Graphic design research: teaching design students to use qualitative research methods in the design process

Tiffany Dianne Olson

Iowa State University

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Graphic design research:
Teaching design students to use qualitative research methods in the design process

by

Tiffany Dianne Olson

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF FINE ARTS

Major: Graphic Design

Program of Study Committee:
Roger Baer, Major Professor
Debra Satterfield
Connie Hargrave

Iowa State University
Ames, Iowa
2006

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Graduate College
Iowa State University

This is to certify that the master's thesis of

Tiffany Dianne Olson

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
To my husband, Nicholas, whose love,
patience and encouragement guided me through this journey.

And, to my parents, who have always supported me
through triumphs and defeats and
no matter what the outcome have stood by me with love.
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ABSTRACT

Within this last decade graphic design educators and design theologians have written a lot about the need for design research to be an essential component in graphic design education, but little has been proposed as to how a curriculum including this aspect would be developed. As educational institutions, such as Iowa State University, realize the potential of design research, there is a necessity to implement research based courses into this field of study. Students need to realize that when they enter the work force they are not designing for themselves or other designers, they are designing for a client. By obtaining an education from a program that offers students’ design research, students would be able to assert the value of design research in the practice of design. Learning about the intended audience and the specific communication issues will make design a more valuable tool for the designer, the client and the audience. Thus, the goal of this thesis is to develop a curriculum that strengthens communication through design research.
INTRODUCTION

Design research. What exactly is design research? The definitions for this phrase currently reside within a cloud of ambiguity. There are several reasons for the lack of a clear definition; one of the main reasons being that every institution using design research, both academically and professionally, prescribes its own unique meaning to this phrase (Becker, Grocott and Storkerson). For instance, some graphic designers use qualitative research methodologies to define a problem long before any actual design has taken place. Qualitative inquiry helps the designer gather information on a given topic to use later for informing decisions during the actual process of designing. Other designers use historical research to create parallels between the social conditions now and those of the past. These parallels are then used as a tool to guide them throughout the design process. Designers have even been known to use the traditional scientific method of quantitative research to attain users' thoughts and opinions. Quantitative data is gathered through focus groups, surveys, usability tests and human-centered research, but this data is generally collected after a design has been completed. Another issue that clouds developing a clear definition for design research is the fact that the practice of graphic design, itself, is so vast. The typical graphic design education introduces the student to a myriad of different areas, some of which include—print design, web design, exhibition design and multimedia. The many avenues that graphic design can take are not exclusive to what is taught in the academic environment either. Depending on the career path a student takes after graduation, a student can experience working on an array of projects in the professional field. For example, practicing designers may work on a website design one week and then work on business collateral for another client the next. Since the field is open to many possibilities, it is understandable that those who are beginning
to develop design research methodologies use a variety of research methods to perform their tasks. As more and more scholarly work becomes available on the topic of design research, it is becoming obvious that different methods can be more appropriate at different points in the design process. Thus, this thesis attempts to examine the challenges now facing the academic community to provide its students with a clear definition of what design research is and when it is the most fitting to use in the design process.

The field of graphic design has been one of continual growth and evolution, with its current state being no exception. The recent buzz around the phrase design research has resulted in the insistence among graphic design educators and professionals alike to advocate designers to understand, conduct and apply research to design problems. This has put graphic design education in a unique position that results in a challenge, yet at the same time presents an opportunity for growth. The response from the academic community thus far has been the development of a Ph.D. program in design. Design students enrolled in the newly developed doctoral programs, such as those offered by the Illinois Institute of Technology, North Carolina State University and Carnegie Mellon University (McCarron 256), have enlisted the use of various quantitative and qualitative methods in their studies. Through the use of these techniques and methodologies borrowed from the fields of science and social sciences, designers begin to better understand the diversities that surround their design problems. By approaching design problems through analytical thinking, as well as, creative thinking these doctoral students have broken free from creating "the obvious solution" to creating solutions that are new and innovative. Carolyn McCarron provides the following example of how doctoral student work is being used to create new and innovative solutions that go beyond the typical responses to design problems. She explains that Steelcase specifically enlisted
doctoral students from the Illinois Institute of Technology’s Institute of Design program to redesign their product showroom (266). Jim Hackett, the president and CEO of Steelcase, attests that Ph.D. research was used to

