A DESCRIPTIVE CASE STUDY OF THE IMPACT OF A PROFESSOR’S TEACHING STRATEGIES ON TAIWANESE COLLEGE STUDENTS’ PHOTOGRAPHIC IMAGE INTERPRETATIONS

A Thesis in
Art Education

by
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ABSTRACT

In this descriptive case study, I investigated the impact of a Taiwanese college professor’s teaching strategies on Taiwanese students who were learning to interpret photographs in his undergraduate photography appreciation course. His systematized teaching approach to photographic image interpretation is particularly important because it helps students to look more closely at photographic images, think more deliberately about them, and read signs embedded within them, rather than simply appreciate their composition and aesthetics.

My review of the literature focused on characteristics of effective teachers and student learning in university-level art education and higher education in general. I also reviewed adult/cognitive learning theories and research studies on photographic image interpretation and criticism.

The study addressed these four main research questions:

1. What are the knowledge, values, beliefs, and assumptions about photographic image interpretation held by the teacher in this descriptive case study?

2. What strategies were employed by the teacher during this study to teach photographic image interpretation in his photography appreciation course?
3. Did the teacher’s teaching strategies impact the students’ methods of interpreting photographic images over the course of the semester? If so, how, and in what ways do the students now make meaning of the photographic images they interpret?

4. Was the teacher in this descriptive case study, Professor Wu, effective in guiding his students to interpret photographic images during his photography appreciation course?

Using a descriptive case study design, I gathered data using written questionnaires (pre- and posttests) and oral questionnaires (interviews). I studied the impact of the teaching strategies of Professor Jiabao Wu on his 29 students’ interpretations of photographic images in his photography appreciation course; I tested the students at the beginning and end of spring semester 2004. Additionally, I interviewed five student volunteers about their prior experiences in photography and their interpretation of photographic images during the course, as well as the instructor about his academic background and experiences in photography that had influenced his teaching. I also observed his teaching during the regularly scheduled class periods of the photography appreciation course during that semester at the Chinese Culture University in Taiwan.
At the outset of the study, the student-participants described subject matter and forms in images and paid little attention to signs and symbolic meanings in their photography interpretations. I concluded that the instructor’s teaching strategies, which encouraged student classroom participation and interaction with both himself and the other students, had a strong impact on the students’ ability to more fully interpret photographic images by the end of the semester. I conclude this dissertation with recommendations for college-level teachers and for the Chinese Culture University.
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Chapter One

INTRODUCTION

In this introduction, I provide an overview of my dissertation that briefly explains
the rationale and methods I used to conduct a descriptive case study of the teaching and
learning of photographic image interpretation in a college photography appreciation
course in Taiwan. This study was intended to provide insight into college-level
photography education in Taiwan. The first chapter sketches the background of the
problem. Other topics in this chapter include: the practices of interpreting photographic
images, the statement of purpose, the significance of the study, my experience in
photography education, and definitions of key terms used in this dissertation.

The second chapter is a review of the literature related to the study, according to
three major topics: effective teaching, student learning, and photographic image
interpretation and criticism. The section on teaching effectiveness includes the
characteristics of effective teachers, teacher knowledge, and reflectivity in teaching. The
section on student learning looks at the theories of learning, knowledge construction, and
student learning styles. The section on photographic images interpretation and criticism
examines the theories and practices of reading and interpreting photographic images.
The third chapter describes the research methodology I used in the study. The chapter is organized into two categories: the survey research methods and the procedures. The survey research methods section discusses the written questionnaires (pre- and posttests), oral questionnaires (interviews with the teacher and students), and the kind of observation I used in the study. I also present the pros and cons of using each research method. The procedure sections presents the methods of data collection and analysis that I used in this study.

In the fourth chapter, I discuss the data analysis and the findings of the study. I present my analysis of the data (written questionnaires and interviews) in terms of the teacher’s effectiveness and how it impacted his students’ learning in his photography appreciation course. In the fifth and final chapter, I discuss my conclusions and the implications of the study, and offer recommendations for teaching photographic image interpretation and conducting related research.
Background to the Problem

“We only see what we look at. To look is an act of choice” (Berger, 1991, p. 8).

Images impact our lives, by influencing what we do and believe. An example of this influence is the photography in advertisements that surround us most of the time.

Typically, when we view a photographic image we only spend a few seconds interpreting it. People tend to view what they see in photographs as only what appears in them, not realizing these images are a manipulation of reality. Oftentimes people think that “seeing is believing” and that “a picture is worth a thousand words.”

Within the course of any given day, we may come in contact with hundreds or even thousands of images—on cereal boxes, on billboards, in magazines, on television, on the Internet, on bus station walls, and in other public spaces. Commercial advertisements of men’s and women’s apparel, for example, use symbols of cultural constructs of masculinity and femininity, such as tall and muscular in the choice of male models, and thin and young in the selection of female models, to represent their manufacturer’s products.

Roland Barthes (1990, 2000, 2003) identified two signifying practices for interpreting photographs—denotation and connotation. An apparel advertisement with its
visual images, such as a poster in a bus station or a photograph in a teen magazine, may
denote (show) a thin, young, good-looking female model wearing a name-brand clothing
product, often in a seductive pose (see Figure 1.1); however, such an image may connote
(suggest, imply) sexual evocation and idealized beauty (young and thin).

![Calvin Klein Jeans advertisement](image)

*Figure 1.1. Calvin Klein Jeans advertisement*

According to Barthes’ (1977) notion of signifying practices, if viewers look at this
commercial advertisement and see only a female model wearing the product, they may
not recognize what the model is actually expressing and thus miss the point of the picture.
People view advertisements over and over, but they may not be aware of the constructed
issues (connotations) beyond the images and how they might influence their lives and lifestyles. Therefore, viewers may unconsciously agree that an ideal female body and face should be thin and pretty, based on their daily exposure to such images as shown in Figure 1.1. Students as viewers do not typically realize that photographs connote constructed issues beyond the literal photographic elements in these images. They will likely see photographs as reality rather than as someone’s portrayal of reality (Barthes, 1977).

As Sontag (1977) stated, “Reality has always been interpreted through the reports given by images” (p. 53). But different interpretations of images define different realities behind constructed images. In this study, I did not seek to resolve what the reality is behind the images. Instead, by deconstructing students’ interpretations and systems of knowledge construction, and by looking at the teaching approaches used in a university photography appreciation course, I was concerned with how the students learned to detect and understand the meanings of photographic images they see in their everyday lives. As Berger (1991) observed, “The way we see things is affected by what we know or what we believe” (p. 8). In this descriptive case study of a college photography appreciation class, I looked at how the specific teaching approaches of the instructor impacted how his
students learned to interpret photographic images.

Statement of the Purpose

The purpose of this study was to investigate and explore the impact of the teaching strategies of a photography instructor, Professor Jiabao Wu, at a university in Taiwan, regarding how college undergraduate students interpret photographic images in the photographic fine arts, personal photographs, on the Internet, and in popular culture found in magazines and other print media. In this study, I looked at the interactions between the students, between the teacher and his students, and between the students and the medium of photography. I focused on how this teacher guides his students to interpret photographic images and whether or not they adopted his methods of interpretation.

Especially, this study attempted to determine how the students’ interpretation of photographic images might change as they came under the teacher’s influence. There were two main components in this study: the students’ processes of learning, whereby they become more aware of the layers of information that photographic images may contain and transmit to viewers (meaning makers), and the teaching strategies that the course instructor used to demonstrate the deconstruction of photographic images.
From my experience, education is generally very concerned about the processes of changing values, beliefs, and assumptions. In this study, I was concerned about this process in both the individual and the entire class of 29 undergraduates. Five volunteer interviewees revealed the specific ways in which they changed how they interpret photographic images after taking Professor Wu’s photography appreciation course. The entire class represented the ways in which the teacher’s teaching strategies impacted the students’ processes of learning to interpret photographic images during the course, which I observed for a semester.

**Research Questions**

The purpose of this study was to investigate how Taiwanese undergraduate college students interpret and read photographic images, and how Professor Wu’s teaching strategies influenced how they learned to interpret them. Not only is there a need for art educators to understand the impact of their teaching on student learning, but there is also a need to find better ways to identify, interpret, and understand the kinds of behaviors that are contained in the teacher’s and students’ methods of understanding photographic images.
Identifying how the students’ responses to photographic images might change as a result of instruction, though the use of a pre- and posttest, would then make it necessary to look at the conditions that might have generated the differences in their learning processes. Such differences would account for student differences in interpretation, the ways in which the students interact with the teacher and other individuals in their class, and the ways in which students understand the contents and meanings of photographic images.

A student enters a college photography appreciation course with prior knowledge, values, beliefs, assumptions, attitudes, and goals. Although these characteristics of the student may not be apparent at the beginning of the course, they will begin to appear when the students’ and teacher’s goals agree or disagree. I believe that an understanding of the impact of the instructor’s teaching approaches could be greatly enhanced through a study of his students’ interpretations of photographic images. Thus, my research questions were as follows:

1. What are the knowledge, values, beliefs, and assumptions about photographic image interpretation held by the teacher in this descriptive case study?
2. What strategies were employed by the teacher during this study to teach photographic image interpretation in his photography appreciation course?

3. Did the teacher’s teaching strategies impact the students’ methods of interpreting photographic images over the course of the semester? If so, how, and in what ways do the students now make meaning of the photographic images they interpret?

4. Was the teacher in this descriptive study, Professor Wu, effective in guiding his students to interpret photographic images in his photography appreciation course?

**Significance of the Study**

In defining research significance, Rossman and Rallis (2003) asked, “How will this new research add to theory, policy, and practice in this area? How might it be of benefit to the participants and therefore of significance to them?” (p. 130). Based on these researchers’ definition, this study could provide a deeper interpretation and understanding of meaning making while reading photographic images that could be significant for
students and photography educators.

**Significance for Photography Students**

Photography provides the possibility for making many images in a very short time. The photographic medium provides more possibilities for making choices in less time and in more ways than media such as drawing and painting. Barrett (2000) believes that all photographs, even very straightforward, direct, and realistic-looking ones, need to be interpreted. If learners are given opportunities and strategies for interpretation, then they can successfully decipher the many messages embodied in the photographic images of visual culture (Barrett, 2003).

By employing the approaches that Professor Wu uses for reading photographic images, his students may gain a better understanding of how a photographic image makes meaning to viewers and gain an ability to critically interpret photographic images. These practices are crucial for two reasons: first, when the time comes for the student to use photography as a tool to create art on his/her own, the student might reconsider how to organize and structure elements of the artwork to reveal meaning. Second, after experiencing more critical practices of interpreting photographic images during Professor
Wu’s course, his students should be able to use more critical analysis when they view photographic images. They would tend to be more critical and thus challenge the values, beliefs, issues, and assumptions embedded in photographic images.

_Significance for the Teacher and Other Photography Educators_

By investigating and exploring the ways in which students learn to interpret photographic images, the teacher can re-examine and improve his teaching strategies to help students more critically interpret photographic images both inside the classroom and within their daily lives. I intended to help make this possible by looking at and/or highlighting the teaching strategies employed by Professor Wu. I chose to study his teaching strategies because he is one of the few photographic critics, researchers, and teachers in Taiwan who is promoting the need for critical interpretation of photographic images and conducting photography criticism regularly. I believed that feedback from the students’ responses to a pre- and posttest at the beginning and the end of the semester could also provide this university teacher with information (from various perspectives) to reshape his teaching strategies and lesson plans to meet the students’ needs for reading photographic images in the future. The results of this study could also encourage other
photography educators to examine their own teaching strategies and help their students interpret photographic images more critically as well.

**Significance for Photography Education in Taiwan**

In Taiwan, formal photography education has generally ignored interpretation. In most college-level photography courses in Taiwan, teachers usually emphasize preparing students to approach photography only on the technical level, such as understanding composition, contrast, lighting, and tone of photographs. But I believe the purpose of photography education should be not only to train students or learners to become successful technicians, but also to foster their learning to read photographic images critically. And, I believe the latter is far more important than the former. Professor Wu’s teaching strategies characteristically emphasize the need for viewers to critically read and deconstruct the meanings of photographic images. My study is significant because the results could provide insight and strategies for educators who are interested in revising their photography course formats to include interpretive strategies for critical analysis of photographic images.
My Experience in Photography Education

My motivation for launching my own career in the photography education field goes back to my undergraduate study in Taiwan. I started taking pictures when I was young, and I had wanted to become a professional photographer ever since I was in high school. Unlike most of the students who chose their colleges based on their scores on the national college entrance examination, I investigated all the colleges in Taiwan that offered photography. I found that the undergraduate program of studies in Taiwan that provided the most photography courses was in the Information Communications Department at the Chinese Culture University in Taipei—so I applied to the program and was accepted. Professor Jiaibo Wu was one of the photography teachers in that program. I took all 13 photography courses offered in the program, and 11 of them with Professor Wu.

Professor Wu teaches photography from three diverse aspects: technical perspectives, historical perspectives, and critical interpretation. Having been a professional commercial photographer for years, Professor Wu certainly knows the practice of photography well. And having been a photography teacher for over 20 years, he says he is “always a continually learning student.” Professor Wu has a wide range of
knowledge in the history of photography. He is an actively published photography critic; he especially promotes the importance of photographic interpretation in photography education in Taiwan.

During my undergraduate education, I studied with Professor Wu for four years and worked as an assistant photography teacher with him during those four years as well. My experiences as a student and co-worker with Professor Wu were very significant in that they helped me to become a “thoughtful” photography educator. In the tradition of photography criticism, photographic images are expected to achieve the finest technical levels because the invention of photography has sometimes been called “the death of painting.” Beyond his technical expertise in photography, Professor Wu has advocated a postmodern view of photography interpretation: when reading a photographic image, viewers construct their own meanings through their own knowledge and experiences.

Later, as an assistant photography teacher myself, at the college level for four years, I was always in front of plenty of beginning photography students. Many were confused most of the time about what a “good” picture is and why it is good. Likewise, as a teaching assistant for four semesters in an introduction to the history of photography (Art 90/Art 190: Introduction to Photography, a general education course at Penn State...
University), I observed that the instructor used historical and technical perspectives to teach the history of photography. Yet I repeatedly found the same confusion in the students taking the Penn State introductory photography course. They also asked, “What is a good picture? And why is it good?”

Furthermore, from my collective experiences as a student, photography teacher, photographer, and art education researcher, I believe that teaching students how to interpret photographic images is very significant for their understanding of the contents of photographic images and the implications they may have for their lives or work in the photography field. Especially, interpreting a photographic image should require viewers to construct their meanings from different perspectives. And yet, teaching “how to interpret” photographic images is much more complicated than the act of “interpretation” itself. Therefore, photography education in Taiwan needs to be reformed in order to emphasize the importance of critical interpretation, which seeks interpretation from different perspectives (Wu, 1998). Different perspectives, as listed and described by Barrett (2000), provide diverse ways of seeing photographs.
Definitions of Key Terms

For readers who are not familiar with art education or photography education, this section is intended to clarify the key terms used here and to help readers to understand the meaning of certain professional terms.

Photographic Images

In this study, I used the term “photography” to describe the processes of combining aesthetic views and ways of seeing by using diverse types of cameras to create visual images on light-sensitive papers or on computer screens (digital photography).

Photographic images are photographs or products of photography that are used for many purposes, including the fine arts and commercial advertising. An image is enhanced with visual elements, signs, and/or messages to convey issues or ideas.

Interpretation

“Interpretation” in this study describes the processes of meaning making while viewing or reading photographic images. Viewing a photographic image could simply be the act of looking at a picture without purposely thinking about it or making comments
about it, but interpretation involves critically thinking about the visual representation and the signs and symbols within the content of the photographic image or images.

**Teaching Strategies**

I used the term “teaching strategies” to describe the teacher’s (Professor Jiabao Wu’s) practices for directing his students’ learning so that they become more aware of the contents of photographic images. The instructor’s teaching strategies are critical for enabling his students to learn how to make meaning when reading photographic images.

**The Teacher and the Students**

In this context, “the teacher” denotes Professor Jiabao Wu, a current faculty member in the Information Communications Department at the Chinese Culture University in Taiwan. “The students” refer to the 29 undergraduate student-participants in Professor Wu’s course, who were taking his photography appreciation course in the Information Communications Department at the Chinese Culture University in Taiwan at the time of my study.
**Photography Appreciation Course**

“Photography appreciation course” is the term I used in this study to describe one of the courses taught by Professor Wu, which I observed in the spring semester 2004 at the Chinese Culture University in Taiwan. The main objective of this course was to introduce the history of photography, which was covered primarily from a Western historical perspective, with little Eastern/ history of photography (e.g., Taiwan, Japan, China).
Chapter Two

LITERATURE REVIEW

My goals in this chapter are to provide an overview of the theories and practices of effective teaching and student learning in higher education and art education, and to summarize key notions of theories on photographic image interpretation.

When considering the instructor’s teaching strategies, I looked at how he uses different approaches to guide and/or impact the students’ interpretation of photographic images. The “teaching strategies” are referred to here as an instructor’s behaviors and his/her decision making while teaching in order to help students have effective outcomes (Hunt, Touzel, & Wiseman, 1999). Therefore “effective teaching” is one focus of the literature review for this study.

On the other hand, the students’ learning processes are more likely associated with the instructor’s teaching behaviors. How students construct their meanings of photographic images based on the teaching strategies used is another significant part of the discussion in this chapter. And since this study emphasized the art form of photographic images, it was necessary to do research on current photography criticism and interpretation for this literature review.
Teacher Effectiveness

Teachers determine the quality of education that students receive (Chao, 2000; Hunt et al., 1999; Perry & Smart, 1997). Many educators (Biggs, 1999; Burden & Byrd, 1994; Feldman, 1988; Hativa, Barak, & Simhi, 2001; Hildebrand, 1973; Hunt et al., 1999; Murray, 1997; Ralph, 2003) believe that effective teachers are more likely to use multiple teaching methods to improve the quality of education for students. Effective teaching means that teachers are “doing the right things” (Wankat, 2002, p. 4) to help students to learn more efficiently. However, when we look at effective teaching, it is also necessary to discuss how students learn. Therefore, a discussion of the correlation of effective teaching to learning is incorporated into this chapter.

Researchers have traditionally defined effective teaching in many ways, for example: effective teaching is teaching that fosters students’ learning (Ralph, 2003; Wankat, 2002); effective teachers are able to use certain strategies and exhibit certain behaviors that result in the advancement of the academic achievement of students in the classroom (Hunt et al., 1999); effective teaching is the progress made by learners toward stated educational objectives (Hildebrand, 1973). Thus, effective teaching is generally assumed to be associated with successful student learning.
Some researchers (Brophy & Good, 1986; Dunkin & Barnes, 1986; Flanders, 1985; Rosenshine & Furst, 1971) see teacher effectiveness as a process-product linking “teacher behavior to student achievement” (Brophy & Good, p. 328). From process-product studies, Gage (1978) discovered more stable relationships between teaching behaviors and pupil performance. Dunkin and Barnes noted that teaching processes are “behaviors engaged in for the purposes of promoting learning” (p. 754). Teacher behaviors also affect classroom process variables (e.g., students’ interactions with others and curriculum materials) and “student achievement gain over other product variables (e.g., personal, social, or moral development)” (Brophy & Good, p. 328). Process-product research suggests in general terms what to do to improve student achievement.

Effective teaching is a complex and multidimensional construct (Marsh, 1987; Marsh & Roche, 1997; Young & Shaw, 1999) that can be represented by a diversity of theoretical models. An effective teacher can apply general principles of teaching and adapt his/her own personal strengths to his/her teaching context (Biggs, 1999). However, effective teaching does not mean that certain strategies and behaviors “universally produce the same outcome with all students and all learning situations” (Hunt et al., 1999, p. 4). Moreover, it is impossible to verify if certain teaching behaviors are effective
unless we look at the student outcomes at the same time (Hildebrand, 1973; Hunt et al., 1999). In addition, teachers not only have to be prepared to employ certain instructional strategies and behaviors but also to have the abilities and skills to use certain strategies and behaviors at the correct time, with specific individual learners or learning groups in specific learning situations (Hativa et al., 2001; Hunt et al., 1999; Murray, 1997; Perry & Smart, 1997).

**Teacher Characteristics**

A great deal of research exists on the characteristics of effective teachers at the kindergarten through 12th grade levels, but research on effective teaching in higher education has been more limited (Murray, 1997). Moreover, the research on effective teaching in the visual arts and art education related field is limited too. Because of the limitations of correlated teacher research in the field of art education, I reviewed the literature of effective teaching behaviors from the general research literature in education.

Teachers’ personal attributes and characteristics are expressed through behaviors as they are primarily inherent personality traits (Cruickshank, Jenkins, & Metcalf, 1999). Also teachers possess and exhibit their characteristics in various degrees. Some personal
characteristics are difficult to gain or to enhance because they are firmly rooted in our personalities, whereas others are easier to modify and to acquire. By becoming more aware of the characteristics that research shows are common among effective teachers and by matching those characteristics with an individual teacher’s own natural tendencies, a teacher will begin to build his/her own unique teaching persona (Cruickshank et al., 1999).

Rosenshine and Furst (1971) identified effective teacher behaviors in one of the most significant and in-depth early studies of research literature concerning teacher characteristics as related to student achievement (Hunt et al., 1999; Murray, 1997). In the well-known education publication, *Phi Delta Kappan*, Cruickshank (1990) published a review of 10 major studies from the 1970s and 1980s, which summarized the characteristics of effective teaching. Pritchard (1998) identified effective teaching behaviors through these approaches: surveys, summaries of previous studies, and theories developed by teaching experts.

