actors. Chapter 4 presents the results in a narrative form, as well as a brief listing of themes. Finally, in chapter 5, I discuss the themes in relation to the literature. I also discuss the implications of the findings, give suggestions for further research, and share my future aspirations.

CHAPTER 2

LITERATURE REVIEW

Introduction

Since my research questions were geared toward understanding the culture of the architecture design studio, this implied a qualitative methodology, relying on an inductive approach in which theory emerged through process (Marshall & Rossman, 1999). With the grounded theory methodology, Strauss & Corbin (1998) suggested looking at the literature after data collection so that the researcher is not influenced by other theories. This technique proved to be difficult for me because there were terms that the narrators used that I needed to compare with existing meanings to understand their definition. On the other hand, Glesne (1999), said that "literature should be read throughout the research process including a thorough search before data collection begins" (p. 20). Though I had already started the study and it was too late to apply Glesne's former suggestion, I took the latter to heart and read throughout the remainder of research process focusing on the themes that arose in the respondents' narratives.

Themes that remained strong throughout this process concerned the history of the profession and teaching of architecture and how it has influenced the design studio, different perspectives on the design studio culture and different teaching styles. This literature review therefore features research that addresses these concerns, and compliments the themes in discussing theories and perspectives dealing with human interaction in society. The review begins with a discussion the culture of architecture design studio, followed by an examination of literature that reveals the history of architecture education through time. I

also provide an overview of teaching styles, and finally I introduce the reader to the methodological perspectives and approaches that helped frame this study.

The Culture of Architecture Design Studio

The goal of this section is to point out literature that discusses and defines architecture studio culture, which will be helpful to the reader in understanding what the culture is today. I begin with what the definition of *culture* and its influential factors, which will provide understanding when the word *culture* is used throughout this thesis. Secondly, I concentrate on literature that addressed the main aspects that make up the culture of the architecture design studio today, and briefly address literature that critiques the design studio culture.

Culture

Bates and Plog (1991) said that culture is "The system of shared beliefs, values, customs, behaviours, and artifacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning" (p. 7). The "members of society" have the ability to reshape the culture. Lang (1987) suggests this phenomenon in stating, "A culture evolves over time as a people develop approaches to dealing with the problems of survival and growth in a particular terrestrial setting" (p. 98). He adds that, "each culture is unique according to its own peculiar history" (p. 80). Gone, Miller, and Rappaport (1999) suggest that, "culture is not transferred from one generation to the next" (p. 373), but it is recaptured and changed through lived experiences. Cultures are therefore in constant flux due to peoples' perceptions

and understanding of themselves (Gone, Miller, & Rappaport, 1999; Mannheim & Tedlock, 1995).

With this definition in mind, the next section discusses the culture of the architecture design studio, moving into the history of architectural education, which will both point out some of the influential factors on the culture and how the culture was influenced by history.

The culture of architecture design studio

According to a report made by the American Institute of Architect Students (AIAS) Studio Culture Task Force (2000), "Design studio teaches critical thinking and creates an environment where students are taught to question all things in order to create better designs" (p. 1). The AIAS Studio Culture Task Force also attempted to define studio culture. They said that even though all the 115 architectural schools have a different studio cultures and even though each studio is different, there are common aspects that are evident:

1. Student health and work habits, including behaviors such as, "all-nighters" and "exacto knife scars" (p. 7). These become a source of pride for many students (Fisher, 2001).

2. Student isolation, which creates a concern that students have a false sense of the world. This isolation is both intellectual and physical (AIAS Studio Culture Task Force, 2002).

3. Design studio as the master value, where there is a disregard for other courses and sole focus on the studio. Architecture students spend most of their time with people in their discipline, making the "outside world" less important (Anthony, 1991; Boyer & Mitgang, 1996).

4. The "potential for integrative learning" in the design process (AIAS Studio Culture Task Force, 2002, p. 10). Architecture students have the potential of having a broad knowledge base and the integration of knowledge needs to be valued. Despite their

potential, architecture students in most studio cultures graduate from college with a false sense of the knowledge. They expect to design buildings when they graduate, and their employers expect them to produce drawings of buildings that have already been designed. They become a source of labor and not ideas (Gutman, 1997).

5. Design as competition, where teachers and students, and students themselves, struggle to gain control of the learning environment because both have their own opinions on design (Argyris, 1981).

6. Interdisciplinary education, because the connection that architecture students have to other disciplines is not sufficient to broaden their knowledge base (Boyer & Mitgang, 1996). Architecture requires a large number of credits to complete the degree, but because of the accreditation requirements, or how they have been interpreted, most of these credits fall within the disciplines. So students do not have a broad liberal arts education to apply or integrate in to their studio work.

7. The design process in the design studio, which is usually accomplished through a hands-on learning process. This allows students to think, learn, and do at the same time (AIAS Studio culture task force, 2002).

8. The education of instructors and visiting reviewers on teaching and learning techniques (Anthony, 1991). Architects are taught to be architects and not teachers, and they are not formally exposed to educational theory. Therefore, they tend to imitate their professors teaching and critiquing methods.

9. Structures of studio learning, meaning the way that studio is run. There is usually a power differential between the student and the teacher, design studio takes up most of the

students' time (Stevens, 1998), and each studio is run differently by different professors, not encouraging consistency (AIAS Studio Culture Task Force, 2002).

10. Assessment in studio learning, because design is subjective and students' tend to interpret their worth through grades (Kuhn, 1999).

11. Critiques and juries, which are opportunities for students to present their projects to their instructors, peers, and members of the architectural arena. These activities are sometimes seen as places for harsh judgment (Anthony, 1991)

12. A place for diversity, which is a goal for many architectural schools, but still is an issue that has not been fully addressed. Architecture has been a white, male-dominated discipline for years. There is a low number of women and people of color in practices, governing organizations and academia.

The architectural culture is dependent on its educational counterpart, which has historically been the primary focus for both teaching and learning in architecture (Corona-Martinez, 2003; Stevens, 1998). The design studio, which is the primary method of educating architects, stems from the *atelier* in the *Beaux-Arts* system of education. Before this system, apprenticeships were the primary method of education. Ateliers were a place where the architecture students worked, and the Beaux-Arts was a school of fine arts based in Paris, and a model of education used by most architecture schools in the early development of architectural education (Anthony, 1991; Weatherhead, 1941).

Stevens (1998), who critiqued architectural education and agrees with the *Bourivin theory of culture*, described culture as being a method for those who have a higher status in society to keep their status. The Bourivin theory of culture, developed by sociologist Pierre Bourdieu, has three concerns: (a) engagement; (b) reflexivity on the sociologist's part; and

(c) a constant interplay between the methodological and the empirical. Bourdieu also created a model of society. Stevens (1998) described Bourdieu's model of society as, "distinguished by competition groups to further their own interests" (p. 59-60). Stevens (1998) also said that studio is used to socialize students into a culture. Students are also isolated intellectually because all the faculty are required to have a degree in architecture; furthermore, the studio supports the idea of enculturation, successfully undertaken through practices, such as taking up most of the students' time, keeping them in suspense about their state of acceptance in the design studio, and keeping them in a competitive state between each other and the professor (Stevens, 1998). All his concerns coincide with the aspects of the design studio culture (AIAS Studio Culture Task Force, 2002).

To better understand the roots of these aspects and characteristics of design studio it was useful to study the history of design education.

The History of Architectural Education

Introduction

In this section, I examine the major time periods that affected the formation of the design studio, the professors' appointment, and how major architects, students, and schools contributed to architectural education. The history of architectural education correlates to the periods of change through which architectural history evolved (Weatherhead, 1941). These periods clearly indicate when the design studio (*atelier*) started functioning and when the professor was designated as leader of the studio. The best way to present the evolution of architectural education was chronologically, focusing on the movements, periods, and schools of thought that were represented by different influential architects and schools.

First I will discuss the École des Beaux-Arts, then the German and English (British) architecture educational systems, followed by the history of American architectural education and how it was affected by these educational systems. This analysis requires, elaborating on the Massachusetts Institute of Technology's (MIT) education system, which became a template for all architectural schools, in America. Finally, I discuss other American universities and how they may have had an impact on America's architectural educational system, focusing on what takes place today in architectural schools.

École des Beaux-Arts

In 1671, close to 200 years before any form of architectural training occurred in America, French leaders believed that a school for teaching architecture was necessary, and thus Louis XIV was encouraged to establish the *Académie Royale d'Architecture* (Van Zanten, 1980) and he set the goal of the academy, as teaching the rules of architecture (Bosworth & Jones, 1932; Weatherhead, 1941). Prior to the establishment of the academy, architectural training was accomplished solely under the apprenticeship model, where students would work for a master architect until they had learned "all the tricks of the trade" (Kostof, 1977).

Lectures at this academy were given in mathematics, mechanics, construction, perspective drawing, and the science of fortification (Weatherhead, 1941). As part of the training program, students would strive to be in the Grand Prix de Rome, established in 1720 (Lagasse, et al, 2001; Robertson, 1993; Van Zanten, 1980). The Grand Prix de Rome was a competition that entitled students to finish four years of their studies, in Rome, by focusing their energy studying classical Rome, in a period called the renaissance, at the Académie de France à Rome (Lagasse et al, 2001; Van Zanten, 1980). Classical architecture has an

"obsession with rigorous quantification, exactitude and detail" (Tzonis & Lefaivre, 1986, p. 1), which was the kind of architecture that students at the École studied.

In 1739, Jacques François Blondel, a writer and the king's architect, opened the first independent atelier, which was the first French private school of architecture (Lagasse, et al, 2001). This atelier took place in a semi-private fashion during the French revolution, which began in 1789, up to 1816. The architects would only give critiques of student work in the evening when they were not in their offices, so the ateliers were student-run. Students had the freedom to work on their assignments whenever they wanted and were not restricted by the professor's presence (Kostof, 1977). The earlier atelier contrasts the studios today, which are bound by a schedule that is required by the university. The students are expected to be in studio during the day and usually accomplish their work outside of the designated time.

In 1803, the Classe de Beaux-Arts was established. It was renamed the Académie de Beaux-Arts in 1816 (Van Zanten, 1980). In 1819, it was named the École des Beaux-Arts, meaning "School of Fine Arts" (Anthony, 1991, p. 9). It had an architectural and a sculptural department. By 1864 the École was separated from the French Academy of Architecture and a professor or *Chef d'Atelier* was placed over each studio (Bosworth & Jones, 1932; John, 1960). During this time, other ateliers opened especially because of the non-classical teachings of the director of the École – Eugène Emmanuel Viollet-le-Duc, a prominent architect and writer (Hearn, 1990). The École faculty members also became more eclectic in their teaching style, which meant that rigid classical forms were not as appreciated as much (Chafee, 1977). The course of study was refined to accommodate the modern requirements of practice, focusing on product rather than process (Lawson, 1988).

It was also during this period when the École des Beaux-Arts had an influence on American architectural education (Edwards, 2000). There was an established form of teaching architecture where the instructors were practicing architects, and other courses were taught in conjunction with the atelier (Weatherhead, 1941). Even at this time, there was a set form of rubrics and teaching methods that the instructors followed, assessing points for each value assigned. Huba and Freed (2000) said that, if "applied to assessment of student work, a rubric reveals if you will, the scoring "rules." It explains to students, criteria against which their work will be judged. These criteria are also used by students to judge their own work" (p. 155).

These rubrics included the following principles:

1. The entrance exam was an ideal that did not grow on the Americans, resulting in much criticism from the École.

2. The respect given to the instructors of the École, who were practicing architects, with the best training possible. They were men who could observe students' faults and inspire development in their work.

3. The requirement that all instruction should be individual, except for the lectures.

4. Student success, was dependent on their "excellent" relationship with the instructor, who was also called a patron,

5. The students' responsibility to produce quality work, which determined their progress.

6. The competition between *ateliers*, causing the participants in a particular studio to work together, discuss problems and observe qualities that enabled success

7. Prizes that were awarded for the 'best work'.

8. A design emphasis, meaning that the *atelier* was held at higher regard than the lectures.

9. The set of requirements in the design project that were followed word for word.

10. The theory of sketching or the *esquisse* in which a quick logical solution was drawn, was important.

11. Rendering as a top priority. Rendering refers to drawings that include tones rather than simply lines. This technique may be done to show shade and shadow, or to deal with light quality and amount. It may also be used to create solid volumes of areas of the drawing to indicate solid materials that have been cut through. This is also referred to as *poshaying* – the skill of filling in drawn buildings to with ink, pencil, watercolor and other drawing media.

12. The instructors judging the students' work in order to award promotions

13. Conservative (classical) fundamentals of design.

These points were the sole determinants of a student's advancement from second to first class and these teaching methods influenced English, German, and American architectural schools (Corona-Martinez, 2003; Weatherhead, 1941).

The English (British) System of Architectural Education

Though active classes in architecture were established in 1808 because the Royal Academy was interested in education for architects, professional architectural training in England was not offered until 1894 when the University of Liverpool was formed (Crouch, 2002). Also, the "pupilage method" (Weatherhead, 1941, p. 21) of training was the norm. This model insured the master's control over the student. The master, who was also an architect, usually belonged to an association called *The Guild*, which regulated all aspects of the profession in England at that time (Fisher, 2001; Kostof, 1977).

After the establishment of the university, technical training and study abroad was common and training could only be done in an architect's office (Crouch, 2002). This practice was adopted from the American Beaux-Arts architectural education (Crouch, 2002). Later in the century, exams were mandated as part of the plan to increase the standards of architectural education. The students also had to pay a fee to be placed with an architect for training. These architects were described as being "good and thorough" (Weatherhead, 1941, p. 22). They were taught to imitate English buildings by measuring them and then reproducing them as a set of drawings. This exercise took most of the students' time and therefore not much effort was spent in lecture courses. This system produced men who were only able to do drafting in an office setting (Weatherhead, 1941).

The German System of Architectural Education

During the early years of architectural education development, German architectural schools were where technical drafting and engineering were taught (Kostof, 1977). It was a requirement for the students to come in with at six months of experience working in an architectural office and knowledge of mathematics and science. This system dampened originality in design and inhibited students' individuality because of the requirements to imitate German masters of architecture (Weatherhead, 1941).

Walter Gropius, the German leader of the modern movement (an architecture movement in the 20th century) that started in 1925 (Fitch, 1960), in conjunction with the influence of students against the École system were able to act as a catalyst for the abandonment for the Beaux-Arts system (Littmann, 2000). Within the modern movement, the Bauhaus, established by Henri Van de Velde, arose (Frampton, 1985). Its educational

principles were geared toward training students as craftsmen, combining art with the modern

technology of the time. The modern era was characterized by the use of steel as a building

material and the use of art and architecture to serve peoples' special needs (Frampton, 1985).

The teaching methods ranged from lecture courses to workshops where students would learn

how to build from the day they stepped into the workshop (Gropius, 1937, 1968)

strengthening the design studio model as a place for all student activities to occur (Nerdinger,

1985). In 1930, Mies Van Der Rohe, a German architect famous for his skyscraper designs,

was appointed to direct the Bauhaus movement. He also became the director of the

Department of Architecture at the Armor Institute of Technology in 1938, and influenced

restructured their curriculum to follow the Bauhaus tradition.

The Europeans eased their way into a less traditional style of design because of the

demands of construction using modern technology (Weatherhead, 1941) therefore the

Bauhaus addressed this concern.

American Architectural Education, MIT and Accreditation

The early development of architectural education was influenced by three

movements: (a) the École des Beaux Arts; (b) the English system of education; and (c) the

German system of education, which I discussed previously. Before 1857, there were a few

architects trained in England, and American architects were trained by apprenticeship in

architects' offices (Weatherhead, 1941). This training style was the direct result of the

English, where little professional training was necessary to become an architect. In turn the

American educational techniques influenced the English system (Crouch, 2002). There were

few requirements, such as the ability to use a tee-square (drawing instrument), slight

knowledge of materials and simple methods of construction used by carpenters and masons on the job. Even in the post-civil war era many architects believed that schools for architectural training were not necessary (Blackall, 1926). This belief resulted in the use of apprentices for free or cheap labor, ensuring a constant influx of workers for force for practicing architects (Crouch, 2002).

During the 1800s most American architects were either from Europe or trained by people in Europe. As a result, the profession of architecture was made up of mostly white men. That held true even in 1994 where 92% of architects were males and 85% were white (Dixon, 1994). Architecture also became a hobby for most architects, resulting in only one documented practice throughout America in the fifty years before the first professional architectural school was established (Weatherhead, 1941). The American Institute of Architects (AIA), the professional organization governing architecture, was the major force behind professional and educational improvement. In 1837, the training of architects began in America through the American Institution of Architects (AIA), whose goal was to advance architectural science. This attempt failed and was followed by another attempt in 1847, which also failed. Since AIA recognized the need for architectural education, a Committee of Education was appointed. The Committee organized the first architectural education center, with an emphasis in construction and less on design. This effort was also abandoned (Weatherhead, 1941).

In 1876, the Committee of Education decided that the schools of architecture would become more local than national (Weatherhead, 1941). They encouraged established higher education institutions to take up the task of integrating architectural education into their curriculum. When these schools started to spring up, the Committee of Education led them

and later gave up their positions as leaders one of advisors keeping the AIA in touch with the schools (Weatherhead, 1941).

In 1897 the University of Illinois began accreditation in architecture, in which exams were given to those who had completed a four-year architectural educational program (Palu & 1998-99 AIAS National president, 1998). This period was followed by the formulation of national standards of architectural education by the Association of Collegiate Schools of Architecture (ACSA) in 1912, which required minimum educational standards to be part of accredited universities. In 1932, the ACSA discontinued the accreditation program, which was reenacted in 1940, and called the National Architecture Accrediting Aboard (NAAB), by the AIA and the National Council of Accreditation Board (NCARB). The NAAB, whose standards are promoted by the Council of Postsecondary Education and the U.S. Department of Education, had and still has the assignment to accredit architectural programs in North America, using minimum standards for architectural curricula. It comprises of AIA, NCARB, ACSA and the America Institute of Architecture Students (AIAS) (Clarke, 1994; Palu & 1998-99 AIAS National president, 1998).

Massachusetts Institute of Technology (MIT)

Schools in America were highly influenced by the École in France. The first school to be established under the teachings of the French system was the Massachusetts Institute of Technology (MIT) (Kostof, 1977; Weatherhead, 1941). The École des Beaux-Arts not only affected the American method of teaching and curriculum design, but also influenced several architects and students who became well known practicing architects in America and instructors in American schools. Richard Morris Hunt was the first American student to seek an education at the École in Paris, where he worked and studied from 1845 to 1855. In 1857

he opened an atelier in America, which had the very first curricular influence on American architectural education (Weatherhead, 1941).

Hunt helped produce well know scholars like William Ware, who graduated from Harvard college in 1852 and received his first architectural training in Hunts' atelier. Ware had a love for teaching and so devoted much of his time to the atelier in his office, which had a two-year program in architecture. In 1865, MIT, was attracted by Ware's enthusiasm and hired him as the director of architectural education at their department of architecture (Massachusetts Institute of Technology [MIT], 1996). Ware consulted with the French and English schools on their methods of instruction, which helped establish a foundation of architectural education in America. In 1868, the first four students were accepted into the program. In 1874 Eugene Létang, who became the first great design teacher in America, was hired from the École. When he died in 1892, his colleagues remembered him because had a close association with students and was personally interested in their work. He also had the tendency to ignore the "weak and lazy students" and condemn the "careless or ignorant" ones (Weatherhead, 1941, p. 31). Létang had a lasting impact on his students to the point that they carried his legacy wherever they went.

In 1892, the year Létang died, American students who had attended the École des Beaux-Arts came together in America and formed an architectural program that was based in that tradition. Design competitions were introduced in 1894, mainly because of the various sects of the École that had emerged. In opposition to these diversions from the tradition (the École), they proposed that a national school of architecture, be established in New York to govern all the architecture schools. However, there were some people who were opposed to

this suggestion, arguing that the French system of education was controlling and did not provide sufficient opportunity for development in all areas.

This opposition was lead by Charles Follen McKim, who helped start the American School of Architecture in Rome in 1894 and attended the École in 1867 (Granger, 1913). This school focused on neoclassical approaches (the architecture of which was generally characterized by geometric shapes) and later became an international style of design. The American School of Architecture also wanted to collaborate with the allied arts (Lagasse et al, 2001; Weatherhead, 1941). The collaboration with the allied arts in which students experienced observation and research strategies became the most outstanding characteristic of architectural education at the time (Ware, 1866). Architectural training and a mature mind were an expectation fostering the student to study history, and the function of the building at the same time.

MIT found that with instructors came principles of teaching, such as the principle of making drawings, the study of construction and history, the appointment of a jury other than the professor to judge the students' work, teaching implemented by a school instructor, the study of drawing, the non-practical nature of design, a close relation to industrial arts, and the option of taking cultural and professional courses (Ware, 1866; Weatherhead, 1941), all of which were affected by the École system (see table 1, for a comparison of the École and MIT principles).

Table 1. A comparison of the principles at MIT and the École des Beaux-Art

École des Beaux-Arts	Massachusetts Institute of Technology
- The entrance exam was an ideal that did not grow on the Americans, resulting in much criticism from the École.	- No entrance exam required.
- The instructors of the École were well respected, practicing architects, with the best training possible and were men who could observe students' faults and inspire development in their work.	- Design was taught by a school instructor: who did or did not have practical experience.
- There was a requirement that all instruction should be individual, except for the lectures.	- Individual instruction was valued.
- The students' success is dependent on their "excellent" relationship with with the instructor, who was also called a patron	- The students had a close relationship with their instructor.
- The students had the responsibility to produce quality work, which determined their progress	
- Each atelier competed against another causing the participants to work together, discuss problems and observed qualities that enabled success.	- Instruction was not supposed to be too practical in nature and solely individual in nature.
- There were prizes for the best work	
- There was a design emphasis, meaning that the *atelier* was held at a higher standard regard than the lectures	- The studio was held at a higher regard than other courses.
- There was a set of requirements in the design project that were followed word for word	
- The theory of sketching or the *esquisse* where a quick logical solution was drawn was valued.	- Study of drawing was important. There was a close relationship with the allied arts.
- Rendering was a top priority, where students would shade their drawings using certain drawing materials.	- An emphasis on construction.
- The instructors judged the students' work in order to award promotions.	- A jury and the professor judged the students' work.
- Conservative (classical) fundamentals of design were taught.	- Cultural and professional courses were offered.

Although these teaching principles did not change, even with new leadership, instructors had the desire to experiment with new teaching methods. In 1881,Frank Eugene Kidder, designed a new course that focused on materials testing. In this "architectural laboratory" students tested the integrity of various materials (Weatherhead, 1941, p. 29). The theory was that students who observed the effects of force on architectural materials would understand construction better. This "laboratory" approach became an elective, later on. Though MIT had the first school of architecture, there were other schools in America that affected architectural education, despite their initial influence from MIT.

Other schools

Cornell University was distinct because its frame of thought was that the student was self reliant, independent, and constantly asking why. Cornell influenced other universities to encourage their students to do the same.

At the University of Pennsylvania, in 1890, the students were geared toward original thinking and encouraged them to use forms of architectural expressions other than the classic, which was the dominant style of that time period (Weatherhead, 1941).

Another influential school was the Armor Institute of Technology (AIT), established shortly after 1893 (Swenson & Chang 1980). It is now called the Illinois Institute of Technology (IIT) in Chicago (Lagasse. et al, 2001). AIT was influential because Mies Van Der Rohe directed its architecture program, from 1938 to 1958 (Swenson & Chang, 1980). He taught the Bauhaus tradition, planned the IIT campus layout, and designed most of their buildings (Legasse, et al, 2001). Hiring Mies to direct the IIT program, also influenced other schools to reconsider their predominantly Beaux-Arts curricular.