redefine the showroom around the user’s experience. Before, it was designed around the display of the product. We completely change that perspective using some of the doctoral students’ research. The research they’ve done on the cognitive experiences and structured planning really helped us get a better result...[because] doctoral students look much further out with much less. They push the boundaries. That’s very valuable to business because here in the company we are not always allowed to take those routes. So the students ensure that we get a really deep perspective on things. (qtd. in McCarron 266)

Although this example illustrates that the doctoral program is a step in the right direction for graphic design education, most graphic design students will never continue on to this level. This presents the problem. Designers need to understand how to conduct research to help them effectively communicate with diverse audiences (which tend to be different from the designer’s own). Since this type of research is only being explored in the masters and doctoral programs, a majority of the next generation of graphic designers are entering the professional world with little to no experience in conducting research. Therefore, it would be a good decision for the graphic design educational community to look at finding ways of incorporating design research into undergraduate curriculum. Teaching undergraduate graphic design students the value of design research will open the door for students to begin to understand the social attributes of their intended audience.

Looking at the current undergraduate graphic design curriculum, students are taught design technique and technology. Teaching technique entails providing students with ways to solve design problems through composition, typography and imagery using a variety of design principles—such as balance, unity, rhythm and contrast. The technologies being
taught are software programs relevant to the field. Students learn to use and operate programs that include Photoshop, InDesign, Dreamweaver, etc., all programs they would actually be using in the workforce. Due to the fact that so much time is spent teaching technique and technology, the curriculum does not provide the time needed to teach students how to approach design problems through research. This means that students are missing the important aspect of getting to know the intended audience. Many in higher education would disagree with this statement. These individuals would protest that students are expected to know about their intended audience, but how do students actually go about collecting this information? Is there any research other than going to the library and reading some background information on a specific audience? Generally, library research is as far as a student will get (if that). There is no attempt to connect actual members of the intended audience and have a personal conversation with them. Why would there be? Students have not been taught how to approach design problems in this way. Since this aspect is not focused on in any great extent in a designer’s undergraduate education, few know how to approach such problems when they are faced with them in their professional careers.

While technique (the process of teaching design principles and theory) will always have a permanent place in the graphic design curriculum, minimizing the numbers of courses reliant on teaching technology can make way for the much needed courses to teach design research. One of the main reasons coursework in technology can be minimized is because computer use is no longer restricted to just educational and occupational settings. According to the U.S. Census Bureau, a 2003 study indicated that 61.8% of all American households had at least one computer with this percentage expected to continually increase (Cheeseman Day, Janus and Davis). As this study indicates, the computer has made its way into a
majority of home environments, making the computer a part of every aspect of everyday life. Thus, an increasing number of students are entering higher educational institutions with the knowledge of how to use the programs previously mentioned. Since, students already have a basic understanding of the technology there is little need for multiple courses teaching these students things they already know. Consequently, this opening in the curriculum can make way for design research to become an integral part of undergraduate studies. Even though removing one or two of the technology courses seems to be the most probable solution for making room for the research courses, it is not the only solution. An alternative option for the inclusion of research in the curriculum is to make research a more prominent part of graphic design studio coursework. This would entail professors teaching specific research methods, such as quantitative and qualitative research methodologies, in addition to teaching theory, principles and providing practical experience and portfolio building techniques. Yet another direction for including research (although a less popular solution) is to increase the length of the program from four years to potentially five years. Increasing the timeframe of the program, as such, could allow for multiple courses in design research, giving the student ample time to learn, study and integrate research into the design process. Regardless of which route a college or university wishes to take, the coursework in research should be able to teach students how to develop research questions, conduct research, analyze the results and implement those findings into a design that represents and solves the problem at hand.