In the following section, I delineate the characteristics of the effective teacher based on the work of Rosenshine and Furst (1971), Cruickshank (1990, 1999), and other researchers. In my analysis in Chapter Four, I illustrate some of these same personal
characteristics of Professor Wu and how they contribute to his teaching effectiveness.

Effective teachers possess motivating and stimulating personalities (Cruickshank et al., 1999) which include these characteristics:

1. **Enthusiasm** (Cruickshank, 1990; Cruickshank et al., 1999; Pritchard, 1998; Rosenshine & Furst, 1971): Enthusiasm has been identified as the estimated amount of vigor and power exhibited by the teacher (Hunt et al., 1999). The teacher conveys enthusiasm through speech, gesture, and facial expressions when s/he teaches.

2. **Encouragement and support** (Cruickshank, 1990; Cruickshank et al., 1999; Danielson, 1996; Pritchard, 1998): A teacher’s encouragement helps students feel accepted as individuals. Encouragement can prompt students to attempt tasks they may be hesitant to start and to continue working even when they are struggling.

3. **Warmth** (Cruickshank, 1990; Cruickshank et al., 1999) and humor (Cruickshank et al., 1999; Cullingford, 1995): A teacher manifests warmth through positive and supportive interpersonal relationships with students. Positive classroom relationships are fostered when a teacher is friendly and
demonstrates interest in students as individuals. On the other hand, humor can defuse tension, promote trust, and help students enjoy learning.

(4) **Businesslike classroom demeanor** (e.g., goal-oriented, serious, deliberate, organized) (Cruickshank et al., 1999; Cullingford, 1995; Kauchak & Eggen, 1989, 1998; Rosenshine & Furst, 1971): “The business of the classroom is learning” (Cruickshank et al., p. 318). Businesslike teachers acknowledge how to accomplish the necessary activities and help students to achieve learning goals. Also, a businesslike teacher organizes the classroom based on the learning goals.

(5) **Adaptability/flexibility** (Cruickshank, 1990; Cruickshank et al., 1999; Pritchard, 1998): Effective teachers need to have adaptability and flexibility to sense or be aware of the need for change and to be able to adapt to those changes.

**Teacher’s Knowledge Base**

Besides personal characteristics and attributes that contribute to a teacher’s instructional effectiveness, their knowledge of their subject area, their understanding of
pedagogy, and their knowledge of student learning are all important to their effectiveness as well.

_Teacher’s Subject Area Knowledge_

The teachers’ full knowledge of the subject areas they teach can be helpful for their teaching, and although we have experienced teachers who are quite knowledgeable in their subject areas, they may be unable to help students learn (Cruickshank et al., 1999). Teachers' knowledge of subject areas is important but not sufficient for effective teaching (Galbraith, 2004; Porter & Brophy, 1988), because they must also possess “personality characteristics, interpersonal skills, and positive behaviors” (Galbraith, p. 5). Cruickshank (1990) found that teachers’ ability to combine their knowledge of subject areas, knowledge of teaching (pedagogy), and knowledge of students are more important in order to implement effective instruction. Shulman (2004) further identified three categories of content knowledge that grow in the minds of teachers: (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular knowledge. Shulman referred to subject matter content knowledge as “the amount and organization of knowledge per se in the mind of the teacher” (p. 201). Shulman also indicated that
knowledge of pedagogy means the knowledge of teaching and “the ways of presenting and formulating the subject that make it comprehensible to others” (p. 203). Curriculum knowledge emphasizes the teachers’ ability to relate the content of a given course to issues being discussed all together in other courses.

**Teacher’s Pedagogical Content Knowledge**

Shulman (2004) described pedagogical content knowledge as that “special amalgam of content and pedagogy” (p. 207) and pedagogical content knowledge as uniquely the province of teachers, or their own special form of professional understanding. Researchers include the following characteristics as significant to pedagogical content knowledge:


   Effective teachers explain their concepts clearly, have a good knowledge of their subject matter, and are able to answer student questions intelligently.

2. **Variability** (Cruickshank, 1990; Pritchard, 1998; Rosenshine & Furst, 1971):

   Variability refers to teachers’ diversity of “information-sending techniques”
(Hunt et al., 1999, p. 8) during the course-giving time, and teachers’ ability to utilize multiple strategies to deliver their messages or issues.

(3) Encouragement of more student participation and peer teaching (Cruickshank, 1990; Danielson, 1996; Rosenshine & Furst, 1971): Teachers use student ideas during instruction, plan appropriate in-class activities, use open-ended questions, and make effective use of small groups for allowing students an opportunity to take an active part in their learning.

(4) Probing behaviors (Cruickshank, 1990; Kauchak & Eggen, 1989, 1998; Rosenshine & Furst, 1971): Probing happens when a teacher asks students to go deeper into their thinking or to elaborate on a comment made.

Teacher’s Knowledge of Student Learning

Every student brings to the educational setting a diversity of prior experiences and preset ideas about what it means to be a learner. Galbraith (2004) believes that prior experiences form the basis of beliefs and actions that guide students as well influence teachers’ teaching styles, if they choose to incorporate the students’ experiences into the process for further learning.
Understanding students’ motivational and participation patterns is also important for effective teaching. If teachers consider the motivational and participation patterns of students, it is challenge for them to develop an appropriate setting for students that allows for full engagement in learning. Effective teachers should adjust their instruction to meet pupils’ developmental levels (Cruickshank, 1990) and be aware of learning differences among diverse socioeconomic or cultural groups. Especially, when teaching the visual arts, teachers need to be aware of students’ cultural and social differences within the necessary content areas.

**Teaching Effectively and Reflectively**

Eggen and Kauchak (1997) believe that reflective teaching is an approach to teaching characterized by a thorough understanding of students. By reflecting on their teaching, effective teachers may acknowledge how their students learn, what motivates their students, and use continuous reflection and introspection to decide the most efficient ways of organizing and implementing their instruction.

The research base for effective teaching practices strongly supports the importance of the teacher’s being a highly trained and reflective professional (Hunt et al.,
1999). However, college-level teachers outside the field of education, unlike k-12 teachers, have not received any “systematic preparation” (Hativa et al., 2001, p. 700) for understanding their teaching roles and gaining knowledge about pedagogical practices. On the other hand, reflection on student feedback and self-evaluation may lead college-level teachers to teach more effectively (Hativa et al., 2001). A reflective teacher has the ability to critically examine what s/he does and the decisions s/he makes in teaching, so that s/he can make changes to improve the quality of his/her teaching in the future.

Grimmett, MacKinnon, Erickson, and Riecken (1990) discovered that there are three perspectives that support the notion of teacher growth through reflection:

First, reflection helps teachers replicate effective classroom practices and continue to use effective teacher behaviors. Second, reflection helps teachers deliberate among competing views of teaching. It enables teachers to be informed about events within a context. Third, reflection can help teachers reorganize or reconstruct experiences. This, in effect, can help transform practice. (Burden & Byrd, 1994, p. 9)

Reflection involves “active, persistent, and careful consideration of behaviors or practices” (Burden & Byrd, 1994, p. 6). Teachers, first, have intended outcomes (syllabi
or lesson plans); after they have acted, teachers observe and study the results so that they can make a better plan for future actions (Aguayo, 1990). A teacher thinks back over situations to analyze what s/he did, why s/he did it, and to consider how s/he might improve learning for students (Woolfolk, 1998). Effective teaching also delivers certain instructional behaviors to specific individuals at the correct time. Alternatively, reflective teaching is similar to teachers reviewing their teaching to help them critically inspect what they did in their teaching processes. Essentially, the objective of effective teaching and reflective teaching is to improve the quality of teaching and learning. Teaching without reflection restricts teachers’ ability to adjust their teaching actions in the future (Biggs, 1999).

**Understanding Student Learning**

An effective teacher presents ideas, concepts, knowledge, and information in ways that students can learn them. Students learn in different ways, not only in the classroom but also outside the classroom. Although there is considerable literature on human learning, this literature review focuses on theories of adult learning and cognitive learning since this study pertained to young adults. To study cognitive approaches to
learning, it is also important to consider teaching strategies, learning activities, and settings that might influence students’ learning. Within the social context, learning processes include the relationship between teaching and learning environments inside and outside of the classroom, and a particular way of thinking about learning at the time.

**Adult Learning**

Since this study focused on a university teacher and his students, in this section I focus on how adults learn and how to teach adult learners. Based on the assumption that teachers have full responsibility for making all the decisions about what will be learned, how it will be learned, when it will be learned, and when it has been learned, Knowles (1984) identified seven components of andragogical practice that suggest some principles that the teacher should follow in their efforts to help adults learn. Knowles (1984) defined andragogy as a focus on the learning, and offered an alternative to the methodology-centered instructional design perspective; he proposed that a teacher should:

(a) Establish a physical and psychological environment beneficial to learning

(b) Involve learners in mutual planning of methods and curricular directions

(c) Involve participants in diagnosing their own learning needs
(d) Encourage learners to formulate their own learning objectives

(e) Encourage learners to identify resources and to devise strategies for using such resources to accomplish their objectives

(f) Help learners to carry out their learning plans

(g) Involve learners in evaluating their learning. (Galbraith, 2004, pp. 7-8)

Knowles’ andragogical approach indicates that a teacher of adults should possess certain technical and interpersonal skills in order to be an effective facilitator of learning.

Recent research has emphasized the importance of considering female perspectives in regard to learning and moral development. Belenky, Clinchy, Goldberger, and Tarule (1997) use a feminist approach to depict how women, as learners, learn outside or inside the classroom. In her research of female learners Belenky et al. found that knowledge is mainly formed and emerges from firsthand experience. Gilligan (1982) found that women’s development of morality was organized by responsibility and care, which differs from Kohlberg (1981) and Piaget’s (1965) systems of moral development, which have mainly centered on males.

According to Piaget’s (1954) developmental stages, learning for an adult involves the processes of building up diverse information, organizing it, and understanding logical
structures. Piaget believed that people organize their perceptions and experiences with a scheme that enables them to connect the details of prior knowledge that are related in various, possibly useful ways. Piaget (1954, 1970) proposed assimilation and accommodation as the processes by which people develop and alter their schemes. For example, when asking people (a) “What did you learn about September 11th?” and (b) “How do you understand September 11th differently now?”—the first question asks for new knowledge and cognitive understanding, which Piaget called “adding on” or “assimilation” of the content. The second question requires a person to reflect on the new knowledge and how it has changed from their initial response prior to gaining the knowledge of the event—or to interpret the knowledge. Piaget referred to this change accommodation. According to Piaget, cognitive development consists of a constant effort to adapt to the environment in terms of assimilation and accommodation.

Likewise, Wu (1993) used the terms “sequence” and “organize” to explain how people process their meanings when reading a photographic image. Wu thinks that the first time an individual reads a photographic image, the first thing s/he does is try to find a sequence within the image. Looking for a sequence means that an individual is mapping the relations between outlines, shapes, sizes, colors, and the contrast of tones (Wu, 1993)
to make sense of the image. Wu’s concept of “sequence” is quite similar to Piaget’s assimilation process, or adding new knowledge. Further, Wu thinks that after determining the sequences on a photographic image, people tend to organize these sequences. Wu has indicated that the action of organizing the sequences means that when people read a photographic image they try “to understand the symbolic meanings under the sequences” (Wu, 1993, p. 11), that is, to interpret them. This is similar to Piaget’s accommodation process.

However, Efland (2002), in interpreting Piaget’s developmental stages, stated that Piaget did not describe much in “the development of understanding in the realm of the arts or the development of artistic skills” (p. 27). Instead, cognitive theorists worked within Piaget’s developmental modes and began to draw the details of individuals’ responses to works of art from cognitive perspectives.

**Cognitive Theories of Learning**

Cognitive theorists perceive learning as a process of making sense, understanding, and creating knowledge (Palomino, 2003). Students in higher education are exposed to a great deal of information and yet may change little or nothing about the way “they
understand what that information means” (Nicholls, 2002, p. 25). Bruner (1966) created an “information-processing” model to explain how a learner processes information into knowledge (see Figure 2.1). For Bruner, learning engages a search for “patterns, regularities, and predictability” (Nicholls, 2002, p. 26). Moreover, teaching helps students to form and discover such patterns, therefore increasing and enhancing their knowledge.

**Reception of sensory information:** Attention and selective perception  
↓

**Short-term memory:** Working memory, cognitive processing, conscious thinking  
↓

**Long-term memory:** Cognitive structures, storage, retrieval  

*Figure 2.1.* Bruner’s information-processing model. Source: Nicholls (2002, p. 25)

Art educator McFee (1961) formulated a learning theory for art based on concepts being developed within the behavioral sciences. McFee’s perception-delineation theory includes four components: the psychological readiness of the individual; the particular environment in which an individual finds him/herself when the perception in question occurs; an individual’s ability to handle perceptual data; and an individual’s ability to
confer aesthetic order on material. McFee’s framework is significant for understanding what affects students’ learning behavior in the arts. McFee believes that the components of her perception-delineation framework “[function] simultaneously rather than in stages” (Eisner, 1963, p. 228). Eisner viewed McFee’s perception-delineation theory as the organic relationship among the various factors that influence human action in the visual arts. McFee (1961) asserted that no single trait develops in a linear pattern; not only do differences exist among abilities in any individual, but as an individual matures, relationships among these differences are likely to change. A pedagogical approach using McFee’s perception-delineation theory would be to select the appropriate teaching strategies whereby the teacher can engage students in acquiring new information in various directions, that is, “toward perception for delineation purposes, or toward perception for appreciation purposes” (Efland, 1967, p. 72).

Interpreting Bruner’s (1966) information-processing model and McFee’s (1961) perception-delineation theory, Efland (1967) suggested a cognitive learning theory as one in which prior learning influences the learning that occurs in a new situation. This theory explains the tendency for new information to be structured in terms of learning that has already occurred so that prior learning can act as a long-term set influencing how new
information will be seen and understood.

In another cognitive theory, Winn and Snyder (1996) identified three cognitive processes of understanding: information processing, symbol manipulation, and knowledge construction. Knowledge construction is a methodological approach which assumes that knowledge needs to be constructed (Apple, 1999, 2000; Bain, 2004; Brooks & Brooks, 1999; Parsons, 1992, 2002; Winn & Snyder, 1996). These authors believe that our knowledge is constructed from a variety of sources, including parents, teachers, religious organizations, and society. Thus, individuals have unique ways of interpreting photographic images and finding a different sense even when looking at the same image, based on their knowledge construction.

Parsons (1992) suggested that the cognitive approach has been quite influential in art education in the last couple of decades. Further, Parsons noted that “the idea of cognition in art should be understood more radically as interpretation” (p. 24). Parsons views cognitive approaches from both psychological and philosophical perspectives. From the psychological perspective, he believes that all mental activities are considered cognitive and that the new psychology related to art is focused on thinking in the art medium. Parsons’ philosophical perspective is that learning to understand an artwork
requires “percipience” (1992, pp. 74-75). Parsons explained that “... percipience, then, is interpretive in character—a grasp of meaningful quality... meanings are constructed mostly in light of the internal relationships of elements of the work—their own inherent intensities, similarities, and contrasts” (1992, p. 75). Smith (1989) further explained that percipience is more than perception. Percipience involves interpretation, requires skills and background understanding, and consists mostly of “knowing what to attend to and how to organize the response” (1992, p. 74). Both Parsons and Smith’s cognitive approaches suggest that understanding an artwork requires that viewers reflect on their prior knowledge, skills, and meaningful interpretation to construct their own meanings.

Likewise, Freedman (2003) argued that cognitive processes of reading the visual arts create meanings for viewers. Freedman used Arnheim’s (1974) theories to explain the processes by which our brain sees visual images, then uses prior knowledge to analyze and organize their information into meaningful relationships. Freedman also employed Solso’s (1994) hypothesis that we only understand the visual arts because we have stored previous knowledge and meaning in our minds. Wu (1993, 1998) also claimed that when looking at a new visual image, as in the case of a photographic image, viewers are searching for stored information in their minds to make sense of the image, based on their
previous knowledge. Thus, the more visual interpretation experiences we have, the more understanding we have of what we view (Wu, 1998).

Cognitive theory suggests that the whole purpose for learning is for individuals to construct their own meanings. Through more practice, individuals can modify their prior knowledge to enhance their new knowledge. In addition, teachers can use their teaching strategies to encourage students to analyze, interpret, and forecast information to learn to construct meaning. Furthermore, Brooks and Brooks (1999) and Walker (2001) recommended that teachers use open-ended questions and encourage extensive dialogue among students. Besides, Walker thinks that students seek their own meanings through both the process of art making and interpretation, as does Efland (2002) who argued that cognition is a constructive process used to allow the individual to secure meanings.

**Social Aspects of Learning**

Individuals sometimes learn by themselves, although most of the time they learn from others. People have parents, siblings, teachers, and peers with whom they interact or communicate, and from whom they receive regulation and inspiration. The social cognition learning models emphasize that culture is the prime determinant of individual
development (Doolittle, 1997). Humans have created culture, and every child develops in the context of a culture. Therefore, an individual’s learning development is affected by his/her culture. Phillips and Soltis (2004) posited that most forms of learning and most human communication would not be possible without language; and language is a social medium. According to Phillips and Soltis, the bodies of our knowledge have been built up within these areas: history, science, and literacy. Thus, an individual acquires knowledge through representations of all kinds of social media.

Likewise, Dewey (1859-1952) was well aware of the social nature of learning and advocated “adopting social perspectives on the whole education enterprise” (Phillips & Soltis, 2004, p. 55). Dewey (1916) believed that every individual is a constituent element of a social group and is a carrier of life experiences of his/her social group. The chief concept for education in Dewey’s definition is experience since he believed that “all genuine education comes about through experience” (p. 13). Dewey also viewed democracy, continuity, and interaction as key concepts for education and that all were related to experience. He viewed schools as communities and wanted schools to engage students in meaningful activities where students have to work with others on problems. Dewey thought the teacher’s duty is to encourage thinking. According to Dewey, the best
way to learn a new idea is to communicate with others and interact with others in purposeful activities. Students’ learning processes are related to and make use of the experience of other students.

Vygotsky (1896-1934) was well aware of the social nature of learning too and theorized that social interaction is fundamental to cognitive development. But unlike Piaget, Vygostky did not assign importance to the developmental stages (Phillips & Soltis, 2004). Instead, he emphasized that learning is affected by social settings, and what learners might accomplish with teachers’ or others’ direction. Vygotsky proposed that cognitive development depends on the **zone of proximal development**, commonly referred to as the “ZPD.” He conceptualized this zone as consisting of knowledge. An individual can acquire knowledge, when assisted by or when collaborating with a teacher or with more knowledgeable peers. In regard to the ZPD, Vygotsky advanced the idea that the edge of the zone on one side is the knowledge that the individual already has, or “the problem s/he can solve alone” (Palomino, 2003, p. 87). On the other side of the zone is the knowledge or problem-solving skill that the individual has not yet developed. Vygotsky supposed that an individual close to the edge of the zone might be able to participate in activities but need active assistance. For Vygotsky, a very significant role
then for a teacher is to organize activities and social groupings that keep students stretching within their zone.

A teacher provides a momentary structure to a student’s learning process, according to Vygotsky. This momentary structure helps a student to construct the concepts and/or knowledge s/he already has during the early stages. Also related to learning and social context, Parsons (2002) indicated that the meaning of an artwork is constructed by the interactions of the viewer and the work, but includes the culture of the viewer. Therefore, those teaching students to understand and interpret an artwork must consider the students’ culture as important when planning lessons. For example, if a teacher were to use Renee Cox’s photograph “Yo Mama’s Last Supper” (1999; see Figure 2.2) for interpretation of an artwork, students in the United States would more easily understand its historical and cultural concepts than would students in Taiwan. Similarly, Parsons (2002) indicated that different individuals from the same culture are more likely to construct similar meanings of the same artwork.
Similarly, Barrett (1990) suggested that people’s knowledge, beliefs, values, and attitudes are influenced by their culture and reflected in the photographs they take. Likewise, when looking at a photographic image, a viewer cannot ignore his/her prior experiences and knowledge.

When learning is examined in terms of social aspects, culture plays a crucial role in the learning process, and as Vygostky asserted, in “what we learn we learn from others” (Phillips & Soltis, 2004, p. 59). Dewey believed that a teacher’s job is to help students develop understanding and problem-solving skills to “fill the important roles in a diverse and democratic society” (Palomino, 2003, p. 86). Therefore, teachers should design curricula and use teaching strategies to encourage interactions between learners and learning tasks. The problem-solving skills are not acquired immediately. However, through interactions with others, including teachers and more knowledgeable peers, an
individual can acquire problem-solving skills to use in the future. I consider interaction to be a significant aspect of learning. Interaction is what I looked for in my observation and analysis of Professor Wu’s teaching.

*Students’ Learning Styles*

Learning is a change in student behavior. Based on his *conditions of learning*, Gagné (1985) highlighted five main areas of student learning: (a) intellectual skills (knowing how rather than knowing what); (b) verbal skills (knowing names, places, facts, and remembering the principles); (c) cognitive skills (the ways students deal with their mental processes such as thinking and memories); (d) attitudes (students’ emotions; social and cultural approaches to the subject and learning); and (e) motor skills (students’ physical tasks of learning, which refer to having the ability to use equipment and materials for learning). Gagné proposed that different types of learning would require different types of instruction. Nicholls (2002) interpreted Gagné’s model as helping teachers to think about “the role of the theory of learning and student learning outcomes” (p. 23). Gagné’s model has been quite influential in educational design (Svinicki, 1999).