By 1898, there were nine established schools of architecture in America. A lecture approach dominated instruction methods, in most of the universities of the time. Architecture schools were an exception in this trend, strictly following the principles laid out by the École, of individual instruction (Bosworth & Jones, 1932). These nine schools of architecture were in, MIT, Cornell University, University of Illinois, Syracuse University, Columbia University, University of Pennsylvania, George Washington University and Harvard (Weather head, 1941).

Their main concerns were to educate students along the line of professionalism and also to design architectural programs that fit into the plan of American higher education institutions (Bosworth & Jones, 1932).

Summary

The architecture program at Iowa State University, which dates back to 1914, started as a structural design program. It shifted its focus to architectural engineering program in 1917 and in 1919 became part of the Engineering department. In 1946 it became an architecture program that closely followed the same, teaching system of the Beaux-Arts. In 1978, the College of design was established which brought four departments to one college building. These disciplines were, architecture, landscape architecture, art and design and Community and regional planning. Most of the events and people who influenced architectural education are summarized in figure 1 on page 28.

Today, the studio model of teaching dominates architectural education, which is not very different from the early model of architectural education (Corona-Martinez, 2003). The instructors and the students in early architectural developments influenced the direction of

28

Figure 1. A timeline of key events that affected the evolution of architectural education in America between 1671 - present

1857- R. Hunt opened an atelier in America

1873- University of Illinois architecture school established

2003- ISU College of Design implementing changes in foundation programs

1803- Classe des Beaux-Arts opened

1912- ACSA established & National standards for architecture schools

1919- Bauhaus formed

1946- Architecture program at ISU established

1978- Merging of design departments at ISU

1991- Kathryn Anthony and Dana Cuff publications

1997- Boyer report- "Building communities"

1837- Failed attempt by AIA in training architects

1867- First architecture center in America

1893- The French depression

1933- Bauhaus closed by the Nazis

1928- Death of the America Academy under Rome & An acceptance of European modern movement

1938- Mies Van Der Rohe becomes director of AIT Department of Architecture

1993- A 30 month study of architectural practice and education begins, by Carnegie Foundation

2001- Rejection of proposal that students take exam immediately after graduation by NCARB

1816-Classe des Beaux-Arts renamed Académie des Beaux-Arts

1852- Robert Ware graduates from Harvard

1864- École separated from French Academy of Architecture

1871- Cornell Department of Architecture established

1890- Beaux-Arts Society formed

1897- University of Illinois started exam to be licensed

1916- Beaux-Arts institute of design established

1960's- 4+2 Programs, Community Design Centers (CDCs)

1981- The architecture education study produced (now the MIT study)

1720- Grand Prix de Rome

1671- French Academy of Architecture

1808- Classes at Royal academy in Britain

1845- R. Hunt went to school in Paris

1862- Morrill Act passed

1868- First four students accepted at MIT

1874- First design professor at MIT (E. Létang)

1894- American School of architecture in Rome & Design Competitions introduced & University of Liverpool opened

1914- ISU structural design program established

1925- Modern movement started

1936- Walter Gropius comes to America

1956- NASA founded, later named AIAS

1980- Tracking of architecture graduates, by Roger Schluntz

1992- Proposal for a new education program by the National Institute for Architectural

1998- Garry Stevens- "Favored circle"

1750-First Independent atelier

1855- R. Hunt completes work and education in France

1872- Postgraduate studies in architecture at MIT

1892- E. Létang died & Group of students get together to form an École movement & Armor Institute of Technology established

1917- Structural design program at ISU becomes an engineering program

1940- AIA, NCAB, and ACSA enacted NAAB accreditation standards

1967- A study of education for environmental design

1988- "Bridging the student-practitioner gap" by Robert Green

2002- Continuming conversations on nomenclature

1819- École des Beaux-Arts

1865- MIT Architecture School established. R. Ware placed over it

1898- 9 established schools of architecture in America

1932- Discontinuation of accreditation of Architecture schools

1996- Boyer & Mitgang, "Future for architecture education and practice."

American architectural education defining what it is today. In particular, the instructor, whose role was first as a patron of the *atelier*, remains the primary influential factor, guiding the way that architecture is taught today. Due to the important role that the instructor plays in this system, the next section will address *teaching styles*, since then these would also be a very important factor in the teaching and learning of architecture.

Teaching Styles

The goal of this section is to introduce the reader to teaching styles. This is accomplished by (a) defining what a teaching style is which will orient the reader to the descriptions and differences in definitions, (b) revealing literature that deal with identifying teaching styles, specifically, Mosston and Ashworth (1990), Reinsmith (1992), Grasha (2002), and how the teaching styles that have been identified in the design studio fit in their models, and (c) Discussing the factors that affect teaching styles in general.

Definitions·

The phrase *teaching style* was used to distinguish the identification of teaching behaviors in the mid-1960s (Mosston & Ashworth, 1990). The use of *styles* in some literature suggests a personal nature of teaching styles (Eble, 1980; Knight, 2002), while in other literature (Mosston & Ashworth, 1990) it implies that teaching styles are not based on ones' personality. Other words such as *methods*, *strategies* and *techniques* are still used by some authors to describe the same phenomenon. Since the predominant orientation in current literature is the consideration of teaching styles as a reflection of personal values, that is where I began.

Style is the portrayal of ones' personality in that they are exuding their presence to students (Elbe, 1983; Reinsmith, 1992; 1994). Elbe (1983) describes presence as ones' "personality and character" (Elbe, 1983, p. 6). *Teaching styles* are not just the way a professor may go about lecturing, but it is the revelation of personality and character to the learners (Elbe, 1980). Some professors may consider this to be untrue because they feel that when they enter a classroom they switch from their own personality to their 'inherited' personality. They 'inherited' it from their former professors, or as part of their graduate teaching experience (Elbe, 1983). Nevertheless, according to the predominant literature, *teaching styles* are not teaching techniques. The term teaching techniques is used for the ways in which the information to be learned is presented (Knight, 2002). A teaching style is a frame of mind, which may include various techniques, based on ones' beliefs and values (Grasha, 1996).

Mosston & Ashworth (1990) viewed *teaching styles* as "decision patterns" in stating, "teaching is governed by a single unifying process: decision-making" and these "decision patterns are called teaching styles" (p. 3). They said that *teaching styles* are based on decisions that we make and do not rely on character or personality (Mosston & Ashworth, 1986).

The definitions discussed concerned *styles* and not *teaching*. Since teaching is part of the phrase, I think it is important to define *teaching* as well. Knight (2002) referred to teaching as "all the planning, preparing and other activities that teachers do to help students learn" (p. 1) and other authors (Jerslid, 1955; Salzberger-Wittenberg, Henry and Osborne, 1983) referred to teaching as an experience. Teaching is also described as a process that has a goal of learning, where both the teacher and the student learn (Hyman, 1970). When

teaching and *styles* are put together they form interesting phrases, such as an *experiential presence* or the *process of learning personally* (combining Hyman, 1970 and Elbe, 1980) or even the *actions of decision patterns* (combining Knight's and Mosston and Ashworth's). The combination of these words explain what a *teaching style* is, which of course differs from person to person.

The individual nature of *teaching styles* might therefore explain why some researchers have argued that, the impression the teacher makes is as much a part of what students learn as the material taught (Elbe, 1983). The goal that a professor has may vary as much as their *teaching style* and it is the *teaching style* that makes the first and maybe the last impression on students (Elbe, 1983). *Teaching styles* do not wholly determine a students' learning, but the faculty's *teaching style* should encourage and facilitate it (Knight, 2002). Knowing one's *teaching style* can therefore deliberately encourage students to learn effectively (Mosston & Ashworth, 1990).

Although *teaching styles* are individual, researchers have attempted to classify them. Even though different theorists have used the term *teaching style* differently, as we discussed earlier, it is possible to create a typology of *teaching styles* that compares both uses of the term. After exploring the current typology, I will relate these styles to those used for architectural education, particularly those used in studio. The three scholars in this area that I will primarily focus on are, Mosston and Ashworth (1990), Reinsmith (1992), Grasha (1994; 2002). Mosston and Ashworth (1990) as mentioned earlier, define *teaching styles* differently in comparison to Reinsmith (1992), and Grasha (2002).

Mosston and Ashworth's spectrum

Mosston and Ashworth (1990) identified 11 *teaching styles* that occur in a spectrum, from *A* to *K*. These styles include: *A- Command; B- Practice*; *C- Reciprocal*; *D- Self-check*; *E- Inclusion; F- Guided discovery; G- Convergent discovery*; *H- Divergent*; *I- Learner-designed individual program production*; *J- Learner-initiated*; and *K- Self-teaching*.

These styles present options to teachers in terms of their objectives. The teacher is the main determinant of their intentional style, depending on the students need. Each styles' difference stems from the learning and teaching behaviors of the participants, starting with the teachers' complete control at *A* to the students' complete freedom at *K*. Mosston and Ashworth (1990) said that there are also minimal developmental effects presented from *A* to *E*, which represent the reproduction of past knowledge, and maximum developmental effects from *F* to *K*, where there is a production of new knowledge (knowledge that is new to the learner or teacher or society). Table 2 gives the name of the style and a brief description of what the professor is encouraged to do, depending on what style they opt for.

In the architecture design studio, as noted earlier in this chapter, there was a mandate that individual attention and collaboration were implemented in the MIT educational system. There was also a tendency for the students to seek the masters' approval. Looking at table 2 and comparing these characteristics of early architectural education at MIT, the teaching style used at the time according to Mosston and Ashworth (1990) would be a combination of (a) *A*-because the instructor would try to achieve uniformity and conformity, and standards were followed, (b) *B*- because of the instructor's individualized relationship with the student, and (c) *C* because the learner was expected to respect other's decisions through collaboration, which encouraged socialization.

Table 2. The spectrum of teaching styles, by Mosston and Ashworth (1990).

Style	Some characteristics of the professors
A- Command	- Achieves conformity and uniformity. - Builds group identity and pride. - Requires direction to be followed on cue. - Controls groups. - Standards are followed.
B- Practice	- Fosters independence. - Teaches accountability of actions. - Teaches to respect others in decisions made. - Initiates an individual and private relationship between the teacher and the learner
C- Reciprocal	- Expects students to learn how to observe, compare and contrast. - Teaches students respect, toleration and acceptance of differences - Expands socialization. - Fosters learning of the specifics of the subject matter. - Corrects errors immediately.
D- Self-check	- Fosters reliance of oneself rather than the teacher or partner. - Uses criteria for verification of learners' performance. - Fosters doing and Increases time-on-task.
E- Inclusion	- Engages the learner conceptually. - Waits for the learners' response. - Gives feedback periodically.
F- Guided discovery	- Makes decisions about expected cognitive operations. - The students thinking will lead to discovery (convergent thinking). - Engages learner in discovery of concepts and principles. - Encourages discovery of interconnection of steps within a task.
G- Convergent discovery	- Helps discover a single correct answer or solution to a problem. - Gives a sequence of operations to perform.
H- Divergent production	- Encourages multiple answers. - Tolerates others' ideas. - Specifies cognitive operations.
I- Learner-designed individual program	- Accommodates individual differences. - Gives opportunity for the learner to demonstrate independence. - Covers one topic over a period of time. - Sets standards of performance and expects self-evaluation.
J- Learner-initiated	- Provides learner with opportunity to discover, create, and develop ideas. - Provides the learner opportunity to initiate learning experiences, including their creation, execution and evaluation.
K- Self-teaching	(This style does not typically exist in the classroom). - Learner takes the role of the teacher and the learner.

In conclusion, the styles identified in the spectrum when applied to early American architectural education, were most probably concentrated in the *A* to *E* section, which according to Mosston and Ashworth (1990), means that there was a minimal developmental effect occurring. This implies little learning due to the production of new knowledge and more learning due to the production of past knowledge.

Reinsmith's continuum

Reinsmith (1992) said that there are eight archetypal forms of teaching at the college level, which fall along a teacher-centered to a student-centered continuum of individualization of learning between the teacher and the learner. These forms are (a) *Disseminator/Transmitter*, (b) *Lecturer/Dramatist*, (c) *Inducer/Persuader*, (d) *Inquirer/ Catalyst*, (e) *Dialogist*, (f) *Facilitator/Guide*, (g) *Witnessing/Abiding Presence*, and (h) *Teacher as Learner*. Table 3 names the style and gives brief explanations of the character of the professor possessing a particular style. Reinsmith (1992), identifies the continuum from the *disseminator/Transmitter* to the *Inquirer/catalyst* archetypes as teacher-centered, and the continuum from the *Facilitator/Guide* to the *Witnessing/Abiding Presence* archetypes as student-centered.

Consider the education of architects under the École des Beaux-Arts in France, the students learned history, the classics, used precedents from an existing body of knowledge and the *ateliers* were student-run. There was also the individualized instruction and collaboration was encouraged while competition was fostered between *ateliers* (Lawson, 1988, Weatherhead, 1941).

In Reinsmith's continuum, these *teaching styles* would be generalized as: an *Inquirer/Catalyst* because they confronted students, engaged the student took the student out

Table 3. Continuum of individualization of learning, based on Reinsmith (1990).

Style	Characteristics of the style
Disseminator/ Transmitter	- Greatest distance between teacher and learner. - Minimal skills required of both teacher and student. - Objectivity.
Lecturer/Dramatist	- Engagement initiated. - Recognize need to connect in a general sense. - More vibrant instructor. - Performance factor. - Communication of meaning, not just facts.
Inducer/Persuader	- Teacher engages learner more directly. - Suggests new possibilities of new attitudes or approaches. - Motivational - more than drama. - Teacher understands student's realm of interest. - True interaction.
Inquirer/Catalyst	- Teacher engages the student straight on. - The bond or relationship to directly confront them. - Takes student out of familiar world and helps them recognize its limitations. - Helps students question their basic beliefs and assumptions. - More than superficial engagement.
Dialogist	- Learning as participatory. - Sense of community and personhood. - Instructor initiates this from the outside without dominating the process. - Balanced scales between teachers and learners. - Teacher can be learner, learner can be teacher.
Facilitator/Guide	- Emphasis on learner. - Teacher's delicate role of helping bring to fruition what already lies inside the mind. - Galileo's principle: cannot teach, only help find. - Facilitation is central. - Teacher judge as well as facilitator.
Witness/ Abiding presence	- Diminished active role of instructor. - Instructor aware of student's struggle but does not articulate the knowledge for them. - Drive is the learner's – instructor last in the process. - Instructor can identify with the learner but still remains apart from them. - Students use instructor as role model. - Knowledge building process is built - Authenticity. - Students understand their own growth and unique potential.

Table 3. Continued

Style	Characteristics
Teacher as learner	- Teacher realizes he/she knows nothing and must learn along with, or from, the student. - Notion of ignorance. - Teacher and learner fuse. - Teaching function internalized by the learner. - One is one's own teacher.

of their familiar environment; a *Dialogist* because there was a sense of community and

learning was participatory; a *Facilitator/Guide* because the teacher was a facilitator as well

as a judge; and lastly *Witness/Abiding Presence* because the teacher was present except in the

evening, therefore the influence of the teacher was mostly virtual, and the students looked at

teachers as a role models.

Grasha's teaching styles

Grasha (2002) identifies five *teaching styles*, which he places into four clusters.

These teaching styles are (a) *Expert*, (b) *Formal Authority*, (c) *Personal Model*, (d)

Facilitator, and (e) *Delegator* (see table 3). The four clusters consist of a *primary* and

secondary style cluster. Cluster 1 has *Expert/Formal Authority* as the primary styles and the

latter three as the secondary styles. Cluster 2 is made up of *Personal Model/Expert/Formal*

Authority as the primary styles and *Facilitator/Delegator* as secondary the secondary styles.

Cluster 3 consists of the primary styles, *Facilitator/Personal Model/Expert* and the secondary

styles, *Formal Authority/ Delegator*. Lastly, Cluster 4 is comprised of

Delegator/Facilitator/Expert as the primary styles and *Formal Authority/Personal Model* as

the secondary styles. Table 4 gives a brief description of these clusters.

The architecture design studio instructors during the period of the Bauhaus fostered

learning, focusing on the design studio in the form of workshops (hands on) and relied less

on lecture based learning (Gropius, 1968). They also encouraged new ways of thinking

about architecture in comparison to the Beaux-Arts system (Littman, 2000). There were

standards and principles followed that were considered, at the time as new architecture, the

Table 3. Grasha's different teaching styles based on their presence

Style	Characteristics
Expert	- Has knowledge that students need. - Displays detailed knowledge and challenges students to enhance competence. - Transmits information. - Tries to ensure that students are well prepared.
Formal Authority	- Possesses a certain status because they are a faculty member and the knowledge that they have. - Creates learning goals. - Gives negative and positive feedback. - Concerned with standard and correct ways of doing things.
Personal Model	- Teaches as an example. - Develops a prototype of how to think and behave. - Shows students how to do things. - Observation of their technique is key. - Imitation on the students' part is encouraged.
Facilitator	- Asks questions. - Suggests alternatives. - Tries to develop students to be independent. - Works with students, in a consultative fashion. - Gives as much support as possible.
Delegator	- Students work independently. - Teacher is available at students' request. - Develops students' ability to work autonomously.

Table 4. Grasha's clusters of teaching styles

Cluster 1 *Primary styles:* Expert/Formal Authority *Secondary styles:* Personal Model/Facilitator/Delegator	Cluster 2 *Primary styles:* Personal Model/Expert/Formal Authority *Secondary styles:* Facilitator/Delegator

- Teacher-centered questioning.
- Teacher-centered discussions.
- Exams/Grades are emphasized.
- Technology based presentations.
- Guest speakers/Guest interviews.
- Term papers.
	- Role modeling by illustration:
	  - Sharing thoughts.
	  - Sharing personal experiences.
	  - Sharing thought processes.
	  - Discussing alternate approaches.
	  - Involved in obtaining answers.
	- Role modeling by example:
	  - Having students emulate the teacher.
	  - Demonstrating ways of thinking/doing things.
	- Coaching/Guiding students.

Cluster 3 *Primary styles:* Facilitator/PersonalModel/Expert *Secondary styles:* Formal Authority/ Delegator	Cluster 4 *Primary styles:* Delegator/Facilitator/Expert *Secondary styles:* Formal Authority/Personal Model

- Case Study discussion.
- Cognitive map discussion.
- Critical thinking discussion.
- Fishbowl discussion.
- Guided readings.
- Key statement discussions.
- Problem based learning.
  - Group inquiry.
  - Guided design.
  - Problem based tutorials.
- Role plays/Simulations.
- Roundtable discussions.
- Student teacher of the day.
	- Contract teaching.
	- Class symposium.
	- Debate formats.
	- Helping trios.
	- Independent study groups.
	- Laundry list discussion.
	- Jigsaw groups.
	- Learning pairs.
	- Modular instructions.
	- Panel discussion.
	- Position papers.
	- Practicum.
	- Round robin interviews.
	- Self-discovery activities.
	- Small group work teams.
	- Student journals.

students imitated various modern architects of the time, and looked up to the instructors (Gropius, 1937).

Based on those characteristics, the style of teaching in the Bauhaus within Grasha's framework, would have fallen under, *Formal Authority* because faculty had a certain status due to their role as instructors, they gave negative and positive feedback and they were concerned with the standard or correct way of doing things. Also *Personal Model* would have defined the studio instructor's style because they encouraged students to imitate various master architects. The instructors could also be categorized under *Facilitator* because the teachers were consultants. Since students worked independently, the instructor's style could have also been categorized under *Delegator*.

This would be a unique cluster because several styles are being used as the primary styles. I found it hard to place it under cluster 1 but evidently, the styles would be a mix between clusters 2, 3 and 4.

Summary

The commonality between these authors is that they insist on a deliberate effort to discover ones teaching style. All these efforts may be affected by the teachers' value system. Therefore, Grasha (2002) suggested understanding ones' value system might be the first step to identifying and using teaching styles effectively. Duffy and Jones (1987) also suggested getting to know oneself as a teacher. If the teacher can get to know their method of teaching they should be able to adjust according to the needs of the student. It is easy to assume that all instructors can name their teaching style but it is difficult to do so, especially with the

changing student population (Axelrod, 1980) and the vast array of teacher's personalities (Grasha, 2002). In spite of this, it is possible to identify ones values, as Grasha (2002) demonstrated in his research, thus identifying *teaching styles*.

So far I have introduced the reader to teaching styles, through definitions of *styles* and *teaching*. Also, I presented identified teaching styles according to Mosston & Ashworth (1990), Reinsmith (1992) and Grasha (1996; 2002). Historical examples of architecture design studio instructors' general teaching characteristics were also explained, and categorized in relation to these three frameworks of *teaching styles*. Though there are other positions regarding *teaching styles*, I have limited the discussion to these three because they are clearly articulated. They also presented options that addressed the *teaching styles* in the design studio.

The next section will introduce the background for theoretical perspectives in this research and which among other theories affected my view regarding the respondents. These perspectives include *social constructivism* and *symbolic interactionism*.

Theoretical Perspective and Methodological Position

My assumptions guiding this thesis are grounded in the symbolic interactionist methodological approach, which falls under the social constructivist theoretical perspective. In this section I will discuss what social constructivism is, its' relevance in the understanding of culture, its' assumptions and how it lays a groundwork for symbolic interactionism. I will also explain the premises of the symbolic interactionist perspective used as a foundation for the creation of the narrative.

Social constructivism

"Constructivism is a theory about knowledge and learning; it describes both what 'knowing' is and how one 'comes to know'" (Fosnot, 1996, p. ix). Social constructivism accentuates the importance of understanding what happens in society today through culture and context, thus constructing knowledge based on this understanding (Derry, 1999). Its assumptions are based on three things: Reality, knowledge and learning. Individuals and societies construct their understood reality through human interaction (Kukla, 2000); knowledge is socially and culturally constructed, through this interaction (Gredler, 1997); and learning occurs internally and externally, by engaging in social activities (McMahon, 1997).

Also the constructivist believes that shared understanding in a community is based on cultural and historical factors and knowledge comes from the interactions that people have with others in their environment (Rogoff, 1990). Kim (2001) refers to this as intersubjectivity (Kim, 2001). For constructivists like von Glaserfeld (1995,1996), not only does learning occur in a particular context, but each learner also brings their own social context with them. The nature of interaction that occurs between the learner and other members of the society, within social contexts and the learners' context, determines how social meaning is given by the individual and to the community as a whole (Bruner, 1990; Gredler, 1997; Wertch, 1991).

This theory is important when talking about the knowledge that teachers bring to the classroom and their expectations of the student to absorb the information rather than to learn it through meaningful interactions (von Glaserfeld, 1996). Although social constructivism is not a teaching theory, Fosnot (1996) suggested that,

A constructivist view of learning, suggests an approach to teaching that gives the

learner opportunity for concrete, contextual meaningful experience through which

they can search for patterns, raise their own questions, construct their own models,

concepts and strategies." (p. xi)

The Social constructivist view therefore sets the stage for other constructivist positions used

in other arenas of life, such as research. The methodological position of symbolic

interactionism stems from constructivism (Cobb, 1996). It relates to constructionism in that,

it helps a researcher try to understand the interactions that occur in the environment that they

are studying (Blumer, 1969).

Keeping this in mind, I will show literature that discusses symbolic interactionism,

which stemmed from social constructivism. I will reveal its' premises and its' use in the

culture of the architectural design studio.

Symbolic interactionism

Symbolic interactionism is a methodological perspective of studying human

interaction. There are several scholars who have analyzed this approach, including George

Herbert Mead. He might be referred to by some, as the father of symbolic interactionism.

Blumer (1969) refers to Mead as the one who "laid the foundations" of this approach (p. 1).

Blumer coined the phrase 'symbolic interactionism' and revised Meads' ideas for a more

sociological application (Plummer, 1983). John Dewey who suggested that people are

understood in their environment also influenced Blumer (Blumer, 1969; Plummer, 1990).