Graphic design education can no longer ignore the importance social attributes have in the design development process. "The majority of coursework in undergraduate graphic design programs...deals with aesthetic form...Issues of audience and context may be embedded in faculty-defined project briefs, but are less frequently identified or negotiated as
explicit content to be mastered by students” (Davis, Boyarski, Helfand, Myers and Poggenpohl 1). Because design students are working within this vacuum they are ignoring issues pertaining to audiences. Therefore, this approach to design education can no longer exist, as it tends to place more value on aesthetics than meaning (Roxburgh Bremner 67). Consequently, meaning needs to hold the same value as aesthetics. As designers go about creating a design, they have to think about how to use the words and imagery in a way that visually expresses ideas to an intended audience that are meaningful for that audience (Noble and Bestley 144, 146). Thus, meaning is the purpose a designer has for communicating with an audience, in addition to the way the audience interprets the message (McCoy). In the end, meaning should develop knowledge and create a shared connection between the designer, the actual design and the audience. This challenges students to look beyond the world as they know it—designing for themselves or their professors—and pushes them to see the world through someone else’s eyes—designing for the intended audience. Urging students to “get to know their audience” is the place where qualitative research traditions and methods can be introduced to inform the design development process. Conducting qualitative research studies integrates audience input into the design solution fostering better communication. Since graphic design is created to communicate with an audience (Remington), human factors such as emotion, desire, need, etc. will always be attached to the problem. Qualitative research becomes the tool of inquiry to begin to understand the meaning people attribute to the world around them (Merriam 3-4). By investigating individuals outside of themselves, graphic design students will learn how to address the intended audience’s needs and present design solutions that accurately address the audience’s social attributes.
DESIGN RESEARCH: CONTRIBUTING TO NEW UNDERSTANDING

Introducing research into the design development process is putting the discipline of graphic design on the forefront of a major enhancement that could transform the way both design education and practice are approached. It is an enhancement that will hopefully free the field from this arts and crafts ancestry (Nemeth 108), which will lead to recognition and to distinguishing the field as a profession. However, the inclusion of research into the process of design is not going to be as easy as one might think. As was mentioned in the introduction, just coming up with a definition for design research is a complex issue, but this is not the only problem that complicates the matter. The hurdles that obscure defining design research bring up questions such as: Should all graphic designers entering the workforce have knowledge in design research or is it a process that should be taught on the job? When is design research the most practical, during the defining stages of a design problem, when a design has been completed or somewhere in-between? Will a designer be in charge of developing, conducting and analyzing all their own research studies? How will the data be validated? Finding answers for these questions are just a few of the obstacles professionals and educators face as they consider developing design research criteria. While no single definition or research methodology could completely encompass all of these questions and issues, several academics have begun the process of defining what they believe design research is. L. Bruce Archer, Professor of Design Research at the Royal College of Art in London, England, offers a complex definition for design research, in which he states that it is a “systematic inquiry whose goal is knowledge of, or in, the embodiment of configuration, composition, structure, purpose, value [and] meaning” (30). Archer sees research as a way to develop knowledge on the structure of design, which means understanding how designers go
about creating meaning through the actual process of designing. Instead of just trying to understand design in and of itself, Professor Keiichi Sato of the Illinois Institute of Technology (IIT) focuses on the human elements embedded in design. Sato asserts that design research is “an activity intended to develop understanding about the domain of concern that includes user needs, social issues and markets” (219). Similar to Sato’s thinking but offering a more detailed definition, Brenda Laurel, editor of Design Research: Methods and Perspectives and Chair of the graduate Media Design Program at the Art Center College of Design in Pasadena, California, contends that

design research is a front-end method, informing the development of products and services from concept stage forward...Design research encompasses a set of methods and practices aimed at getting insight into what would serve or delight people. It investigates behind the scenes looking at individuals, situated context, cultures, forms, history and even business models for clues that can inform design. (2003, 17)

Still focusing on user needs, but using a different technique, Stacey Purpura studies statistical information collected through quantitative methods “to inform anything from practical considerations to refining theories about interaction with designed objects through the validation of exploratory research findings...[all] to help understand how to make things simpler and easier” (63). From all four of these definitions (especially the last three), the theme that becomes apparent is that design research is a way to inform the design process.