Nicholls (2002) asserted that the most influential research about student learning
over the last 20 years has been the “concept of approaches to learning” (p. 30), which is about understanding the relationship of the individual to the material being learned.

Ramsden (1992) further explained that the concept of approaches to learning is about “how” and “what” individuals learn rather than how much they remember. Ramsden adopted Marton’s (1988) “approaches to learning” (p. 66; see Figure 2.3) and developed his idea that students learn in context. Nicholls (2002) considers both Ramsden and Marton’s model of approaches to learning as having “the underlying implication” (p. 30) that if an individual learns, s/he will accomplish different tasks in different ways.

Figure 2.3. Marton’s approaches to learning. Source: Ramsden (1992, p. 66)
The most significant feature in student learning is an affirmation by the teacher that s/he has the ability to determine the types of learning activities and approaches in which the student will be engaged. Understanding learning theories can provide teachers with ideas about the types of activities and interactions which encourage students to have a positive approach to their learning.

**Photographic Image Interpretation**

Interpreting a photographic image involves complex processes in our minds that enable us to perceive the meanings of that image (Barrett, 1990, 2003; Barthes, 1977; Messaris, 1994; Sturken & Cartwright, 2001). In this section, I explore key notions of the interpretation of photographic images and different approaches to interpreting them.

**Defining Interpretation**

Interpretation goes beyond offering information about an artwork. Art educators advocate using strategies to develop “image-analysis skills” (Anderson, 2000, p. 41) in order to teach students how to understand artworks. Feldman’s theories on art criticism
have had a strong influence in the art education field for the past few decades. Feldman (1970) also defined various strategies of art criticism: description, analysis, interpretation, and judgment. Feldman believes that these stages should be taught in a hierarchical order, starting with describing and ending with judging.

On the other hand, as noted by Barrett (2000), to interpret is to account for all described aspects of a photographic image and to speculate on the significant relationships between these aspects. Barrett cited these described aspects as “subject matter, form, medium, style, comparing and contrasting, and internal and external sources of information” (pp. 20-34). According to Barrett, to interpret is to seek meanings and to figure out the most important meanings in a photographic image.

By another definition, Anderson (2000) indicated that interpretation is “an act of creative synthesis to answer the questions, what is going on here and what is its significance?” (p. 84). Anderson believes that interpretation contains not only obvious meanings but also embedded and implied meanings. Rather than seek truth in interpreting art, he urged the seeking of meanings. For Anderson, interpretation is a constructed story, meaning that there can be various interpretations of the same situation, or as in this study, of photographic images.
When an individual “reads” an artwork, s/he must have some response after s/he reads it. The process of analyzing one’s responses to an artwork, according to Parsons (2002), is interpretation. Further, Parsons thinks that interpretation is the construction of meanings rather than “the perception of qualities” (Parsons, 2002, p. 30). Some scholars (Barthes, 1977; Sturken & Cartwright, 2001) consider interpretation to be a semiotic approach for deconstructing the meanings of the artwork, and recommend this approach. According to Sturken and Cartwright, the process of interpretation is derived from semiotics. They suggest that every time an individual interprets an image around him/her, whether consciously or not, s/he is using tools of semiotics to understand the image’s significance or meanings.

Barthes believes that there are three interpretative analyses of visual images: the linguistic message, the denoted image, and the connoted image. By applying Barthes’ signifying practice of denotation and connotation, Barrett (2000) asserted that Barthes’ schema can be taught to students of all ages, who can then apply them to all images, with or without text. Although Piaget’s schemas of developmental stages did not describe much in terms of understanding art, Barthes’ schemas are simple, powerful, and helpful for interpreting photographic images (Barrett, 2003).
Interpretation in the visual arts and photography-related fields follow various theories. There are many definitions and methods of interpretation, but few studies on the teacher’s role in teaching interpretation (Anderson, 2000). Interpretation provides not only information, qualities, and a description of the artwork, but evokes the construction of personal meanings from responding to the artwork. The difference between description and interpretation is that art interpretation not only recognizes the visual elements, it also understands how the elements work together to create the visual meanings (Tucker, 2002).

**Defining Meanings Through Ordinary Visual Experiences**

To interpret a photographic image is to read it and make meaning(s) of it. Many scholars (Barrett, 1990, 1997, 2000, 2003; Sturken & Cartwright, 2001; Wu, 1993, 2002) believe that learning how to interpret a photographic image is a way to make new meanings of it. According to Barrett (2003), when viewers interpret a work of art, they perceive that work of art in their mind and construct a new version of it. Barrett (2000) also outlined principles of interpretation that depict how to interpret, what to interpret, and factors influencing interpretation. Barrett concluded that there are diverse approaches to interpreting photographic images (i.e., comparative interpretation, feminist
interpretation, psychoanalytic interpretation, formalist interpretation, semiotic interpretation, etc.). Moreover, he argued that when people interpret a photographic image, they are more likely to use multiple approaches rather than just one interpretive approach.

Numerous scholars claim that viewers interpret a visual image and define meanings according to their prior knowledge, values, assumptions, experiences, and beliefs (Barrett, 1990; Berger, 1977, 1991; Duncum, 2002). Additionally, Berger (1991) stated, “. . . the way we see things is affected by what we know or what we believe” (p. 8). To interpret a photographic image is a complicated process of mixing a viewer’s visual awareness and the understanding of his/her visual experiences; then the viewer analyzes his/her response after viewing the image to identify the interactions between the work and themselves. Looking at photographic images influences our thinking and beliefs. As Duncum stated, “The more common visual experiences are and the more ordinary they appear, the more powerful they are in both informing and forming minds” (p. 6).

People tend to think seeing is believing. Thus, they may think that seeing a photographic image is a more realistic representation than something described by words. No matter how we view a photographic image, as Smith-Shank (2003) posited, “no
photograph is a simple documentation of reality” (p. 35). Likewise, Barrett (1990) suggested that all photographic images are metaphors and that they “need to be deciphered” (p. 38).

Moreover, Semali (1999) proposed that viewing visual images includes three processes. First, it involves observing, identifying, and describing elements in the visual image. Second, it requires responding to and interpreting data in varied ways. Finally, the viewer evaluates and applies findings. Semali (2000) also developed a framework of five questions for interpreting visual images: What is at issue? How is the issue/event defined? Who is involved? What are the arguments? What is taken for granted, including cultural assumptions? Semali further explained that this framework uncovers the deeper meanings embedded in media texts. For Semali (2000), seeking deeper meanings requires “analyzing, comparing, interpreting, and finding meaning that is different from usual, routine, and preferred meaning” (p. 159).

**Defining Meanings Using Semiotics**

Many scholars have discussed interpretation using semiotics. The European philosopher Hans-Georg Gadamer believes that interpretation means “to give voice to
signs that don’t speak on their own” (Barrett, 2000, p. 37). Every time a viewer interprets a photographic image, that viewer is using the tool of semiotics to understand its signification or meaning (Sturken & Cartwright, 2001, p. 28).

Saussure established a two-part model of signification: the signifier and the signified (Chandler, 2002). Saussure’s model focuses on the sign in the linguistic area. What is signified is the concept. The signifier is now commonly understood as the “material (or physical) form” of the sign (Chandler, 2002, p. 19), and it can be seen, heard, touched, and smelled. For example, the concept of a chair (the signified) is very similar for people (i.e., a chair has four legs), but the image of a chair (the signifier) as reflected in individuals’ minds is different. For Saussure, a sign must be a combination of both the signifier (material form) and the signified (the concept); however, the same signifier could signify something different.

Barthes (1977) identified two signifying practices for interpreting a visual image: denotation and connotation. A denotation refers to the “obvious meaning” or what the image represents, such as a sports car; the connotation is the “implied meanings” of the image (Anderson, 2000, p. 84), for example, speed and social class. In the same way, Barthes (1977) asserted that all imitative arts contain meanings. Viewers can define the
same feelings or meanings by interpretation because the code of the connoted system is
“constructed by a universal symbolic order or by a period rhetoric, in short, by a stock of
categories” (Barthes, 1977, p. 18). I agree that to deconstruct denoted and connoted
messages in a photographic image one must also consider the viewers’ cultural
knowledge, especially when teaching photographic image interpretation.

According to Hall (1997), “Visual signs and images, even when they bear a close
resemblance to the things to which they refer, are still signs: they carry meaning and thus
have to be interpreted” (p. 19). Hall considers interpreting a photographic image as
conceptualizing the relationships between the viewer, what is viewed, and the meanings
the viewer makes.

language comprise visual arts. Also, a photographic image can be read and understood by
decoding the visual elements and visual language within it. Wu (1998) believes that all
photographic images are the carriers of two kinds of information: cultural information
(such as Edward Weston’s photograph “Pepper No. 30”) and commercial information (for
element, a photograph of a green pepper on a supermarket flyer). A photographic image
can be a carrier of cultural or commercial information, and yet, a photographic image
could be a carrier of both kinds of information (such as Richard Avedon’s commercial fashion photographs). Wu (1993, 1998, 2000) asserted that a photographic image contains signs and must be deciphered by viewers. Wu suggested that different viewers will interpret images as having diverse meanings. Furthermore, Wu (1993) proposed that a photographic image must carry cultural signs—even a masterpiece of photography (a work of art) or a commercial photographic image should contain “cultural signs and codes” (pp. 7-13). A pedagogical approach for photography teachers is to engage students in critical interpretation. Then students will have the ability to recognize the kind of image they are viewing and the kind of information the photographer or the image maker is trying to convey to them.

Sturken and Cartwright (2001) have said that we use many tools to interpret images and create meanings with them and that we often automatically look at images and respond spontaneously. Although a photographic image is made by social and aesthetic conventions, the viewers must learn the codes to make sense, and the codes we learn become second nature. As Sturken and Cartwright have pointed out, when a viewer looks at a sign, s/he immediately will read and decode a complex image instantly.

Similarly, Smith-Shank (2004) argued that semiotics is a study of signs and
symbols in culture. The things we use to carry messages are signs, and they could be anything that stands for something or someone. Smith-Shank (2003) considers no single photographic image to be a pure documentation of reality, and yet, all photographic images are carriers of signs and contain messages. According to Smith-Shank (2004), to interpret a photographic image is to understand the signs embedded in that image, as people always bring their own experiences to any understanding of any sign.

Nevertheless, people barely attempt to keep their own biases from “the formulation of meaning” (p. 2). For Smith-Shank (2004), the heart of semiotic pedagogy is that the only way people can learn something new is to connect new information to some foundation, basic knowledge, mental images, or experiences. By examining semiotic pedagogy, we find that people have common sense regarding photographic images (Smith-Shank). And, Wu (1993) considers common sense to be the reason that people can recognize some “universal signs and codes” in order to interpret photographic images.
Chapter Three
RESEARCH DESIGN:
A DESCRIPTIVE CASE STUDY

To understand the teacher’s teaching strategies and the students’ changes in their interpretation of photographic images after receiving instruction in a college-level photography appreciation course, I decided to conduct a descriptive case study as defined by Merriam (1988).

A case study is an examination of a specific phenomenon such as a problem, an event, a person, a process, an institution, or a social group. The bounded system, or case, might be selected because it is an instance of some concern, issue or hypothesis. (pp. 9-10)

Merriam (1988) also defined a descriptive case study as “one that presents a detailed account of the phenomenon under study” (p. 27). A case study is “a search for an understanding of an idiosyncratic, complex case,” according to Stokrocki (1997). And Creswell (1998) further defined “a case study [as] an exploration of a bounded system or a case over time through details, in-depth data collection involving multiple sources of information rich in context” (p. 61).
My research project was therefore a descriptive case study of the bounded system of a 15-week, university photography appreciation course, during which I collected several kinds of data on students who were learning to interpret photographic images. Through this case study, I investigated the impact of the teaching strategies of the instructor, Professor Jiabao Wu, on his students and their ability to interpret photographic images over the course of one semester.

Methodology

Survey research methods were the main forms of inquiry used in this qualitative study. The survey research methods I used were designed to investigate: (a) the students’ and the teacher’s knowledge, values, beliefs, and assumptions about photographic image interpretation, both at the beginning and end of the semester that I observed the class; (b) the teaching strategies employed by the instructor in the photography appreciation course; (c) the students’ meaning-making processes in their reading of photographic images; and (d) the factors that influenced the students’ interpretations of photographic images.
Survey Research Methods

In reference to survey research, Fowler (2002) stated that “the main way of collecting information is by asking people questions; their answers constitute the data to be analyzed” (p. 1). To attain the beliefs, knowledge, assumptions, and values in regard to learning or teaching the interpretation of photographic images, asking questions was the main form of inquiry in this study.

Fink (1995) identified four types of data collection that can be used in survey research: self-administrated questionnaires; interviews; structured record reviews to collect financial, medical, or school information; and structured observations. I used structured observations, written questionnaires (a pre- and posttest), and oral questionnaires (interviews) to gather in-depth data to investigate the impact of Professor Wu’s teaching strategies on his students’ learning of how to interpret photographic images. Babbie (2001), reflecting his own experiences, indicated that “surveys may be used for descriptive, explanatory, and exploratory purposes” . . . to “collect original data for describing a population” (Babbie, 2001, p. 238). Therefore, in this research design, I used both written and oral questionnaires.
**Written Questionnaires: Pre- and Posttest**

I conducted a pretest and a posttest to compare Professor Wu’s students’ interpretations of photographic images before and after they had received instruction in his photography appreciation course. Using the results, I compared the students’ initial interpretations of the four photographic images with their interpretations of the same four images near the end of the photography course to see if their instructor’s teaching strategies had impacted their interpretations—and if so, how. I administered the pretest during the second class meeting at the beginning of the course rather than at the first meeting, to avoid the add-and-drop students.

For these tests (written questionnaires), I selected and printed photographic images on sheets of paper, along with questions, which I stapled together as a booklet. Each student was given a booklet which contained the same set of four different photographic images for both the pre- and the posttest. The three questions that were listed with each photographic image were (a) What is this photograph about? (b) What does this photograph mean? and (c) How do you know? (see Appendix C) These three questions were similar to Barrett’s interpretation questions to students (1997); and similarly, the students in my study were asked to read and answer each question after
viewing each photographic image in my pre- and posttest.

The first question I asked about each photographic image in the pre- and posttest (What is this photography about?) sought the students’ description after viewing each image. Barrett (1997) worded his first question as “What do you see?” in order to get students to describe a photographic image. However, in Chinese, “What is this picture about?” has a more obvious meaning for students than Barrett’s “What do you see?” although these two sentences have a very similar intention, which is to ask the students for their descriptions of the photographic images. Thus, I used “What is this photograph about?” in my pre- and posttest. I had also translated the English version of the pre-and posttests into Chinese for the student-participants in Taiwan. Naturally, I had to translate their responses into English to present my data analysis for this study.

When giving the pretest, I informed the students that their reflections should be spontaneous, explaining that people see images in their everyday lives, but they don’t ordinarily “think” about them for a long time. I collected the students’ pretest materials upon their completion. I repeated the same process in the posttest as I had at the beginning of the semester when I administered the pretest. Chapter Five (Conclusions and Discussion) discusses whether Professor Wu’s teaching strategies changed the way
his students interpreted photographic images after he encouraged them to look more
closely at them to read them semiotically.

There were two potential advantages to using written questionnaires (the pre- and
posttest). First, certain questions included in the pretest collected data on the students’
background information, such as their education, life experiences, and prior cultural and
art experiences. This information helped me to detect how interpretation is employed by
the students, because demographic factors influence their interpretations. The students’
photographic image interpretations are influenced not only by their photography teacher,
but also by their prior experiences, knowledge, beliefs, values, and assumptions. Instead
of asking the students’ background information separately, including these questions in
the pretest helped me to save a great deal of time in my data collection. Secondly, Fowler
(2002) thinks that written questionnaires are an easy way to present questions requiring
visual aids, in contrast to telephone interviews.

The pre- and posttest for my study required that the students actually view and
write responses to photographic images. Also, since everyone uses a different amount of
time to study a photographic image, the written questionnaire allowed the individual
student to use the time they needed to look at each photographic image in order to
respond to the questions. Fowler identified another potential advantage to using written questionnaires, i.e., the researcher is capable of “asking questions with long or complex response categories” (p. 72). In the pre- and posttest, I used a series of open-ended and close-ended questions to investigate the students’ interpretations and beliefs regarding interpreting photographic images. The open-ended questions required a longer period of time in which to respond, because simple yes/no questions would not yield the necessary data.

However, there are three disadvantages to using written questionnaires: first, “good reading and writing skills by respondents are needed” (Fowler, 2002, p. 72). Some people can talk very well but may not write and read well. Then the pre- and posttest would not be a suitable research tool for studying the responses of these persons. Second, open-ended questions may not provide useful data for the researcher. With the pre- and posttest, I used open-ended questions to determine the students’ interpretative behaviors and learning processes. But those student-participants who could not read or write well may not have had adequate descriptive skills to respond to the questions in order to provide me with useful information. Third, a student’s attitude can affect his/her writing response. Some students take written questionnaires more seriously than others and might
spend more time on responding or tend to write more than others.

**Oral Questionnaires: Interviews**

Interviewing can be a crucial way to obtain rich, detailed data about people and how they view their world (Rossman & Rallis, 2003), so I chose to conduct oral interviews as well as to collect written survey data for my study. I wanted to find out from the participants “those things we cannot directly observe [such as] feelings, thoughts, and intentions” (Patton, 1990, p. 196). The interviews allowed me to probe more deeply into the students’ and teacher’s perspectives on interpreting photographic images. In addition, I had an interest in “understanding the experience of other people, and the meaning they make of that experience” (Seidman, 1998, p. 3). According to Merriam (1988), “It is also necessary to interview when we are interested in past events that are impossible to replicate” (p. 72).

I conducted two open-ended and in-depth interviews (one in the first week of the 2004 spring semester and the other in the last week of the same semester) with the course instructor, Professor Jiabao Wu. I attempted to understand his complex teaching behaviors without imposing my own assumptions, which could limit the field of inquiry.
The term “complex behaviors” is defined here as the investigation and exploration of (a) the professor’s educational background, professional experiences in the area of photography, and teaching experiences, (b) his teaching strategies, and (c) his expectations for his students.

There are basically two types of interviews: structured interviews and unstructured interviews (Fontana & Frey, 2000; Fowler, 2002; Merriam, 1988; Patton, 1980, 1990; Seidman, 1998). In structured interviewing, the interviewer asks all the participants the same set of questions with a limited set of response categories (Fontana & Frey). Unstructured interviews are very useful and helpful “when the researcher does not know enough about a phenomenon to ask relevant questions” (Merriam, 1988, p. 74). Rossman and Rallis (2003) defined another type of interview that falls between the structured and unstructured types: “standardized open-ended interviews, having fixed questions that are asked for all participants in a particular order . . . . However, participants respond freely” (p. 182). And Merriam explained that the less-structured interviewing formats “assume that individual respondents define the world in unique ways” (p. 74). In my study, I used a less-structured, open-ended interview as a method to “access the perspective[s] of the person[s] being interviewed” (Patton, 1990, p. 196).
As Fontana and Frey (2000) stated, interviews can take the form of “individual, face-to-face verbal interchange . . . or face-to-face group interchange, mailed or self-administered questionnaires, and telephone surveys” (p. 645). In addition, Rossman and Rallis (2003) stated, “‘Talk’ is essential for understanding how participants view their worlds. Often, deeper understandings develop through the dialogue of long, in-depth interviews, as interviewer and participants co-construct meaning” (p. 180). From my prior experience with the same kind of research interview structure, I have found that open-ended questions are oftentimes easier to answer orally than in writing, especially for college students.

The selection of interview participants is also important. Creswell (1998) has said that “for one-on-one interviewing, the researcher needs individuals who are not hesitant to speak and share ideas” (p. 124). Likewise, Stokrocki (1997) suggested that “it is important to find key informants who are participants and appear willing to cooperate with you and give you extra information and insights” (p. 40). So, on the last page of the written pretest, I asked the student-participants to indicate if they would be willing to have a face-to-face, one-on-one interview with me. Of the 29 student-participants in the course who completed the pretest, 13 agreed to be interviewed. I followed up their
responses by sending an email to each one to confirm that they were able to have the interview with me. A few days later, I sent a second email and made a phone call to each individual as well. Finally, five student-participants agreed to be interviewed, two males and three females.

There are three potential advantages to the personal interview. First, as a researcher and interviewer, I could answer the respondents’ questions, probe for adequate answers, while closely following the questions’ sequence throughout the interviews (Fowler, 2002). Unlike other types of interviews, such as telephone or group interviews, in face-to-face, one-on-one interviews, the interviewee will more likely concentrate and spontaneously respond to the interviewer’s questions. In addition, Rossman and Rallis (2003) have posited that an interview can be considered a conversation with a purpose, and the interviewer can ask questions for which s/he truly wants answers. Clear and direct responses are important to a study. From the participant’s perspective, an interviewer can clarify answers and responses from the participant during the time of the interview, if necessary.