Symbolic interactionism rests on three premises which are (a) meaning, which refers

to the idea of "meanings that things have" assigned by the individual, (b) social interaction

as a derivative of those meanings, and (c) thought, which encompasses the "interpretive

process" that is used to handle meanings (Blumer, 1969, p. 2). For our purposes here, it is important to understand how previous scholars have related meaning, interaction and interpretation in relation to the narrative. Therefore, I will start by describing narrative and show the relation to three premises.

The narrative/story

Leitch (1986) describes a narrative in this way: "A narrative begins with one situation, a series of changes occurs according to a pattern of causes and effects; finally a new situation arises which brings about the end of the narrative" (p. 8). Other scholars describe a narrative as the primary way that humans make sense of their experience (Gee, 1985; Hymes, 1982). Narratives or stories have their place in this world and "Stories are somehow important for our identity. They tell us who we are" (Widdershoven, 1993, p. 6). The person who we are is the person who narrative analysis is trying to capture which is our "narrative identity" (Widdershoven, 1993, p. 7). Leitch (1986) describes the narrative as being in a "telling" mode where, "Stories are essentially deigetic [telling] representations in which experiences are assumed to be recounted by a story teller" (p. 3). Sarbin (1994) uses the narrative as an, "organizational principle." He states, "I have identified the human propensity as the narratory principle – the interpretation of actions and events as emplotted, as organized." (p. 8).

These definitions and statements indicate that is nature of human beings to tell and interpret stories. Therefore if one were to tell a story or to interpret one, the story must have already been experienced, or is in the process of being experienced, or as MacIntyre (1980) would insinuate, is going to be experienced at a later point in time. Ricoeur (1990/1992) disagrees with MacIntyre (1980) in suggesting that stories are the enactment of the meaning

of an action within a plot, making the meaning understandable to others. This is the perspective that I take because it is consistent with symbolic interactionism, where interpretation of an action is one of its characteristics (Blumer, 1969) and a story is a way of telling about the interpretation.

This is why in-depth interviews are one of the main methods of conducting a narrative analysis as implied by Chirban (1996). The interactive-relational in-depth interview approach, allows for a growing interaction and relationship between the narrator and the researcher, where there is reflection and open conversation about each other (Chirban, 1996). Symbolic interactionism, the narrative and also the method of hearing the narrative become important tools in understanding the social phenomena. As Glesne and Peshkin (1992) said, "interviewing is a human interaction" (p. 63).

In conclusion, people live "storied lives," and narrative analysis "seeks to describe these lives" (Marshall & Rossman, 1995, p. 86). Therefore, stories need to be told for a phenomenon to be understood, so in other words, the story reflects the context, and the context reflects the story. Sarbin (1994) says, "Stories are lived before they are told, and lived-stories are influenced by the stock of stories that are integral to the culture" (p. 9). One way of understanding a culture is through social constructivism; and the symbolic interactionist perspective allows for the understanding of the participants, narrators or actors of a culture, through the stories that they tell. Childress (2000) in his discussion of Josselson and Leblich (1993) who posed the question, "What must be added to a *story* to make it *scholarship*?" responded with a question suggesting that there is not an area that lies beyond story, and that "All well-told stories have a conceptual structure" (p. 5). This gives the story a basis for being used as data.

Meaning

The meaning that people give to their lives becomes a central part of interpreting their life and context. Blumer (1969) suggested that meaning has to do with the research process in stating:

> The position of symbolic interactionism, in contrast [to other meaning theories] is that the meanings that human beings have for things are central in their own right. To ignore the meaning of the thing toward which people act is seen as falsifying the behavior under study. (p. 3)

If a researcher were to bypass this idea, the life of the participant would not be understood because it is being taken out of context, leading to misinterpretation. Blumer (1969) implies that a person can therefore be seen as an actor in their context, interacting (playing parts) with self and other. They can also be seen as a narrator, telling their interpretations to self and other. Taylor and Bogdan (1998) explain that, "All organizations, cultures and groups consist of actors who are involved in a constant process of interpreting the world around them" (p. 12). Since human beings have self, they have the ability to reason and make sense of this world based on those interactions. In other words, they have the ability to be reflexive and therefore, are reflexive (Blumer, 1969). The human being is aware of their surroundings and can make interpretations through the interpretive process. Mead refers to this interpretive process as *symbolic interactionism*. He argues that, "symbolic interaction involves interpretation of the action" (Blumer, 1969, p. 8) and that "the participants fit their own acts to the ongoing acts of one another and guide this [the interpretation] in doing so" (p. 66).

At this juncture, I will discuss what is meant by the *meanings* of these acts (interactions), and how they contribute to the narrators' story.

Interaction

Interaction is what people do "together or with respect to one another- and the accompanying action, talk and thought processes" (Strauss & Corbin, 1990). It is not limited to one persons' interpretation, but can also be applied to a group of people. Each person within the group has a line of action and they try to fit them together. This is what Mead refers to as "interpretive interaction" (Blumer, 1969, p. 16), which implies that the narrative, particularly in a chosen population, can therefore be formed by several people and not necessarily, only one. "Fundamentally, action on the part of a human being consists of taking account of various things that he [and she] notes and forging a line of conduct on the basis of how he interprets them" (Blumer, 1969, p. 15). In other words, a human being interprets various things, and from that interpretation creates a line of conduct (the way that they will act), this also implies that each narrator's interpretation does not necessarily need to fit together.

Gone, Miller, and Rappaport (1999) suggested that the reason why a narrative is very informative is mainly because of its symbolism or "communicative practice" (p. 378). The narrative is a cultural practice, which is fostered by interaction within and outside the environment, which makes the narrative and the interaction within a context interconnected. Gone, Miller, and Rappaport (1999) said that the interaction produces a "past-personal narrative" (p. 383). Also, "narratives may be characterized as products of social interchange," and it is evident that the personal narrative is produced by this interchange (Gone, Miller, & Rappaport, 1999, p. 384).

Gone, Miller, and Rappaport (1999) said that a narrative offers a privileged point of access for the study of cultural identity. In the process of a narrator's meaning making, there is the availability of a culture which "may be understood to be public, patterned and historically reproduced symbolic practices" (Gone, Miller, & Rappaport, p. 372). The symbolic pattern is necessary because there is communication that occurs (self-interaction and other-interaction). This is the same premise that *symbolic interactionism* takes, where communication, which often takes the form of a language, allows for interaction of actions and "self-awareness" within a cultural environment (Gone, Miller, & Rappaport, p. 375).

This self-awareness requires a constant thought process to create meaning (Blumer, 1969). This thought process is called *interpretation*, and is a process that both researcher and participant go through.

Interpretation

"Interpretation is the reconstruction of the meaning of the text following the sequence of events" (Rosenthal, 1993, p. 67). Meaning making (occurring through interpretation) occurs at different levels. It occurs between the actors and their selves and other narrators or actors in the setting, all centered on objects or artifacts (Blumer, 1969). Interaction helps develop a narrative and the narrative is interpreted by the narrator affecting their lives and their culture, and in turn the culture affecting them (Gone, Miller, Rappaport, 1999). When a narrator reflects on their life, they produce a *thick* descriptive story (Geertz, 1973) that is either, never shared, partially shared, fully shared or even discarded. There two types of interpretations that affected me during the research process were (a) the interpretation that the narrators give to their lives (Blumer, 1969), and (b) the interpretation that I gave to the data (Creswell, 2003).

Some researchers would like to be the main interpreters of the narrators' lives, but "the underlying structure of the subjects' interpretation of her or his life, which may go beyond the subjects own intentions" (Rosenthal, 1993, p. 61) is what is really being captured. This means that the interpretation of a narrators' life is first conducted by the narrator and then is 'reported' by the researcher, or both the researcher and the narrator conduct it (Clandidin & Connelly, 2000). Despite the researcher's 'reporting' status, it is clear that reflexivity on the part of the researcher is important in beginning to understand how the narrators' story is perceived (Creswell, 2003). Unlike some postmodernist perspectives on qualitative research, which require the "death of the author" (Rosenau, 1992, p. 31), a symbolic interactionist perspective, justifies the researchers' reflexivity in relation to the interaction between the researcher (author) and the narrator, as part of the narrator's narrative.

The narrator's interpretation is very important in helping decide what events (actions) cause another, and how the decisions made by the narrator, affect the events. In making these decisions, the narrators or actors are actively engaged in the construction of their actions. This occurs because "conduct is guided through such a process of indication and interpretation" (Blumer, 1969, p. 15-16). During interpretation there is an "organization of action" (Blumer, 1969, p. 63), through which researchers can begin to understand a social phenomenon. Just like interpretation is an on-going practice in the lives of narrators, researchers have the same task of continually interpreting their own thoughts and actions to consider the narrator's actions and interpretation of actions (Creswell, 2003). Interpretations of stories, which are considered data, are eventually presented in writing (Creswell, 2003). This interpretive process becomes key in the stories that people tell. When an interpretation

occurs it has the potential of being told, thus the formation of the narrative or story in written form.

In summary, the three premises of symbolic interaction (*meaning, interaction and interpretation*) are interconnected. Interaction leads to meaning and meaning stems from interpretation, which is communicated in a personal narrative or personal story (Blumer, 1969; Gone, Miller, & Rappaport, 1999). Childress (2000), confirmed the usefulness of the narrative in qualitative research when he said that, stories can be use to understand people and data for the examining of concepts.

Conclusion

This study began with the question "What is the culture of the architecture design studio?" (see p. 6-7). Also its sub questions, "how did the culture come to be this way?" and how does this culture of architecture design studio impact the teaching of architecture students today?" Therefore the literature review has given a definition of culture and a brief detailing of how architecture schools can be seen as a culture or a sub-culture. Also, the literature review indicates how this culture has come about historically from the apprenticeship to the present. This Chapter also discussed some literature concerning methodological approaches and methodologies in order to support the direction of this study - guiding theory of knowing and learning, social constructivism, and a methodological perspective of studying human beings, symbolic interactionism were addressed, giving importance of stories that people tell (narratives).

Chapter 3 will continue to discuss methods specifically regarding data collection and analysis, in terms of narrative analysis and grounded theory. I will also introduce the narrators used for this pilot study

CHAPTER 3

METHODOLOGY AND PROCEDURES

Introduction

Taylor and Bogdan (1998) referred to a methodology as, "the way in which we approach problems and seek answers" and noted that, "when stripped of their essentials, debates over methodology are debates over assumptions and purposes, over theory and perspective" (p. 4). My theoretical perspective is based on *social constructivism* and *symbolic interactionism* as previously discussed. Therefore I am interested in understanding how people make sense of the world around them (Loseke, 1999, p. 176). I also am interested in understanding and presenting "social phenomena from the actor's own perspective, examining how the world is experienced" (Taylor & Bogdan, 1998, p. 4), by studying people's actions and the way they talk about their experience in a narrative (Childress, 2000).

With these perspectives in mind, the selection of the appropriate methodology was based on the type of data being sought – the narrators' lived experience, their voices, perspectives – in other words, their story (Lincoln & Guba, 1985). Therefore I chose methods that would enable this type of data to be collected. The purpose of this Chapter is to explore the qualitative methodologies (narrative analysis and grounded theory), that are consistent with my methodological and theoretical perspectives, introduce the participants of the study, discuss the methods used for data collection and analysis, and present the concerns that I had due to my status in that environment, which also could have also been limitations for the study.

Qualitative Research

Why qualitative research?

The traditional approach to research (quantitative methodology) relies mainly on numbers to explain certain phenomenon, and uses instruments that cannot measure the nature of human beings, which is interactive and produces experiences (Denzin, 1989). Darlington and Scott (2002) stated, "Qualitative research has an important role to play in the understanding of this world and in complementing other forms of knowledge" (p. 2). Within qualitative research, several methods indicate that understanding this world is the purpose of qualitative research. Darlington and Scott (2002) considered the core qualitative methods as, "in depth interviewing of individuals and small groups, systemic observation of behavior and analysis of documentary data" (p. 2). While quantitative researchers use interviewing as well as some open-ended survey questions, which can be considered qualitative data, they are usually compiled or reported as quantities or numbers. Qualitative research is particularly well-suited to making sense of a phenomenon (Jacob, 1987, 1988). Qualitative researchers usually take joy in the words that people use to describe their realities (Strauss & Corbin, 1998).

Denzin and Lincoln (2000) suggested that a researcher goes through five phases:

1. The researcher must deal with ethical and political confrontations regarding research and human relationships.

2. The researcher must be aware of and must make the reader aware of interpretive paradigms, which shape beliefs that affect the way the qualitative researcher sees the world.

3. The researcher must determine strategies of inquiry that will address the research question appropriately.

4. The researcher must determine methods of data collection and analysis.

5. The research must interpret and present the findings, which is both "artistic and political" practice "in making sense of one's findings" (pp. 19-23).

Qualitative research, especially when using a grounded theory approach, is useful for initial, exploratory research on a topic. It helps both to create both important categories of information and to identify independent and dependent variables that arise from the respondents, as opposed to being imposed from outside influences.

In doing this study I went through these five phases. I first reflected on myself, finding out my reasons for doing qualitative research and my values and beliefs. Second, I investigated *symbolic interactionism* and *social constructivism*, which corresponded with my values on how I was going to study interaction in the design studio. Third I examined different strategies of inquiry that would be consistent with these theoretical perspectives. I then considered different methods under these strategies that would help collect and analyze data. Finally I was conscious about interpretation – the participants' interpretation of their life which results in a narrative, and my interpretation of the participants' stories, which could affect the written product and the way people perceive the architectural design studio.

The first, second and fifth phase were discussed in chapter 1 and 2. The third and fourth phases will de discussed in this chapter, starting with the strategies of inquiry.

Strategies of Inquiry

Narrative analysis

According to Lieblich, Tuval-Mashiach, and Zilber (1998), a narrative analysis is "any study that uses or analyzes narrative material" (p. 2). Lieblich, Tuval-Mashiach and Zilber (1998) addressed three domains that narrative analysis works fall under. These domains are (a) a study "in which the narrative is used for the investigation of any research question." (p. 3), (b) studies that investigate the narrative as object, and (c) narrative used as a methodological approach. This study fell in more than one of these domains since I was researching a "real-life" situation by drawing stories or narratives from informants. I then attempted to understand and analyze these narratives and retell a number of narratives as the narrator's narrative.

The approach taken in narrative analysis revolves around three things, which coincide with the premises of *symbolic interactionism*. They are (a) to elicit and understand the meaning that the narrator assigns to events, (b) to understand and present the social interaction in context, and (c) to elicit, understand, and present the interpretation (thought/reflection) that the participant gives to the meaning in context. The participant therefore produces a narrative that can be presented as a narrative and used as data.

Clandinin and Connelly (2000) defined narrative research as the researcher asking individuals to provide stories about their lives, which will be retold in conjunction with other narratives by the researcher. Childress (2002) replaced use of the word and the phrase "evidence" and "empirical data" with *stories* (p. 4). He also said that, "all stories have a conceptual structure – there has to be a framework under all that data," no matter whom it is presented by; otherwise it would not be a story and simply be chaos (Childress, 2002, p. 5).

Since every participant had a framework, I was often able to combine these frameworks to present their story.

Grounded theory

Grounded theory is based on drawing theory, categories, ordering principles and frameworks, often from the respondents themselves, rather than establishing them in advance and testing them as the goal of the research (Creswell, 2003). The issues, categories, relationships as well as their interaction are determined during the research. The research itself therefore shapes and alters the course of the research as it proceeds as opposed to having a pre-established research protocol that is followed irrespective of the data gathered (Charmaz, 2000). Grounded theory is theory that is derived from the research process itself – it emerges during or through the research (Strauss & Corbin, 1998). Grounded theory is therefore and iterative process.

Most strategies of inquiry, unlike grounded theory, require postulating a hypothesis before the research begins (Dey, 1999). The only exception to this is when new insight is sought on an existing theory, to build upon it and not prove it (Glaser & Strauss, 1967). One purpose for which grounded theory is uniquely well-suited is to acquire an understanding of the nature of the human experience (Charmaz, 2000). Another purpose of grounded theory is the study of areas where little is known (Strauss & Corbin, 1998). Some theorists refer to this work in areas where little is know as the development of substantive theory, which can take the form of a conceptual model (Creswell, 1998; Lang, 1987).

The inductive process is based on observation and exploration of a phenomenon and occurs through multiple methods such as interviews, observations, document analysis and casual conversations. To ensure that the theory is grounded in the data, it is important that

the researcher's preconceptions, bias and knowledge about a phenomenon should be suppressed so that a new understanding can be gained. This is called *bracketing* (Glaser, 1992). Others have argued that while *bracketing* may or may not be successful, those researchers working with this approach are also are required to present clearly their biases and existing positions so readers can clearly determine for themselves the success of the researcher's bracketing.

Additionally, grounded theory researchers should use a constant comparative approach throughout the data collection and analysis phases. Multiple methods are extremely important to such a comparative approach. Data from interviews and observations can be compared, which can be compared to an archive, or documents. Where possible, actions and the meaning and categories provided by the informants should be compared. Data from the same individual and different individuals also should also be compared (Charmaz, 1983, 1995, 2000).

While in most of the empirical positivist research, random selection of subjects, or matching sets and groups of people with certain features of interest, is preferred, in the practice of grounded theory, participants are selected with the intent to make the theory as rich as possible (Strauss & Corbin, 1967). To determine whether the data collected are sufficient, data saturation has to occur, whereby no new or relevant data emerges. This means that the data collected are well-developed in all areas, and categorical relationships are suitable (Strauss, 1987). It is rare that a research study reaches data saturation (Strauss & Corbin, 1998).

Social constructivist researchers who are also using a grounded theory approach, possess several characteristics that make them well-suited to answer the call "for the

empirical study of meanings," posed by Herbert Blumer (Charmaz, 2000, p. 511), which is

called *symbolic interactionism*, by Blumer (1969). In relation to grounded theory, Strauss

and Corbin (1998) call the interpretive process of symbolic interactionism, "theoretical

conceptualization," which means, "they are interested in patterns of actions and interaction

between and among various types of social units" (p. 169). Charmaz (2000) specifies the

characteristics of constructivist grounded theorists as follows:

1. Grounded theory strategies need not be rigid or prescriptive.

2. A focus on meaning while using grounded theory *furthers*, rather than limits

    interpretive understanding.

3. [These researchers] embrace grounded theory strategies without embracing the

    positivist leanings of earlier proponents of grounded theory. (p. 511)

That is, constructivist grounded theorists can recognize or give recognition to multiple

realities (Charmaz, 2000; Strauss & Corbin, 1998), which earlier grounded theorists would

not have accepted, given the positivist tendencies to recognize a single objective reality. In

relation to the three premises of symbolic interactionism, which are (a) meaning, (b) social

interaction, and (c) thought or interpretation, it is easy to see that the actors, their

interactions, and the interpretations that the actors give are important to constructivist

grounded theorists.

Social theory researchers like Adele E. Clarke, who wrote an article concerning

reproductive science, Laura B. Lampert, who wrote about "definitional dialogues in abusive

relationships" (Strauss & Corbin, 1997, pp. 147-170), Celia Orona, whose research includes

identity loss and temporality because of Alzheimer's disease, and Herbert Blumer, who

developed *symbolic interactionism*, have used symbolic interactionist views to inform

grounded theory, making their data valuable in fulfilling the call for the empirical study of meanings.

The process of choosing the methodology

The advantage of using several methodologies was that they allowed me to inquire about the respondents' experiences effectively, as well as providing a means to retell their stories through narrative analysis (Creswell, 2003). Grounded theory has helped me to frame and organize the stories and has led to richer comparisons. I conducted formal and informal interviews and participant observations, and looked at documents. The use of multiple data collection strategies provided me with data that I could compare.

When I first started this study, I had planned to use narrative analysis as my methodology because of its consistency with the methodological and theoretical perspectives. Unexpectedly, I found it hard to present and express the categories that emerged from data collection. The more interviews and observations I did, the more I realized that there was more than a story and interpretation to be exposed that would benefit architectural education. There was a cycle of interactions that if explained, could act as a catalyst for further research. Also, as categories emerged from the data being collected, I found myself placing them in more categories, which continually refined the analysis process. Though I am intrigued by the narrative analysis methodology, which helped me present the stories of the respondents who give meaning to their environment, through rich descriptions and interpretations, the grounded theory approach of data collection and analysis helped me develop a conceptual understanding of the architectural design studio interactions that would not have been revealed if only the narrative paradigm was used.

According to Charmaz (2000), "grounded theorists' analysis tells a story about people, social processes and situations" (p. 522). This has been a concern for many positivists and empiricists because the story being told is directed by the emergence of new themes, therefore giving the idea that there is information is being lost in the process (Charmaz, 2000). However, the constructivist grounded theorists are sensitive to the idea that there are several constructed realities and that they as researchers, are dealing with only one reality at a time. In this study, according to the social constructivist and symbolic interactionist view, I was able to put several realities (different stories) together to create a more complete description of the phenomenon.

Introduction to the Participants/Narrators/Actors/Informants/Respondents

The researcher

I am a 25-year-old African female, teaching and learning in a predominantly caucasian male-dominated educational arena, which is architecture. Upon graduation with my Bachelor of Architecture, I was hired to teach beginning-level architectural design studios at Iowa State University, as a temporary professor. The experiences that I had during my undergraduate years left me with mixed feelings about the architecture studio regarding how it was perceived from a students' point of view, and after I started teaching, mixed feelings regarding how it is perceived from an instructors' point of view. I always had planned to seek further architectural education; however, after teaching my first few studios, I decided that I needed to seek further education about teaching generally and teaching architecture specifically. I thought that through this education I would better understand the premise of studio teaching.

The early teaching experiences created feelings of frustration because of my inability to express myself verbally to the students, especially when I realized that I was why they did not "get it" because I was so caught up in the architectural jargon, in which I had been enculturated for the last four years. Another frustration was seeing students achieve only a vague understanding of what occurs in the architecture design studio. I felt that there was a gap between the understanding that the students had of the studio and what really went on in the studio. Just the semester before, I was a student, and I was still nostalgic about my first few weeks in design studio experiencing a need for attention from the instructor and a need for direction and at the same time freedom. Now I was an instructor feeling the pressure of attending to each students need, conveying information correctly, grading, "student rebellion" and classroom management. This deepened my desire to understand the design studio, the participants of the design studio, and their norms and behaviors, all of the facets of what Lang (1987), Gone, Miller, and, Rappaport (1999) and other scholars would describe as a culture or at least a subculture.

My attempt to uncover the "mystery" behind studio, and explain it not only to the students but also to the "outside world," was qualified by my sincere desire for student success. Teymur (1992) described the content of architectural education as being a mystery as well. Teymur (1992) believes that architectural education is about "hidden content, hidden agenda, silent discourse, repressed or suppressed knowledge, gaps in information [and] messages between the line" (p. 22).

In the process of trying to uncover this mystery, I realized that I needed to understand the students and myself, hopefully improving my communication with the students, and in the long run improving my ability to teach or rather, my ability to learn with them. As a new

professor (instructor), it was hard to voice these frustrations. I needed to understand what other professors' thought. I therefore encountered two instructors and one student, who were willing to give me their opinions on the reality of architecture design studio.

Chad

Chad, a first-year (or pre-architecture or Arch 102) studio instructor, was my key informant. According to Taylor and Bogdan (1998), "key informants are the researcher's sponsor in the setting and primary source of information" (p. 54). I picked Chad because I knew him well and he had been teaching architecture for many years in several schools. Also, I had known Chad for four years and had been taught by him in a lecture course that supplemented Arch 102 in the fall semester of 1996. Because of this, I did not have to build up that much of a rapport in the beginning. Nevertheless, I made sure that I had taken all the steps to ensure a good rapport despite my initial contact with him. These steps included purposely removing myself from my own thoughts about the respondent and also attempting to get to know him again (like it was the first time I was to meet him). Also, Chad had never been my studio instructor, although he often sat on "juries" or the review sessions, which are public, usually formal presentations that are done during the process of a project. He had on numerous occasions given me feedback on my projects in my undergraduate years at Iowa State University. Also, I had invited him to be a critic on some of my students' review sessions. After the first interview, I knew that I had selected the right person because of the number of years that he had been here at Iowa State University and also the experiences that he had had before the start of his career here. I was at an advantage because he was a practitioner at one point during his life, a professor in different universities and went to school in the Bauhaus era.