Therefore, a solid definition that can be given for design research (that will be used as the definition for this thesis) is it is a way for

approaching design problems or investigating [the] context within which to work...Research methods encourage designers to develop a personal and critical point of view through the recording, documenting and evaluating of visual and verbal structures, languages and identities in the wider environment, and then apply those findings within their own work. (Noble and Bestley 46)
In this manner, design research becomes the tool used to enhance the design development process, a tool that makes the designer more aware of who and what they are designing for. Thus, design research is the means for making informed design decisions.

Having established a definition for design research, the focus now shifts to the need to incorporate research in the design development process. Making research a part of the design development process has become the challenge placed upon the graphic design community that proclaims that “designers need better research skills and increased capabilities to be able to work on more complex design problems” (Deane Richardson qtd. in McCarron 256). So what makes current design problems more complex than problems from the past? The answer, quite simply, can be attributed to globalization. The entire world has become a global market due to the development of the computer and the internet, making the diversity that globalization poses more of an issue than ever before (Ireland 22). As globalization presents a realistic problem, designers need a foundation in conducting research to get acquainted with those they aim to communicate with. Achieving this will require design research to become an integral part of both educational and professional work. To support this claim, Sharon Poggenpohl asserts that researching human perception, in the way of understanding how an individual or group of individuals interact and interpret the social world around them, is essential to comprehending a target audience in the profession. She goes on to explain that the professional domain is not the only area that can benefit from the inclusion of design research—universities need to be the vanguard of this essential tool (6). Universities, having the opportunity to take the lead in developing these skills among designers, can begin the process that teaches students to develop research questions, investigate those questions and then apply the data to solve the design problem. Poggenpohl
believes that universities focusing on teaching students research methodologies and how to apply these methods will better prepare the student to enter the professional field (7).

Universities seeking to introduce design research methodologies into the curriculum may encounter resistance among traditionalists and students. For as long as graphic design has been taught within an institution, the designer has been conditioned to think in visual forms. Visual forms then give way to learning how to arrange those elements on the page. Although this teaching in technique will always be necessary in a student’s development, it often bases design on the student’s perspective. It is instinctive for young graphic designers to go straight to creativity, because a creative solution will generally get them praise. There are even a number of professionals who contend that design should only use an intuitive approach and question the need for research altogether (Poynor 122). While intuition is an essential component in graphic design (both academically and professionally), the dilemma that designing solely on intuition presents is that designers will not know how to face complex problems that entail understanding and communicating to an audience with a background different than their own. D.K. Holland reinforces this statement. She suggests that graphic design needs to move away from its “preoccupation with the decorative or form-giving side that has excluded [the designer] from participating in bigger conversations” (26). What needs to be understood is intuition has its place in the process of design, but in addition to this, designers need to be able to search outside of themselves for solutions to their design problems. When graphic design education includes research in its curriculum, it offers students another tool (in addition to intuition) to solve design problems. The integration of research will get students to think about design as more than just aesthetics. These students will learn that the true nature of graphic design is communication. According to Brenda
Laurel, students should not approach “design research as a cage, but as liberation” (Laurel 2004), because designing through research helps to make ideas accessible that are often difficult to obtain through intuition alone.

**Classification of graphic design programs**

Michael Bierut, a senior critic in graphic design for the Yale School of Art, along with Dick Powell, the chairman for the Design and Art Direction (D&AD) Education Council, both firmly attest that current graphic design programs within the United States are divided into two distinct categories. Bierut refers to the division as process schools and portfolio schools (215), while Powell classifies them as universities and vocational institutes (Powell and Fern 41). Bierut’s process schools and Powell’s universities are those that rely more on academics (41) to enhance a student’s critical thinking skills instead of focusing solely on a project based education. The intended outcome of this type of education is to broaden a student’s abilities in approaching design problems. Acknowledging the fact that process schools and universities provide a wide-ranging exposure to other disciplines (that is often classified as a liberal arts education), portfolio schools or vocational institutions, by contrast, give students an education in marketable skills. The main area of focus in these institutions is providing students with the tools and techniques to create highly developed portfolios that lead to career opportunities after graduation (Bierut 216). Portfolio schools offer fewer classes categorized as academic when compared to those required for a university education, however portfolio schools provide more hands-on design coursework.