The disadvantages to interviews are the time and financial costs required. The first disadvantage to having face-to-face, one-on-one interviews with selected participants
is that the total data collection period is likely to be longer than that of telephone or group interviews (Fowler, 2002). I interviewed five students and the teacher individually at the beginning of the semester and at the end of the semester. The interviews with the student-participants took approximately 40 minutes each. So I spent approximately one and a half hours with each student interviewee, and nearly three hours total with the teacher. The preparation time for each interview, the meeting arrangements with the interviewees, and my travel between home and the interview site were time-consuming.

The other disadvantage to conducting face-to-face, one-on-one interviews, in contrast to telephone or group interviews, is that “it’s likely to be more costly than other alternatives” (Fowler, 2002, p. 72). My air travel from the United States to Taiwan to conduct the in-person interviews for my study, as well as other transportation to the individual interviews while in Taiwan, was quite costly.

**Observations**

Observation has been characterized as “the fundamental basis” of all qualitative research methods (Adler & Adler, 1994; Angrosino & Mays de Perez, 2000; Rossman & Rallis, 2003; Stokrocki, 1997). Rossman and Rallis believe that through observation, the
researcher learns about a person’s actions and infers the meanings those actions have for the participants. Observation assumes that actions are purposeful and expressive of deeper values and beliefs. As noted by Foster (1996), to make an observation is to construct “public knowledge (empirical or theoretical) about specific issues, which can be used by others in a variety of ways” (p. 57). The needs for my observations during this study were: (a) to see the patterns of both the students’ learning processes and the teacher’s teaching strategies; (b) to see the patterns the participants did not mention and/or were unwilling to talk about during the pretest and the interviews; and, (c) as the researcher, to gain direct personal experiences and knowledge of the topic (Angrosino & Mays de Perez, 2000; Creswell, 2003; Rossman & Rallis, 2003).

During the spring semester of 2004 in Taiwan, I observed the 29 students and the teacher in a photography appreciation course, and their class activities every Thursday afternoon, from February 19, 2004, to June 9, 2004, for two hours per week. The course only met once a week, so I observed all of the class meetings in the spring semester.

I used audio tape recordings and field notes to collect data on the teaching strategies Professor Wu used in the course. I used classroom observation, written field notes, and informal interviews with the professor, when I needed clarification of what I
had observed in the class, as well as to triangulate the data and uncover the framework of
his teaching strategies. During my observations, I used an observation protocol (see
Appendix A) to record my field notes. My field notes were descriptive and reflective. In
addition to my classroom observations, I made fields notes on my interview
transcriptions, mapping, audio sound recordings, and other documents that I collected and
organized.

In qualitative research, there are several kinds of observation. Creswell (1998,
2003) defined four types of observers: (a) the complete participant: the researcher
conceals his/her role; (b) the observer as participant: the role of the researcher is known;
(c) the participant as observer: the observation role is secondary to the participant role;
and (d) the complete observer: the researcher observes without participating. In this study,
I chose to be a complete observer, mainly so as not to influence the teacher or the
students, and in order to remain objective in my observations. During the class time, I sat
with the students and observed Professor Wu’s teaching, listened to what was discussed,
and watched the interactions between the students and between the teacher and the
students. But I did not offer any comments or opinions during the lectures or in-class
activities.
In addition to the benefits of using questionnaires and interviews, there are a couple of advantages to using observation. First of all, without having to rely on just the participants’ descriptions in interviews or written questionnaires (pre- and posttest), the research observer (in this case, myself) can more likely directly record information about the students’ learning behaviors, and the teacher’s teaching strategies. According to Foster (1996), some participants “may be shaped by a particular role the person plays in ways that make the account misleading” (p. 58). Some believe that including observation in a qualitative study will more likely get accurate data for the data analysis (Babbie, 2001; Foster, 1996). Secondly, an observer may possibly perceive what study participants cannot (Foster, 1996; Wragg, 1999). In other words, participants sometimes find it difficult to “detach themselves from their own prior knowledge, beliefs, commitments and prejudices about a place they know very well and have seen every day for years” (Wragg, 1999, p. 15). Specifically, I had attended the university where I observed the photography appreciation class, and had taken courses from Professor Wu who had taught photography-related courses at the university for over 20 years. Additionally, observation data can be useful and supplemental for triangulating and checking on data from other sources. Wragg believes that “the information given by people about their own
behaviour in interviews can be compared with observation of samples of their behaviour” (p. 59).

One advantage of observation, according to Angrosino and Mays de Perez (2000), is that “naturalistic observation does not interfere with the people or activities under observation” (p. 674). However, in the real world, and from my own research experience with observation, I have noticed that when a researcher-observer sits in the classroom, the participants cannot naturally ignore the observer’s presence. Therefore, I believe the participants’ behaviors may change during observations. Also, Wragg (1999) believes that observation can never provide readers with “a direct representation of reality” (p. 59), that is, an observation is a conclusion of the observer’s viewpoints and reconstructed representation. Even though I used an audio tape recorder, I could not possibly record everything that happened during the classroom observation time. The descriptive and reflective data I collected through my observations were therefore comprised of my own judgments and determinations to make decisions about what should be recorded and what should not. Finally, observation can be very time-consuming and costly in contrast to other methods of data collection, such as interviews or surveys.
Procedures

This section described the procedures I followed to conduct my study.

Study Approval and Informed Consent

Because my research used human subjects, I submitted the written questionnaires (pre- and posttest) and the oral questionnaires (interview protocol) that I constructed, along with the participant informed consent forms, to The Pennsylvania State University Director of the Office for Research Protection of Human Subjects for review. The approval for this study was given on January 15, 2004 (see Appendix B).

Before I administered the pre- and posttest to the students and conducted the interviews with the teacher and his students, I distributed the informed consent forms to the participants via email the first week of the spring semester 2004. All 29 students who registered for the course, along with the teacher (Professor Wu), returned the signed consent forms. Before administering the pretest, I checked to see if each student had received the electronic consent form that I had sent and distributed a hard copy to the students who had not.
**Written Questionnaires**

I administered the pretest during the second class meeting at the beginning of the course, rather than at the first meeting to avoid the add-and-drop students. I administered the posttest during the last day of the course. Each test took approximately 40 minutes to complete.

The student-participants were asked to fill out the last four digits of their university student identification number on the cover page of the pretest as well as on the cover of the posttest. These four numbers helped me to recognize that the pretest and the posttest were completed by the same participant. As each student-participant has a different ID number, I was unable to verify their identities from these four numbers and thus provided them anonymity. The cover page of the pre- and posttest also included the reference information and the instructions for completing the test, as well as my contact information (see Appendixes C and D for the pre- and posttest).

**Pretest**

I administered the pretest at the second meeting of the photography appreciation class on February 26, 2004, from 3:10 p.m. to 3:50 p.m. A total of 29 student-participants
completed the test: 12 females and 17 males.

The pretest consisted of four different photographic images, along with 12 questions that required individual responses. Of the four photographic images I chose, two were works from Eastern culture (by contemporary Taiwanese photographers) and two were from Western culture (by contemporary American photographers). Three questions were listed with each photographic image in the pretest. The three questions were adopted from Barrett’s interpretation methods (1997), as indicated previously.

Although Professor Wu (1993) has his own interpretation methods, called “the system of reading photographic images” (see Table 3.1), his methods are considerably more detailed and were thus not an appropriate level for beginning learners taking my pre- and posttest. Although I found the content of Wu’s methods to be parallel to Barrett’s questions, I decided that Barrett’s three questions appeared to be simpler, shorter, and easier for beginning photography learners to answer in response to the photographic images. Thus, due to the time constraints for administering the written questionnaire, I decided to use Barrett’s method of questioning in both the pre- and the posttest.

Twelve of the questions in the pretest required individual responses, nine of which were open-ended. The 12 questions covered the following: personal information (two
items), intention for taking the course (one item), prior photography experiences (six items), photography meaning-making and interpretation processes (two items), and willingness to be interviewed (one item).

The personal information section was used to gather descriptive data: academic major and academic level (items 1 and 2). Item 3 was intended to gather data as to why the student-participants enrolled in this particular course (the intention question). Items 4, 6, 7, 8, 9, and 10 asked the student-participants to identify their prior experiences in photography, including their familiarity and experience with photographic criticism. Items 5 and 11 asked the participants about their methods of meaning making and their methods of photographic interpretation. Item 12 offered participants the option to engage in a face-to-face, one-on-one interview with myself as the researcher. If the participants were willing to be interviewed, they marked ‘yes’ and provided additional contact information. If the participants were not interested in participating in an interview, they marked ‘no.’ In order to protect the student-participants’ privacy, this item was listed individually on the last page of the pretest and known only to myself, the researcher. After analyzing the data and contacting the interview volunteers, I destroyed the pages with item 12 on them to protect the student-participants’ identities.
Posttest

On June 3rd, 2004, the last class meeting of the course, I administered the posttest from 3:20 p.m. to 4:00 p.m. Twenty-two participants completed the test.

There were 17 questions that required individual responses, along with four different photographic images (the same set as used in the pretest). With each photographic image, the same three questions that were used in the pretest were used in the posttest (see Appendix D).

All 17 questions were open-ended and required individual responses. Item 1 asked the student-participants about their attendance during the semester. Items 2, 3, 4, 5, 6, 11, 12, and 13 investigated the students’ learning behaviors, to determine their learning behavioral changes during the semester. Items 7 and 14 sought information about the student-participants’ methods of meaning making and methods of photography interpretation. Item 7 on the pretest is the same as item 5 on the posttest; item 14 in the posttest is the same as item 11 in the pretest. Four items (items 5 and 11 in the pretest, and items 7 and 14 in the posttest were designed to gather data related to the students’ processes of meaning making prior to and after taking Professor Wu’s course. Items 8, 9, and 10 in the posttest asked the student-participants to describe the teaching strategies
employed by the teacher, and to explain the difference between the teacher’s teaching strategies in relationship to their own interpretation strategies.

For the last questions (items 15, 16, and 17) in the posttest, I decided to use a seven-point Likert-type scale, with 1 being ‘not significant’ and 7 being ‘very significant,’ to examine the importance of in-class activities and lectures in helping the students with their photographic images interpretation. To determine what experiences in the course would help them to interpret photographic images in the future, I asked the open-ended question, “Why?” after each item they rated. This question allowed them to explain their rated response to items 15, 16, and 17.

**Identification of the Student-Participants**

To assure the students’ privacy, I identified them by the last four digits of their student identification number which they wrote on their responses to the pre- and posttest. According to their responses, as shown in Table 3.1, I designated each student-participant by their participation in the pre- and posttest, and the interviews. Five student-participants who completed both pre- and posttest and both interviews are identified as “Number, Pretest, Posttest, Interviewee,” for example, “1PPI.” I categorized the 17 student-
participants who completed both tests as “Number, Pretest, Posttest,” such as “6PP.” The seven students who only participated in the pretest are labeled as “Number, Pretest.”

Table 3.1

Student-Participants’ Identification

<table>
<thead>
<tr>
<th>Number of Student-participants</th>
<th>Identifier</th>
<th>Source of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1PPI to 5PPI</td>
<td>Completed pre- and posttest and were interviewed.</td>
</tr>
<tr>
<td>17</td>
<td>6PP to 22PP</td>
<td>Completed both pre- and posttest.</td>
</tr>
<tr>
<td>7</td>
<td>23P to 29P</td>
<td>Completed only the pretest.</td>
</tr>
</tbody>
</table>

**The Pilot Study**

I conducted a pilot study, that is, a smaller version of the qualitative data collection process for the study, using the written questionnaires (the pre- and posttest). Many scholars are convinced of the importance of doing a pilot study before they do the formal data collection. Wilson (1996) stated that “a pilot investigation is a small-scale trial before the main investigation, and is intended to assess the adequacy of the research design and of the instruments to be used for data collection” (p. 103). For this reason, I
also constructed a feedback form for the pilot study as recommended by my dissertation chair.

I administered the pretest on February 12, 2004, and the posttest on June 1, 2004, in order to revise these questionnaires for the main study. Twenty college students in a similar photography appreciation course from another university in Taipei, Taiwan, completed these two tests. The results of the pilot study of the pre- and posttest helped me to clarify and revise the questions prior to administering these two questionnaires in the actual study.

When I conducted the pilot studies, I asked the participants to write down the starting time on the cover page of the test to help me calculate the total time needed to complete it. In addition to piloting both the pre- and posttest, I administered the pilot feedback questionnaire containing the following questions regarding the two tests: (a) Are all the questions listed easy to understand? Please indicate which question(s) need(s) to be clarified? (b) Please tell me what will make this questionnaire better? and (c) How long did it take you to complete this questionnaire?

Another reason for conducting a pilot study was so that I could gain real-world practical experience in administering the questionnaires before gathering data for the
main study. Cone and Foster (1996) warned that “pilot work is important because what you plan to do may look good on paper but not work very well when you actually try it out with real subjects” (p. 201). In addition, I had to revise my pre- and posttest based on some small technical problems identified by my dissertation committee members, after hours of discussions with them about details on the pre- and posttest following the pilot study. This process convinced me of the necessity for conducting a pilot study.

**Oral Questionnaires**

The oral questionnaires consisted of the interview protocols for the individual interviews with both the teacher and the student volunteers at two different times during the semester. I chose to interview the participants because “as a method of inquiry, interviewing is most consistent with people’s ability to make meaning through language” (Seidman, 1998, p. 7). In this study, I employed less-structured, open-ended, and in-depth questions for the interviews with the teacher and the five college students.

I conducted two face-to-face, one-on-one interviews with the teacher. One was during the first week of the spring semester 2004, and the other was during the last week of the same semester. The week after the pretest, five students participated in face-to-face,
one-on-one interviews with me. After the student-participants completed the posttest
during the last week of that spring semester, I interviewed the same five volunteers
individually, in the same manner. To conduct the interviews of the students and the
teacher, I used four interview protocols (see Appendix E), two for the teacher (for the first
interview at the beginning of the semester, and for the second interview at the end of the
semester) and two for the five volunteer student-participants (after the pre- and posttest).
I took notes and audio tape recorded the interviews based on several scholars’
suggestions (Ives, 1997; Creswell, 1998; Seidman, 1998). I interviewed all the
participants individually in Chinese in a university classroom.

First Interview with the Teacher

On February 24, 2004, I interviewed Professor Wu in his office at the Chinese
Culture University in Taipei, Taiwan, using the interview protocol I had developed (see
Appendix E). The interview took approximately 1 hour and 45 minutes. There were four
types of interview questions in the interview protocol: general questions (6 items), career
choices (5 items), teaching experiences (10 items), and professional photography
teaching strategies (30 items).
The general questions consisted of the teacher’s demographic information, for instance, Professor Wu’s family, educational background, photography and art learning experiences (items 1 to 6). The career choice section included questions concerning the possible factors that had influenced him to teach photography (items 7 to 11).

The teaching experience section covered Professor Wu’s definition(s) of teaching and learning, concepts and knowledge of teaching photography, and his photography teaching experiences at the college level, from his first years until the present (items 12 to 21).

The professional photography teaching strategies section was divided into two parts: questions about photography knowledge and skills (6 items: from item 22 to item 27), and questions about professional approaches to interpret photographic images (24 items: from item 28 to item 51).

The questions about photography knowledge and skills focused on the teacher’s concepts, ideas, and experiences regarding teaching students to interpret photographic images (items 22, 23, 24, and 25); challenges (item 26); and opportunities for improvement of photography knowledge and skills (item 27).

The questions about professional approaches to interpreting photographic images
concentrated on the features supporting Professor Wu’s teaching, for example, the
department’s guidelines and expectations for this course (items 28, 29, 30, and 31); his
definition of “photography appreciation” and “interpreting photographic images” (items
32 and 33); his photographic image interpretation and meaning-making process (item 34
and 35); his methods of teaching students to interpret a photographic image (item 36 and
37); his teaching strategies (12 items: 38 to 49); and functions of Professor Wu’s
teacher’s online photography discussion board (items 50 and 51).

First Interview with the Student-Participants

Item 12 on the pretest asked the student-participants about their willingness to
have a face-to-face, one-on-one interview. Thirteen of the 29 student-participants
indicated on the pretest that they would take part in an interview with me. I sent each of
them an email two days after they completed the pretest to ask when they could be
interviewed. I sent out a second email (four days after administering the pretest) and
made phone calls to all 13 student-participants who had agreed to an interview. Five
indicated their strong willingness to be interviewed by contacting me after they received
my email and asking for a confirmation. These five participants also gave me a time to be
interviewed. I interviewed each of the students individually in an empty classroom to provide them confidentiality and privacy.

The interview protocol for the student-participants covered four areas: general questions (6 items), pretest questionnaire follow-up (6 items), daily visual experiences (5 items), and learning experiences (9 items). The general questions (items 1, 2, 3, 4, 5, and 6) included the student-participants’ demographic information, such as their educational background, and photography and art learning experiences.

The pretest questionnaire follow-up questions (items 7, 8, 9, 10, and 11) asked the student-participants’ their intentions and motivations to learn photography, their prior experiences in photography, and their processes of meaning making while interpreting a photographic image.

The daily visual experiences section (items 12, 13, 14, 15, and 16) explored the locations in which the student-participants mostly viewed photographic images, their attention to photographic images, and their beliefs related to the reality of photographic images.

The learning experiences questions (items 17 to 25) focused on the participants’ definitions of teaching, learning, and photography appreciation, as well as on
photography interpretation and the expectations of the teacher.

**Second Interview with the Teacher**

I conducted the second formal interview (see Appendix E for interview protocol) with Professor Wu in his office at the University on June 3rd, 2004. It took approximately one hour. There were two types of interview questions: photography knowledge and skills (6 items) and professional approaches to interpreting photographic images (6 items).

In this interview, my questions about photography knowledge and skills focused on the teacher’s concepts, ideas, and experiences regarding teaching students to interpret photographic images (items 1, 2, 3, and 4), challenges in teaching the course (item 5), and ways to improve the course (item 6).

The questions about professional approaches to interpreting photographic images were designed to discover which steps the teacher took towards aligning class activities and assignments with course objectives listed on the syllabus (items 7, 9, and 10); the teacher’s beliefs about his own teaching and how they contribute to the students’ learning to interpret photographic images (item 8); the frequency of student participation in the online discussion for this course (item 11); and the teacher’s most powerful and
memorable teaching experiences in this course (item 12).

Second Interview with the Student-Participants

I interviewed the same five student-participants individually after they completed the posttest (from June 3rd to June 5th, 2004). Each interview took approximately 30 to 40 minutes. The interview protocol (see Appendix E) covered three sections: posttest questionnaire follow-up (items 1 to 8), daily visual experiences (items 9 to 13), and learning experiences (items 14 to 20).

The posttest questionnaire follow-up section was designed to investigate the reasons, motivation, and efforts on behalf of the student-participants to access the online class discussion for this course (items 1, 2, and 3); assess changes in the student-participants’ photography learning experiences (item 4); understand the ways the students utilized Professor Wu’s teaching strategies to interpret photographic images (item 5); assess the importance of photography criticism in helping the student-participants to understand the meaning of a photographic image (item 6); investigate the student-participants’ methods of meaning making and methods of photography interpretation (items 7 and 8).
The questions about daily visual experiences were designed to gather data on the locations in which the student-participants mostly viewed photographic images; their attention levels when viewing photographic images; and their beliefs related to the reality of photographic images or imagery (items 9, 10, 11, 12, and 13). This section duplicated the first interview with the student-participants (the same questions as items 12 to 16 in the first student interviews).

The questions about learning experiences focused on the student-participants’ definitions of teaching, and learning, photography appreciation, as well as on photography interpretation; concepts and knowledge of learning photography; expectations of the teacher (items 14, 15, 16, 17, 18, and 19); and the student-participants’ most powerful and memorable learning experiences in this course (item 20). After I had completed the interviews, I transcribed the tape recordings, translating them into English, in order to analyze the data and write up the results of the study.

**In-Class Observations**

Reed and Bergemann (2001) have noted that observation is one effective means of learning how certain teaching methods are employed by schools or teachers, and how
students respond to the classroom environment. Since my study was intended to research the teaching approaches and learning processes, I observed both the teaching methods used in the photography appreciation course and the students’ learning behaviors in the classroom.

Professor Wu introduced me to the student-participants during the first and second class meetings. As a “complete observer,” I did not participate in any in-class activities or any discussions during the lectures. I sat in the same seat in the classroom and walked in between the groups to observe their discussions or in-class activities.

I kept observation field notes, utilizing a sample form developed by Reed and Bergemann (2001) and Merriam’s checklist of what to observe (1998; see Appendix A). Having observation field notes in a format would allow me “to find desired information easily” (Merriam, p. 105). My observation field notes included the date and time of my observation; length of the observation; number of students (number of male and female participants); the classroom physical setting (the location; technologies used in the setting); topics of the day’s class; in-class activities; conversations and interactions (there is a form to record the conversation between the students and the teacher to interpret the interaction of the students and the teacher); and take-home assignments.
Each time I observed the class, I not only wrote down field notes but also audio
tape recorded the class discussions and the teacher’s lectures. The audio sound recordings
helped me to clarify discussion I had missed during class time. I also collected documents,
including the teacher’s syllabus, online discussion forum, supporting documents
distributed during class, and Microsoft ® Power Point slides from the students and their
teacher. This wide range of documents helped me to triangulate the data when I analyzed
them.