Despite my reasons for choosing Chad as a respondent, before the first interview I was concerned about the possible difficulties that might arise since he had been used to dealing with me as a student. Now, I had to interview and interact with him as a colleague and a researcher. The concern quickly became a non-issue when he spoke to me as a peer. I had many formal interactions with him, such as interviews in his office, and participant observations in his studio, at juries and at meetings. I also had several informal interactions with him in the hallways, on the way to lectures, and in the main office.

As I worked with Chad, I discovered that I needed to speak to more than the key informant because he had one perspective of the design studio. He talked about what he thought about students in the design studio and how he thought other professors behaved. I wanted to explore a student's perspective and another professor's perspective in this regard. He referred me to Julie, a student, and Mike, an instructor.

Mike

Mike was a non-white instructor, who taught at the same level as Chad, went to school at Iowa State University for two years, dropped out, and went into practice for about ten years. After those ten years in the architectural firm, he came back to school and received his degree in Architecture. Mike had much on his plate, but, despite his heavy workload, our discussions were unrushed and very rich.

I chose Mike not only because Chad referred him to me, but also because I thought that his experience as an adult learner would enrich the data. I also thought that because of his race, he would have interesting stories to tell. This was stereotypical on my part because we did not converse about racial issues during our interviews. I believe that in a different study, with a different title, those issues would have been more urgent to divulge. Describing

my research agenda to him may have framed some of the conversations we had in general. Another reason why I chose Mike was that he and Chad were teaching the same level and held some of their reviews together, which meant that I had the opportunity to observe them interacting in the same environment, through participating in their reviews.

Mike had been teaching for five years. When I was a student, he taught third year studio and I remembered some of the comments that my peers at the time, gave about him. So I had stereotypes about his personality and his teaching methods, although I did not have the opportunity to get to know him well. I tried to suppress those stereotypes as much as possible and get to know him from his point of view. His stories revealed much about himself, his life and his experiences in the design studio, and my stereotypes were broken.

Julie

Julie, a 20 year-old woman, was raised in Iowa and was now in her fifth year of architecture. She always wanted to be an architect. I chose her because Chad had described her as a hard working student, who would be willing to be interviewed. I also felt comfortable approaching her, describing my study to her, and finally asking her to be one of the respondents. Even during that initial contact, she spoke passionately about her experience as an undergraduate student. Later on I thought that Julie and I had a few things in common, such as being very goal-oriented and persistent in her studies. Another reason why she was a good respondent was that she was in one of Chad's studios during the time I spent interviewing her, which gave me a chance to observe her interactions with Chad in studio and during reviews.

Julie and I had a hard time finding a time to meet, and I anticipated asking her questions around her experiences in the design studio, what she thought about the teachers,

and about architecture in general. To my surprise, she popped by my office one day without my knowledge that she was going to stop by, and asked whether it was a good time to interview. I welcomed her in, knowing full well that I had not written down the questions that were streaming in my head. This resulted in a lively conversation about her experiences in architecture studio, which I assume would have been hindered if I had a list of questions to ask her. She gave me a student's perspective on the design studio during our formal and informal interactions, which was very valuable in this study.

Methods of Data Collection and Analysis

Data collection

In-depth interviews. According to Blumer (1969) in his analysis of symbolic interaction, the interaction between the researcher and participant is necessary for interpretation through narrative (Blumer, 1969). Taylor and Bogdan (1998) stated, "Interviewing multiple informants lends itself to building general theories about the nature of the social phenomena" (p. 91). With all three participants, there was an intentional use of open-ended questions that were derived from the emergent themes (Chirban, 1996). It was also intentional to go into the first interview with only one request, which was, "tell me a little bit about yourself." It was my intent to be flexible, which was useful particularly to this study because I did not want to impose my views on the respondents but permit them to frame their issues in their own way (Taylor & Bogdan, 1998). Although I took this precaution when I first started interacting with the respondents, it was inevitable that I may have influenced the respondents in some way, while explaining this study to them. Since I explained the research to them initially, they already may have had questions and answers

ready in their subconscious. Regardless of the influence that I may have had on them, the

first question was consistent with narrative and grounded theory techniques (Merriam, 2002),

which I wanted to honor. APPENDIX C shows a list of some the questions asked.

In the fall of 2002, I started corresponding with one narrator, Chad, with whom I

conducted two interviews before I realized that it was necessary to explore other individuals'

narratives. Chad's interviews usually were held on Monday at 11am in his office. Being in

his office was important because it was a familiar place for him, meaning he might have been

more comfortable in that environment. The first interview lasted for 1hour and 45 minutes,

being cut short only because both Chad and I had to prepare for studio. The second interview

with Chad lasted for about 1hours and 30 minutes. The third interview, which lasted for

about 1 hour, was combined with a *member check*, which meant that I gave him some

materials to read and explained to him what I thought he said during the interviews and he

would inform me if they were consistent with his thoughts. This helped me make sure that I

was conveying information correctly (Taylor & Bogdan, 1998). I talked to Chad formally

once more in the spring semester, for 45 minutes, where he gave me feedback on a draft of

my written version of his stories, to verify that the draft conveyed his interpretations,

meanings and categories appropriately. He also gave me some suggestions on the write-up

of the study itself and on the significance of the study. This whole process is referred to by

Lincoln and Guba (1985) and Taylor and Bogdan (1998) and as a *member check*. A *member*

check is crucial for accurate understanding of the respondents' feelings (Borland, 1991).

I had already gotten in touch with the other respondents one week after Chad's first

two interviews. Julie's first interview was held in my office at the end of September, and

lasted more than 2 hours because we were getting to know each other, and at the same time,

she was telling me stories about her experiences. I followed up with her by having small conversations in the hallways. Because she was heavily involved in her work we did not find another time to sit and talk, until the spring of 2003 when I invited her to stop by my office to do one last interview based on the feedback that she gave me on the paper that I had written in the fall. Interviews with Mike lasted at most 1 hour and 30 minutes usually because of time constraints. I managed to interview him twice in the fall semester and one more time, for 1 hour, in the spring semester for some feedback after presenting to him the paper that I had written.

Each formal meeting with the respondents were taped and transcribed within at least two days of the interviews. During the interviews, I also jotted down notes on key themes and repeated concerns. I regularly had conversations with the respondents in the hallways, in studios, and during meetings. These can be considered as informal interviews, so that the contact that I had with them extended beyond the nine interviews and approximately 11.6 hours mentioned. After each encounter with the respondents, I wrote memos, sorted data, wrote short paragraphs, and read literature. The literature especially fostered my understanding of available information, descriptions, and definitions surrounding the emerging categories. Each follow-up question (questions after the first interview) depended on the themes that emerged during the interview and during data collection. I did not ask all these questions directly because most of them were answered during our conversations.

Participant observation. I also used participant observation to collect information. In this particular case, this meant that I interacted with the respondents and their students in their studio or in a "jury" or review setting.

Taylor and Bogdan (1998) warned the qualitative researcher "not to be surprised if things are not what" they "thought them to be" (p. 26) during the process of participant observation. Therefore I attempted to go into each studio and review experience knowing that, because it was neither equal to my previous studio experience as a student, nor my studio, I should try to experience each as a unique example – seeing it for what it is and not for what it ought to be. Regardless of my efforts to do this and despite the warning from Taylor & Bogdan (1998), I was still found myself comparing it my experiences.

A unique opportunity arose at one point during this study. I was invited to be a critic for Chad's and Mike's combined, fifth-year level architecture students' review. Since Julie was a student in Chad's studio, I also had the opportunity to listen to her present her work, and listen to Chad's and Mike's critiques, as well as to help critique it. Although the review lasted for about 4 hours and 30 minutes, I was present for only 2 hours and 30 minutes and saw a mix of Chad's and Mike's students present their work. This gave me the opportunity to determine whether there was a difference in learning between the two studios. This observation is presented on page 103.

During the fall and spring semesters, I also would visit their studios, just to walk around and observe what they were doing, what their students were doing, talk to their students about their projects, and hopefully gain some insight about the correlation between what they said and what they did in their studios. I did not spend more than 45 minutes during any one visit to their studios, but visited each of them over seven times.

Archival materials and artifacts. Narrative inquiry also makes use of and may depend solely on newspaper articles, materials such as journal records, photographs, letters, notes or memos, and autobiographical writing (Marshall & Rossman, 1999). Bogdan and

Biklen (1984) recommend supplementing interviews with such personal or public

documents. The documents that I used were mostly academic, including Chad's and Mike's

syllabi used in the design studio and other handouts such as reading lists. Also, the work

(drawings and models) that the students produced at the review, especially the work that Julie

produced in the studio class, was examined. These documents were a supplement and in this

case did not play a big role in providing emerging themes, but did help in understanding the

respondents' thought processes better.

Data analysis

  Theoretical sampling. This is the technique whereby the sample is modified after a

theory emerges (Dey, 1999). I accomplished this initially by conversing with several

architecture professors and students and then identifying a participant (Chad) whom I

interviewed. By analyzing the data acquired, I was able to identify key elements, or

concepts, or categories, that needed further investigation and that required the participation of

other actors (Mike and Julie). Charmaz (2000) described it in this way:

> Theoretical sampling represents a defining property of grounded theory and relies on
>
> the comparative methods within grounded theory. We use theoretical sampling to
>
> develop our emerging categories and to make them more definitive and useful. Thus
>
> the aim of sampling is to refine *ideas*, not to increase the size of the original sample.
>
> Theoretical sampling helps us to identify conceptual boundaries and pinpoint the fit
>
> and relevance of our categories. (p. 519).

Sampling is not limited to the respondents (Charmaz, 2000). It can range from samples of

documents, to samples of the scene, events that take place at a scene, and casual

conversations. This meant that there was a constant comparison of the categories that emerged from these samples, that led me to go back to the participants, their scenes, and to the events.

The first process that I went through was what Strauss and Corbin (1990) referred to as axial, where no categories were known. I casually had conversations with several architecture studio instructors who talked about their experiences in the architecture design studio. This took place in hallways, in studios, and before faculty meetings. This first stage simultaneously happened with "open coding," whose aim was to break down, examine, compare, conceptualize and categorize data (Strauss & Corbin, 1990, p. 60).

I took the categories that emerged from these casual conversations, placed them side by side, compared them, and determined how they related to new categories and each other. I was at an advantage because I had easy access to the site and people with whom I had initially had conversations with (Strauss & Corbin, 1998), but I also had to be careful not to allow my own experiences and meanings developed as a design student make me miss others' categories and issues of the relationship between various factors. I was able to visit Chad and Mike's studios and begin to compare conversations with incidents and categories with each other. This process is called "variational sampling," whereby "the researcher is looking for incidents that demonstrate dimensional range or variation of a concept and the relationship among concepts" (Strauss & Corbin, 1998, p. 210). Therefore, further conversations were held about what categories had emerged, and whether the respondents thought they were relevant. Variational sampling was used with "axial coding," described by Strauss and Corbin (1990) as "a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories" (p. 96).

I also used "discriminate sampling" to chose specific people who I believed would "maximize opportunities for comparative analysis" (Strauss & Corbin, 1998, p. 211). In other words, I selected one person to be my key informant, who I thought would provide both breadth and depth of comparisons. I realized later that I needed another instructor and a student to allow for richer data to be collected, to facilitate making comparisons. Along with discriminate sampling, "selective coding" occurred, "which helped integrate the categories along the dimensional level to form a theory" (Strauss & Corbin, 1998, p. 211). In other words, justification of conceptual relationships was fostered and categories were refined.

Memoing. Glaser (1992) described memoing "as the theorizing write-ups of ideas as they emerge, while coding for categories, their properties and their theoretical codes" (p. 108). I used *memos* to record ideas about my evolving theory (Strauss & Corbin, 1998). These *memos* included, notes to myself taken simultaneously through the interviews and their analysis, and notes taken during and immediately after informal meetings, as well as during and after studio reviews and visits. This was an unfolding and constantly evolving process, which also required constant documentation of ideas through memos. There was a potential of being overwhelmed by all the data, including the categories and issues revealed. Memoing provided a way to organize and keep track of my thoughts (Taylor & Bogdan, 1998). APPENDIX D gives examples of some of the memos produced in the research process.

This means that the memos helped me generate ideas (Huss, 1994), by brainstorming. They assisted with categorical comparisons and facilitated the establishment of an *audit trail*, (Lincoln & Guba, 1985). *Audit trails* are the records collected throughout the research process ranging from memos, to transcripts, tapes, notes, documents, analyses containing

coding, diagrams, and napkins used to scribble down an "aha". Memoing varied according to the phase of research, from a description of what I thought was going on (during open coding and open sampling), to a constant comparison of concepts (during axial coding and variational sampling), to a more analytical selection and comparison of categories (during discriminate sampling and selective coding).

The processes described in this section are not as linear and procedural as they appear. There were certain instances where the memoing, even in the last few stages, took a form that was similar to the first stage. Also, some memos have a combination of descriptions, theories, diagrams, and random thoughts.

Reflexivity. I agree with Clandinin & Connelly (2000) when they refer to "education and educational studies" as a "form of experience," and that the "narrative is the best way to represent and understand that experience" (p. 18). By using narrative analysis, there might be a tendency to depend consciously or subconsciously on one's interpretation rather than the interpretation that the narrator gives to their environment. Reflexivity therefore is necessary to keep the researcher inquiring about why they are doing what they are doing (Clandidin & Connelly, 2000; Schön, 1983, 1987).

This reflexivity resulting in meaning making on the part of the narrator/actor and researcher, allows for the constant cycle of narration to occur, thus understanding the phenomena the narrative is describing. The symbolic interactionist perspective has helped me understand the depth of qualitative research and why research in the narrative form is rightly called narrative analysis and how grounded theory can help reveal certain phenomena. A useful tool, which has already been addressed, is the in-depth interview, "which is effective in generating data about respondents' feelings and/or perceptions" (Miller, 1997, p.

4). This revelation can take place through reflexive thinking, which also can be thought of as

processing information or processing actions through a lens of cultural context. Blumer

(1969) refers to this as the process of interpretation.

Trustworthiness

Empirical positivist researchers discuss the validity and reliability of data. These

issues are not precisely transferable for researchers doing qualitative work especially for

social constructivists, constructivist-grounded theorists and those using narrative analysis.

For research of this type, the issue is one of *trustworthiness* (Denzin & Lincoln, 2000;

Lincoln & Guba, 1985).

Lincoln & Guba (1985) use the term *trustworthiness*. They suggested being able to

produce a compelling argument, that is, convincing an audience of whether the findings are

worth their time is the measure of trustworthiness. Lincoln and Guba (1985) suggested that

credibility, *dependability*, *transferability* and *confirmability* are the criteria of

trustworthiness. In the following paragraphs I describe how these criteria are fulfilled.

Credibility is the degree of accuracy to which a researcher understands or presents the

actors' perspective. *Credibility* also can be the level of integration of the various informants'

perspectives into the entire narrative written by the researcher (Keoughan & Joanning, 1997).

To ensure as much credibility as possible, I used *peer debriefing, member checks, reflexivity*

(which is the researcher's constant writing and inquiring about what they are doing), and

comparison of the emerging theory with data that was counter to the narrative.

Some of my peers that I had in the doctoral were willing to look at this study and give

critical constructive feedback. Also my colleagues in the architecture department were

willing to listen to the findings and give feedback on the evolving work. Some of the classes I took in research evaluation had *peer debriefing* workshops, which allowed me to look at my research through a different lens than an architectural one, and it made me more aware of the themes that I focused on during my latter interviews. An example of this was my constant referral to the design studio, with the implication that my peers knew what occurred in it. Also, in the beginning of the research process, I was focusing on the students, and they helped me realize the importance of the instructor. Therefore it was beneficial for me to share my research process with my peers (Anderson & Jack, 1991).

When analyzing the data, I took into consideration my familiarity with the subject matter. I was sensitive to that fact and attempted to keep myself from getting caught up in the frenzy of what I thought and felt, which Klienman (1991) warns against, but to remind myself that I was writing about someone else's life experiences and using those experiences as data for theorizing. This meant going and consulting with the participants and making sure that I had interpreted what they said correctly. This did not mean that I did not express to them what I thought, because I believe in being honest and open with the narrator (Clandinin & Connelly, 1994; Glesne, 1999).

Establishing *credibility* was not a single stage. I went through a refining and a re-refining stage, wherein, I looked over the material collected and compared it to all the emerging themes. I verified that the themes and categories grew out of my respondents' suggestions and whether they were consistent or anomalous. This of course, led to more data collection and interpretation, but allowed me to follow up with the participants.

Dependability is the assurance that the data is stable and consistent. This was addressed through *member checks* and *audit trails*, which have been explained.

Transferability is the ability to apply for the findings to other settings. Grounded theory results in a theory that cannot be applied to other situations (Creswell, 1998). Narrative analysis results in a narrative that varies greatly within a particular culture, let alone in comparison to other cultures. The theory can be built upon, but the narratives cannot be replicated. The categories, I speculate, within the narrative might appear in other architectural cultures, but I will not be able to do it justice to that point in this pilot study.

Confirmability is making sure that the research is based on the perceptions, or the interpretations that the respondents have of their environment. I found member check useful in this endeavor, but certainly reflexivity gave the most satisfaction to the respondents and myself in ensuring that the research was grounded.

Concerns and Limitations

The one concern about my doing research in a setting that I was already familiar with, was that I had to be careful about using the knowledge that I already had about the field as the only source of insight (Strauss & Corbin, 1998). I had to be careful about assuming that the audience already knew the terminology that was used in presenting the data. In my interview with Chad, I sometimes had a passive understanding of a word, but when I asked him what he meant by that word, it turned out to be different from my thoughts. I also was concerned about using one point of view to establish a foundation of knowledge. That concern was soothed when I realized through the interviews with Chad that I needed more participants to interview because the information was not sufficient to move on.

Transcribing, analyzing and interpreting, literally had to take place at the same time. This was because when a question was answered, more questions arose, yielding a never-

ending flow of insight. Until I got to that point of saturation, which according to Strauss and Corbin (1998) is rare for any research study to attain, I don't think I would be satisfied with the information that was acquired. Despite my efforts of quick data collection and analysis, this pilot study did not reach the point of saturation, meaning that there is more to be explored. Regardless of this fact, I had to be careful about collecting too much data in the time frame that I had, which would not have given me enough time to conduct analysis adequately.

Summary

In chapter 3, I discussed the process of choosing narrative analysis and grounded theory as my qualitative approaches, defining and describing how they related to symbolic interactionism. I also explained why qualitative methods were appropriate for this study. Also, this chapter introduced the participants of the study including, myself - the researcher, Chad and Mike – the professors, and Julie – the student. This chapter presented the research methods that I used to collect data, which included, in depth interviews, participant observation and documents. Data analysis methods were also described, including theoretical sampling and memoing. The trustworthiness of this study was measured against Lincoln and Guba's guidelines. I also discuss *reflexivity* and how that contributed to the trustworthiness of this study. Chapter 4 presents and analyzes the data (narrative).

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter is to present Chad's, Mike's, and Julie's narrative under themes that consistently emerged throughout the interviews, and later discuss them in relation to the literature. These categories were selected on the basis of the narrators' concerns, experiences, and feedback they gave me about the themes. I used these categories as headings in the presentation of their narratives. Although the literature review is similar and some of the literature review was guided by these same themes, they are not identical. The key themes are (a) the architecture design studio, (b) the interactions and their importance in the design studio, (c) the teacher and their teaching behaviors and values, (d) students and their expectations, and (e) the project in the design studio.

Under each heading I give a short summary of what the narrator and I conversed about with regard to that topic and what we were talking about before the topic arose, called *(respondent's) thoughts*. After each narrative is presented according to the theme, I give a brief analysis of the key themes and emerging themes. This will be expounded upon later in chapter 5. Finally, I end the chapter by listing the main themes and highlighting the themes that I discussed.

The Design Studio

Chad's thoughts

After telling me his professional story, Chad mentioned that prior to teaching studio he had taught classes dealing with architecture and culture, but not necessarily the culture of

architecture studio. He was quick to relate what he had taught and what he had experienced in the design studio. Before this narrative, I had asked him to explain what he meant by culture:

Well, you know, it's never really a direct application [culture classes he taught to the design students]. If you go to sort of the standard definition of culture, alright ... it's a way of life. And you know, and there are certain kinds of qualities, and qualities of evidence that we look at. But if we take that as a way of life, ok, then the design studio for architecture for design disciplines, is in fact a way of life.

Design studio is organized around projects, ok, which is how all of the [professional] practices in design are organized. Whether it is architecture, or landscape architecture, or industrial design, or a new fashion line for Dolce and Gabbana ... It's project! Ok! And that project occurs in a place called a studio; and the expectation is that everything that you know, ok, will somehow work its way into the design project through a process. Um, So, you know, in architecture, uh, many of us see the design studio as the center of architectural education. While it's very nice to know about history and when Palladio designed the Villa Rotunda [or other famous buildings], and all of those kinds of things, you know as a factual kind of knowledge, we expect a historical kind of knowledge of how those things were designed, how they were to be made to have some kind of value in the studio, as a ... as a way of going about formulating a project. Ok. That's one dimension of the studio culture, ok.

The second dimension of the studio culture is, that students learn a great deal from each other, yeah. Through interaction, uh, through different kinds of

perspectives, through the kind of diversity we value. The students, by looking at what

each other is doing, by commenting and commenting on what the other people are

doing, tend to learn a great deal from each other, alright. So, that is the kind of

other, you know ...uh, cultures always have these incredibly interactive dimensions

and that interaction dimension is present in studio. Um. Maybe a third aspect of the

culture of studio in the university is kind of an unusual one. Uh. It's a model of a

different form of higher education, ok. It's not based on lecture in classes, it's not

based on the transmission of sort of fact from teacher to student in lecture format, but

it involves a continual discourse between a faculty and students, and between

students themselves and sort of an exploratory mode of learning, ok. And the logic of

the design project is not unlike the moot court in law school, alright, or the business

plan in management school. So the case study model is always how someone is

involved in the studio. And that is a very, kind of a professional form of education.

Mike's thoughts

Mike and I had an interesting discussion on his experiences as an undergraduate in

the design studio, actually out of design studio at the time. This was after he had come back

to school after ten years of being in the field. He considered himself more mature than the

rest of his classmates because as an adult learner he valued different things. In the first

section of this narrative he emphasized that no freshman had a personal workspace in design

studio at that time because of the way the design studio was organized, so they had to find a

place to work.

No one could say, "Why is there trash thrown all around here?" I would see people

over at the Union before it was remodeled, making models. I would see people in the

atrium here [at the college of design]. Luckily for me I was working in a firm I could

do a lot of work there. I did have a desk in my home.

Whatever the assignment was turned in, you were graded and you were

ranked according to the entire class. On point basis. You knew where you stood.

And you knew if you were out of like a 300 point total, and that if you were

somewhere at midterm, not beyond 100, it was not going to happen for you. You

know, and if you were up there, you understood what you had to do to maintain that

status to ensure your entrance. Because we all had to make portfolios. While we all

did the same assignment, the products were not necessarily the same. So you had to

find a way of representing yourself. The other downside is, we [the students] didn't

have any reviews. You put it on the wall, 50-60 something students whatever,

standing around to see what the professors said about them. The professors tried to

do it [grade] as a collective group.