Bierut and Powell’s claim of the existence of only two types of design schools can be considered a superficial view of the graphic design educational system. Many educational institutions teaching graphic design here in the United States fall somewhere in-between
process and portfolio, and more often than not, many of these institutions rely on a variety of aspects from both. Therefore, AIGA (the American Institute of Graphic Arts) has devised a way to explain the division of graphic design schools in the United States that improves upon the stance taken by Bierut and Powell. AIGA has divided the graphic design undergraduate programs into four separate categories consisting of the four-year professional degree with majors in graphic design, the four-year professional studio art degree with majors other than graphic design, the four-year liberal arts programs and the two-year programs in graphic design ("Making Choices" 2-4).

The four-year professional degree in graphic design offers rigorous instruction in design principles, theory and technique, in addition to course offerings in highly specialized areas such as packaging design, exhibition design, wayfinding, multimedia, etc. In order for the four-year professional degree in graphic design to be classified as such, the program must adhere to the NASAD (National Association of Schools of Art and Design) guidelines. These guidelines state that 65% of the curriculum must be structured around design related study, with at least 25% of this time devoted specifically in graphic design courses ("NASAD: Handbook 2005-2006" 78). The reminder of the curriculum (35% of the time) is divided among liberal arts or general education requirements that provide the student with a variety of courses outside the discipline of art and design. Thus, the degree that a student receives upon completion of this program is a Bachelor of Fine Arts in Graphic Design or a Bachelor of Graphic Design. Given that the competition for graphic design jobs has increased over the past decade, many professional design firms hiring young graphic designers tend to prefer students with a four-year professional degree in graphic design, because their education has explicitly prepared them for professional practice.
While the four-year professional degree in graphic design offers an education specializing in design, the four-year professional studio art degree with majors other than graphic design offers a broad based education in art. Since this program offers a broad based education, which leads to a Bachelor in Fine Arts, it introduces students to art in general and only supplements the student’s education with a handful of design related courses. The curriculum still requires that at least 65% of the student’s studies be spent in art and design related coursework, but there is no specific requirement for the percentage of time that must be spent in courses solely focusing on graphic design (“Making Choices” 2). Depending on the structure of the program and the student’s projected path, the student could graduate with very little knowledge in graphic design or a wealth of knowledge. Because there is no way to guarantee the amount of time a student spends in graphic design related coursework, many students graduating from this type of program generally lack the skills needed to work in professional practice. Therefore, additional education, such as a master’s degree, would be needed to prepare the student for employment in graphic design.

The third type of program classified by AIGA is the four-year liberal arts program. Students enrolled in a liberal arts program are generally granted a Bachelor of Arts degree, rather than the Bachelor of Fine Arts. The distinction between the degrees offered by the previous two programs and the liberal arts program is that a majority of the liberal arts curriculum concentrates on classes outside of the discipline of design, which include a range of classes in science, social science, humanities and literature. Only 30%-45% of the coursework in a liberal arts education is dedicated to classes in art and design exclusively (“Making Choices” 3). Due to the fact that a majority of a student’s time is spent taking general education courses, the liberal arts education does not adequately prepare students for
professional practice and students obtaining this type of degree either have to continue on into a master’s program or seek lengthy apprenticeships in the field.

The final category that AIGA provides for graphic design programs in the United States is the two-year program in graphic design. These two-year programs are often taught at community colleges, vocational and technical schools, and just recently with the aid of the internet, through online courses. Students enrolled in two-year programs many times spend a majority of their time learning technology (such as using design computer software). Therefore, coursework is focused on practical application and hands-on experience, but the finer details of design principles, design theory and design history are often overlooked due to the time restrictions of the program. In addition to the absence of design principles, theory and history, the liberal arts education is completely eliminated. Students completing a two year program in graphic design receive an Associate of Arts or Associates of Fine Arts, but these students generally transfer to four-year programs to complete their education and better prepare themselves for professional practice.