**Analyzing the Observation Data**

After each observation of Professor Wu’s class, I replayed the audio tapes to
analyze my observation data. I adopted Flanders’ (1985) student-teacher interaction
system to interpret the interactions I had observed in the classroom. As noted by Reed
and Bergemann (2001), a coding system looks for “specific elements of teacher and/or
student behavior” (p. 25).

Flanders (1985) divided student-teacher interaction into three trends (with nine
categories): indirect teacher influence, direct teacher influence, and student talk. The four
categories, according to Flanders (Reed & Bergemann, 2001), that illustrate indirect
teacher influences are when the teacher: accepts feelings (the teacher accepts or
acknowledges student-expressed feelings), praises and encourages (the teacher gives
positive evaluation of a student response or involvement), accepts or uses ideas of the
students (the teacher clarifies, develops, or refers to a student contribution), and asks
questions (the teacher seeks information or asks opinions with the intent that a student
answers). Three kinds of student-interaction are considered to be direct teacher influences;
the teacher lectures (the teacher presents ideas or information), gives directions (the
teacher directs or suggests in a way that indicates the student is expected to obey), and
criticizes or justifies authority (the teacher evaluates a student’s contribution negatively
or refers to the teacher’s authoritative position). The following two responses are student
talk: student talk response (the student’s direct answer to the teacher’s question) and
student talk-initiation (the student initiates a comment or question that is unpredictable
and/or creative in content).

Thus, I scored the number of times these nine categories of interaction occurred
between Professor Wu and his students. Table 3.2 shows my observation data.
Table 3.2

Analysis of Student-Teacher Interactions in Professor Wu’s Class

Date: 2/19/2004

<table>
<thead>
<tr>
<th>Types of Interactive Behavior</th>
<th>Scores of the Times Observed</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDIRECT TEACHER INFLUENCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepts Feelings</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Praises and/or Encourages</td>
<td>10</td>
<td>11%</td>
</tr>
<tr>
<td>Accepts or Uses Student Ideas</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>Asks Questions</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td><strong>DIRECT TEACHER INFLUENCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lectures</td>
<td>15</td>
<td>17%</td>
</tr>
<tr>
<td>Gives Directions</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Criticizes or Justifies Authority</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td><strong>STUDENT TALK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Talk-Response</td>
<td>14</td>
<td>16%</td>
</tr>
<tr>
<td>Student Talk-Initiation</td>
<td>8</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>87</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Adopted from Flanders’ (1985) student-teacher interaction model.
Chapter Four

DATA ANALYSIS

Data analysis is a process of “making sense out of one’s data” (Merriam, 1988, p. 127). For a case study, Creswell (1998) explained that data analysis consists of “making a detailed description of the case and its setting” (p. 153). I analyzed the data I collected for this study by adopting Yin’s (2003) linear-analytic structure, starting with my research questions and review of the related literature. I begin my description of my data analysis by describing Professor Wu’s personal characteristics that help make him an effective teacher; then I explain his educational background and professional experiences that helped form his subject content knowledge. Following that, I discuss Professor Wu’s pedagogical content knowledge and his knowledge of student learning. Finally, I discuss several strategies that Professor Wu used in the photography appreciation class that I observed and their impact on the students’ interpretation of photographic images.

Professor Wu’s Personal Characteristics

Cruickshank et al. (1999) described an effective teacher as generally having a motivating and stimulating personality. Kauchak and Eggen (1989, 1998) identified a
positive attitude as one of the most significant traits of an effective teacher. From my analysis of my interviews with and observations of Professor Wu, I found him to have these three characteristics, as well as others described as follows (as previously delineated in the literature review).

_Wu’s Enthusiasm_

One of the teacher attributes most closely linked to desirable student outcomes is enthusiasm (Rosenshine & Furst, 1971). Enthusiastic teachers convey to students that they are confident and enjoy what they are doing (Cruickshank, 1999), that they trust and respect students, and that the subject areas they teach are valuable and enjoyable. Even though enthusiasm is difficult to define, Good and Brophy (1987) specified that a teacher’s enthusiasm has two significant dimensions: interest and involvement with the subject matter, and vigor and physical dynamism.

In my first interview with Professor Wu at the beginning of the spring semester 2004, he described his area of interest in the field of photography, having worked in both his native Taiwan and Japan. Wu stated that “after studies in Japan, from working and teaching experiences, I figured out my biggest interest was in teaching photography, not
becoming a commercial photographer” (Wu, the first interview). Thus, Wu identified his strong interest in teaching photography, rather than being a commercial photographer.

Compared with being a commercial photographer, a photography teacher usually makes less income, but Wu confirmed that he enjoys what he is teaching.

As a photography teacher, the payoff is not good, but you can be satisfied by teaching and learning from students. The satisfaction of learning something new could not be found when I was a commercial photographer. Being a commercial photographer, I am using the same techniques I already knew to satisfy different clients’ needs. By teaching students, I began to gradually understand the things that I did not know before. I learned a lot from teaching photography. That’s why I like to teach. (Wu, the first interview)

Since the photography appreciation course is not a required course for the students at the Chinese Culture University, their intention for taking it would be important to the students’ attitudes toward learning. Thus, I included intention questions in the pretest (item 3, see Appendix C). Ten percent of the student-participants indicated in the pretest that they registered for this course because they liked Professor Wu’s teaching. His teaching of photography is enjoyable and valuable for these students.
**Wu’s Encouragement and Support**

Ornstein (1990) described teachers who are encouraging as those who respect and believe in students’ abilities. When students have begun a task but are becoming frustrated and are ready to give up, the teacher’s words of encouragement are significant to build their confidence.

Flanders (1985) identified encouragement as an indirect teacher influence in his student-teacher interaction model, which I used to analyze my observations of Professor Wu’s class. In every class, Professor Wu offered some encouragement (approximately 10 to 15%) to his students when asking/answering questions, probing ideas, and responding to student presentations.

From my observations and personal experiences, one of the cultural differences in students who grow up in Eastern culture seems to be that they are more passive and quiet listeners in the classroom than Western students. However, Professor Wu encouraged and supported his students’ active, verbal participation. According to my observation field notes, the most frequent question he asked during his teaching was, “How do you think about these two pictures? Can anyone tell me the difference?” In the beginning of the semester, whenever Professor Wu asked students this question, the classroom was quiet,
although the students participated more as the semester continued. To engage them,
Professor Wu always tried to ask different students to respond his question during his teaching.

Please tell me about how you think about these two pictures? Can any one tell me the difference? . . . . (The whole class was quiet for a while with no response.)

Please say something to me. Don’t worry about telling a wrong answer in public because there is no right or wrong answer in photographic image interpretation.

Everyone can have his/her own interpretations. Please imagine telling me the answer is a practice. When you attempt to provide the answer for me, you are practicing to organize your logical thinking in interpretation. You need more practice to read photographic images. (Wu, lecture 2)

**Wu’s Warmth**

A teacher manifests warmth through positive and supportive interpersonal relationships with students (Cruickshank, 1990). Positive relationships are fostered when teachers are friendly, showing interest in their students as individuals, and appearing to be open and willing to work things out with students
Professor Wu conveyed his warmth during his interactions with students inside and outside of the classroom. In the pretest, 93% of the students responded that they had completed more than one course with Professor Wu, which suggests that he is well liked and personable. During my observations, from the very beginning of the semester, Professor Wu was able to recognize almost every student by name. Whenever Professor Wu had questions during his teaching, in-class activities, or when the students asked him questions, I saw that he always recalled the student by names and demonstrated a friendly attitude. Some student-participants indicated in their pretests and interviews that they registered for this course because they like Professor Wu’s personality.

I like Professor Wu’s courses not only because he knows almost everything in photography but he is different as other teachers in our department. After I took one course with him, whenever I met him on campus, he always expresses his concern on my progress in the department. His courses are dense and a heavy load, but I enjoyed his teaching. (4 PPI, the first interview)

Not only do the students see Professor Wu as a friend, but he thinks of his students in that way too and reaches out to them to involve them in class. As he said, I always think I can learn something new from my students. And yet, I told them...
that no question is a stupid question. I am afraid when students have “no question”
that means either they did not actively participate in my teaching or they think I
am not willing to help them. (Wu, the first interview)

Wu’s Businesslike Classroom Demeanor

A businesslike teacher is one who emphasizes and focuses classroom activities on
tasks and is more likely to help students learn. Cruickshank (1999) cited the two most
important characteristics of businesslike teachers as being goal-oriented and organized.
Businesslike teachers focus on helping students achieve their goals; they also organize
the classroom and instruction based on established learning goals. From my point of view,
well-organized, businesslike teachers are more likely to involve all students in all
instructional activities to help them learn.

The main goals in Professor Wu’s course that I observed, and which he stated,
were to “have some knowledge of the history of photography and to have abilities to
interpret photographic images critically” (Wu, the first interview). Thus, Professor Wu set
his goals and organized his course accordingly. First, he organized and taught this course
content chronologically, from the 1830s when photography was invented to the present.
Second, in addition to lecturing, he engaged students in learning through small-group discussion to ensure that each student had opportunities to talk. Finally, Professor Wu assigned each student to make a presentation on a particular photographer and/or from a particular time. Professor Wu also asked each student to critique the others’ presentations.

In the beginning of the semester, his students tended to be passive about volunteering to present first. But when more student presentations took place, the students were more likely to get involved in presentations.

**Wu’s Adaptability and Flexibility**

Unlike the majority of college professors in Taiwan, Professor Wu did not lecture to his students all the time. In fact, he allowed his students to lecture in the class and give presentations part of the time during the second half of the semester, while he sat in the class and observed and responded to the students’ “teaching.” This is an unusual role reversal at the college level in Taiwan, where lecturing has been the standard teaching format. This suggests that Wu is adaptable and flexible in his teaching strategies. He even invited the students to ask questions and challenge his interpretations. He exhibited considerable openness to their opinions. In order to give his students even more
opportunities to participate in discussions and ask questions, he established his own Web site. He also showed other flexibility in the classroom by having numerous small-group discussions. Hence, it was evident that his teaching strategy was to not be the authority in the classroom, but to allow equal participation.

Professor Wu’s Knowledge Base

In this section, I depict Professor Wu’s subject content knowledge, his pedagogical knowledge, and his knowledge of students’ learning. I found that Professor Wu has a diverse knowledge base for teaching the photography appreciation course.

Wu’s Subject Content Knowledge

Recently, researchers have indicated that effective teachers’ content knowledge not only means their subject content knowledge but also includes their pedagogical content knowledge (Cruickshank et al., 1999; Galbraith, 2004; Shulman & Wilson, 2004). Shulman and Wilson believe that effective teachers’ full knowledge and understanding of their subject area content are still significant influences on their teaching.

Professor Wu attended the National Taiwan University of Arts (formerly known as
Taiwan College of Arts) in 1966 and completed three years of coursework with an associate degree in printing science. After he finished military service, Wu went to Japan to study at the undergraduate and graduate levels, with a concentration in photography at Nihon University from 1973 to 1977. (Male citizens over 20 years of age or who have finished their undergraduate study are required to have military service in Taiwan.)

Wu started teaching photography as a part-time instructor in 1977 at the National Academy of Arts in Taiwan. He became a full-time photography teacher in 1990 at the Chinese Culture University. As mentioned previously, Wu currently teaches photography-related courses, including photographic images communication theories, visual cognition and psychology, photography appreciation, and photography editing and production.

Wu described his photography education during his first year of study at the National Taiwan University of Arts. At that time, there were two required courses at the school: photography and practices in photography. Because Wu liked photography enormously, he read photography books extensively during his college years in Taiwan. Wu noted one problem with studying photography books as a youngster and at college, however: he could not find many in English at that time. The Taiwanese government did not lift the martial law until 1987. Before that, foreign language publications had been
As a youngster, Wu said he went to almost every English bookstore in Taipei but could not find one book in which he was really interested. Wu did find some English-language photography books published by Eastman Kodak Company, which were only for amateur photography learners, such as how to take good family portraits. But then one day he went to a Japanese bookstore with his father where he found numerous photography books, although they were in Japanese. That time he brought a Japanese photography book home, but he could not understand it. For that reason, he started to learn Japanese. Because some of the same characters are used in both Chinese and Japanese (although the meanings can be totally different), Wu assumed that he could easily understand Japanese, so he proceeded to study Japanese photography books. Then from Wu’s freshman year to his junior year in college, he studied Japanese.

Professor Wu identified two experiences in photography between 1985 and the present as being the most important for him and for his photography education. They were the Saturday photography course he took at Nihon University and the photography course he took with Shizenge Kanamaru at Nihon University. Kanamaru had founded the Photography Department at the University before World War I.
Professor Wu mentioned that the Saturday photography course was not popular among students because they were required to meet every Saturday afternoon at 3 p.m. But because of his avid interest in photography, Wu never missed a class in two semesters. Because there were only four students in the course, Wu had plenty of interaction with the others. The other important experience for Wu was his studies with Shizenge Kanamaru at Nihon University. Wu believes there was one common denominator between these two courses: both emphasized visual cognition. Kanamaru’s course used a book called *The Language of Vision* (Kepes, 1964). Wu noted that Kepes’ book was significant in helping him form his subject content knowledge base, and most influential for him in learning to teach photography.

From 1985 to the present, the most important learning experience for me to affect my teaching in the future was to learn visual cognition in Saturday courses in Japan. I did not recognize the importance of visual cognition and how it would affect my teaching in the later days. (Wu, the first interview)

Professor Wu has concluded that his subject content knowledge in commercial photography is primarily based on his previous work with Eastman Kodak Company as well as on having been a freelance, full-time commercial photographer. After Wu
completed his military service in 1971, he decided that he needed some work experience before going to study photography in Japan. Initially, Wu hoped to becoming a commercial photographer in an advertisement company, but no company offered him a job. However, after passing the interview exam, he went to work for the Eastman Kodak Company in Taiwan in 1971. Wu worked for Kodak as a sales representative for two and one half years.

As a sales representative, Wu had to visit all the photography retail stores throughout Taiwan once a month. Because he “represented” Eastman Kodak Company, the retailers always thought he could solve any photographic technical problems. For example in 1972, commercial strobe lighting equipment for portrait and commercial studios was introduced in the Taiwanese market at that time. Many photography studio owners bought strobes, but they did not know how to operate them correctly. But neither did Wu. Often when he visited the retailers or photography studios as his routine job, people would ask him to help solve their technical problems, especially how to use strobes. But Wu did not think he had the necessary knowledge, skills, and abilities to help his customers.

About the same time, the Minister of Education in Taiwan sent Wu a letter
notifying him that his permission to study aboard would expire in the next couple of months. Because of this notification and his lack of confidence in his technical knowledge to meet his Kodak customers’ needs, Wu sent applications to Japanese universities to continue his studies. He was accepted and went to study photography at Nihon University in Japan.

After Wu finished his studies in Japan and returned to Taiwan, he worked as a commercial photographer from 1977 to 1985. He worked as a full-time commercial photographer and taught photography part time at the National Taiwan University of Arts. Working as a commercial photographer was a very significant experience, Professor Wu noted. He realized that photographic images, especially commercial photographic images, were constructed for meaningful purposes. It is apparent that Wu’s experience of being a commercial photographer was important, first, because he noticed the meanings behind photographic images; and, he learned and practiced photographic technologies during those years as a full-time commercial photographer—both of which gave him an extensive knowledge base in commercial photography that has enriched his teaching.
Wu’s Pedagogical Content Knowledge

Shulman and Wilson (2004) stated that pedagogical knowledge means that teachers must have an armamentarium of alternative forms of presentation, “some of which derive from research whereas others originate in the wisdom of practice” (p. 203).

Professor Wu used four different teaching strategies in his photography appreciation course: lectures, student-presentations, small-group discussion, and critiques. These four pedagogical strategies engaged his students in learning in his classroom, especially to interpret photographic images. Photographic image interpretation requires complex interpretive behaviors (Barrett, 2000) to deconstruct the signs embedded in a photographic image. In fact, Wu developed a “system of reading photographic images” (Wu, 1993; see Table 4.1) in order to teach students to interpret them. Professor Wu believes that his system is suitable for reading photographic images universally. For Wu, it is important for students to come to this course not only to learn the history of photography, but also to know why certain pictures are considered significant in history. Professor Wu considers his system of reading photographic images to be a method of analysis that uses multiple perspectives, including visual aesthetic, visual cognition, and symbolic meanings, to understand the contextual meanings of any photographic image.
In my observations, Professor Wu transforms his subject content knowledge base, and effectively employs the four teaching strategies to convey his system of reading photographic images to students. Wu highlighted details of his system, and mentioned that he continuously encourages students to practice this system to interpret photographic images during the class meeting time. As Wu told his students,

From my experiences of previously working with other students, I think you might find it difficult, and not be used to adopting the system of reading photographic images. More practice in using it in this class will make you get used to adopting it. In the future, I believe you will benefit from using the system of reading photographic images to easily understand the meanings of any photographic images. (Wu, lectures)
### Table 4.1

**Professor Wu’s System of Reading Photographic Images**

<table>
<thead>
<tr>
<th>LAYERS</th>
<th>WU’S EXPLANATIONS</th>
<th>REFER TO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st}) Layer</td>
<td>Its Surface Story</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. What is this picture about?</td>
<td>Using your intuition to describe this picture.</td>
</tr>
<tr>
<td></td>
<td>b. The stories (the characteristics of objects and their changes)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. The most stimulating point in visual effects of the images</td>
<td>Contrast, tones of the color, the outline, and etc.</td>
</tr>
<tr>
<td>2(^{nd}) Layer</td>
<td>Visual Aesthetics and Its Intention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determine the value of a photographic image</td>
<td>Viewer’s visual processes of reorganization &amp; organization</td>
</tr>
<tr>
<td>3(^{rd}) Layer</td>
<td>The Symbolic Meanings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The deeper meanings and implied meanings</td>
<td>Contextual meanings of this image</td>
</tr>
</tbody>
</table>
Professor Wu’s “system of reading photographic images” supports the notion that there are three layers of meanings embedded in a photographic image: its surface story (the characteristics of objects), visual aesthetics and its intention, and the symbolic meanings. Wu explained this system in detail and expected the students to adopt it for reading photographic images both inside and outside of the classroom.

The first time he showed a new picture, Wu would usually ask the students: “From looking at this picture, what is this picture about?” His inquiry was almost the same as the first question that accompanied the four images in my pre- and posttest for the study. Following a couple of students’ responses to his inquiry, Wu started using his system of reading photographic images to ask students their interpretations and to elaborate on their interpretations. As researchers (Cruickshank, 1990; Kauchak & Eggen, 1989, 1998; Rosenshine & Furst, 1971) suggest, probing behaviors help students to go deeper in their thinking. Professor Wu used his system of reading photographic images to engage the students in his photography appreciation course in meaningful inquiry to deconstruct meanings in images.

At the end of the semester, the student-interviewees reflected on their learning experiences in the course with Professor Wu during the semester. Most of them
mentioned that the beginning of the semester was the most difficult time for them because they had to change how they read photographic images. However, once they got used to Wu’s system of reading, they believed the system was very useful for them for interpreting photographic images. They think that visual aesthetics and the deeper meanings of signs are significant for them. Plus, they consider cultural, political, and social issues as important aspects too.

When looking at a picture, I am aware of the relations between visual elements space arrangements. I consider the signs are important for viewers to read too. Moreover, I remember Wu suggested for us to carefully think about the social and cultural background of that piece of work. How that piece of work makes meanings to me, to the society, and the culture. (5PPI, the second interview)

*Wu’s Knowledge of Students’ Learning*

Understanding students’ developmental levels in the subject content areas (Cruickshank, 1990) and being aware of students’ cultural differences within subject content areas are significant considerations for teachers in order to develop appropriate lessons and use different teaching strategies to engage students in learning. This is
especially true for college students in Taiwan, who are more passive than American students in the classroom. The students were able to access the course syllabus and discussion forums through Jiabao Wu’s Personal Photography Web site http://wu.gcd.pccu.edu.tw/07bbs/ Wu’s Web site is public, and any of his students or anyone else (who can read Chinese) can upload texts and images for peer critique and discussions. Wu sees his Web site as a place to announce and clarify issues, questions, and problems related to his courses, rather than as a virtual learning environment. As Wu said,

My Web site is a place for my students to ask questions, post their concerns, discuss issues related to my photography teaching. As you know, the nature of Eastern culture, students are shy and unwilling to ask their questions during the class time. For this reason, I set up my Web site for students to ask questions freely at any time. (Wu, the first interview)

From my observations, I think the students were more willing to ask questions on Professor Wu’s Web site than in the classroom. This teaching strategy complemented his classroom strategies. Professor Wu certainly notices what students need by using his Web site. This was another example of his attempt to encourage and support his students.
Professor Wu’s Teaching Strategies

As I described in Chapter Three, classroom observations were necessary for me not only to track the patterns of the students’ learning processes, but also and mainly to analyze the teacher’s teaching strategies and teaching effectiveness. Moreover, my observations allowed me to see the patterns the participants did not mention and/or were unwilling to talk about during the pretest and the interviews; and to provide me with direct personal experience and knowledge of Professor Wu’s teaching and the students’ learning behaviors (Angrosino & Mays de Perez, 2000; Creswell, 2003; Rossman & Rallis, 2003).

Observation is the act or practice of paying attention to people, events, and the environment (Reed & Bergemann, 2001). The difficulty with observation is that every individual has his/her perception of it. In this study, I tried to keep my observations as objective as possible. Also, the more data that are identified and analyzed during the observation, the easier it will be to get a complete picture of a phenomenon.