After this conversation, he contrasted his freshman and fourth-year experience in the design

studio. He described different studios and what they offered him. He was now satisfied with

one in particular.

And I found it [the application of theory through building] in one professor

who had an unconventional studio, ok. He was a leader, so he did not know the rules

of engagement of studio, so he was out of line himself! But it was a studio where he

said, "Look! We are going to make full scale constructions in this studio, this year,

this semester, you will not be making models." So we began operating on the studio

itself. We had to draw the space we were in we laid out plot lines, we drew our own

spot, our territory, everything! Tiles! Desks! Whatever was in that territory, we

drew. And then we started experimenting with other sites in the same way, how we recorded information and get information off the site. One of the sites, was here in Iowa and another one was a site of our choice in Chicago. Uh, but the point was always to use the studio as a platform to construct the ideas and thoughts that you were having about work and that you wanted to propose in those places. Now everybody didn't get that in studio.

Julie's thoughts

Julie recently had come back from the optional study abroad trip that architecture students participate in for their fourth-year, second semester of study. She was nostalgic and wondered if she would ever have an experience like that again. She and I shared our different experiences in Rome at length and then she started comparing the studio in Rome to the ones at Iowa State University. She was also going through what people call "senioritis" in which seniors in any major feel that they have reached their last straw with regard to education (this was her description). So, her narrative on the design studio is built on several different phases of the conversation we had during our first interview.

I have to experience that [experiencing something one loves to do as their career], you know, have something like that actually, that's something that I always like search for or grasp for, like, why am I doing this, why, why, why, why?! And there has to be a reason, you know, or, you know, to actually build it [the building] and see that coming to play [actually built]. It's [architecture] one of those things that I think that I always just thought I would do. When I got to school, actually it's a lot different than what I thought it would be, and I always thought that I'd be an architect and build buildings. I don't think that's necessarily my path, you know, but

something with architecture, something with spaces, and, and, with design

[passionately]. I think that's what I really headed for I guess ...

There's an important role for the people who can work at firms and there are

some people that are great at it and that's why studio is [corrects herself] does work

the way it does because there are that many types of people. I remember looking up

at studios, like, would it be your year? Were you ... two years ahead of us?

I remember in first-year, they [the second-year students] had the couches, and we

would go, like, we were building our precedent models and we would go on them and

thinking that "This is great! Can't wait to be in second year," but we never got have

that stuff!

I like the armory [the building space where the first through third-years have

assigned studio space]. That's something that I noticed about fourth-year, our first

semester here [in the College of Design building, where fourth through fifth year

students have assigned studio space]. We felt like we couldn't be dirty any more, like

we couldn't build big, like, messy, we always felt ... it was sort of ...I recognize that

students are a lot cleaner, which I don't know, if that's necessarily a good or bad

thing, but that's one way we [her class] realize the difference.

Analysis. Chad talked about the design studio as possessing characteristics; he also had a

clear vision of what he expected the design studio to be. On reviewing Chad's perspective

six things stand out: (a) the design studio is centered around projects, (b) the design studio is

the way of life of students in architecture, and even professional practice, (c) the design

studio is the center of architecture education, (d) the learning in design studio occurs through

a process, (e) the design studio is made up of diverse mindsets, and (f) the design studio

involves interaction, knowledge, and learning. It is the synthetic application of knowledge from other spheres.

The common theme that ties these six points together is the learning through interaction. The process that occurs in the studio is fostered by the interaction of the students and the professors, and the students who make up design studios are individuals, therefore possessing diversity in knowledge allowing them to learn from each other through communication. These are the interaction dimensions of design studio.

Mike described his experienced in two different kinds of studios. One of the studios in his initial experience at the first-year level created a separation of student due to location, reinforcing competition. Also, this studio fostered uniformity in the assignment and the ranking of student according to a set of criteria that were developed by a group of professors cooperatively. He encountered the second design studio during his post-professional life. This studio encouraged the idea of experimentation, independent student work, and learning through doing. The theme that ties these two different studios together is the difference in teaching techniques. The former was an impersonal one, while the latter was a personal strategy. Chad's narrative described the instructional quality of the architectural design studio.

Julie's narrative addressed the design studio catering to individual differences, which, in comparison to Mike's narrative, would relate to the kind of experience he had in the second studio. Her narrative also addressed the physical space of the studio, its appearances, its accessories, and the feeling that the space allowed the production of "messy" work, while the College of Design seemed to discourage "messy" work. Several instructors see this "mess" as a process that the students go through to learn through making. The "mess" is

created by the material that students use to draw on and with, and the materials the use to build with – wood, paper, metal, paint, and other similar materials. Another important theme that emerged was the idea of traditions. Discontinuing a tradition, can affect those who are deprived of it negatively. Overall, her narrative discloses her expectations of the physical qualities of the architectural design studio and their importance.

Some of the themes from Chad's, Mike's and Julie's narratives overlapped. These themes included the importance of interaction in several forms. One form mentioned by Julie was achieved through traditions that enhanced studio relationships. Mike described the lack of interaction, which resulted in a competitive atmosphere. On the other hand, the lack of interaction in Julie's narrative created a lack of knowledge of one another. Chad talks about interaction in the form of intellectual diversity encouraging learning. All three respondents talked about the design studio as a place where learning occurs through doing

Interaction and Its Importance in Architectural Design Studio

Chad's thoughts

Before this particular conversation, Chad had explained that he thought architectural studio was learner-centered because of the way the students interact.

The real value of [having] students in [a] studio is that they have different perspectives and different abilities, um, different levels of skill development [and] knowledge. And in this interaction with each other, they can share that, alright, um, with each other, so that they can begin to get a different perspective, they begin to see different abilities that they want to acquire. So that's the primary value I think, all right. You know the traditional value maybe, um, is that since studio requires all

these hours of effort outside of studio, that when all of the students are there, they

help each other put in that kind of effort.

Mike's thoughts

In this section of his narrative, Mike had reflected on his first year at Iowa State, illustrating the independence in dealing with projects when no desired workspace was provided. He described his interaction with other students in his first year as very limited.

I did work in my bedroom, in my tent space, a desk here, in addition to a baby crib.

It's funny I've got this picture holding my daughter, uh, while I was sitting at the

drafting table in my bedroom, trying to work. But that provided everyone with a

sense of their own resourcefulness. The problem was that you didn't know what

anyone else was doing. You couldn't learn form anyone else. Now that made for an

incredibly competitive culture!

Julie's thoughts

Julie, during our conversations, described her regret for their physical setup at the college of design (not everyone in her class was on the same floor). Before this part of our conversation, she mentioned that being in the College of Design was valuable time during which she and her classmates could get to know each other before they graduated. They had not had this chance in the armory.

And I remember them [the second-year students] you know, doing things together,

outside studio as well, and inside studio. And that is something that our class never

grasped. I'm not sure why. Maybe ... that's [being in the college of design] the thing

about fifth-year. We're on third floor, fourth floor and fifth floor! [frustrated] and

it's too bad. It's like one of our, you know most important semesters, and we're not

even like ...[on the same floor].

Analysis. Chad identified what he the valued about studio. The key value is the interaction,

the overarching theme in this section of his narrative. The studio provides the opportunity

for students to interact with each other. Due to this interaction, skills are learned effectively

because they teach each other how to do certain things, knowledge is shared because of their

diverse backgrounds and abilities, views and perspectives, and greater work output is

expected.

Both Mike's and Julie's narrative in this section confirmed what they had said about

the nature of the design studio in different learning environments. Mike's experience was

different than what Chad described because he observed that students could not learn from

each other. This was because they were not in the same setting. Also, students were

competitive rather than sharing. Mike's views were framed through his prior experiences,

which might have lead to his own separation. Julie had expectations about the interaction

that occurs between the students. She was frustrated because she did not socialize much with

peers as she had observed previous classes doing.

These narratives presented the different values that the respondents had, which were

framed in interaction.

Teachers and their Teaching

Chad's thoughts

Chad felt that he had developed his ideal teaching method. This was not surprising

given his experience. He constantly referred to "models of teaching" that he thought existed

and how students responded to them. Here is what he has to say about the subject matter:

The thing that I heard from students is this, ok: If you want to get a good grade, you recognize the power differential between the instructor and the students, and you look for, and you do what the instructor is looking for. And that will get, you know [where you want to be], students are very good at figuring out what instructors want. And, so they give an instructor what they want because of this.

There's another issue here: Design grading is not objective. It is pretty subjective because it is value based, and design is all about values rather than just facts. Um, so that creates this issue, creates a power differential, you know, and the studio instructor who was traditionally called the studio master, um you know has this degree of power. Now you know ... now many faculty don't play that game. Many faculty look at students individually and try to help those students develop their own interest, their own perspectives, their own set of values and their own design process, you know. Um, but the traditional mode is that you hire, the studio instructor is a, real designer and they know stuff, and then you learn how to design like them.

I learned to design like, let's see some of the instructors that I had, I learned to design like Walter Gropius, and I learned to design like Van Thompson, who was a kind of a student of Corbusier, and I learned to design like Louis Khan [laughs loud.] You know! And there is a little bit of value in that, that value of imitation, right. But you can see the difference at the end when all of the work comes out of the studio and it looks a certain way versus the diversity of work. So you can tell what kind of teacher was teaching that studio.

Now since we hire less practitioners and less known architects to teach studio, um, you know, and it's mostly academics teaching studio now, can't really make a claim for the great designer model for the studio. I'm not the great designer." Um, My own personal opinion, alright, is when it comes to design, academia lags far behind where architectural practice is. So there is a value of having practitioners teach the studio. But there is also university politics of that, many practitioners are going to be adjunct, they are going to be part time teachers, they're not going to be on tenure track, they're not going to do that. The push of universities towards tenure track appointments, ok.

One of the models of design studio education is that the student and the teacher are in a partnership. That they work together, that the teacher has a great deal of experience and so they are actively engaged in the design of that project along with the student, alright. They'll make sketches, they'll say, do this, don't do that, do this, you know, and they'll actively be engaged in that project. Ok. Um. And that's a model. This is also the formula teacher, ok. Um, that they have you know, if you do certain things sequentially, then you will, you know, its a highly structured approach. It organizes around a project ok. And says do this, do this, do that, ok. Um, I [the teacher] will come and direct [the student] on it [the project], alright. Now the idea there is that the product, the end result is sort of crucial. This may in fact be the dominant mode of education, you know. If I were to come into, you know, second year and I'm asked to make project statement to give to the students. I'll write that project statement down with a set of fairly standardized exercises. Then I can say that they have learned very specific things by conducting these exercises. It

also allows me probably an easier grading because I stand up the projects at the end and say this is better than that, that, that, you know, so that I can sort of rank all of that. Um, and so it's a very teaching-oriented kind of thing. You know some people are really very good at this, alright, and students do sort of well in this, and yet it's a, you know, it's more oriented in the model of "I have this to teach." And it's the, you know, it allows the standardization of exercises, every student being treated you know, the same way because they have to do the same project.

Now another model of studio teaching is that it is a partnership, alright, that it's the students responsibility to do that design, and that my role as a teacher is simply to be that critique. To encourage them to say, this is good that's is not good. To let them make their own decisions to let them make their own mistakes, alright. Umm. And that would be an issue. So you take these two models, and we have teachers that work both ways in this program, ok. You see something in those studios. The teacher in partner studios, you can tell who taught them, alright because the design turned out pretty much the same. The teacher-as-critique studio, everything comes out differently.

Mike's thoughts

Mike described criteria that he used for teaching, pointing out what his expectations were for students and what he thought their expectations were of him. In his point of view,

Teaching any first year studio is extremely difficult. And I think that the difficulty rests on the issue of communication. Professors talk a certain way. Professors are certain personas. Students who are in their first year, truly their first time on campus, would have no clue that they would be that close to a professor. They could

probably imagine a lecture course like psychology. They cannot, unless they have gone through some sort of art studio background, understand that the professor can be within an eyelash distance away for hours. And that has got to bring about a certain anxiety to them. How do I, I mean, this is real personal. There's this person who's just not afraid to walk through studio and say anything, not afraid to pull out someone for an example for either good or bad. You know. "What kind of space is this?" [the] freshmen have got to be thinking. So what do you do as a professor in first-year? I can't say I know. It's a tough thing. There are some professors who are extremely frustrated, there some professors who have developed a technique to a science, and can draw out of students what they know they must have and to get them to perform well. And some struggle.

One thing, at least for me, the freshman does not understand a professor who wants to give them independence. For them, that's [giving them independence] you abandoning them. So when they understand that a professor is there and is supposed to be close, when that professor lets go, they feel alone. The problem is that the system easily creates a parental kind of configuration in the relationship between the student and a professor. And when the professor, and he or she has to at some time, the student then thinks that you're not doing your job. "Your not helping me enough, you're giving me a base of answers now tell me what I'm supposed to do." And that's a fine line that I think a professor has to walk. So how much parenting? And how much professoring? But you're also, I mean, your trying to get them to see, if nothing else, what the nature of design education is which is a way of learning.

Mike was able to trace how his student experiences impacted how he taught.

I would say that my entire undergraduate experience was uh, existed in three forms. One was just, the first couple a years in part, a display of competence as well as just general conception, the second was a definitive construction, materiality, sweat kind of work in studio, the third was a really theoretical research, rigorous understanding of what design could be. And I left school with that.

By the time I got to fifth-year, I had the professor who asked, and this may seem odd, but who asked, what I thought for the first time, and not only asked, but also gave the opportunity and the space and time to do research! [laughs] in a design studio! And this was in fifth-year, this was in the diploma project an option studio. She said, "I want you to the spend he first four weeks researching. Now I want you to make things that represent the knowledge that you gain from your research." So this was uh, new to me. Four weeks to explore knowledge, ok. That did wonderful things to me, especially after the success in the fourth-year studio. Because what now would be the meaning I would try to insert or cause to emerge in my architecture.

Uh, so how does that impact what I understand to be the culture of studio? Uh that I enjoy! I am essentially trying to build on those things. The difficulty with that is, my students at the level at which I teach, throughout the entire program, they don't have 10 years of experience in practice, ok. So they do come wanting to know how to make a building, just show me that, I don't know, I mean I want this conceptualization, I mean, "I don't want this theorizing of architecture, I just kind of want to know how to make it." [imitating students]. So I had to try and figure out ways to challenge both sides of the line, regardless of where you're coming from or what your experience has been.

Now for me that makes my studio a very loosely defined space. My framework is not the most important framework. I have one, and I will share it with the students and I will say, "here is what I am expecting," and in the same sentence I will say, "but what is most important is what your aspirations are. And if you are willing to step out on those aspirations please do. If you are willing to challenge the framework, please do. But don't dislike it and use that, or disagree with it and use that as an excuse not to engage yourself in studio."

There are times when I would also come in, and students can attest to this, I would come in at night or whenever they would want me to. I was known to be in the studio from 2 to 4am when they were there. I was known for being in there over the weekend, and I would do this for intermediate students, fifth-year students, no I haven't spent any weekends here.

Julie's thoughts

Julie had described her experience in studio before she went to Rome. This experience in her fourth-year studio at Iowa State University made a lasting impression on her – about the way she viewed instructors and her self in the design studio.

I think fourth-year, is very like strict, chalk-board written into the programs. I remember fighting, like every day, fighting, for my project and that was a big revelation for me, I hated it and I did fight the whole time and finally I got recognized at the end, and I was like ok! Finally I achieved what I wanted. It came out nice. For my professor to say, Julie I finally see what it is that you're doing at the end was like best comment that I could ever receive because it was such a battle the whole semester.

It's just a really tough, bad semester because they're so, "it's got to be a building, it's got to have a sitting room" [imitating the professors]. And to me it seemed as though every one was arranging boxes. And that's not, anyone can arrange you know, but why ...Yeah, that was an interesting semester because, because of my peers seeing me you know like, you know like arguing, I had a couple of friends who felt the same way, and were just like, "just stick with it! [her own projects and ideas] You will learn something this semester." You [the student] don't have to go along with the professor, and I'm not saying that I'm right by any means and they have something that they are trying to teach that semester and I try and realize that. But what I mean, uh, by following along I wasn't going to learn anything, so ...

It wouldn't be good to be completely opposing, like, I think every, um, both people have something that they bring to it. I mean and I think as you move up through the years you have more of a sense of what it is you are trying to do too. But the professor initially has, you know [control over everything], especially in first-year ... I've been mentoring a [first-year] class and that makes it kind of interesting I remember when Chad switched the program and I just remember seeing the buildings [project models] in the atrium. And one of my friends who is in architecture, we just sat down there and discussed why they change it [the project in relation to her experiences in first-year], you know, why are they doing this and for some reason I think that it's great. But it's interesting that I wish that they would do that [change the project so that it reflects the student's personality] with fourth-year. You know.

In first year I was kind of scared about it at first because I was like you [the freshmen] don't know how to experiment, you don't know anything, you know, you really don't, you're just kinda thrown in there, but it's probably good because they are getting that creative, like, thinking outside, and you know, like thinking about things that you really should be grasping.

Analysis. In his narrative Chad identified several factors that influence a professor's method of teaching in the design studio. These factors included the professor's personality traits, which is an overlapping factor between Chad's and Julie's narrative, as well as the teacher's perception of the student and grading criteria.

Chad's narrative also identified several teaching types. These teacher-types affect the way studio runs, how the assignments are designed and how people interact. These teaching types are (a) *Master-Instructor*, who has much power over the student, (b) *Partner-Instructor*, who designs projects together with the student, and (c) *Critic-Instructor*, who encourages students to think on their own.

Mike mentioned other influences on the instructor's teaching methods in his narrative. These included the difference of level of study requiring different instruction. A higher-level studio may require a more independent approach. Another influence mentioned was the students' tendencies to have a "traditional" frame of mind, where they challenge the professor to use lecturing techniques. Julie talked about her professor challenging her learning technique because he had a traditional mind frame. Misunderstandings between the student and professor can therefore occur in these situations. Mike's narrative also revealed factors that influenced his teaching methods, which were, (a) his life, and (b) his undergraduate student experiences.

From a student's point of view, Julie spent most of the interview time talking about the professors and how they affected her positively or negatively. In the narrative presented, she accomplished prestige and power. After that conversation, she said that her peers respected her for her "rebellion". It was evident that she had developed her confidence from pre-architecture to fifth year. She was confident in her ideas in her last two years of design studio, which contrasted her uncertainty as a freshman. This may indicate different maturity levels of upperclassmen, which may inform an instructor on the teaching type to use. This also may inform the instructor on the learning style of the student.

The key theme had to do with the use of teaching techniques, or types, or styles and methods, which are informed by certain factors (personality, values, beliefs, life and undergraduate experiences).

The Project

Chad's thoughts

Before Chad presented this narrative, he had just finished explaining the difference between the formalist and the aesthetic exercise (project). He voiced that he was not happy with the way instructors correlated other topics and the projects that they do, because that did not assist the students in learning how to apply these topics to professional practice. An example that he gave was that the correlation of history and technology to the final product of the project (the model or the drawings) did not exist.

The fact that [a] city wants this building [a certain building] for very social and

political, and environmental reasons [makes the correlation between what is taught

in the classroom and in the studio important]. All this stuff [aspects that architects

have to think about like drawing and history] comes together in that design project,

ok. If I were to critique studio education in this place, is simply that that [the

synthesis of social, political and environmental issues in a design project] doesn't

happen.

> *We're so interested, in teaching the students to be creative, that we don't have*
>
> *any time to do that [teach them how to synthesize those matters]. That we don't do*
>
> *precedent projects or study history, or show the relevance of history to any studio*
>
> *projects that we do, ok. We seldom get a project to the point where any of that*
>
> *technical knowledge can come in, you know. You know, second-year maybe tries to*
>
> *do some of that, but what can you do, like this [is] where students get confused. [For*
>
> *example] if I have to make a joint ...*

> *A student came and told me whether they were wrong or they were stupid or*
>
> *what. Now this is the highest-ranked student in second year*

> *"Maybe, I'm stupid but I think this project is really dumb."*

"Well what's the project?" I ask.

> *"Well I have two materials, glass and linen, and a word called bond to make*
>
> *a joint. And I went to look around what bond means, and the only way we can*
>
> *bond glass and linen together, is by heat. And we don't have a 3000-degree*
>
> *temperature, access thing on campus, so we can't bond glass. So I asked my*
>
> *instructor what to do, and he said that I should just use glue' [laughs] 'Is this*
>
> *dumb or not dumb?' What do you think? 'I think it's a dumb project!"*

Now at the same time we want the students to incorporate some of the technical stuff

in there, alright. So they have to draw a wall section through the existing, building of

the art center, that drawing, cutting, a wall section, alright. Here are two projects that are, one of them being teaching them creativity, join glass and uh, which may be reasonable to do, ok. But this other project is teaching them to do a technical drawing and those two things have no relationship to each other. So students get confused.

Another project that the students are asked to do is do a piece of public art using digital media, right. Well, you know, in Columbia, public art is fifth-year program, and they get a week to do this project right, and do media. It's pretty complicated. They get a week to do that right? You know, this is teaching ego, that's what it's doing. I can whip up a public art project, in two weeks, I can do a video in, you know, a week.

Mike's thoughts

Mike and I had been discussing his style of teaching. He described a studio instructor that allowed students to do what they had a passion for as long as they met certain criteria. These criteria were affected by a project's amount and quality of work produced.

I want to talk to you [the student] every week, but I have got to do that on the grounds that you sign up [talking about the studio that he teaches]. Not me coming around invading what you are doing.

I give them a space of time, and another thing that I do is constantly go throughout the studio when no one is there, ok, to see the development that's taking place. And I also ask that they use the walls to put up their work. This is a way they can also learn and this is a way that those coming through the studio can see what's

going on. So I do that and when I see very little on the wall, very little on the desk, I

know that they have not been working.

Julie's thoughts

We had been talking about professors and what she thought about their role in the

design studio. She specifically talked about her second-year professor who encouraged her

to do whatever she had her heart's desire to do. While talking about this she describes her

project.

> *She [the professor] would bring things in, you know, "look at this," or look at this*
>
> *material, have you ever thought about doing something this way. You know go for it*
>
> *Julie, don't you know, like ... I was trying to do something about heart transplants, or*
>
> *relating it to my bridge hub, which is ridiculous, but you know, here we are with these*
>
> *grand ideas and schemes in second year, but she was like, "do it, don't back off" and*
>
> *that was really, really great she was phenomenal. I think its just personality.*

Analysis. In his narrative, Chad suggested that the studio determines how well practice and

education are connected, through the project. This is because only certain things are taught

in academics, which may not correlate to practice. An example of this is the idea of teaching

students "design" which is an academic goal of architecture design studio, and "structures"

which is necessary to make buildings stand, and never disregarded in professional practice.

By focusing on design with no correlation to structures, the design studio and practice

become disconnected.

Another thing that Chad said about the project was that there might be confusion

about the congruency. An example of this would be when Julie "rebelled" against her fourth-

year instructor. Since the instructors design the project, they become the main determinant of

the atmosphere in the design studio. Mike's criteria and expectations of the students with regard to the project clearly indicated that he set the stage for the students. Also, Julie's second year instructor allowed for interpretation of the project, which may have contributed to the confidence Julie has now.

The Student

Chad's thoughts

This is a narrative taken from the second interview. I had finished summarizing what we had talked about during the first interview and gave Chad a list of emerging themes. He picked one of the themes (how first- and second-year students feel in design studio), and we started the next interview in that way. In the third interview, part of which is presented here, he talked about the fifth-year students.

Well, I think they [first and second-year students] feel pretty good in the first-year, even though they are under a lot of stress to get in to the [professional] program. Most students in the first year seem to have a very good attitude, all right, they seem to be cheerful, they seem to do a lot of work, you know. They really, uh, work quite heavily, ok. So I would say that you know that first year, that you know, that even though they have this stress, of "how am I going to get into the program?" [whining] they generally seem to feel pretty good. At least, you know, the evaluations that I've seen of the course are generally really good.