Recognizing some of the ways various individuals and associations divide the graphic design programs in the United States leads to the question: How do the top ranked design programs fit into these categories? U.S. News & World Report ranks the top five design schools as: the Rhode Island School of Design, the Art Center College of Design, Virginia Commonwealth University, Carnegie Mellon University and North Carolina State University ("Fine Arts Specialties: Graphic Design"). Categorizing each program, one would conclude that by AIGA standards all of these programs offer a four-year professional degree in graphic design, because each of these universities provides their students with a program that leads to a Bachelor of Fine Arts in Graphic Design degree (with the exception of the Rhode Island
School of Design and North Carolina State University which offers a Bachelor in Graphic Design). In Bierut and Powell’s classification these top five universities would be considered process schools instead of portfolio schools, because each program requires their students to take additional credits in liberal arts. The problem with Bierut and Powell’s classification is that they would place the four-year professional degree in graphic design in the same category as the four-year professional degree with majors other than graphic design and the four-year liberal arts programs. Noting the differences AIGA describes between these types of programs, Bierut and Powell’s categorization is limiting. Considering that NASAD requires all programs offering a four-year professional degree in graphic design to included design related coursework along with a liberal arts education, means that each institution uses a combination of process work and portfolio work.

Bearing in mind the categorization for these top ranked graphic design programs, Iowa State University would be classified in a similar way. By AIGA’s definition Iowa State would be considered a four-year professional school offering a Bachelor of Fine Arts. (Iowa State has yet to complete the accreditation process, thus it is not recognized as a member of NASAD and is not classified as a program offering a four-year professional degree with a major in graphic design). In Bierut and Powell’s definition Iowa State would be considered a process school. The reason Iowa State University would be classified as such, is because of the time it allocates to interdisciplinary education. The graphic design curriculum at Iowa State offers its students an array of classes outside of the department of design (“Art & Design: Graphic Design”). In addition, this interdisciplinary education is supplemented by requesting students to conduct research on various design projects in the form of analyzing styles from design history, reading about the culture one is designing for and looking at
historical artifacts relevant to the design problem. While these are fundamental in an Iowa State student’s education, it is not the only area of importance. Iowa State goes beyond Bierut and Powell’s classification of just being a process school, because there is as much of a need (if not more of a need) to produce a high-quality portfolio piece. In the end, the main goal for all graphic design students (regardless of the program they complete) is to find a good job, hence the need for a polished portfolio.

When a student completes any program in graphic design, they need a portfolio that illustrates their skills and abilities, in addition to a portfolio that demonstrates how well they have mastered graphic design technology. However, one of the most important aspects of a good portfolio is the student’s capability to procedure aesthetically pleasing designs. It is the necessity for a polished portfolio that can get a student a job that leads to what all graphic design educational institution have in common—aesthetics (Bowen 16). Due to the importance placed upon aesthetics in education, the concept of meaning (in other words, communicating with an audience) is often only touched on briefly or completely overlooked (Rosowsky 8). With so much time and energy being placed on aesthetics, passing over the issues of meaning and communication creates an amateur designer (Margolin 124), one who is unable to take their interdisciplinary education (or lack there of) and translate that into a design. Since meaning is inherent in good solutions, not teaching the students how to transform the knowledge they have gathered from areas of research and turn it into a concept leading to a solution, hinders the student in the communication process. With the lack of teaching of how to use research, where does this leave the curriculum? What do educators have to do to ensure that students not only learn to conduct research properly but also learn how to use it in the design development process? An awareness of the importance meaning
and proper communication plays in the design process should encourage educators to find ways to introduce students to both interdisciplinary education and the importance of research. Thus, students will be able to learn about their intended audience, as well as, learn how to bring meaning to a design through the process of research. Teaching graphic design students to take the time to learn about their intended audience (Sommese 44) will allow them to understand more about the human experience, in addition to, aesthetics and communication (Poggenpohl 10).