Lectures

Flanders (1985) defines lecturing as giving facts or opinions about content or
procedure, expressing ones’ own ideas, and giving one’s own explanations. According to my observation field notes and analysis of the student-teacher interaction in the first half of the semester (first seven weeks)—following Flanders’ framework; see Table 3.1), Professor Wu tended to have more direct teacher influence (approximately 50%) than student talk (approximately 20%), while indirect teacher influence, such as accepting feelings, accounted for 30%.

During my first interview with Professor Wu at the beginning of the semester of my study, he stated that he believes that taking his course gives the students an opportunity to build a photography knowledge base. Thus, he gave seven weeks of lectures (with some student discussion and in-class activities) on the history of photography.

**Student Presentations**

After giving seven weeks of lectures during the whole class time, Wu encouraged the students in his photography appreciation course to give lectures as well. Knowles (1984) believes that a teacher’s encouragement of students to identify resources and to devise strategies for using such resources to accomplish their objectives will be more
effective for students’ learning. Instead of having lectures in the traditional fashion, during the latter half of the semester, Wu initially asked each student to present an assigned photographer’s work of art in the first half of each class; then Wu gave a lecture in the second half of the class. He asked the students to prepare lectures based on the information they collected, which was to be from diverse resources, such as the Internet, books, magazines, newspaper, and photography journals.

An interesting phenomenon occurred in the latter part of the semester: more students gave presentations in lectures, and more student talk (student talk-response and student talk-initiation) took place. In the latter part of the semester, I found that the students became more active than at the beginning of the semester. When a student presented, their peers tended to more actively challenge the presenter. When Wu offered his suggestions and/or his viewpoints, students started to ask his reasons for saying them. These changes in attitudes towards more active participation in the classroom might have occurred because Wu continuously encouraged the students to engage, and emphasized that they must have personal opinions and viewpoints beyond his.
Small-Group Student Discussions

Professor Wu used a variety of ways to stimulate student discussion. For example, he began a lesson with small-group student discussion to refresh his students’ memories about previous lectures or assigned readings. Sometimes, Professor Wu had students express their critical viewpoints from reading photographic images presented either in his lectures or in other students’ presentations. These strategies can also be used to help focus large and small group discussions.

Obviously, a successful class discussion engages planning on the part of the teacher and preparation on the part of the students. Professor Wu communicated this commitment to the students the first day of class by clearly articulating his expectations.

Small group discussions allow students to exchange their viewpoints with peers. Usually, students were more likely to be willing to discuss critical issues with peers because it was more informal and less pressure than having to give right/wrong answers.

Critiques

When the time came for student-delivered lectures, Professor Wu was not only a
spectator and audience member, but he also criticized and/or justified authority, giving lectures and responding to the students’ comments. For example, to this student’s comment in a presentation, he said,

Overall, I think Robert Frank’s photographic images are just like snap shots.

Some of his pictures even were out of focus and over exposed. I think I can take better pictures than him. (Student A, class presentation on March 18th, 2004)

Commenting on the student’s presentation, Wu remarked,

I think “Student A” [his name] made two valuable points. First, I think “Student A” really detected some details of Frank’s pictures. As he mentioned, I think some of Frank’s photographic images were out of focus and over exposed. And Frank’s pictures look like snapshots to me too. However, after you review Frank’s whole book (The Americans by Robert Frank), you may find he carefully framed and cautiously chose the subjects he wanted to present as his ideas of Americans. The snapshot type photographic images seem to me are informal and more innocent. As a viewer, when you feel informal and innocent after reading the pictures, you are more likely to believe what you see as natural and just out there. Although I
don’t believe those subjects were just out there, he must have waited until just the
right moment and took hundreds of pictures of the same scenes, the one you saw
on the textbook, it was the best result of what he tried to convey. (Wu, responding
to student A’s presentation)

Opportunities to critique offer students’ practice in critical interpretation and analysis
when reading photographic images.

**The Impact of Professor Wu’s Teaching Strategies**

The pre- and posttest served as significant sources of data with which to interpret
and understand the students’ insightful thinking, and to answer my research questions.

My questions in the pretest were intended to investigate the students’ background; prior
experiences in photography; beliefs, values, and assumptions for interpreting
photographic images. The pretest also indicated how the students were interpreting
photographic images at the start of the course.

By interpreting and comparing the posttest data analysis with the pretest data
analysis, I was able to map a whole picture of how Professor Wu’s teaching approaches
impacted his students’ learning of photographic image interpretation during the semester of my observations.

My third research question was: *Did the teacher’s teaching strategies impact the students’ methods of interpreting photographic images? If so, how, and in what ways do the students now make meaning of the photographic images they interpret?* Thus, I selected the same set of four photographic images (see Figures 4.1-4.4) for inclusion on the pre- and posttest. My first question in the posttest “What is this photograph about?” was modeled on “What do you see?” in Barrett’s (1997) original questions. “What is this photograph about?” has a very similar but more obvious meaning in Chinese for eliciting the viewer’s description, which was Barrett’s intention for asking “What do you see?”
Figure 4.1. The first image in the pre- and posttest

Figure 4.2. The second image in the pre- and posttest
Figure 4.3. The third image in the pre- and posttest

Figure 4.4. The fourth image in the pre- and posttest
The Students’ Descriptive Interpretations

From my first question in the pre- and posttest, based on Barrett’s (2000) aspects of photographic images, I expected the student-participants to describe subject matter, form, medium, style, and to compare and contrast (with other photographic images) in their responses. Table 4.2 conveys my analysis of the student-participants’ responses to the first question that accompanied each image in the pre- and posttest. The percentages in the table reflect the student-participants’ responses in the descriptive categories.

Table 4.2

Analysis of the Responses to the 1\textsuperscript{st} Question with the Four Images in the Pre- and Posttest (‘‘What is this photograph about?’’)

<table>
<thead>
<tr>
<th>Image</th>
<th>Subject Matter</th>
<th>Form</th>
<th>Medium</th>
<th>Style</th>
<th>Compare &amp; Contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} (Pretest)</td>
<td>83%</td>
<td>7%</td>
<td>7%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>1\textsuperscript{st} (Posttest)</td>
<td>45%</td>
<td>23%</td>
<td>9%</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>2\textsuperscript{nd} (Pretest)</td>
<td>72%</td>
<td>17%</td>
<td></td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>2\textsuperscript{nd} (Posttest)</td>
<td>59%</td>
<td>23%</td>
<td></td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>3\textsuperscript{rd} (Pretest)</td>
<td>76%</td>
<td>7%</td>
<td>7%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>3\textsuperscript{rd} (Posttest)</td>
<td>50%</td>
<td>36%</td>
<td>27%</td>
<td>9%</td>
<td>50%</td>
</tr>
<tr>
<td>4\textsuperscript{th} (Pretest)</td>
<td>97%</td>
<td></td>
<td>3%</td>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>4\textsuperscript{th} (Posttest)</td>
<td>89%</td>
<td></td>
<td>14%</td>
<td></td>
<td>68%</td>
</tr>
</tbody>
</table>
As Table 4.2 indicates, when responding to the first question in the pre- and posttest, most of the student-participants identified “subject matter” first when reading the fourth photographic image in both tests. Subject matter, in Barrett’s (2000) definition, refers to identity and typifies “persons, objects, places, or events” in a photographic image. For example, student-participant 6PP, in responding to the first image, wrote, “In this photographic image, I saw a man with two huge muscles” (6PP, the pretest).

More student-participants described “form” in the posttest than in the pretest. “Form” refers to “how the subject matter is presented” (Barrett, 2000, p. 26). Form is a descriptive statement about how a photographic image is composed, arranged, and constructed visually. Student-participant 17PP, in responding to the fourth image, wrote, “From the window, I saw cars in the bottom of the image first, then I saw other cars coming from the other side of the road, and my viewpoint went to the hangers with no clothes on them” (17PP, posttest).

Barrett (2000) defined the term medium as “what an art object is made of” (p. 28). The student-participants were more aware of “medium” in the posttest than in the pretest. Student-participant 13PP, in responding to the third image, wrote, “On this color photographic image, I saw some chocolate and prints” (13PP, the posttest).
Style specifies a similarity among diverse art objects from “an artist, movement, time period, or geographic location and is recognized by a characteristic handling of subject matter and formal elements” (Barrett, 2000, p. 31). Style is a more comprehensive way of categorizing art objects. Viewers likely need to have more of a knowledge base and understanding of art history to have the ability to categorize art objects. In the posttest, few students recognized the first photographic image as a commercial photographic image. The student-participants showed few differences in describing styles in other photographic images.

Many student-participants used “comparing and contrasting” strategies to interpret images in the third and fourth photographic images in the posttest. “Comparing and contrasting,” by Barrett’s (2000) definition, is to compare and contrast an image to other photographic images by the same photographer, or to another photographer’s works. Student-participant 7PPI, in responding to the third image in the posttest asked, “Is this a chocolate advertisement? It looks like much dirtier, messy than we usually see in advertisements” (7PPI, the posttest).
The first question “What is this picture about?” asked for the students’ description of a photographic image. However, interpretation goes beyond literal description to build meanings (Barrett, 2000). Therefore, the next question “What does this photograph mean?” invited students to make their own meanings after reading this image. Many scholars (Anderson, 2000; Barrett, 1990, 2000; Barthes, 1977; Sturken & Cartwright, 2001) believe that making meaning is in interpreting an image. Barrett (2000) further explained that Barthes’ signifying practices (denotation and connotation) can be “applied to all photographs” (Barrett, p. 39). Thus, I employed Barthes’ dual practices to interpret the students’ responses to this question. Table 4.3 contains the results of my analysis of the student-participants’ responses to the second question in each photographic image.
Table 4.3

*Analysis of the Responses to the 2\textsuperscript{nd} Question with the Four Images in the Pre- and Posttest ("What does this photograph mean?")*

<table>
<thead>
<tr>
<th>Images</th>
<th>Linguistic Message (LD)</th>
<th>Denoted Message (DM)</th>
<th>Connoted Message (CM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} (Pretest)</td>
<td>97%</td>
<td>86%</td>
<td>49%</td>
</tr>
<tr>
<td>1\textsuperscript{st} (Posttest)</td>
<td>45%</td>
<td>86%</td>
<td>45%</td>
</tr>
<tr>
<td>2\textsuperscript{nd} (Pretest)</td>
<td></td>
<td>90%</td>
<td>14%</td>
</tr>
<tr>
<td>2\textsuperscript{nd} (Posttest)</td>
<td></td>
<td>100%</td>
<td>23%</td>
</tr>
<tr>
<td>3\textsuperscript{rd} (Pretest)</td>
<td></td>
<td>100%</td>
<td>10%</td>
</tr>
<tr>
<td>3\textsuperscript{rd} (Posttest)</td>
<td></td>
<td>86%</td>
<td>23%</td>
</tr>
<tr>
<td>4\textsuperscript{th} (Pretest)</td>
<td></td>
<td>72%</td>
<td>21%</td>
</tr>
<tr>
<td>4\textsuperscript{th} (Posttest)</td>
<td></td>
<td>82%</td>
<td>45%</td>
</tr>
</tbody>
</table>

In Barthes’ (1977) signifying practice, denoted messages show obvious meanings (subject or form); connoted messages imply meanings beyond the obvious. Most student-participants could identify denoted messages in the pictures in the pre- and posttest.

According to Barthes (1977), linguistic messages are a very significant way of making meaning besides denoted messages and connoted messages. The first photographic image (see Figure 4.1) is an apparel commercial with a popular brand name.
(Calvin Klein). Thus, I included a linguistic message on the photographic image to check the student-participants’ responses. In the pretest, only one student-participant did not recognize this linguistic message. However, the other students, who acknowledged the linguistic message, were more likely to interpret the brand name first than the connoted messages. For example, student participant 3PPI, in responding to the first image to answer question two, mentioned “I think this is a Calvin Klein’s commercial because a male model wears Calvin Klein underwear” (3PPI, the pretest).

Compared with their responses in the pretest, more student-participants identified connoted messages of the photographic image in the posttest. Student-participant 14PP, in responding to the fourth image, wrote, “By looking at the cars and people outside the window, I feel lonely” (14PP, the posttest).

*The Students’ Meaning-Making*

In the third question with the four images in the pre- and posttest, I asked the students to answer “How do you know?” in order to conclude from what sources and in what ways they learned this information or knowledge (see Table 4.4).
Table 4.4

Analysis of the Responses to the 3rd Question with the Four Images in the Pre- and Posttest: (“How do you know?”)

<table>
<thead>
<tr>
<th>Images</th>
<th>Subject Matter</th>
<th>Form</th>
<th>Medium</th>
<th>Style</th>
<th>Compare &amp; Contrast</th>
<th>LD</th>
<th>DM</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (Pretest)</td>
<td>31%</td>
<td></td>
<td></td>
<td></td>
<td>31%</td>
<td>59%</td>
<td>14%</td>
<td>7%</td>
</tr>
<tr>
<td>1st (Posttest)</td>
<td>23%</td>
<td>5%</td>
<td></td>
<td></td>
<td>73%</td>
<td>41%</td>
<td>41%</td>
<td>18%</td>
</tr>
<tr>
<td>2nd (Pretest)</td>
<td>76%</td>
<td>24%</td>
<td>3%</td>
<td>21%</td>
<td>62%</td>
<td></td>
<td>48%</td>
<td>17%</td>
</tr>
<tr>
<td>2nd (Posttest)</td>
<td>68%</td>
<td>36%</td>
<td></td>
<td></td>
<td>73%</td>
<td></td>
<td>32%</td>
<td>9%</td>
</tr>
<tr>
<td>3rd (Pretest)</td>
<td>83%</td>
<td>34%</td>
<td>10%</td>
<td>7%</td>
<td>52%</td>
<td></td>
<td>52%</td>
<td>10%</td>
</tr>
<tr>
<td>3rd (Posttest)</td>
<td>56%</td>
<td>27%</td>
<td>14%</td>
<td></td>
<td>45%</td>
<td></td>
<td>45%</td>
<td>14%</td>
</tr>
<tr>
<td>4th (Pretest)</td>
<td>66%</td>
<td>24%</td>
<td>10%</td>
<td>10%</td>
<td>72%</td>
<td></td>
<td>45%</td>
<td>10%</td>
</tr>
<tr>
<td>4th (Posttest)</td>
<td>55%</td>
<td>18%</td>
<td></td>
<td>9%</td>
<td>68%</td>
<td></td>
<td>41%</td>
<td>9%</td>
</tr>
</tbody>
</table>

In conclusion, the student-participants often understood the context of the photographic images by interpreting “subject matter” through “comparing and contrasting,” and from “denoted messages” in the images in the pre- and posttest. The student-participants were more likely to concentrate on describing subject matter in the pretest. As a result, the students’ responses were different in their comparing and contrasting. Apparently they were trying to use more compare/contrast analysis in their
interpretation. Therefore, Professor Wu’s teaching strategies evidently impacted the students’ processes for interpreting photographic images.

**The Students’ Meaning-Making of Photographic Interpretation**

Items 7 and 14 in the posttest were intended to discover the student-participants’ methods of making meaning of and interpreting photographic images. Item 7 in the posttest was the same as item 5 in the pretest, and item 14 in the posttest was the same as item 11 in the pretest.

When looking at the photographic images in items 5 and 7 in the posttest, the students were asked to reflect on photographic image interpretation and to describe how they go about making meaning of works of art.

In the pretest, over half of the student-participants (55%) responded that they make meanings based on their intuition. Then some students (48%) mentioned that they look over the aesthetic forms (such as composition, visual elements, focus, comparing the space and the objects, tones of colors, etc.). One student-participant, 12PP, explained how he/she views a photographic image:

> When I read a photographic image, I always look for the focus. The next step will
be interpreting the composition and finally I will question whether there are some
deep meanings embedded within the image. Tone of colors, compositions,
objects, and style are very important for me to interpret. (12PP, the pretest)

Ten percent of the students agreed that they do compare their prior experiences and/or
knowledge to what they are reading now, and 10% of the students pretended they were
photographers of that picture. Ten percent of the students further clarified that
imagination is very important for them while reading a picture in order to make meaning.

Student-participant 6PP described how he/she makes meanings while reading a
photographic image:

By reflecting on my intuition and comparing to my prior experiences, I made
definition of what this picture is. I spend a lot of time on taking pictures and
looking at pictures. However, when the time is coming for me to read or interpret
a picture, I always pretend that I am the photographer. Why I shot this picture at
this angle? What was my intention? By imagining all kinds of situations and
possibilities, I make sense of what I read. (6PP, the pretest)

In the pretest, the student-participants pointed out some strategies they employ for
making meanings: (a) they usually look at the general appearance of a photographic
image overall, then go over the details; and (b) they use comparison (looking for the differences and similarities).

In the posttest, 45% of the students tried to detect the symbolic meaning of a photographic image, and 45% of the students attempted to organize the relations between objects, space, and shapes.

I will try to use the “system of reading photographic images,” which I learned from Wu, to initially sketch the whole image. Furthermore, I will pretend I am the photographer and ask myself why did I use those visual elements to express my thinking? What are the intentions? In addition, I will compare my own art and photography knowledge to understand this photographic image. (22PP, the posttest)

Thirty six percent of the students considered aesthetic forms (such as composition and visual elements) as very significant for them to make meanings. There were 27% who understood the picture because of their prior experiences and information. Twenty-three percent of the students used their intuition to make sense of what they read. Twenty-three percent of the student-participants believed their imagination helped them to understand the contents of a picture. Nine percent of the students looked for contextual meanings to
deconstruct the meanings.

When I first looked at a picture, I tried to find out if there were any visual elements that attract me, and I imagined the reasons for these visual elements to be here. In addition, I compared my summary of meanings with the system of reading photographic images that I learned from Wu. (21PP, the posttest).

In conclusion, I found that in the pretest, the student-participants tended to use their intuition and look at the visual aesthetics forms first. Then they compared them with their prior knowledge or experiences, pretending to be photographers and using their imaginations to make meaning of what they interpreted.

But in the posttest, the student-participants first made meanings through detecting the symbolic meanings and attempting to organize the relations among objects, space, and shape. Next they looked at the aesthetic form and compared them with their prior experiences or information, used their intuition, although fewer students use their imaginations. These analyses indicate that Professor Wu’s teaching and interpretive system guided the students toward using more logical and meaningful interpretations of photographic images.
Influences on the Students’ Photographic Image Interpretation

I asked the student-participants to enlighten me about their beliefs and assumptions in photographic image interpretation. In item 11 in the pretest and item 14 in the posttest, I asked: When you are viewing a photograph, what is the most important thing for you to consider for it to be a good work of art?

In the pretest, 37% of the student-participants thought the composition was the most significant thing for them; 24% of the student-participants believed the tone of the colors was the most influential factor for interpreting the images; 20% of them believed the photographers’ expression is very important too. Twenty percent of the student-participants believed the content meanings are essential. In responding to this item, student-participant 2PPI, in the pretest, explained to me,

I think my intuition will tell me either I like this picture or not. Next, I usually scan the whole image and look at the composition. Also, I see the tone of the colors as a key visual element for considering as a good picture. (2PPI, the pretest)

In addition, the student-participants pointed out intuition (17%), interactions with authors (17%), and techniques (17%) as what constitutes a good picture. Personal favorites (6%), visual aesthetics forms (6%), qualities of the images (6%), subjects (6%),
and social value (6%) were mentioned by student-participants too.

In the posttest, the student-participants considered the following aspects to be the most important in a photographic image: whether the picture is understandable for them (45%); meaningful symbols and/or signs (37%), composition (37%), tone of color (9%), intuition (9%), subject matter (9%), and aesthetics (5%). Student-participant 12PP, in the posttest, explained:

I think the composition, tone of colors, and the angle of shooting are very significant for me to determine whether I like this picture or not. In addition, symbolic meanings are crucial for my reading too. (12PP, the posttest)

Another student-participant had a similar viewpoint:

I consider the symbolic meanings as the most important aspects for my interpretation, although it depends on whether I can detect the meanings or not. As Wu said to us, more practices of looking and interpreting will lead to more critical interpretation abilities, I will keep practicing. (14PP, the posttest)

Overall, the student-participants at the beginning of the semester considered aesthetic forms (composition, tones of colors) first when interpreting images. Then they attempted to understand the contextual meanings of the photographic images, such as
expression and symbolic meanings. On the other hand, in the posttest, the student-
participants considered being able to understand a photographic image as being the most
important aspect for them. Then they think of symbolic meanings and aesthetic forms.

**Changes in the Students’ Photographic Image Interpretations**

As stated earlier, photography interpretation is affected by the viewer’s
knowledge, values, beliefs, and assumptions. In addition to the pre- and posttests, I
conducted two interviews with five volunteer student-participants at the beginning and
the end of the spring 2004 semester to gain some insightful data on the students’ thinking
as a result of the photography appreciation course. The purpose of this study was to
determine if the methods of instruction by Professor Wu would have an impact on how
the students interpreted photographic images.

**The Students’ Initial Beliefs**

After analyzing my data from the interviews of the five student volunteers at the
beginning of the semester, two main phenomenological types of beliefs and values
regarding photography interpretation became apparent. The first type is the student who
interprets photographic images by constructing meanings. Three student interviewees in this group were more likely to believe that people can define their meanings while reading a photographic image. The other phenomenological type is the student who interprets photographic images as appreciating their visual aesthetics. There were three student interviewees in the “interpreting photographic images as constructing meanings” group: 1PPI, 3PPI and 5PPI. Two interviewees were in the “interpreting photographic images as the appreciating visual aesthetics” group: 2PPI and 4PPI. (See Table 4.5 for these two groups and other student information.)