Then we ask students to do an independent project in fifth-year. Um, ten students, I have ten students in diploma studio [the independent project in fifth-year]. Two students can do an independent project. Mostly because they've argued with

their instructors all the way through, you know, and so they've developed a sort of independent attitude. But most, the other eight students are really expecting me to tell them what to do, and Mike has the same issue. That's about the ratio, you know, 20%.

Also, the presumption is that someone who's 18 years old knows what they want to do. There isn't a lot of time given to you know, given accreditation requirements and all that kind of stuff, for a student to search around, find out what they want. The model that I like in beginning education is you really throw them in the deep end of the pool. This is what architects do. Do you like or don't like it? If you don't like it then pick another major. If you like it and you got the skills ... So I tend to throw buildings at them rather than cubes, alright. Something tangible, so that they can see what architecture really is.

In some studio settings, the assumption is that students coming into the first year either don't know anything about architecture or the stuff that they know is pretty bad and we got to erase it, right, it's called the blank slate model, or the tabula rasa, you know. Or the slates been scribbled over with a bunch of junk and the first thing got to do is erase it. So that's the kind of model. And the presumption behind that model has always been so interesting.

Mike's thoughts

Mike and I spent a great deal of time discussing his teaching method. He gave me the syllabus for his courses, which helped make some connections between what was required and if those requirements are being fulfilled.

So I try to make things pretty definitive. So what does that do in the studio? That puts an incredible amount of responsibility on the students. I think unlike they have ever experienced before they get to my studio, and I think that it has caused both problems and good things. Because the students in my studio will feel the pressure to be responsible and students do not always want that. They need and want boundaries, they need and want prescriptions, uh, and those are the things that I say, "you must construct for yourself." And some students fare well, and some students do not. None-the-less they all come through with an understanding that it was yours to do [laughter of satisfaction]. Oddly that has made me in the course of teaching four or five years, to really hone my framework, to hone my method of communication with them, so they can become clear.

Students [in fifth-year] kind of know what to do. And so, if I say, "I want you to make a floor plan at 1/4 inch scale of this," they will do that. If I say, "I want you to show me how your spaces are organized, which is in essence the information that comes through a plan," ok ...That causes them to think more and that tells me whether or not they are willing to think more, ok. But if they say, "what do you mean?" It becomes this dance between teacher and students to see who is going to give it [the complete set of directions on the instructor's part, and the energy it takes to think on the students part] up the earliest.

Julie's thoughts

Julie's narratives mostly revealed her personality, her values, and the impact that professors had on her undergraduate life. In the narratives presented earlier, Julie's experiences shaped the way she viewed certain professors. Also, Julie was clear about the

type of teaching she preferred. She wanted to be independent, yet at the same time have structure. The stories that Julie told me talked intensively, about certain professors and what she preferred about those professors. Because of confidentiality (for the respondent and the professors), I will not present those stories. But in the narratives previously presented, Julie discusses he satisfaction with her second-year professor and also talks about the encouragement that she received from her peers when dealing with her fourth-year studio.

Analysis. Chad talked about several things that he valued, and that he assumed about students. The first theme was the assumption that students come in with a certain attitude. He talked about students who had argued (much like Julie) with the instructor, as those who had an independent attitude. He also relayed two assumptions of freshmen students in pre-architecture – either they knew it all, or did not know anything at all.

Mike touched on the students' attitudes in the architectural design studio. He said that their ability to learn depended on their willingness, whether they were given assistance in finding their own framework and whether their need for boundaries were met or constructed by themselves. Julie's narratives showed examples of the frustration of having a professor, the joy of being recognized by that professor, and the struggle to apply one's own framework to their project.

Although the instructor may set the stage in the studio, the project creates a dialogue and emotions from both the instructor and the student. In the architectural design studio, the project may foster interaction, and thereby create expectations between the student and instructor. Mike talked about the quality and production that he expected from the students, and Chad exemplified his reaction due to a lack of work during observations, during observations.

Observations

My first observation and interaction with Chad's students occurred about two weeks after the second interview. It was an observation of Chad's first-year studio in the Armory.

The Studio

The studio that I walked into was not full of students. There were about thirteen students present, and from what Chad had told me he had nineteen enrolled in his class. The students were working and Chad was not there yet. I walked around the room where the table and chairs where higher than usual because they were drafting furniture. They were arranged so that they were not allowed to be in the "fire lanes," which were taped off using blue tape. The low partition walls allowed for all sorts of noises like drills and radios that students were using in the other studios to create a din. The ROTC voices were also loud. The students did not mind that at all.

Some of them just sat and waited while others worked on some of the drawings and models that they had created. It was 9:10am and Chad walked in. I noticed that some students straightened up and looked at him, expecting to hear something from him. He walked straight to me and greeted me, introducing me to the students (although I think they already knew me). Some students kept on working while others just sat around doing nothing, or waiting to be addressed by Chad. After explaining to him what my intentions were, he went about his business. He looked around and he seemed to be attracted to a particular student's work. This student had much going on, on his desk. It was quite cluttered, and as Chad walked towards him, he seemed to not notice because he was engrossed in his work. Chad spent sometime with him and walked around again, looking for work. Someone put up his hand and he went to talk to him. This person did not seem to

have as much work, and Chad spent less time with him. Students walked in and out of the studio freely, talked to each other and asked each other for help. Other students strolled into the studio, after 9:40am. They did not seem to be in a hurry, and plopped themselves at their desks. They were carrying stuff (which was their work). Once they got situated they pulled out their work and started working, occasionally talking to the other students and asking them what Chad had talked about while they were gone.

Chad and the students took breaks, and when class was over at 11:50am, some of the students stayed behind. Particularly, the one who stayed the longest (until about 12:15pm) was the one with whom Chad had spent the most time with.

The Jury

Another observation that affected the scope of this research (which I have already alluded to previously) was the interaction that I had with Chad and Mike at their combined studio review. It took place on the fourth floor of the College of Design at 1:00pm. I had a meeting until 2:00pm, so I had told Chad that I would not make it for the first few reviews.

When I walked in, everyone turned to look at me (well, not everyone, but it felt like everyone). The area was on the landing of the fourth floor so there was a lot of movement of people from the stairs and the elevator (which made a noise every time somebody got onto it). The area was quite enclosed, though, because of some partition walls that were cleverly built out of perforated metal, and served a dual purpose for hanging student work. So the place was open for anyone to walk into and observe.

I did not sit down yet because they were still in the middle of a student's review. All the students were seated behind the reviewers/jurors and most of them listened intently to what the reviewers had to say (some students were barely staying awake). I noticed that

nearly everyone who was presenting was dressed formally. Most of the reviewers, including myself, were wearing some sort of black item of clothing or a dark color, and indeed they looked professional and important. One student made a comment about his classmate's work throughout the whole session. When the review was done, which happened when the reviewers did not have anything else to say, everyone clapped. During that particular review I realized something about the work that was pinned up on the wall. It was different from what I was used to. What I am used to are models made out of wood or some other materials and drawings on paper or computers. This review was different in the sense that the student had brought in some pictures of process work about someone's life. It was quite interesting and reminded me a lot about qualitative research. She was designing a space for someone and got to know the person before she did.

During the reviews, terms like *structure* and *process* were used. Each reviewer, including myself, had a chance to talk. Not necessarily one after the other, but rather talked whenever they thought it was convenient, usually building upon what had already been said. Clarifications were asked for and suggestions were given.

In one of the other reviews, which was less the architectural norm (buildings) than Julie's, Mike was specifically interested in it, especially because of the process that was taken to get from one point to the next. For being a midterm review, the amount of work was astounding. Chad was interested in the more extreme work as well, but also about the reality of things. He voiced that he wanted to know how things stand up and the experience of being in the place. Mike talked about the process of making things and the application to the building process. I would rather have not talked but just observed.

When I had to leave everyone thanked me with a nod of the head and Chad invited me to another review, which was in conflict with something else that I had to do, so I couldn't go.

Analysis. Chad had the tendency to talk to students who had more work for a longer time, than those who did not have much work. The students seemed to be free around Chad. I could tell, some students were trying to avoid talking to him, others kept doing their work, and yet again others tried very hard to get his attention. During this observation, I recognized that Chad had specific teaching methods, values, and even his expectations of the students.

During one of our random casual conversations, I asked him what he thought about the amount of work that students produced, and he confirmed his actions, when he explained to me that the work the students showed him during class the main criteria for grading. The process that the students went through from the beginning of the project to the end was important, and how they presented it at the final review at the end of the semester. He also looked for unique work, work that stood out and caught his eye.

Mike and Chad seemed to have similar interests during the review process. The major difference between their opinions was the difference between process work and work that had to do with reality. Mike never said that he was not interested in the reality of things, but his comments made it seem as though he was more intrigued and valued process work more. In a conversation that we had, Mike talked about his desire to learn about process, yet at the same time learn about reality (conceptual and realistic work), when he was a student. This conversation did not correlate to his actions during the review.

Conclusion

The preceding section presents the data (the stories) of the respondents and illustrates how these data were analyzed in terms of drawing out issues and themes. The narrators in this study contributed to the development of themes through the stories that they told, as well as *member checks*. Since the goal of this study was to was to inquire about the culture of architecture design studio, focusing on *teaching styles*, and to pilot test a methodology that could be used in a larger study, the information derived from the analysis, particularly *the design studio, interaction* and *teaching styles*, also will be compared with the existing literature in chapter 5.

Summary of Key Themes

The design studio

1. The design studio is centered on projects.

2. Design studio is the way of life of students in architecture.

3. Design studio is the center of architecture education.

4. The learning in design studio occurs through a process.

5. Design studio is made up of diverse mindsets.

6. The design studio allows for:

    a. Knowledge gain.

    b. Interaction between individuals.

    c. Learning through discourse.

7. The design studio may cause separation depending on the teacher's teaching type.

8. The design studio may foster competitive environment.

9. Design studio sometimes requires uniformity in assignment.

10. Design studio has the ability to rank.

11. Professors in design studio could work together.

12. The design studio can foster idea of experimentation.

13. Student independence of thought process.

14. Design studio fosters learning through doing.

Interaction and its Importance in architectural design studio

1. Interaction as a value of time, where they spend many hours together.

2. Interaction as a value of difference.

3. Interaction as a value of sharing.

4. Interaction due to level of maturity.

Teachers and their teaching

1. Former teachers affecting the teaching styles of the instructors (Undergraduate experiences).

2. Grading as an issue because grades are value-based (subjective).

3. The teacher's perception about the student; Teacher-types:

    a. Master/Instructor: who has much power over the student.

    b. Partner/Instructor: who designs together with the student.

    c. Critique/Instructor: Who encourages students to think on their own.

4. Personality traits of the instructor.

5. The traditional frame of mind being brought into the studio by students.

6. The life of the instructor affection their teaching methods.

The project

1. How well practice and education are connected because only certain things are taught in academics, which may not correlate to practice.

2. How well the student reaches the objective of the class because there might be confusion about the congruency of the assignment.

3. Could give reasons as to why a student 'stands up' to do their own project (like Julie did).

4. The instructor is the main contributor to the design of the syllabus, so can steer how this occurs.

5. Expectations of production.

The student

1. Whinny.

2. Having much work but still in good spirits.

3. Still needing to be directed when the get the their fifth-year of study.

4. Seen as good when they rebel in the fifth-year because it means that they are independent.

5. Needing boundaries.

6. Come out of the course understanding what the objective was, not to impose values on them but to help them find their own.

7. Not understanding why questions are framed the way they are in the design studio.

8. Having the ability to think more based on their willingness.

Not all of these themes were discussed or investigated fully. So the reader should bear in mind that these are a presentation of themes that emerged, that were not necessarily discussed in the fourth or the fifth chapters.

CHAPTER 5

DISCUSSION, IMPLICATIONS, RECOMMENDATIONS, LIMITATIONS, FUTURE

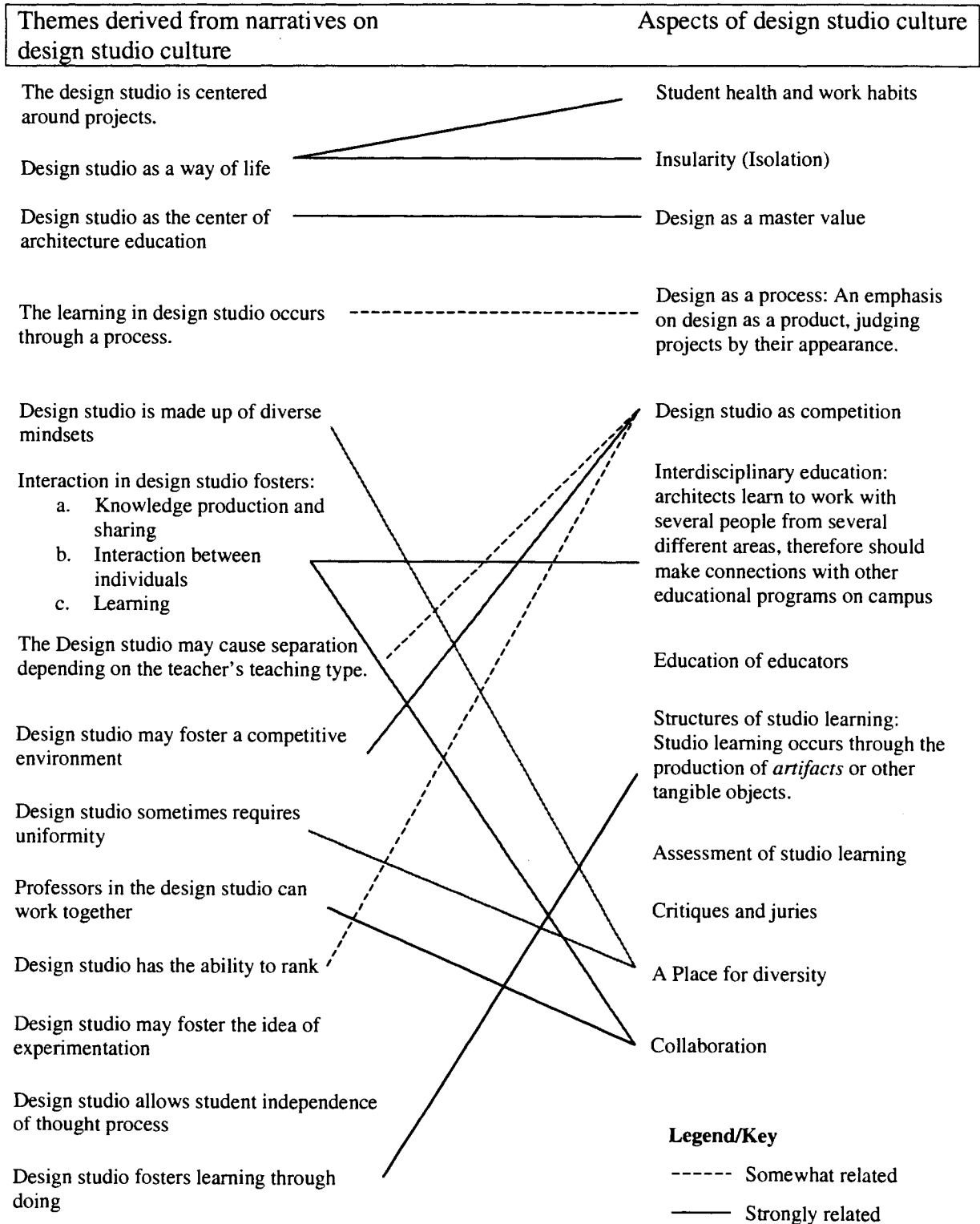# ASPIRATIONS AND CONCLUSION

Introduction

The purpose of this chapter is to discuss the themes, findings, and implications of this

study, which will begin to answer the questions – what is the architecture design studio

culture? What are the roles of the participants, particularly the instructor, in the culture?

What are the teaching styles in the architectural design studio? It also will discuss some of

the strengths and weaknesses of the methodological approach in preparation for attempting a

study similar to the pilot study on a larger scale. Finally, this chapter will give

recommendations for further research and share future aspirations.

Themes and Findings in Relation to the Literature

The culture of architecture design studio

As discussed in the literature review, the AIAS Studio Culture Task Force produced a

report in 2002, which identified what they believed to be important aspects of studio culture.

Using these aspects that identify key elements of the architecture design studio its culture

was described. Figure 2 compares these aspects with the ones that emerged in this pilot

study. Out of the themes that emerged I identified seven aspects that were comparable in

both lists. These included: *Student health and work habits* and *Insularity*; *Design studio as*

master value; *Design as a process*; *Interdisciplinary education*; *Structures of studio learning*;

Assessment in studio learning; *A place for diversity*; and *Collaboration*.

Figure 2. A comparison of the design studio culture aspects (AIAS studio culture task force, (2002) and the themes derived from the respondent's narratives on design studio culture

| Themes derived from narratives on design studio culture | Aspects of design studio culture |

The design studio is centered around projects.

Design studio as a way of life

Design studio as the center of architecture education

The learning in design studio occurs through a process.

Design studio is made up of diverse mindsets

Interaction in design studio fosters:
   a. Knowledge production and sharing
   b. Interaction between individuals
   c. Learning

The Design studio may cause separation depending on the teacher's teaching type.

Design studio may foster a competitive environment

Design studio sometimes requires uniformity

Professors in the design studio can work together

Design studio has the ability to rank

Design studio may foster the idea of experimentation

Design studio allows student independence of thought process

Design studio fosters learning through doing

Student health and work habits

Insularity (Isolation)

Design as a master value

Design as a process: An emphasis on design as a product, judging projects by their appearance.

Design studio as competition

Interdisciplinary education: architects learn to work with several people from several different areas, therefore should make connections with other educational programs on campus

Education of educators

Structures of studio learning: Studio learning occurs through the production of *artifacts* or other tangible objects.

Assessment of studio learning

Critiques and juries

A Place for diversity

Collaboration

Legend/Key

------ Somewhat related

——— Strongly related

The importance of studio to education in architecture and to the definition of architecture culture, which is included as, *Design studio as the center of architecture* and *Design studio as the master value* in the AIAS report, indicates the importance and central value placed on the studio within the culture. Chad's narrative is quite specific to this.

> *It's project! Ok! And that project occurs in a place called a studio; and the expectation is that everything that you know, ok, will somehow work its way into the design project through a process. Um, So, you know, in architecture, uh, many of us see the design studio as the center of architectural education.* (see p. 78)

This is not surprising, as the historical and other related literature also include this theme. Stevens (1998) describes this tendency for students to spend most of their time in the design studio. Corona-Martinez (2003) adds that this results in a disregard for other classes. This value or stress on the studio was also borne out historically as seen in the *atelier* during the Bauhaus and Beaux-Arts periods (Gropius, 1937, 1968; Weatherhead, 1941).

The design studio being the center of architectural education is correlated to, *Design studio as a way of life* for the architecture students because students spent most of their educational time in the studio. I believe that this theme is equivalent to two of the aspects that the task force identified – *Insularity* and *Student health and work habits*. Chad argued that if culture was defined as a way of life, then the architecture design studio is the students' way of life (see p. 78). Not only does their psychological and physical isolation (*insularity*) (Stevens, 1998) affect their ability to judge what occurs outside the world of being an architecture student, but it also affects their health (Boyer & Mitgang, 1996).

The AIAS report makes a central point of the competitiveness of design education. Other literature also includes this (Anthony, 1991; Dutton 1987; Steven, 1998). Stevens

(1998) believes that studios today have competition due to the pressure of the "good" student's desire for status. Although competition was not the key theme from the narratives of this pilot study, Mike did talk about being at Iowa State University during a time when the freshmen did not have designated studios and had to find a space to work, as increasing the sense of competition. I might postulate from Mike's description that, even though this increased the sense of competition, it may have reduced the effects of insularity (isolation). Competition was encouraged between studios in America by the introduction of the Beaux-Arts competitions in 1894 (Weatherhead, 1941). Also studios today are said to have competition due to the pressure of the "good" students to remain in their status (Stevens, 1998).

While the competition discussed above is between students, another kind of competition in architectural education is defined as the competition that occurs sometimes between the faculty and the student (Argyris, 1981). Mike demonstrates this power struggle between the instructor and the teacher by saying that there is a, *"parental kind of configuration in the relationship between the student and a professor"* (see p. 90) a with regard to classroom management, as well as *"his framework"* having the ability to be *"challenged"* by students (see p. 101). Julie expressed her struggle with a professor, when she expressed that *"by following along"* she was not going to learn anything (see p. 93). The AIAS Studio Culture Task force (2002), Anthony (1991), and Dutton (1987), therefore saw competition differently than Mike, who negatively valued competition in his comments.

The Task force aspect, *The structure of studio learning*, correlates to the narrative theme, *Learning through doing*. Chad said that the design studio values work production. In the conversation we had after the first-year studio observation, he alluded that the production

of work was one of the grading criteria (see p. 103). The production of work through hands-on exercises was also important to Mike. In his narrative, he said that, that is how he determined who was working or not (see p. 97). Also another studio characteristic is that there is a differential of power between the student and the professor, which was previously discussed. The idea of producing in a design studio is not a new one. Even during the Bauhaus era, Walter Gropius' studios were called workshops because of their production (Gropius, 1937).

The identified AIAS aspects, *Interdisciplinary education and collaboration*, I believe are parallel to the narrative themes, *Interaction* and *the professors working together*, in the design studio. The AIAS described the architecture as giving the opportunity for a broad knowledge base and interaction with several individuals to occur. Though the AIAS described interaction between disciplines, the respondents described interaction that occurred between the students and the professors. Mike described a collaborative effort between professors during his initial first-year experience, Chad described students helping each other and increasing their knowledge base, and Julie described the lack of interaction, leading to less socialization (see p. 84-86). Cuff (1991) and Fisher (2000), described the need for collaboration and it's benefits to the architecture student. They mentioned collaborating within the design studio and across disciplines.

Finally, the last two that coincided were *the studio as a place for diversity* and *Design studio as a place for diverse mindsets*. The Task Force voices their concern on the matter of diversity in terms of race, ethnicity, and gender (AIAS Studio Culture Task Force, 2002), while Chad talks about the diversity in talent and skill. Historically the architecture profession has been predominantly homogeneous. The AIAS report expressed its fear that

"many professors work against" the "reproduction" of a diverse learning environment (AIAS Studio Culture Task Force, 2002, p. 18). Although race and ethnicity were not particularly themes that emerged, diversity was seen by Chad as intellectual (see p. 84).

Two themes I am personally concerned about that Task Force has not addressed are the separation that can be caused, in the studio, through ranking or even favoritism, which does not create a healthy learning environment, this can be influenced by the instructor's teaching types. In relation to this, Mike said,

> *Whatever the assignment was turned in, you were graded and you were ranked according to the entire class. On point basis. You knew where you stood. And you knew if you were out of like a 300 point total, and that if you were somewhere at midterm, not beyond 100, it was not going to happen for you.* (see p. 80)

This technique does not happen any more in the Iowa State University design studios, but it did, and it still happens in our educational system as part of the criteria for accepting students into the architecture program, though this time they use high school rank giving it a weight of 15% (The Department of Architecture, 2003). This ranking system does not usually determine the retention of a particular student, nor does it create a collaborative atmosphere in the freshman studios. It fosters competition.

Interaction in the Design Studio Culture

When these narrators referred to interaction they meant interaction through conversation or joint activity within the context of the design studio. Interaction also was expressed by Blumer (1969), who said that it is an action that people do together while talking and thinking. Strauss and Corbin (1990) and Gone, Miller and Rappaport (1999)

described interaction in relation to the narrative, suggesting that interaction produces a narrative.