When a high school student in Taiwan passes the national examination for entering college, they must provide a list of the names of the schools they wish to attend to the Minister of Education. The Ministry compares all the students’ wish lists and notifies them of its final decision on the school the student will attend. In general, these five student interviewees did not purposely select this specific program as their first choice, and they all confirmed that they had “accidentally” decided to enter this program.
Table 4.5

*Students’ Interpretive Types and General Information*

<table>
<thead>
<tr>
<th>Type*</th>
<th>ID</th>
<th>Gender</th>
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<th>Professional Photo Experiences Before</th>
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</thead>
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<tr>
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<td>1PPI</td>
<td>Female</td>
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<td>None</td>
</tr>
<tr>
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<td>Female</td>
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<td>None</td>
</tr>
<tr>
<td>First</td>
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<td>Male</td>
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<tr>
<td>Second</td>
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<tr>
<td>Second</td>
<td>4PPI</td>
<td>Female</td>
<td>Sophomore</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*The first type refers to “interpreting photographic images as constructing meanings;” the second type refers to “interpreting photographic images as appreciate visual aesthetics.”

All the student interviewees (1PPI, 3PPI, and 5PPI) of the first type had not had any professional training or related experiences in learning photography before attending college. They had started to learn photography professionally in college and had taken at least one photography course with Professor Wu prior to this course. Students 1PPI and 5PPI thought Wu’s courses were among the most beneficial to them among other courses they had taken at the University. Student-participant 1PPI said,

I consider Advanced Photographic Images Production (another course taught by Wu at the Chinese Culture University every fall semester) as the most useful
course for me. Professor Wu asked students to take huge amounts of pictures and bring them to the classroom for peer critiques. Hearing the diverse opinions from other students or Professor Wu, I felt were beneficial for my next shooting project. At the time I viewed other students’ work and gave them my judgments, I can learn something new too. (1PPI, the first interview)

In contrast to the first type group, the student interviewees in the second type group (2PPI and 4PPI) had some photography experience. Student 2PPI had his first photography learning experience in junior high school. The mathematics teacher who taught 2PPI was also a photography enthusiast and always showed students some travel snapshots after finishing lecturing. Student 2PPI began to learn to appreciate photographic images and started to use an automatic camera to shoot.

The first photography experiences 4PPI had were in elementary school; she had the loan of an antique camera from her father. Ever since, 4PPI has found photography irresistible. She went to a professional photography workshop for six hours in her junior high school and joined the commercial photography club in her senior high school for three years. Student-participant 4PPI reflected on her experiences:

I went to the commercial photography workshop when I was a junior high student.
I enjoyed the teacher’s lectures, and the slide shows were very attractive to me. I saw all kinds and types of commercial photographic images and that was why I attended the commercial photography club in my senior high school life. (4PPI, the first interview)

Another interesting attitude emerged when I analyzed the interview data. I asked these five student interviewees if their prior photography experiences (before this course) had motivated them to register for this course. All of the student-participants in the first type group agreed. However, the second type group denied having prior experience.

Student 2PPI registered for this course because he was curious about its content and was very interested in it. Mostly, these five student-participants described using their intuitions and feelings to make meanings of an artwork. Thus, 3PPI described how she makes meanings:

I usually look at the whole photographic image roughly at the beginning. Then I can feel if I like it or not. After that I try to find any recognizable relationships such as subject matter and signs; space arrangement, the environment; and etc. (3PPI, the first interview)

Next, I asked the student interviewees to tell me what criteria they used to judge a
photograph as a good work of art. The students in the “interpreting photographic images as constructing meanings” group indicated that if they can use their intuitions to help them to understand the work of art, they think it is a good photographic image. Somehow, both students in the “interpret photographic images as appreciate visual aesthetics” group explained that they would look at the composition or the content of the photographic image, then use their prior experiences and “aesthetic knowledge” (4PPI, the first interview) to decide if it is a good photographic image.

In general, the five student interviewees do not believe that photographic images will reflect the truth. And 5PPI explained why:

What is the truth? I even think there is no truth in the world. Everyone has their own definitions of the truth. A particular definition of the truth belongs to that particular individual and may not be suitable for others’ definitions. Even if most people agree with the same point of view, that cannot affect my beliefs of my own definition of truth. (5PPI, the first interview)

As I mentioned before, these five student interviewees had taken at least one or more courses with Wu, and as a rule, they see “teaching” as being students’ interactions with Wu. In contrast to teaching, 1PPI, 2PPI, 3PPI, and 5PPI believe that learning is
having curiosity about everything, and continuously asking questions in class. Student 4PPI believes that learning is to practice how to view all kinds of photographic images. Overall, the student interviewees agreed that their ideas about photography knowledge and skills, with regard to photography learning, are related to having the ability to take pictures, knowing the technical photography issues well, and having some aesthetic knowledge to interpret photographic images. Moreover, they agreed that they acquired the photography knowledge and skills that they need for learning to interpret photographic images from Wu’s lectures (1PPI to 5PPI), personal photography experiences (1PPI, 4PPI, and 5PPI), books (1PPI to 5PPI), and photography exhibitions (2PPI, 4PPI, and 5PPI).

Further, when I asked the student interviewees to explain their definitions of “photography appreciation” and “interpreting a photographic image,” two different types of phenomenon appeared again. All “interpreting photographic images as constructing meanings” students believe that photography appreciation is to understand the reasons why this picture is good. The “interpreting photographic images as appreciating visual aesthetics” students think “appreciation” means that an individual must apply visual aesthetics when viewing a photographic image.
The student interviewees in the “interpreting photographic images as constructing meanings” group mentioned that interpreting a photographic image is to transform the “signs” (1PPI, the first interview) and “messages” (3PPI and 5PPI, the first interview) in the picture to understand its internal “meanings” (1PPI and 3PPI) or “issues” (5PPI).

Student 1PPI elaborated on her thought by telling me,

I think interpreting a photographic image is to explain my intuition when I view the picture the first time. Upon reflecting my intuition, I usually try to figure out what the subject matters represents for me. What are the signs and what are the internal meanings? (1PPI, the first interview)

On the other hand, the “interpreting photographic images as appreciating visual aesthetics members” had different viewpoints from the “interpreting photographic images as constructing meanings” members. Student 2PPI said that interpreting a photographic image means “to explain or express my feeling and thinking to others after I view the photographic image” (2PPI, the first interview). Student 4PPI thought “interpreting a photographic image was to judge whether it is a good picture or not and explain to other people my reasons for that judgment” (4PPI, the first interview).
The Students’ Changes in Their Methods of Interpretation

I had the second interview with each individual interviewee at the end of semester. Overall, the five student-interviewees showed positive attitudes about how they have benefited from this course. Also they acknowledged that Wu’s “systems of reading photography” provides many advantages that enable them to interpret photographic images. First, from taking this course, all the student-interviewees think that Professor Wu offered useful principles of interpretation as guidance for them. Next, the student-participants reflected on the experiences of having student-presentations and critiques. They exchanged opinions, suggestions, and arguments in the class discussion and presentations. As one of the interviewees reflected in her examples,

I think I benefited a lot from our course discussions and presentations. I never thought about things in those ways, but my peers and Wu showed me the different ways of reading photographic images. In addition, Wu’s suggestions of related-reading materials and online resources were very helpful and useful for me as well. Now, I am trying not to limit my thoughts and ways of reading photographic images to narrow down my personal perspective. It’s difficult for me to do so, but I am trying. (1PPI, the second interview)
Most of the student-interviewees agreed that after taking Professor Wu’s course, they were more motivated to visit exhibitions of photography or a related visual arts field regularly. Moreover, they had begun to read photography criticism:

I went to Taipei City Museum twice, and other galleries during the semester. I went to museums and galleries because I tried to examine Wu’s teaching in this course. I started to wonder why those pictures are hanging in museums or galleries? And why the curators or artists exhibited photographic images in that sequence?

In addition, I attempted to use Wu’s “system of reading photographic images” to understand the meanings of those images. (3PPI, the second interview)

Compared with their abilities at the beginning of the semester, the interviewees were able to define the most important aspects of reading photographic images differently by the end of the semester. By then, all five interviewees had more similar viewpoints. They think visual aesthetics and the deeper meanings of signs are significant for them to interpret photographic images. Plus, they consider cultural, political, and social issues as important aspects of photographic images too.

When looking at a picture, I am aware of the relations between visual elements space arrangements. I consider the signs important for viewers to read too.
Moreover, I remember Wu suggested for us to carefully think about the social and cultural background of that piece of work. How that piece of work makes meanings to me, to the society, and the culture. (5PPI, the second interview)

The student-interviewees reflected on their learning experiences of having this course with Wu this semester. Most of them mentioned that the beginning of the semester was the most difficult time for them because they had to change their ways of reading photographic images. However, once they got used to Wu’s system of reading, they believed it was very useful for them for interpreting photographic images.
Chapter Five

CONCLUSIONS AND DISCUSSION

In this final chapter, I answer my research questions and discuss the implications for teaching and learning photography interpretation based on my data analysis. I also offer recommendations for the Information Communications Department where I observed the photography appreciation course, as well as for Professor Wu, students, photography teachers, and for further related research.

Summary of the Study Findings

Through an analysis of my student-participants’ pre- and posttest responses, interviews with the teacher, Professor Jiabao Wu, and five student-participants in the Information Communications Department at the Chinese Culture University in Taiwan, I discovered that the students’ abilities to deconstruct complex meanings of photographic images could be powerfully impacted by the teacher’s (Professor Wu’s) teaching strategies. Only a few students responded that they had not changed how they interpret photographic images as a result of his course in photography appreciation. But these students also showed poor class participation in student-presentations and attendance.
Surprisingly, I found that at the beginning of the semester some students had some professional photography training before studying with Professor Wu, and those students tended to see photographic image interpretation as appreciating visual aesthetics. The students who did not have any prior professional photography training tended to accept Wu’s theory of seeing photographic image interpretation as deconstructing layers of meanings. However, despite this difference, by the end of the semester, these two types of students seemed to have developed the same point of view that interpreting photographic images must go beyond visual aesthetics to detect the implied messages or meanings in these works. The students’ responses in the posttest and my interview data support my finding that Professor Wu’s teaching strategies impacted their methods of making photographic image interpretations and enabled them to think more consciously about the signs and symbols, and implied meanings, when reading photographic images.

**Discussion of the Research Questions**

In the previous chapters, I described the background to the problem of limited photographic image interpretation, reviewed the related literature, discussed my research design, and analyzed the data I collected for this study. In this section, I answer each of
my research questions and draw insightful conclusions for my study.

**Response to Research Question One**

*What are the knowledge, values, beliefs, and assumptions about photographic image interpretation held by the teacher in this descriptive case study?*

In response to this first research question, I found that Professor Wu’s knowledge of photographic image interpretation can be primarily attributed to his extensive and diverse work as a commercial and freelance photographer, and as a photography sales person for an internationally known company. In addition, his university studies in Taiwan and Japan, and his study of over 8,000 books in photography and related fields, formed the foundation for his knowledge base. With this knowledge, Wu developed his “system of reading photographic images” (Wu, 1993), which he believes is appropriate for reading any photographic image, by interpreting the “surface story,” “visual aesthetics and its intention,” and “the symbolic meanings.”

In his teaching, Professor Wu also used his knowledge of students’ individual differences. Especially, his personal attributes—his enthusiasm, encouragement, support, and warmth, while being businesslike—enhanced his teaching effectiveness for students
to learn photographic image interpretation in his college course.

**Response to Research Question Two**

*What strategies were employed by the teacher during this study to teach photographic image interpretation in his photography appreciation course?*

Professor Wu used a variety of pedagogical strategies (lecture, student-presentations, small-group discussion, and critiques) to teach photographic image interpretation in his photography appreciation course. He believed his lectures would provide the students a knowledge base of the history of photography, yet that student-presentations would allow them to gather diverse information from various resources on their own and share this information with their classmates in presentations. This teaching strategy offered the students opportunities to learn in their own ways and collaboratively. In addition, small group discussions gave the students a chance to exchange their opinions with peers. From my observations, the student-participants were more willing to talk during small-group discussions. Professor Wu also used critiques to lead class discussions on critical points of view. Discussion could support the expectations and class objectives, but critiques engaged the students in more critical, logical discussions.
Response to Research Question Three

*Did the teacher’s teaching strategies impact the students’ methods of interpreting photographic images over the course of the semester? If so, how, and in what ways do the students now make meaning of the photographic images they interpret?*

Professor Wu’s teaching strategies of challenging the students to “look for more” impacted and guided the students to interpret photographic images in several ways. First, in terms of descriptive interpretation, most of the student-participants in the pretest, when interpreting the four photographic images, were more likely to describe “subject matter” and use “comparing and contrasting” with very few other criteria. In the posttest, however, more student-participants described “form” and “medium” than in the pretest. However, by the end of the semester, more student-participants were able to read the connoted messages embedded in the photographic images they were interpreting. Finally, in the posttest, the student-participants not only concentrated on describing “subject matter” but also tried to more evenly use other methods of interpretation to make meanings.

By the end of the semester, most of the students reported that they were using Professor Wu’s system of interpreting photographic images. After Wu’s instruction, the
majority of the students were tending to detect the symbolic meanings while interpreting photographic images. However, the students who had not had any professional photography training before studying with Wu tended to adopt his system the first time they interpreted photographic images in his course. They tried to seek symbolic meaning before other perspectives. Also, students who had some professional photography training before studying with Professor Wu investigated the aesthetic forms or technical aspects before they would adopt the teacher’s interpretive practices. Comparing the student-participants’ pre- and posttest responses, I found that most of the students spent more time on reading photographic images because they used much more detailed descriptions and deeper interpretations of the four images in the posttest after receiving Wu’s instruction. Therefore, Professor Wu’s “system” not only seemed to motivate the students to look for more layers of meanings but also seemed to encourage them to think about more perspectives while meaning making, in order to deconstruct the implied meanings within a photographic image.

Most of the students changed their ways of interpreting photographic images from reading just the descriptive aspects to reading the symbolic meanings. Also in their posttest responses, the student-participants indicated that Wu’s system of reading
photographic images is useful in helping them understand more about a picture’s deeper meanings.

At the beginning of the semester, the student-participants tended to make meaning of what they interpreted by using their intuition and first looking at the visual aesthetic forms, such as composition and color tones, as the most important factors in interpretation. Then they attempted to understand the contextual meanings or expression and symbolic meanings. But by the end of the semester, the student-participants were making meanings by detecting the symbolic meanings, and then attempting to organize the relations among objects, space, and shape. However, the most significant characteristic of a photographic image interpretation for the student-participants was if they considered the image to be understandable.

Response to Research Question Four

Was the teacher in this descriptive case study, Professor Wu, effective in guiding his students to interpret photographic images in his photography appreciation course?

Based on Professor Wu’s personal characteristics and the impact of his teaching strategies, Professor Wu can certainly be characterized as an effective teacher in his
course on photography appreciation. Additionally, his knowledge of his subject (photography), his pedagogy (how he teaches), and his curriculum (syllabus planning and varied lessons) also made him an effective teacher in his course on photography appreciation.

Limitations of the Study

One limitation that must be considered in this study is that the teacher’s and students’ responses to the questionnaires and interviews, when translated from one language to another (Chinese to English) sometimes lost their authenticity in the translation. Due to my time constraints for conducting the study and my knowledge of photography and the program at the Chinese Culture University, I did all the translation in this study, including the students’ responses to the pre- and posttest, and both sets of interviews of the teacher and the students.

Since these students may take up to 10 photography courses in their undergraduate study, their learning of how to interpret photographic images is not limited to Professor Wu’s courses. So, the students’ methods of interpreting photographic images could be influenced by other factors, even those outside of formal education.
Ideally, this study should have collected data for four years, the length of the students’ program of study, as one semester of research was just a beginning. Researchers could study students’ interpretation behaviors from the first day they enter a program until the end of their college program. Researchers could explore which course is the most significant and influential for the students’ learning of photographic image interpretation.

Also, due to time constraints, my study was limited to one particular course, with one particular teacher’s teaching strategies, and how they impacted students in that particular course. Ideally, researchers would work closely with one or a very few student-participants in order to have a deeper understanding of each individual’s different learning behaviors, or compare results of teaching strategies of more than one teacher with their students to determine how they differ. Despite the limitations of this study, the results serve to provide the potential for other studies of a similar nature.

**Implications of the Study**

As noted before, teachers determine the quality of education that students receive (Chao, 2000; Hunt et al., 1999; Perry & Smart, 1997). A number of educators (Biggs,

According to Cruickshank (1990), an effective teacher’s full knowledge of the subject matter, and their ability to provide maximum content coverage are significant for student learning. Similarly, my research findings suggest that Professor Wu’s success in teaching students to broaden and deepen their interpretation of photographic images can largely be attributed to his diverse educational background in Taiwan and Japan, his professional photography background as a sales representative and as a commercial photographer, and his extensive research on critical photographic image interpretation, as well as his teaching experience of over 20 years. Moreover, this implies or suggests that photography teachers would benefit from having multiple perspectives from which to teach photography interpretation.

Besides, Wu organized and systematized his knowledge and practical experiences with a clear structure for his students’ learning. This implies that not only is a teacher’s knowledge of the subject field significant, but his/her ability to convey that knowledge through presentations, lectures, and discussions and demonstration is very crucial for
Wu believes that his lectures can not only help students build their own knowledge base but that the practices of student lecturing can also benefit the student-presenter and their peers. Thus, he dedicated one half of the semester to the students’ presentations, rather than just to his own lectures, and encouraged student active participation through questions and in-class activities. In fact, the majority of the student-participants indicated that the student presentations were very significant for them to learn how to interpret photographic images. The students learned how to categorize information from the process of preparing presentations. The students increased their critical analysis abilities when the teacher questioned and challenged the contents of student presentations and the students’ beliefs about interpretations. This implies that when the students have more hands-on experience in the form of student-presentations in the art classroom, as opposed to strictly teacher lectures, the students will engage in more critical interpretation and their own thinking.

During the semester, Wu’s positive attitudes of encouraging and promoting peer critiques and student talk offered the students opportunities to question the teacher’s and their peers’ beliefs regarding photographic image interpretation. In my opinion, and from
my personal experience as both a student and a teacher, students in Eastern cultures tend to be shy and passive in the classroom because teachers are more likely to emphasize the correct and wrong answers, and rely on their own lectures, rather than on the kind of collaborative learning Wu encouraged in his course. But if students are afraid they might respond incorrectly to questions, they would rather not respond to or interact with the teacher at all. Wu is aware of this phenomenon and on the first day of his course proposed ways his students could avoid it:

I hope you can challenge my opinions or other people’s at any time in this course.

The things that I said and the information from the textbook are not the only viewpoints you can agree with. Please tell me how you think and why you think in that way. From our discussion of whether we agree or disagree, you and I will learn something new at the same time. (Wu, lecture one)

From my observation log, I found that in the latter part of the semester, when students gave presentations in Wu’s class, the students talked more. This response suggests that students often do not talk or express their thinking in the classroom because they are not offered the opportunities to do so, nor do the teacher’s attitudes encourage them to do so.

Once the teacher has an open mind and acknowledges the value of the students’ responses,
offering opportunities for students to talk, the students will be eager to express their thinking and opinions, as in Wu’s class.

The findings of this study show that the majority of students are willing to practice looking critically at photographic images after been instructed on how to do so. In both Western and Eastern educational systems, we can scarcely find photographic image interpretation being taught in K-12 art classrooms. But art educators (Barrett, 2000; Berger, 1977, 1991; Sturken & Cartwright, 2001) believe that we need to interpret photographic images frequently in our ordinary lives. This implies that we should add lessons for photographic image interpretation to our K-12 curricula, beyond the courses in high school that focus primarily on making photographs.

**Recommendations**

This study’s findings warrant the following recommendations for teaching photographic image interpretation, for teaching in related fields, and for photography courses at Chinese Culture University.
Encourage Self-Reflective Teaching at the College Level

Unlike K-12 teachers, college teachers have not been required to have any “systematic preparation” (Hativa et al., 2001, p. 700) for understanding their teaching roles and the consequences of their teaching. But reflection by a teacher on their own teaching strategies seems equally important in higher education, and it seemed apparent that Wu was self-reflective in his teaching, which contributed to his effectiveness. Wu noticed that if he did not categorize his knowledge into a clearly structured system for teaching photography, his students were more likely to become confused about how to interpret the meanings of photographic images. Similarly, other photography professors in colleges and universities can reflect on their teaching to improve their teaching strategies, which would benefit their students. The student-participants’ responses in the posttest strongly support the fact that Wu’s systematizing of his lectures enabled his students to easily understanding the context of the meanings of photographic images and thus to interpret them more readily.

Extend Photography Class Meeting Time

Traditionally, the photography appreciation course has been held for two hours
per week for one semester each academic year in the Information Communications Department at the Chinese Culture University. Students indicated in their posttest responses and end-of-semester interviews that the practices of photographic image interpretation were more effective and helpful after the students had prepared their presentations for class.