Interaction was understood through the social constructivist position, which is an interaction theory, and symbolic interactionism, which is a methodological perspective. They helped inform the narrative analysis and grounded theory study approaches (Orona, 1997), which are approaches used to study interaction. The theme that emerged in the narratives dealt with the values that the respondents had in the design studio, framed in interaction. Chad said,

> *The traditional value maybe, um, is that since studio requires all these hours of effort*
>
> *outside of studio, that when all of the students are there, they help each other put in*
>
> *that kind of effort.* (see pp. 84-85)

This section of his narrative relays the amount of hours the students spent together in the design studio, as a time when students can help each other. The understanding of the students' interaction is framed by the social constructivist theory, which is based on reality, knowledge, and learning (Derry, 1999; Kulka, 2000). Reality would be built during the time that the students spend together (Gredler, 1997). Also, learning would occur not only during designated class time, but during times when social activities occur (McMahon, 1997). Julie voiced her concern for her culture when she expressed her frustration about the interactions that did not occur in her class as compared to other classes prior to hers (see pp. 85-86).

In essence, she said that they do not get a chance to interact, which was not helping their knowledge base, since knowledge is constructed through interaction (Gredler, 1997). Symbolic interaction helped me understand the meaning that she gave to her experiences,

through interaction or the lack thereof, and interpretation. Another important theme under interaction emerges from Chad's narrative:

> *The real value of students in studio is that they have different perspectives and*
> *different abilities, um, different levels of skill development. Knowledge. And in this*
> *interaction with each other, they can share that, alright, um, with each other, so that*
> *they can begin to get a different perspective, they begin to see different abilities that*
> *they want to acquire.*

The architecture design studio encourages students to teach each other different skills. The belief that shared understanding comes from cultural-, historical-, and knowledge-based factors due to interaction is followed by social constructivists and symbolic interactionists (Rogoff, 1990). Chad clearly said that individuality is of value and that students begin to get different views on the same matter in their environment (von Glaserfeld, 1995, 1996). With regard to history, it is hard to overlook sharing quality that students have. The *ateliers* at the Beaux-Arts in France fostered this construction through the students running the atelier. Symbolic interactionism creates a basis for the creation of meaning form the sharing that they do (Kim, 2001). This sharing can be done in relation to objects (drawing, models, computer simulations) created through the project, which leads to the production of objects (which I call "artifacts") that are going to be interpreted, and therefore assigned a meaning. One of the conceptions of the symbolic interactionist perspective suggests, "people, individually and collectively, are prepared to act on the basis of the meanings of the objects that comprise their world" (Blumer, 1969, p. 50). When this statement is looked at in the context of the architectural design studio, a parallel can be made between the project and the object (artifact) produced, in the sense that meaning is assigned to it through interpretation. When

the respondents were involved in critiquing or presenting work, it made their meaning clearer to me.

The design studio is only one part of architectural education that helps create a shared construction of the world. In this discipline students are learning a new language (specialized terms), mannerisms, and public speaking, just to mention a few. The instructor in the design studio supports this enculturation because of their experiences in the design studio. During reviews, architectural jargon is used and students observe and imitate the different ways of acting and speaking. Therefore, the instructor is only one part of the equation that describes the design studio culture.

The Teacher and their Teaching Styles

Though the categories that fell under *teaching* and *the teacher* were all interesting, I was most intrigued by the *teaching-types* that Chad mentioned. In his mind he had developed a set of teaching-types with their characteristics. Clearly the historical development of the discipline from the master modes had remained one of the models or teaching types in the design studio (Anthony, 1991; Stevens, 1998; Weatherhead, 1941). What other teaching styles are used in the design studios, as noted in the literature review, has not been a subject of much research.

Grasha (2002) suggested that the teachers' personality and character made up their presence, which is a component of their *teaching style*. So this section also will look at the elements of the instructors' presence as revealed in the narratives. Some elements suggested their personality, interest, and experience. This last category includes not only life experiences generally, but a specific consideration of their experience as an architecture

student. After exploring some of these elements that might affect the teaching styles, I will introduce the three architecture design studio *teaching or instructor types* (*styles*) that were identified: the *Instructor-as-master*, the *instructor-as-partner/guide*, and the *instructor-as-facilitator/guide*.

The reader should bear in mind that the elements represented in this study do not represent all instructors in the design studio. Every instructor has a different teaching style preference. Nevertheless, these elements are grounded in the narratives told and further research probably will reveal more *teaching styles*.

The Teacher

The instructors' professional and life experiences, together with student experiences, personality, and interests, are some of the factors that contribute to shaping a person's, attitudes, beliefs and preferences, as well as their knowledge base. Mike's narrative on pages 89-90 illustrates this, with his discussion on "frameworks."

Professional and life experiences.

Chad and Mike both were practitioners before becoming professors. Both faculty members said that their views on architecture and learning were strongly influenced by their experiences. Mike in particular said that the experiences he had impacted how he taught (see p. 91). He also described how they impacted him and how he was applying what he had learned from those experiences. Although Chad, after being in the practical field, found that practitioners were valuable assets, he did not say specifically that his practical experiences influenced his teaching. However, he did mention that the correlation between what was

taught in the architecture design studio and what was expected of practitioners in the field should be evident (see p. 86).

Practitioners initially taught at and establish architecture schools (Kostof, 1977; Van Zanten, 1980; Weatherhead, 1941). Some of the *ateliers* were even located in their personal offices (Whetherhead, 1941).

Student experiences

Faculty generally are impacted by their own experiences, and their experiences as students, specifically by the personality and teaching styles they encountered in architecture schools. Chad notes learning like certain masters (see p. 87). Mike mentions different experiences as a freshman, with very rigid school exercises and little contact with students. He compared that experience to his experience with a teacher who focused on-hands on experimental learning. He also compared his freshman experience to another professor who was willing to break the rules' rigidity, to accommodate a rigorous explanatory experience, yet with fairly loose restrictions (see pp. 90-91).

Neither Chad nor Mike directly said that they had modeled their *teaching style* after those particular people, but when they talked about how they teach and when I observed them, you could see some of these influences quite clearly. Mike's teaching is oriented toward hands on, rigorous, experiential, exploratory work and requires students to be responsible motivating and directing themselves. Chad's teaching also is geared toward hands-on experimentation, independent student work and providing evidence of learning through the production of work. The dialogue that they both had correlated to what they had said about their teaching or teaching in general.

Even at the University of Pennsylvania, which opened its school of architecture in 1890, instructors modeled their teaching after what they had learned from the dominant model of architecture at the time – *the École* (Whitehead, 1941). The respondents' stories were evidence to this tendency.

Personality and interests

I did not ask the respondents specifically about their personalities, so this section in particular is drawn only from the narratives. Grasha (2002) and Reinsmith (1992) described personality and characteristics as important to teaching styles. Both Chad and Mike were involved with student success activities in the department of architecture, which indicated an orientation to student success. How they talked about the students in the narratives gave insight into their personalities.

Students from other studios come to Chad with their concerns, and are honest about their feelings toward a project (see p. 96). Mike helped students regardless of the hour, and was eager to know their personalities, so he could help them appropriately (see pp. 97 & 101).

Some of the personalities in history, for example, Eugene Létang (the first identified professor of architectural design in America), was said to ignore the lazy students, which showed that he valued students who did well. Also, William Ware who hired Létang, was said to be enthusiastic and to have a passion for teaching (Weatherhead, 1941).

Literature on teaching styles for other disciplines indicated that experience and personality have impacts on the choice that instructors make regarding teaching style. This is probably true for design studio instructors as well. In their narratives, all three respondents told stories, specifically about *teaching style*.

Teaching Styles in the Design Studio

Instructor-as-master

I think fourth-year, is very like strict, chalk-board written into the programs. I

remember fighting, like every day, fighting, for my like, project and that was a

big revelation for me, I hated it and I did fight the whole time. (see p. 92)

This was a recollection of Julie in her fourth year of study in the architecture program. She

had explained to me that the studio that she was in was very strict because of the professor.

She also said that she did not have room to do what she wanted to do. I learned that to be

successful in the design studio, she relied on her goal-oriented personality and the support of

her mother, who encouraged her to do whatever she wanted as a career. Julie and I talked at

length about the experiences that she had throughout her years at Iowa State University, and

this particular experience was one that really stood out. As she reminisced about the battle

that she had in fourth-year, she described her professor as being the type who wanted you to

do what he wanted you to do.

Chad also describes some of the experiences that students have with professors. He

said that because the instructor has the "power" to grade work, it *"creates this issue, creates*

a power differential" and "the studio instructor, who was traditionally called the studio

master," had that *"degree of power"* (see p. 87). This statement goes back to the history of

what the design studio used to be after the appointment of professors (Weatherhead, 1941).

Chad, having been taught in a school that used the same theories, explains that it is not very

common to find this type of professor here, but the *master* approach to teaching has not been

totally erased. He said,

The assumption is that students coming into the first year either don't know

anything about architecture or the stuff that they know is pretty bad and we

got to erase it, right, it's called the blank slate model, or the tabula rasa, you

know. Or the slates been scribbled over with a bunch of junk and the first

thing got to do is erase it. (see p. 100)

Therefore, the *master* or *mentor* teaching types is one who conducts themselves as an expert

and who passes a store of knowledge down to the students. This idea that a student needs the

instructor's knowledge to succeed in a particular course is often the norm in other

departments in a university setting. In most lecture rooms, the student needs the knowledge

that the professor talks about to pass their exams and to go to the next level. This type of

instructor is one that Dutton (1991) referred to as, "Usually structured in vertical relations,

teachers speak in ways (often unconsciously) that legitimize their power, and students orient

their speech and work to that which is approved" (p. 172), thus influencing the students to

adopt some of those characteristics in search for approval from the instructor.

This instructor-type relates to Mosston's *command* style, Reinsmith's

Disseminator/Transmitter style, and Grasha's *Expert* style falling in his first cluster. It is to

the extreme of the teacher-centered philosophy (Duffy & Jones, 1995). The master may not

be the ideal architectural teaching type because of the nature that education is moving in

today – to a learner-centered paradigm (Huba & Freed, 2000).

Instructor-as-partner/guide

Some people may see the *master* style as sometimes being in the *partner* category,

but the major difference between the two is the amount of control that the instructor has. The

Partner who is described by Chad in the following narrative:

One of the models of design studio education, is that the student and the

teacher are in a partnership. That they work together, that the teacher has a

great deal of experience and so they are actively engaged in the design of that

project along with the student, alright. They'll make sketches, they'll say, do

this, don't do that, do this, you know, and they'll actively be engaged in that

project ...It's a very teaching-oriented kind of thing ...You know, some people

are really very good at this, alright, and students do sort of well in this, and

yet it's a, you know, it's more oriented in the model of "I have this to teach."

(see p. 89)

This description of the *partner* really spoke to the essence of what their tendencies are. The *partner's* teaching type functions by allowing the student to come up with ideas for a piece of architecture and will give instructions on how to implement ideas, sometimes drawing on and correcting what they think is not right. They listen to the instructor and follow instructions, not questioning why the instructor asked them to follow the set of guidelines. Chad even went on to say that the work produced by students in a studio guided by this type of instructor turns out similar. Even though the word *partner* is defined in a collaborative manner, this teaching style can move toward the *master* in the instance where takes the stance of a boss and the student the stance of an employee.

This partnering style also encompasses the *formula-teacher* that Chad described. He said that they have a student do "certain things sequentially," and that, "it's a highly structured approach" (see p. 88). At one of my first-year reviews that I had in conjunction with another first year class, Mike asked the student why he had designed a certain architectural piece the way he did and the student said, *"because [the instructor's name] told*

me to do so." Mike then asked the student why the instructor asked him to do that, and he could not answer. This interaction illustrates an example of the student learning through a set of architectural variables, that need to be taught and are imposed on the student usually without encouraging or allowing for the student to question the variables or the sequence.

This style correlates to Mosston's *Practice style* because of these characteristics – It encourages individual and private relationship between the instructor and the student – and *Reciprocal style* mainly because of the aspect of teaching the student to observe and correct errors immediately (see p. 33). All the characteristics are not covered because I think that there are some behaviors like standardization, which is quite unique to architecture. The *teacher-as-partner style* does not correlate to any of Reinsmith's teaching styles. The closest fit would be the *Disseminator/Transmitter* (see p. 35), because of objectivity in that there is a set of rules to be followed. Finally, the partner style can be compared to a combination of the *Expert, Formal Authority,* and *Personal Models* from Grasha (2002) because there are set rules to be followed, information is transmitted, the professor has knowledge that student needs, imitation is encouraged, the professor gives negative and positive feedback, and the professor teaches by example. This clearly would fall in the second cluster (see pp. 38-39).

With Mosston and Ashworth's model, this style would also be seen as more teacher-centered than learner-centered.

Instructor-as-facilitator

The facilitator is an instructor who does not base the studio on the knowledge that he has, but relies on the students to take initiative in the learning process. This instructor will not tell the students what to do, but instead will give advice on certain issues regarding their project. This instructor is like a mentor encouraging the students to produce actively and

physically produce the idea that they have generated, ask them what they think about it, and use the students' own insights to guide them. Chad described it in this manner,

It is not based on the transmission of sort of fact from teacher to student in lecture format, but it involves a continual discourse between a faculty and students, and between students themselves and sort of an exploratory mode of learning, ok. (see p. 79)

The facilitator also tends to rely on the work that the students produce to give them feedback.

By the time I got to fifth-year I had a professor who, and this may seem odd [sarcastically] but who asked what I thought. For the first time! [laughs]. And not only asked but gave me he opportunity to do research! In a design studio! (see p. 91)

When Mike started describing the instructors who I describe as a facilitator, his eyes lit up and there was excitement in his voice.

Now that took a professor that came in with a framework, but allowed people to exist slightly outside of that framework. A high degree of trust in him in order to accomplish what their educational goals were, in addition to what his framework was. Now that was earth-shattering for me! (see pp. 91-92)

It was clear that Mike aspires to be a good teacher by using the facilitator model. Mike called himself a facilitator because his studio is a "very loosely designed space," and concluded that, "his framework is not the most important framework." (see p. 92). He related,

The difficulty with that is my students and the level at which I teach throughout the program they do not have ten years of practice ...So I have to try and figure out ways to challenge both sides of the mind regardless of where you're coming from and what your mission is. My framework is not the most important framework. I have one and I will share it with students and I will say here is what I'm expecting. But in the same sentence I will say, but what is most important is what are your aspirations are, and if you are willing to step out on those aspirations, please do, if you are willing to challenge the framework that I've created, please do (see pp. 90-92).

Mike shows characteristics that correspond to the *instructor-as-facilitator*, which can be related to Mosston's teaching styles from *E* to *K*, which are, *Inclusion, Guided discovery, Convergent discovery, Divergent production, Learner-designed individual program, Learner Initiated*, and *Self-teaching* (see p. 31). It also fits into Reinsmith's *Inducer/Persuader, Inquirer/Catalyst, Dialogist, Facilitator/Guide*, and *Witness/Abiding Presence* (see p. 35), which is the best fit because their characteristics are the same as the narrative descriptions. It also fits into Grasha's *Facilitator* and *Delegator styles*, but does not fit in any cluster.

Létang seemed to be a facilitator, because of his intimate relationships with his students and his need to see progress in a student (Weatherhead, p. 31). These instructors fostered a unique student body of collaboration and Weatherhead (1941) insinuates that without the intervention of these architects, the style of teaching would have remained unchanged. This is a description of a possible rebellion against the dominant style of the time, which was the École.

Student expectations

He emphasizes to the students that what is most important is what their aspirations are and recognizes that this technique of teaching placed *"an incredible amount of responsibilities in the studio"* (see p. 100). He said that some students might not know how to handle that responsibility because of their need for *"boundaries and prescriptions"* (see p. 101). He expressed that,

> *The students in my studio will feel the pressure to be responsible. And*
>
> *students do not always want that. They need and want boundaries, they need*
>
> *and want prescription, and those are things that I say that you must construct*
>
> *for yourselves, and that is pretty hard. So some students fare well, and some*
>
> *students do not, but none-the-less they all come through understanding that it*
>
> *was yours to do.* (see p. 101)

Mike voiced that he was interested only in the students' agenda, as long as they actively participated in the design studio. Chad did not openly identify his type.

Summary

The purpose of this section was to compare the identified instructor-types of the architecture design studio to the literature. The three types are (a) *Instructor-as-master*, (b) *Instructor-as-partner*, and (c) *Instructor-as-facilitator*. In comparison to the literature, there are models that fit the architecture styles more than others, and in some cases there is no fit at all. Again, these styles do not represent the whole body of architectural instructors, but identify them according to the narratives of the respondents.

I created a list of the findings and themes that emerged from this process, to help better visualize the different areas that have the potential of being studied. Because of the goal of this research, I explored only the *design studio, interactions, and teaching styles*. Though as listed earlier (see p. 107), there were several categories that emerged and have the potential of being studied in-depth.

Summary of the Findings

1. There are more *aspects* of the design studio than the Task force presents. These aspects can be determined through the narratives of the participants of the design studio.

2. Interaction in the design studio is prolonged but valued by both the student and the instructor. This is especially true for the students who need to work outside of class time to accomplish work. The interaction fosters learning because of the intellectual diversity with in the studio, shared thoughts, physical needs, and the presence of adult learners.

3. The personalities and interests, experiences in undergraduate school, and life experiences, affect the way that instructors teach, even though there might be other factors affecting their method of teaching. The *teaching styles* that are presented by other scholars may not appropriately fit the *instructor-types* that the design studio present. The instructor-types are (a) the *instructor-as-master*, (b) the *instructor-as-partner*, and (c) The *instructor-as-facilitator*. It is also highly possible that there are more instructor-types than those that emerged.

Implications

What has changed?

Architecture design studio education has not changed much over its years of development. The only changes that have taken place have been in the curriculum. One example of this change involves the use of digital media to present and design work, as opposed to designing by hand. Also, techniques of building change with time, affecting how the materials are used in the design studio. Another change is the move from the restricted review sessions (where reviews were restricted to professors and invited architects) to a more public activity (Anthony, 1991). This restriction still occurs during competitions, where work is judged and selected by a closed jury.

Besides that, there are traditions that remain in place, such as the organizations that govern who or what can be part of the architectural community. The only differences between *guilds* and today's associations are that, their names have changed to NAAB, NCARB, AIAS, AIA, and that they started off being associations mainly for the arts and vocational disciplines. They are still bodies governing an architects' acceptance in society.

Another thing that has remained constant is the idea of the apprenticeship. Although the word may not be used anymore, learning of "the tricks of the trade" is valued, not only by the *instructor-as-partner*, but also by the organizations mention above. The idea that one has to accumulate points to become licensed after spending much time with an architect and their firm speaks to this model. Today, this is called an internship. Also, design studios are designed for the purpose of shaping the student into and architect, and who best to learn from than the instructor? Not only do the students gain knowledge, but they also learn mannerisms, from jargon to the style of clothing.

Also the idea of the studio in general as being the main learning method in architecture is still eminent. Administrators do not want to risk staining the relationship that they have with the governing organizations by trying something new. I am not saying that administrators are not willing to make changes, but truly, those changes are based on requirements, which can be very restrictive. The design studio *is* the master value. Will this change? I doubt it will any time soon. But what I gathered from this study suggested that there is little or no reflection on the parts of the participants (faculty and students) on the occurrences in the design studio. This means that they have an individualized understanding of design studio, which is rarely, if at all shared by members of the studio and almost never shared beyond the design disciplines.

At the same time, the College of Design at Iowa State University is trying to implement change, from an academic system that they really never knew about or investigated. My questions here are: How does one change or revamp the design studio, if one knows very little about it? If there is knowledge about it, what is the nature of that knowledge? My answer to the second question is: There is knowledge, which is mostly quantitative. Knowledge such as, grades number of students enrolled, grade point averages, how many men and women and so on. These numbers do not speak much to the experiences of the students, instructors, and administrators, who are in fact the essence of the design culture in this setting.

Reflection would allow documentation and realization of where design studio has been, which will determine where it should go or where it is going. The organization of the design studio at Iowa State University allows for reflection or interpretation to occur at an academic and social level. These interpretations are seen not only in products (through

student projects), but also in their thought processes, which we do not encounter all the time. That is why it has been valuable for me to engage in conversation at a research level with participants of the culture. This study proved narratives were useful in looking at different perspectives, determining where studio is and where it should go, and overall becoming more aware of the culture in general. This awareness should not stop at discussions, but should be a catalyst for the implementation of change.

In lieu of this, design studio researchers need to document the interpretations that the participants give. These interpretations will be useful for administrators in their decisions for change. Also the design studio participants need to understand the processes that occur in the design studio, so they are intentionally and actively learning together, not passively assuming knowledge about their setting. Architecture design studio has the potential of being a teaching-learning model for higher education to follow because (according to the findings of the study) it is learner-centered, has small class sizes, fosters one-to-one interactions, engage multiple ways of solving problems and builds academic and social community.

It has been part of the architectural tradition to literally build community (physically) and actively participate in that community. Also the learner-centered paradigm has been part of the culture of the design studio since the Beaux-Arts. I believe that the problem is the participants (especially the instructors) have become numb to the qualities that architecture can give to the community – we take it for granted. We as a discipline can and should learn from other departments because they are practicing reflection. It is evident that they understand their culture through research and documentation and therefore effectively implement changes. What is the architecture design studio culture? How can we begin practicing reflection? I will attempt to answer these questions in next few sections.

**Understanding the design studio culture**

Thus far, findings have been presented that centered on interaction, identifying

instructor-types and the meaning that the narrators gave the design studio. In order for a

culture to be understood, one has to understand the complex processes that occur within it.

The architecture culture is made up of aspects (or in this case identified themes) that

are products of the interaction that occur within the culture (Rogoff, 1990). The themes are

not only a product, but they also affect the culture of the design studio because of the cultural

and historical references that the people in a culture use (Lang, 1987). The participants of the

culture build reality using historical knowledge and cultural aspects, thus creating meaning

through interpretation, from interactions (Blumer, 1969). In the process, learning occurs

(von Glaserfeld, 1995). In the case of the academic learning that occurs in the design studio,

the participants also affect it through the same interaction with their environment. A lack of

interaction creates a narrower reality and knowledge base, more interaction creates a diverse

and substantial reality, and intentional interaction creates meaningful knowledge.