Yet for the semester that I observed the class, each student only had time to give one or two presentations. Since the majority of the students responded well to this teaching strategy, my study results support providing more time for student-presentations, leading to more critical discussion and interpretations. Therefore, I recommend that the University extend the photography appreciation class to two semesters or extend the class meeting time to twice a week to allow for more student presentations.

**Reschedule University Photography Courses**

Wu (1993) developed a “system for reading photographic images” (see Table 4.1) as a clear structure for interpreting photographic images. The contents of Wu’s “system” involve theories in visual cognition. As I mentioned in Chapter Four, the Information Communications Department changed the order of the courses offered to students.
Originally, visual cognition courses were offered in the fall semester and photography appreciation courses were offered in the spring. Since 2004, the visual cognition and photography appreciation courses have both been offered simultaneously in the spring semester. Thus, some of Wu’s students enrolled in the visual cognition course prior to enrolling in his course, but some did not. As a result, Wu had to spend more time explaining visual cognition in order to help some of his students understand his system of reading photographic images. Therefore, I recommend that the Information Communications Department at the Chinese Culture University rearrange its scheduling of these two courses. Rather than offer both courses during the same semester, I recommend that students be required to take the visual cognition course as a prerequisite to the photography appreciation course.

Emphasize Eastern and Western Perspectives

Photography was invented in France (Marien, 2002) in the early nineteenth century, but it spread all over the world during the twentieth century. It has been my experience that the history of photography has more often emphasized the Western perspective rather than the Eastern. Most history of photography books were published in
the Western world, so the Eastern history of photography has usually been excluded or ignored. Therefore, teachers at the college level need to give more attention to both Eastern and Western perspectives of photography so that students can have multiple and multicultural perspectives and dimensions in their learning. Also, books on Western photography should be published in the Chinese language, and those on Eastern photospheres should be published in English. Thus, teachers could draw from a wide range of resources and cultures for their teaching.

In Conclusion

Stake (1995) believes that most education researchers in doing descriptive case studies are interested in the people and programs. He also said that the most important reason that education researchers conduct case study research is that they are interested in the case for their people’s and programs’ “uniqueness and commonality” (p. 1). When observing Professor Wu’s photography appreciation course, I not only found a uniqueness in his teaching strategies and evidence of their strong impact on his students’ photographic image interpretations, but I also found a commonality with my own experiences both in my teaching and learning about photographic image interpretation.
This realization has affirmed my own teaching strategies and career goals in photography education.
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APPENDIX A

Observation Protocol
Observation Field Notes

Date and Time of Observation:
Length of Observation:
Number of Students: ___ Male-students  ____ Female-students
Classroom’s physical setting:
   Room number:

   Technologies: □ computer with screen and projector
           □ slide projector
           □ microphone
           □ Other:

   Topics of today’s class:

In-class activities:

Conversation and interactions:

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Take-home assignments:
APPENDIX B

IRB Approval and Informed Consent Form
Date: January 16, 2004
From: Mary B. Becker, IRB Administrator
To: Chia-chi Chaang
Subject: Results of Review of Proposal - Exemption (IRB #17948)

Approval Expiration Date: January 15, 2005

"A Case Study of Teaching Approach(es) in A College Level Photography Appreciation Course in Taiwan"

The Social Science Committee of the Institutional Review Board has reviewed and approved your proposal for use of human participants in your research. **This approval has been granted for a one-year period.**

**COMMENT:** Enclosed are the dated, IRB-approved informed consents to be used when recruiting participants for this research.

Approval for use of human participants in this research is given for a period covering one year from today. **If your study extends beyond this approval period, you must contact this office to request an annual review of this research.**

Subjects must receive a **copy** of any informed consent documentation that was submitted to the Office for Research Protections for review.

By accepting this decision you agree to notify the Office for Research Protections of (1) any additions or procedural changes that modify the participants' risks in any way and (2) any unanticipated subject events that are encountered during the conduct of this research. Prior approval must be obtained for any planned changes to the approved protocol. Unanticipated participant events must be reported in a timely fashion.

On behalf of the committee and the University, I thank you for your efforts to conduct your research in compliance with the federal regulations that have been established for the protection of human participants.

MBB/mbc
Enclosure
cc: Wanda Knight
INFORMED CONSENT FORM (For the Students)

The Pennsylvania State University

**Title of investigation:** A Case Study of Teaching Approach(es) in a College Level Photography Appreciation Course in Taiwan.

**Investigator:**
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State College, PA 16801
(814) 237-6143; exc638@psu.edu,

**Dissertation Advisor:**
Wanda Knight, Ph.D.
211 Arts Cottage
University Park, PA 16802
(814) 863-7313; wbk10@psu.edu

1. **Explanation of the study**
   The study in which you are invited to participate is part of a doctoral dissertation intended to investigate how Taiwanese college students interpret and read photographic images, and how the teaching approach influences the ways that students learn. Identifying how students’ responses change on pre- and posttests would then make it necessary to look at the conditions which might have generated the differences in their learning processes. The differences in the learning processes would account for the differences of the student, the ways that the student interacts with the teacher and the other individuals in the class, and the ways that the student understands the contents and meanings of photographic images.

   If you agree to participate in this research, you will be asked to take part in pre- and posttests to write down your response after you study several photographs. Also 3 to 8 students will be asked to take part in a discussion or an interview about photographic images interpretation and the processes of their learning to interpret photographic images. The entire procedure of the pre-and posttest will last approximately 30 minutes each. The entire procedure of a discussion or an interview will last approximately 60 minutes and will be audio taped. The audiotape will be listened to only by the principle investigator, Chia-chi Chuang.

   This doctoral dissertation focuses on investigating how Taiwanese college students interpret and read photographic images, and how the teaching approach influences the ways that students learn interpretation. All data will be stored confidentially. The audiotapes, pre- and posttests, and consent forms will be kept in a locked file cabinet for two years after this study is finished. The transcription will be on the personal home computers with names removed. The tapes will be destroyed by cutting them up, and the confidential information on the separated page of the pretest will be destroyed by a secure paper shredder. I will sit in on your class and make field notes to collect data on teaching strategies in the class every week until the end of this semester. Confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

2. **Protection of participants’ rights**
   A. The qualitative and quantitative strategies involved in this study involve no deception.
   B. You may ask any questions about the pre- and posttests, discussion or interview procedures, and I will answer these questions to your satisfaction.
   C. The information I record about your participation will remain confidential.
   D. You are free to withdraw from the discussion at any time, or to decline to answer any specific questions.
E. There are no risks to your mental and physical health in this study, beyond those encountered in everyday life.
F. You may contact the Office for Research Protections, 212 Kern Graduate Building, University Park, PA 16802, (814) 865-1775 (or ORProtections@psu.edu) for additional information concerning your rights as a research participant.

3. Informed consent

Participant
This is to certify that I, __________________________, agree to participate in pre-and-post tests and interviews that is an authorized part of the education and research program of The Pennsylvania State University.

I understand the information given to me, and I have received answers to any questions I may have had about the research procedure. I understand and agree to the conditions of this study as described above.

To the best of my knowledge and belief, I don't have any physical or mental illness or difficulties that would increase the risk of participation in this study.

I understand that my participation in this research is voluntary, and that I may withdraw from this study at any time by notifying the person in charge. I understand that I may decline to answer any specific questions. I have received a signed copy of this consent form.

Please print your name                                                  Date

Principle Investigator

I certify that the informed consent procedure has been followed, and that I have answered any questions from the participant above as fully as possible.

Chia-chi Chuang, 02/20/2004

Please print a copy of this informed consent form for your records.
APPENDIX C

Written Questionnaire: Pretest
Pretest

Please write the last FOUR digits of your student ID number: ________
02/2004

Studying and Writing Interpretations to the Photographic Images

Reference Information:

Please take your time to write interpreting responses after you study each picture. If you need extra paper, please see Chia-chi Chuang immediately. Please return the completed questionnaire to Chia-chi Chuang right after today’s class.

Your contribution to this study is very important.

If you need help in responding to the questionnaire, please ask Chia-chi during the time you are writing. Please contact Chia-chi Chuang at 0919-56-0022 or exc638@psu.edu, if you want to know more about this research.

Thank you.

Sincerely yours,

Chia-chi Chuang, Ph.D. Candidate
School of Visual Arts, Art Education Program
The Pennsylvania State University
207 Arts Cottage
University Park, PA 16802, USA
Email address: exc638@psu.edu
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see)

B. What does this photograph mean?

C. How do you know?
Instruction: Please respond to each question.

1. What is your major?

2. What is your educational level?

3. Please describe your reason(s) for registering for this class.

4. What experience(s) do you have in photography?

5. When looking at a photographic image, please reflect upon the photographic image interpretation and describe how you go about making meaning of works of art?
Instruction: Please study the picture and respond to the following three questions.

A. What is it about?
   (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please respond to each question.

6. Prior to enrolling in this class, have you attended a photography exhibition?

7. Do you own photography book(s)?

8. Have you borrowed a photography book from a library or purchased a photography book before you enrolled in this class?

9. Where have you mostly seen photographs?

10. Have you read any photography criticism in any media (Web site, newspaper, magazines, books, journals, etc.) before you enrolled in this class? If you did, which media?
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please respond to each question.

11. When you are viewing a photograph, what is the most important thing for you to consider a photograph to be a good work of art?
Instruction: Please circle the ONE response that best describes your situation.

12. Please indicate whether you would like to participate in interviews.

**a. Yes**, I would like to participate in interviews.

My name:______________________________
Email address:______________________________
Phone number: (Cell-phone)________ (Home)________

**b. No.** I would not like to participate in interviews.

THANK YOU VERY MUCH
APPENDIX D

Written Questionnaire: Posttest
Posttest

Please write the last FOUR digits of your student ID number: ________
05/2004

Studying and Writing Interpretations to the Photographic Images

• Reference Information:

• Please take your time to write interpreting responses after you study each picture. If you need extra paper, please see Chia-chi Chuang immediately. **Please return the completed questionnaire to Chia-chi Chuang right after today’s class.**

• Your contribution to this study is very important.

• If you need help in responding to the questionnaire, please ask Chia-chi during the time you are writing. Please contact Chia-chi Chuang at 0919-56-0022 or cxc638@psu.edu, if you want to know more about this research.

• Thank you.

• Sincerely yours,

• Chia-chi Chuang, Ph.D. Candidate
• School of Visual Arts, Art Education Program
• The Pennsylvania State University
• 207 Arts Cottage
• University Park, PA 16802, USA
• Email address: cxc638@psu.edu
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please respond to each question.

1. For this class, approximately what percentage of the lectures did you attend?

2. Over the course of each week, how often did you access the WUJIA BAO & PHOTOGRAPHY (class Web site) online discussion board?

3. During the time in which you were enrolled in this course, did you attend a museum or gallery to see a photo exhibition?


Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?  

C. How do you know?
Instruction: Please respond to each question.

7. When looking at a photographic image, please reflect upon the photographic image interpretation and describe how you go about making meaning of works of art?

8. Please describe the strategies to interpret photographs taught in this class.

9. Please describe how you used or modified these strategies to interpret photographs.

10. What did you learn from these strategies?
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please respond to each question.

11. Have you read any photography criticism in any media (Web site, newspaper, magazines, books, journals, etc.) since you enrolled in this class? If you did, which media?

12. Did you take notes regularly during the class time?

13. In taking notes, what information did you feel was important to note?

14. When you view a photograph, what do you consider to be the most important aspect of the photograph?
Instruction: Please study the picture and respond to the following three questions.

A. What is it about? (What do you see?)

B. What does this photograph mean?

C. How do you know?
Instruction: Please circle ONE response for each question that best describes your situation.

15. Please rate the significance of completing photography assignments in this class in terms of helping you to interpret images in the future.

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Why? _______________________________________________________________

16. Please rate the significance of critiquing photo assignments in this class in terms of helping you to interpret images in the future.

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Why? _______________________________________________________________

17. Please rate the significance of the instructor’s lecturing in this class in terms of helping you to interpret images in the future.

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Why? _______________________________________________________________
APPENDIX E

Interview Protocols
First Interview Protocol with the Teacher

General Questions:

1. Please tell me about yourself and your family.

2. Do you remember your first art experiences in photography? Please describe them for me.

3. Please describe your photography learning experiences for me.

4. Please tell me about your educational background in photography related fields.

5. Please describe a powerful and memorable learning experience in photography with as much detail as you can recall. What did you learn, how did you learn it, why does it stand out to you as an art learning experience?

6. Can you recall anyone who has most influenced your interest in photography?

Career Choices:

7. When did you decide to become a photography teacher?

8. Please tell me the reason(s) for your career choice.

9. Please tell me why you became a photography teacher.

10. Please tell me how you became a photography teacher.
11. As you remember, who was the most important person that influenced your career choices?

**Teaching Experiences:**

12. What is your definition of “teaching”?

13. What is your definition of “learning”?

14. From where did you acquire your concepts and knowledge of teaching?

15. Please tell me when you started teaching photography related courses at the college level.

16. Please describe what photography related courses you generally teach.

17. Please tell me when you began to teach photography as a full-time college professor.

18. Please tell me at which institution you began to teach as a full-time college professor.

19. Please tell me how many years you have been teaching photography as a full-time college professor.

20. Please tell me when you began to teach photography as a full-time college
professor at Chinese Culture University.

21. Please describe the photography related courses you teach every academic year at Chinese Culture University.

**Professional Photography Teaching Strategies:**

*Photography knowledge and skills:*

22. Please tell me your ideas about photography knowledge and skills with regard to teaching students to interpret photographic images.

23. From where did you acquire the photography knowledge and skills that you need for teaching students to interpret photographic images?

24. Please recall the experiences you had in your photography related courses.

25. What contributions have your photography knowledge and skills made to your teaching of students to interpret photographic images?

26. Do you have any challenges with regard to photography knowledge and skills when you teach?

27. What photography knowledge and skills would enable you to improve your teaching?
Professional Approaches to Interpreting Photographic Images:

28. For your Photography Appreciation Course at Chinese Culture University, does the Information Communication Department have certain teaching guidelines or requirements for you to conduct the syllabus for this course?

29. If yes, what are those guidelines?

30. How do you merge the department-required guidelines with your own teaching approaches?

31. If not, please explain to me how you conduct the syllabus for this course.

32. What is your definition of “photography appreciation”?

33. What is your definition of “interpreting a photographic image”?

34. When looking at a photographic image, please reflect on photographic image interpretation and describe how you go about making meaning of works of art?

35. When you are viewing a photograph, what is the most important thing for you to consider for a photograph to be a good work of art?

36. For your Photography Appreciation Course at Chinese Culture University, in what ways do you teach the students to “interpret” photographic images during class time?
37. How do your methods for interpreting photographic images become a part of your photography appreciation lessons?

38. For your Photography Appreciation Course at Chinese Culture University, during class time, what kinds of in-class activities do you conduct in order to help students interpret photographic images?

39. Please recall the experiences you had in conducting the in-class activities.

40. Please describe the contents of each in-class activity.

41. Please tell me the purposes of each in-class activity.

42. Please tell me about your expectations for the students’ learning after they participate in the in-class activities.

43. Please identify one significant in-class activity that stands out among all others in the whole semester, and please explain why that activity stands out.

44. For your Photography Appreciation Course at Chinese Culture University, during the class time, what kinds of assignments do you conduct in order to help students interpret photographic images?

45. Please recall the experiences you had in conducting the assignments.

46. Please describe the contents of each assignment.
47. Please tell me about the purpose of conducting each assignment.

48. Please tell me about your expectations of the students’ learning after they completed the assignments.

49. Please identify one significant assignment that stands out among all others in the whole semester, and please explain why that assignment stands out.

50. Please describe the reasons you set up the WUJIABAO & PHOTOGRAPHY (class Web site) online discussion board.

51. How often do you access the WUJIABAO & PHOTOGRAPHY (class Web site) online discussion board weekly?
First Interview Protocol with the Students

General Questions:

1. Please tell me about your self and your family.

2. Do you remember your first art experiences in photography? Please describe them for me.

3. Please describe your photography learning experiences for me.

4. Please tell me about your educational background.

5. Please describe a powerful and memorable learning experience in photography with as much detail as you can recall. What did you learn, how did you learn it, why does it stand out to you as a photography learning experience?

6. Can you recall anyone who has been most influential in shaping your interest in photography?

Pretest Questionnaire Follow-up:

7. According to your responses on the pretest, your major is ________________:

7.1 Please tell me the reasons you chose this major.
7.2 Please recall all the courses you have attended so far—which courses have been most beneficial to you and tell me the reasons.

8 Is this a required class for your major?

9 According to your responses on the pretest questions number 3 and number 4 (repeat the questions and responses for the interviewees), did your prior photography experience motivate you to register for this class?

10 When looking at a photographic image, please reflect upon the photographic image interpretation and describe how you go about making meaning of works of art?

11 When you are viewing a photograph, what is the most important thing for you to consider for a photograph to be a good work of art?

Daily Visual Experiences:

12 Please describe where you usually view photographic images.

13 Please tell me what kind of photographic images get your attention the most. Why?

14 Please tell me what kind of photographic images get your attention the least. Why?

15 Do you believe the photographic images reflect the reality of the truth. Why or why not?
16 Please tell me what kind of photographic images will reflect the truth more than all others. Why? Please explain.

**Learning Experiences:**

17 What is your definition of “teaching”?  
18 What is your definition of “learning”?  
19 Please tell me your ideas about photography knowledge and skills with regard to photography learning.  
20 From where did you acquire the photography knowledge and skills that you need for learning to interpret photographic images?  
21 What is your definition of “photography appreciation”?  
22 What is your definition of “interpreting a photographic image”?  
23 What do you expect to learn from this course?  
24 What do you expect to gain from this course with Professor Wu?  
25 How will you note what you feel is important to remember in Professor Wu’s class. Will you take notes regularly? If yes, please describe in what ways you will take notes? If no, why not?
Second Interview Protocol with the Teacher

Professional Photography Teaching Strategies:

Photography knowledge and skills:

1. Please tell me your ideas about photography and your knowledge and skills with regard to teaching students to interpret photographic images.

2. From where did you acquire the photography knowledge and skills that you need for teaching students to interpret photographic images?

3. Please recall the experiences you previously had while teaching this course.

4. How have your photography knowledge and skills contributed to your ability to teach students how to interpret photographic images?

5. Did you experience any challenges with regard to teaching this course this semester?

6. How will you improve this course the next time you teach it? What knowledge and skills in photography will enable you to do so?

Professional Approaches to Interpreting Photographic Images:

7. Did you teach all topics as outlined on the course syllabus? If yes, will you make any changes in your future teaching? If no, why not?
8. Do you believe that students can learn better ways to interpret photographic images, following their completion of this course? If **yes**, why? And how? If **no**, why not?

9. For your Photography Appreciation Course at Chinese Culture University, during class time, have you conducted all in-class activity(ies) as you planned in the beginning of the semester? If **yes**, which in-class activity do you think is most significant? Why? If **no**, please describe the reasons for not including the activity(ies).

10. Did you assign all after-class projects as you had listed them on the syllabus? If **yes**, which projects do you think are most significant? Why? If **no**, why not?

11. How often do you access the **WUJIABAO & PHOTOGRAPHY (class Web site)** online discussion board **weekly**?

12. Please describe a powerful and memorable teaching experience in the class with as much detail as you can recall. What did you teach, how did you teach, and why does it stand out to you?
Second Interview Protocol with the Students

Posttest Questionnaire Follow-up:

1. According to your responses on posttest question number 2 (repeat the question and response), please describe the reasons why you accessed the online discussion.

2. Was the discussion board helpful for you? If yes, please tell me how. If no, why not?

3. Was the discussion board helpful in terms of interpreting photographic images? If yes, please tell me how. If no, why not?

4. According to your responses on the posttest questions number 4, 5, and 6 (repeat the questions and responses), if any of the responses are yes, please describe the motivation. If no, why not?

5. According to your responses on posttest question numbers 8 and 9 (repeat questions and responses), please describe the reasons you use these strategies to interpret photographic images.

6. According to your responses on posttest question number 11 (repeat question and response), do you think photography criticism is/was helpful to you in interpreting photographic images? If yes, how? If no, why not?
7. When looking at a photographic image, please reflect on the photographic image interpretation and describe how you go about making meaning of works of art?

8. When you are viewing a photograph, what is the most important thing for you to consider a photograph to be a good work of art?

**Daily Visual Experiences:**

9. Please describe where you usually view photographic images?

10. Please tell me what kind of photographic images will get your attention most?

   Why?

11. Please tell me what kind of photographic images will get your attention least?

   Why?

12. Do you believe that photographic images reflect the reality of the truth? Why or why not?

13. Please tell me what kind of photographic images will reflect the truth more than all others?
Learning Experiences:

14. What is your definition of “teaching”?

15. What is your definition of “learning”?

16. Please tell me your ideas about photography knowledge and skills with regard to photography learning.

17. From where did you acquire the photography knowledge and skills that you need for learning to interpret photographic images?

18. What is your definition of “photography appreciation”?

19. What is your definition of “interpreting a photographic image”?

20. Please describe a powerful and memorable learning experience in this course with as much detail as you can recall. What did you learn, how did you learn it, and why does it stand out to you as a photography learning experience?
VITA

Chia-chi Chuang

Education


**M. A.** in Photography, Long Island University, C. W. Post Campus, Brookville, New York, 1999.

**B. S.** in Graphic Communications, Chinese Culture University, Taipei, Taiwan, 1996.

Professional Experience


Conference Paper Proceedings