The creation of meaning in the architecture design studio

Figure 3 shows a conceptual suggestion that the influence on the culture of

architectural design studio is interlocked with the students and the professors. The

instructors do not exist without the students and the students do not exist without the

instructor. The production of an artifact (which could come in several forms, including a

physical model, a two-dimensional drawing, or a rendering on the computer) by the student is

evident through the implementation of the project. The instructor uses the artifact, which is

in essence a symbol, to generate conversation in the studio setting, which may be in the form

of a one-to-one desk critique or a review. Therefore, without the artifact, a relationship with

Figure 3. The interactive relationship between the students and the professor in the design studio

Legend/Key

Example of the interactive
connection between parties
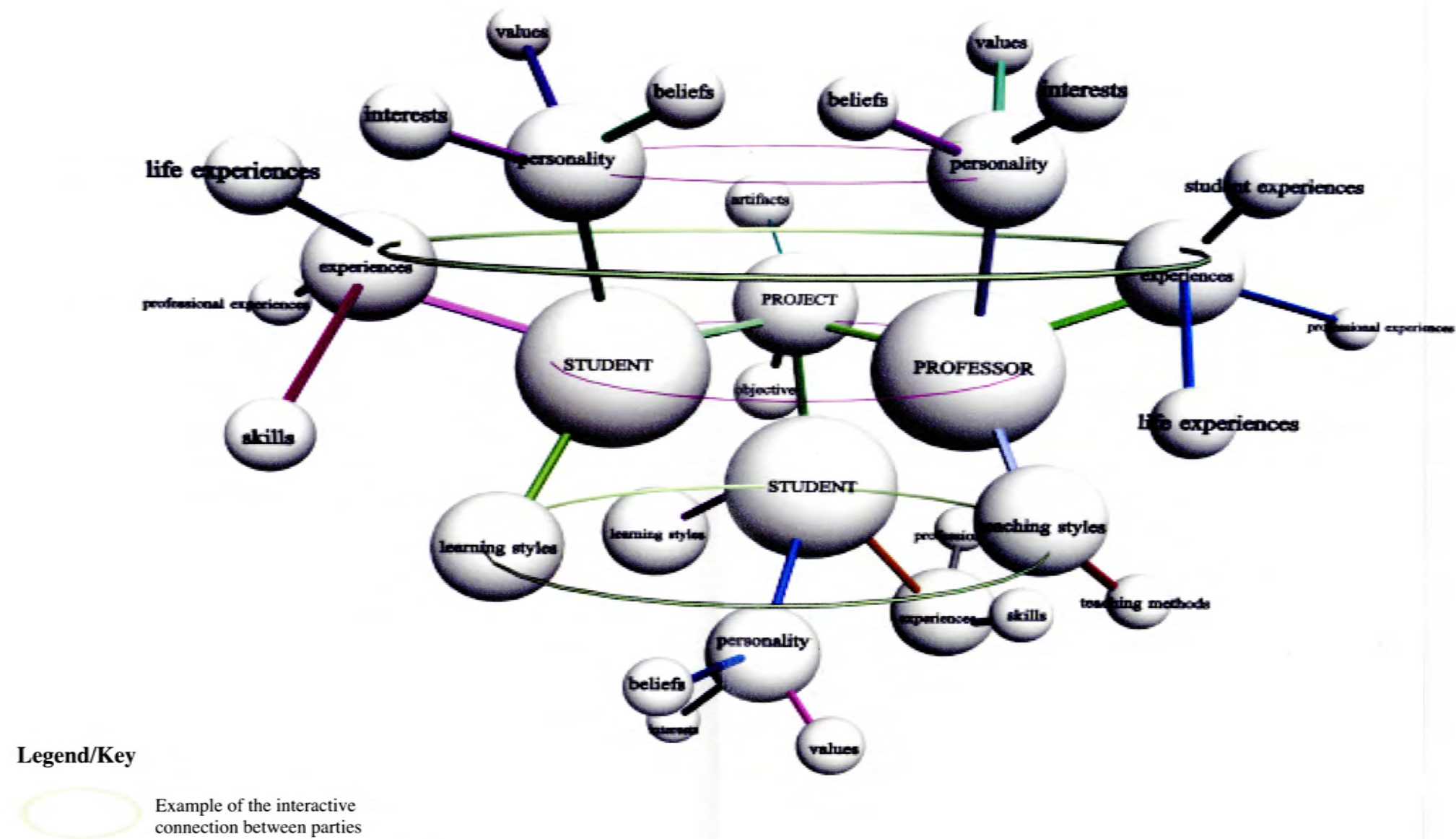
the professor is not built productively and for educational purposes. Also, the way that the conversation evolves during a desk critique or a review of the students' artifacts all depends on the aspects of the design studio culture – it is a cycle

The instructor, the student, and the project, which results in the artifact and perceptions of the participants due to their background (interpretation and meaning), therefore play an important role in how the culture of the studio is shaped. The instructor has the ability to change the way the studio is perceived because of their initial contact with the student, and the students also have the ability to shape the perceptions of the studio because of their interaction with each other and the professor. In this concept, interpretation of one's environment occurs constantly. This allows for the sharing of multiple perspectives because there are several participants, self-correction through reflection because intentional interpretation is occurring through comparisons of self with other, and also a building of one's knowledge base because of multiple interactions and interpretations.

The role of the studio instructor

Austerlitz, Aravot and Ben-Ze'ev (2002) discuss the *desk crit* as the dimension on which the interaction between student and instructor occurs. They say that the *desk crit* is "a complex interweaving of two interrelated design processes, the student's and the instructor's" (Austerlitz, Aravot, & Ben-Ze'ev, 2002, p. 4). This gives the instructor the impression that their responsibility stops there. Interaction in the design studio does not only occur at the *desk crit* or *formal crit*, it occurs in the hallways, in offices, walking to class and so on. The participants recalled many interactions other than at a student's desk.

According to the study, the instructor has a great responsibility in the culture of architecture design studio. The instructor not only teaches, but also aids in the creation of

reality in the design studio through interactions. In comparison to a lecture type classroom, the interactions may not be as complex. This is because of the one-to-one nature of the design studio. In the design studio interactions are cyclical and there are multiple interpretations occurring at the same time, by the same or different individuals in the several psychological and physical contexts.

One way that the role of the instructor can be fulfilled is to discover one's teaching or instructor-type, which will foster an intentional reflection on the instructors' part in consideration for the student population. There most likely is a greater range of teaching-types than the ones indicated in this study. Learning about other teaching types in other arenas, may help identify those in architecture, as demonstrated when the literature was compared to the findings. An instructor may possess one or more of these styles depending on the situation or the students' need. After giving descriptions of the instructor-types to the respondents, they were asked to identify each other's types, resulting in a mixed format, therefore increasing the possibility of possessing multiple styles, for example, *Master-Partner* or *Partner-Facilitator*.

The reason why one's teaching-type needs to be identified specifically in architecture or design studio is because of the prolonged, complex relationships that the student and the teacher have. Instructors also should make a comparison with teaching styles in other disciplines, therefore appreciating and learning about other academic environments of the university. It seems to me that many designers know what their type is but it is hard to identify it because there are no guiding materials that seem descriptive of what design studio instructors do.

Though Greenfield (1975) suggested that, in the tradition of architecture studio, *the facilitator* may be the only way that design studio can be taught effectively, this study suggests that there are several ways that studio can be taught, including *the master* and *the partner* approaches. In spite of the different characteristics that the instructor-types show, the students still learned something. This learning is fostered by the professors' interests, personalities, experiences as students and life experiences. Even Julie, who had the battle with her fourth-year instructor said that, every instructor had different personalities and regardless of their personality, she learned something.

Instructors need to make an intentional effort to apply and reflect on teaching styles. The student interprets the role of the instructor, even though the instructors determine their own role, which has the potential of dampening or fostering the learning process.

Strengths and Weaknesses of the Methods Tested in this Study

The study was limited because it focused on only three participants, all of whom were a part of the same school. It was based on the architecture design studios at Iowa State University. Themes in the narrative are personal, and the factors affecting the instructors' teaching methods, like life and undergraduate experiences, will vary from person to person.

This study also was limited in that it did not address several other characteristics of the design studio in relation to *symbolic interactionism*. Mostly the interactive and personal (the teacher) characteristics were investigated more thoroughly than the interpretative characteristics of culture. This was a pilot study, and therefore was limited to the amount of time spent with individuals, who were busy. Also, the interviews were the main source of

data, even though observations informed the study. If both of these methods informed the study equally, the data collected would have been richer.

Despite it's weaknesses, the strength of this study includes the use of multiple methods of data collection and analysis, which not only allowed me to be reflexive as possible, but also present data and findings that were as credible as possible. Also, this research allowed for the use of the grounded theory approach, that in many cases is used to develop a theory. In this case a theory was not developed, but a concept of the interaction in the design studio was presented. The categories therefore can be used for further research in the architecture design studio.

Recommendations for Further Research

A number of recommendations can be drawn from the findings and themes.

1. Qualitative research methodologies were useful in identifying specific experiences from the narrators. In the research of architectural education, I suggest the use of qualitative research methods to understand the complex activities that occur in and outside of studio. The *narrative* is especially beneficial to work with because of the contact with the narrators and recommendations. *Grounded theory* is also recommended because it draws out themes that can lead to other studies. It also draws out the narrator's way of framing and valuing various aspects. *Social constructivism* and *symbolic interactionism* are appropriate perspectives to help guide the study of interactions.

2. There is a need for documentation of the behavior that occurs in the design studio. In particular, there have been some new studies that address, learning styles and emotions in the design studio. It should not stop there, because there are several areas that can be

researched, i.e., *the project.* In research studies based in other settings, there is plenty of information that can be used to understand behavior. These existing social theories and perspective can act as springboards for several other social theories, specifically in the design studio.

3. The research of design studio should include collaboration between students and instructors in the design studio and other academic areas that are well-versed in research methods, such as education. This will foster the importance of collaboration outside of the architecture field.

4. All the studies that are done should benefit architectural education and higher education as a whole. If possible, the data should be used for the improvement of quality education in that particular university setting, which hopefully will improve the quality of education as a whole.

Future Aspirations

Although this study was very beneficial in clarifying my curiosity about architectural design studio culture, I believe that there are further questions that can be raised, such as: What role do the students play in the culture? What factors do they bring to studio with? What are their learning styles, and can they be correlated to the professors' teaching styles? What are the characteristics of the project, and how does that affect the relationship between the professor and the student?

Also, I would like to develop this study further, by the selection of more participants and the involvement of other disciplines and universities, because I do not think that this particular study is complete. As I said before, instructors have different personalities, and I

would like to get to know more of those personalities through a continuation of the conversation with the narrators who participated in this study and other instructors. I also would also like to start interviewing students in-depth, to learn about their experiences, and to see what factors affect their participation and immersion into design studio. This will allow for a more complete conceptualization of the interactions that occur in the design studio culture.

In the meantime, I suggest that this study should be seen as a stepping-stone to a greater study of the architectural design studio. Understanding the studio culture allows the understanding of the student and instructor experiences. This is useful for establishing teaching and learning styles, hopefully improving the studio education as a whole.

Conclusion

This qualitative study was intended to be a pilot study that would inform me about the culture of the architecture design studio, specifically the teachers, so that I would be able to apply what I learned in a more complete study for my doctoral dissertation. The findings of this study must be understood in relation to the limitations of qualitative research, the focus on three participants, the physical context and time of which were all described previously.

From the interactions and narratives that I had with my respondents, I learned that the participants of the culture are very different, yet they share some of the same values of student learning. I learned that narratives are powerful tools for research and can be used effectively to draw out information about a culture. I learned that just because there are one-to-one relationships in the design studio, it does not mean that students are learning. This

study challenged me in my own thinking about who I was in the context of the design studio, what my teaching and learning styles, were and how I can better serve the students.

Finally, this study left me with a conviction to increase the awareness of what occurs in the design studio. I realized there is no such thing as a perfect teacher, but teachers, who strive to do their best in teaching, taking into consideration the students, will be better teachers.

APPENDIX A

HUMAN SUBJECTS EXEPTION

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

DATE: September 26, 2002

TO: Patience Lueth

FROM: Janell Meldrem, IRB Administrator

RE: **IRB ID # 03-117**

The project, "The Culture of Architectural Design Studio" has been declared exempt from Federal regulations as described in 45 CFR 46.101(b)(2).

> (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

To be in compliance with ISU's Federal Wide Assurance through the Office of Human Research Protections (OHRP) all projects involving human subjects, must be reviewed by the Institutional Review Board (IRB). Only the IRB may determine if the project must follow the requirements of 45 CFR 46 or is exempt from the requirements specified in this law. **Therefore, all human subject projects must be submitted and reviewed by the IRB.**

Because this project is exempt it does not require further IRB review and is exempt from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects.

We do, however, urge you to protect the rights of your participants in the same ways that you would if IRB approval were required. This includes providing relevant information about the research to the participants. Another recommendation from the IRB is to add your major professor's contact information to your consent email.

Any modification of this research should be communicated to the IRB to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: Nancy Evans

HSRO/RCO 9/02

APPENDIX B

INFORMED CONSENT

<u>INFORMED CONSENT DOCUMENT</u>

Title of Study: The Culture of Architectural Design Studio
Investigators: Patience L. Lueth

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this study is to learn about the experiences that students and instructors have in the architectural design studio environment, in their first and second year of the architecture program (pre-architecture and second year) thus learning about the culture of the architectural design studio. You are being invited to participate in this study because you are a student enrolled in the pre-architecture program, or you are a student in the second year of the professional program, or you are an instructor for the pre-architectural or second year design studios.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will last for one semester and if you are in pre-architecture there will be a follow up in your second year of study. During the study you may expect the following study procedures to be followed. You may be interviewed six times during the semester, each interview lasting about one hour. The interviews will be recorded on audio tape and will be erased after the completion of this research. You will be asked to complete two surveys during the semester (you may skip any question that you do not wish to answer or that makes you feel uncomfortable). You will also be observed during studio times.

RISKS

While participating in this study you may experience the following risks: The only thing that you may feel uncomfortable about is sharing information about yourself with regards to your experiences in studio.

BENEFITS

If you decide to participate in this study there may not be any direct benefits to you. It is hoped that the information gained in this study will benefit society by improving their understanding of architectural design studio. The study may provide useful information about learning styles and learning outcomes in architectural design studio.

COSTS AND COMPENSATION

You will not have any costs from participating in this study.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies, the Department of Education, the Department of Architecture and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: Subjects will be given a number and a letter on the surveys completed and their names will be deleted off the surveys, to keep their confidentiality. Real names will not be mentioned on recordings. Recordings and surveys will also be kept in a cabinet that only the principle investigator will have access to. If the results are published, your identity will remain confidential.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study contact: Patience L. Lueth, 161-F University Village, Ames IA, 50010, (515)572-4589 or (515)294-7153, patience21@hotmail.com or popiyo@iastate.edu. If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; meldrem@iastate.edu or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; dament@iastate.edu.

****

SUBJECT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the signed and dated written informed consent prior to your participation in the study.

Subject's Name (printed) _____

_____   _____

(Subject's Signature)   (Date)

INVESTIGATOR STATEMENT

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

_____   _____

(Signature of Person Obtaining   (Date)
Informed Consent)

APPENDIX C
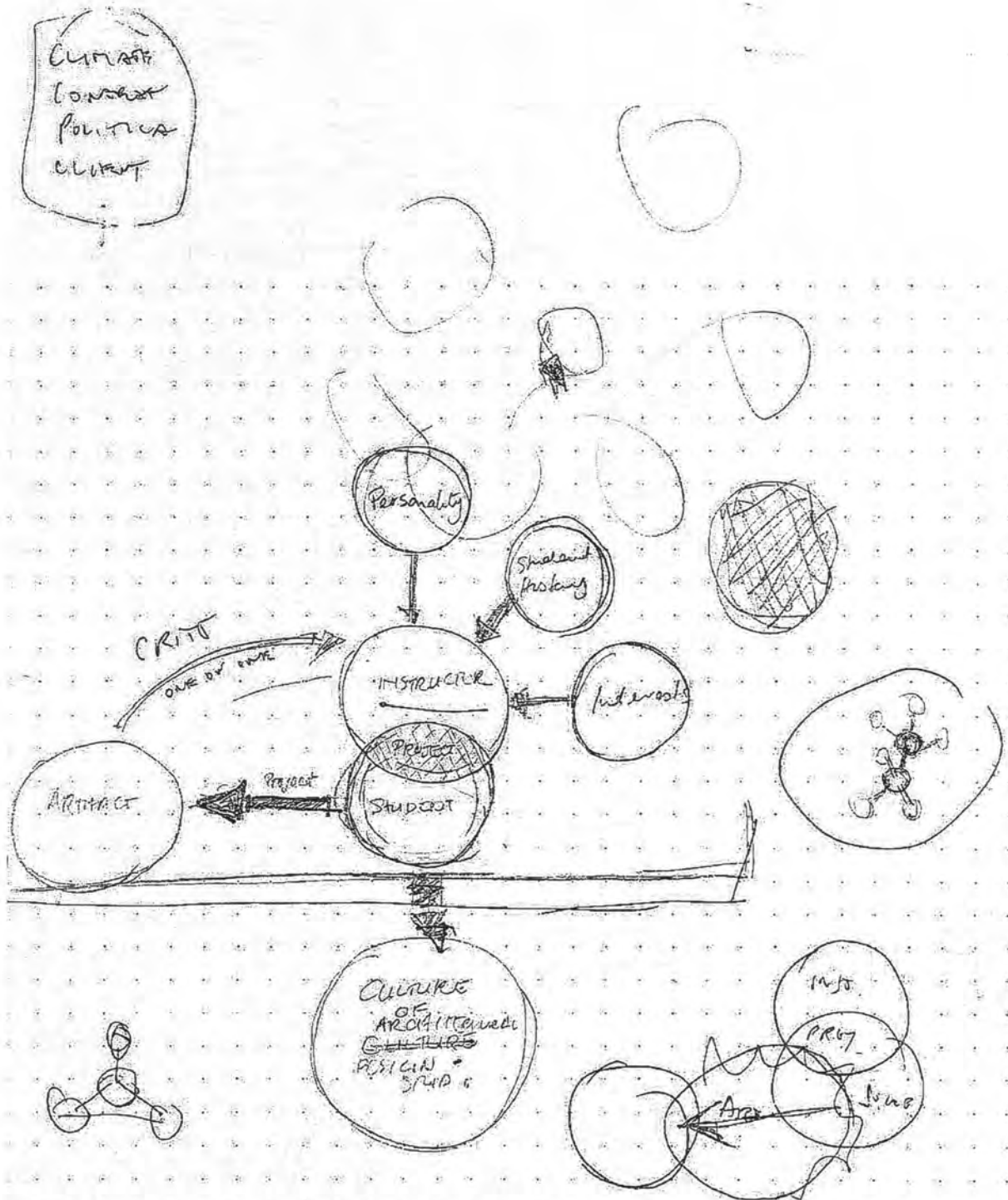
EXAMPLE OF QUESTIONS

For all the respondents

1) Tell me a little bit about yourself.

General questions

1) Tell me about your experiences in design studios.

2) Tell me how you became an instructor.

3) You talked about the types of instructors, tell me how you would describe the.

4) What are your impressions on the design studio?

5) How would you describe your undergraduate studio experience?

6) How do you think students feel in design studio?

7) What are the instructor-types that you think best describe you? (for Chad and Mike) and why?

8) What do you think the students need when they make the decision to go to architecture school?

9) What do you value the most and why?

10) What do you think that the instructors' intentions are in the design studios?

11) What are your intentions in the design studio?

APPENDIX D

EXAMPLES OF MEMOS

The idea of interaction.

CLIMATE
CONTEXT
POLITICS
CLIENT

CRITT
ONE ON ONE

Personality

Student history

INSTRUCTOR

Interest

ARTIFACT

Project

PROJECT

Student

CULTURE
OF
ARCHITECTURE
CULTURE
DESIGN +
STUDIO

Chemical configurations inspired the conceptual model of the interactions in the design studio
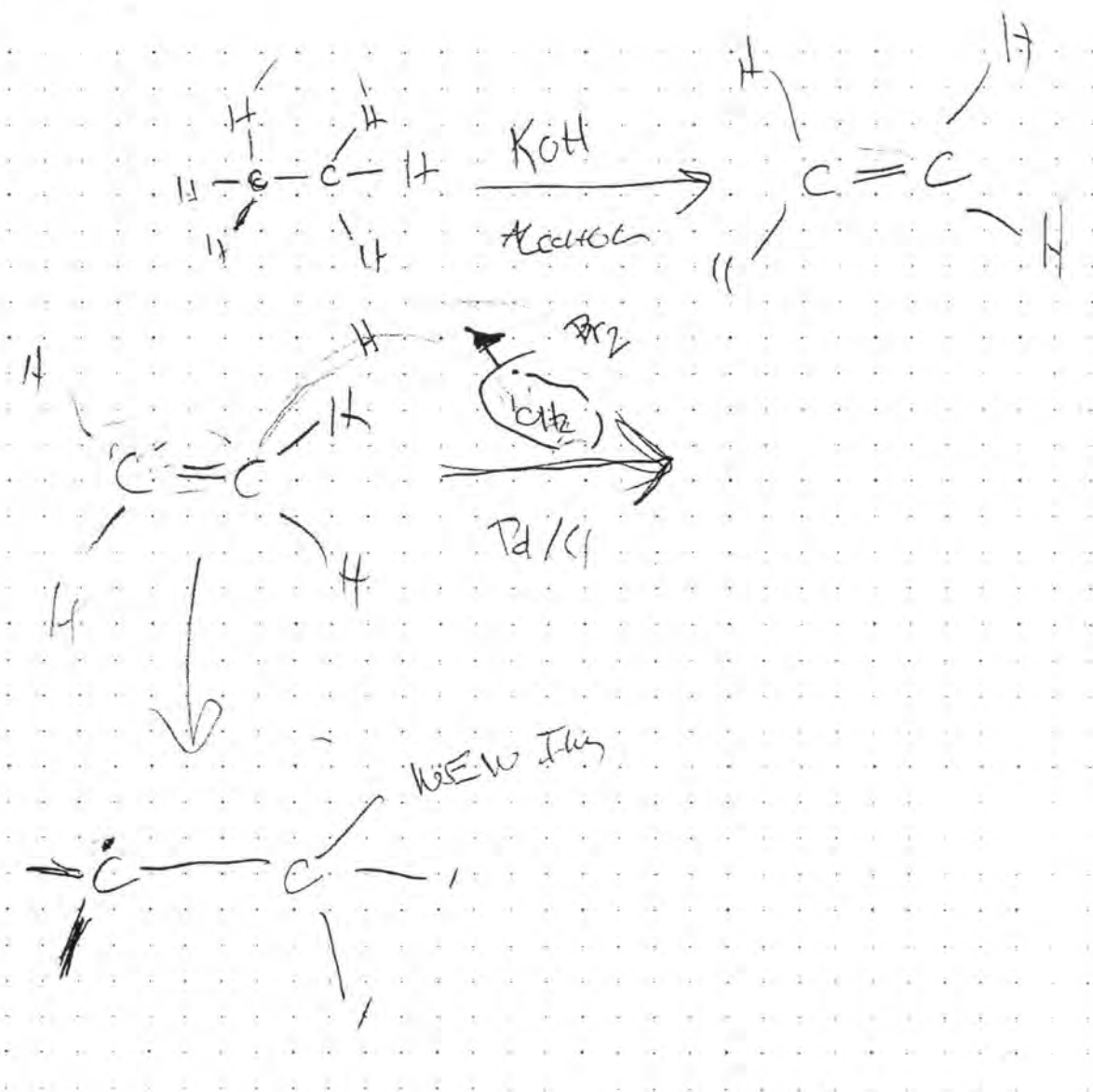
<u>Change in Direction:</u>

- After talking to my peers I began to understand how powerful it would be to focus on

  participants

- Participants are the student and the instructor

- The project is also very important

- These are too big studies

- Need to focus on one

- The data shows that the instructor is always talked about by all three participants

Instructor

- Who are they?

- Why are they important?

- What have they got to do with the culture if they are one of the ones that make up the

  culture?

There is a possible relationship between the project and the student and the culture. Seems in the

conversation that I had with the participants these three are inseperable.

Thought on Jury

I have been on a jury before especially with my being an instructor. And it was quite different being on this particular Jury because I knew that I was observing at the same time. So I was not only critical of the work that was on the walls, but also of the people and the environment.

Mike and Chad make a good team to work together with. You could tell the difference between the work that was produced in Chad's and Mike's studios. Chad's studio had more practical work, whereas the work from Mike's incorporated a lot of process and if I may say "crazy stuff." There were also "crazy" things in Chad's studio, but less than that of Mike. I was wondering whether the way that they gave comments was the same as the way that they did things and thus affecting their student's work. There seems to be a parallel to that. I am not sure whether. And also the students who were involved in this particular jury, did they have the intention of pleasing or actually doing work that they wanted to. I say this because of the way that some also responded to the questions and comments. Some more defensive and others just agreeable. It might just be their personality, or maybe the way that they see the review session.

The interesting thing for me was the difference in the way that the people dressed. It seemed as though many of them were formal and others not. This I think is a tradition in architecture because I have noticed the same thing in my students.

One thing that I wish I would have done was focus more on one thing. But the thing is that I am not sure what all my themes are at the moment. I will investigate. There are too many themes that I need to narrow down.

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