**Approaches of design research in use**

The notion of integrating research into the graphic design curriculum brings up several important questions. First and foremost: What are some of the ways to teach design students how to conduct research? In other words, what research approaches would be the most appropriate? Next, how do educators develop methods and tools for students to use when conducting their research? Will the end results of these new research projects lead to enhancing the quality of a student’s design? And finally, will the knowledge acquired from the act of research itself bring about new theories that can be used by the field as a whole? As of yet there has not been a sound proposal that offers a direct solution for the inclusion of research into the undergraduate graphic design curriculum. However, Richard Buchanan’s research approaches being used in the professional realm and at the graduate/doctoral level in graphic design can give some insight into how to apply design research into an undergraduate classroom setting. Buchanan divides design research into three distinct areas consisting of clinical research, applied research and basic research. (2001, 17). These three approaches, which are starting to be used more and more in graphic design practice, have roots in fields outside of design; fields such as, science, social science, economics, marketing, etc.
The realization here is that these approaches can be used as a guide for getting designers to develop questions before jumping into creativity. It is these questions guided by research that lead to creativity, thus creativity becomes the result of research, not the starting point.

By and large the most popular of Buchanan's approaches to research has been the clinical approach (Friedman 2003, 510). The frequent use of this approach can be contributed to the fact that clinical research concentrates solely on individual cases. This means that the design problem at hand is the only topic being researched. For instance, if a designer (working in the professional field) were approached by a client and asked to redevelop their existing identity, the graphic designer would research information specific to that client—the client's industry, markets, etc. By focusing exclusively on that problem, the designer solves it through research by the way of "gather[ing] whatever information or understanding may be relevant to its solution" (Buchanan 2001, 17). Due to its exclusive nature, the knowledge obtained through clinical research is specific to the problem and the context of that problem; therefore it is rarely applicable to other research studies (Jeamsinkul and Sawasdichai 160).

While clinical research looks to find answers for resolving a particular problem, applied research takes a number of similar cases and searches for the reoccurring patterns between them. As Terence Love explains, the intent of applied research is to develop theories that can be used to help predict future situations by making connections between various individual cases (qtd. in Jeamsinkul and Sawasdichai 160). This often results in solutions that are generalized and provide mutual benefit to multiple parties. Referring again to the example mentioned previously about the client seeking to redevelop his/her company's identity, if the designer chooses to use applied research the designer may look at a variety of
successful business redesigns and look for the similar patterns that exists. Once the patterns have been identified as to what made these identity redesigns successful, they can then be applied to the design for the current problem, but applied research does not stop at this point. The results of this inquiry are not exclusive to a particular project; these patterns can be passed on to solve other problems that are similar in nature.

Understanding that clinical research and applied research both gather knowledge to solve problems; basic research on the other hand, seeks to develop new knowledge and theoretical understanding. Basic research is an exploratory journey in search for fundamental knowledge. According to Ken Friedman, “basic research involves a search for general principles. These principles are abstracted and generalized to cover a variety of situations” (2000, 18). Thus, basic research becomes the search for answers to the questions of why. Answering these “why” questions begins to explain everyday phenomena, making the answers obtained relevant to almost any situation. Basic research is pure research (Pizzocaro). It does not need a specific situation or set of situations to be conducted. Basic research is impartial to the need of researching to answer a particular problem. It is a research practice solely dependent on broad applications offering new ways of knowing. As a result of the vast nature of basic research, developing this type of knowledge that leads to the discovery of new theories can be a daunting task. Therefore, the time and money commitment required for this research strategy minimizes its use in the field of graphic design (Buchanan 2001, 19).

Consequently, which of these approaches (if not all) would be the most appropriate for graphic design undergraduate curriculum? The logical and safe choice to start with would be to introduce students to the clinical research approach. The straightforwardness of this
approach would be the easiest for students to understand and the most pertinent in relation to the design problem. However, this is not to say that a student could not use any of the other approaches or that questions generated by one approach could not be used to bring about knowledge from a different approach (Friedman 2003, 510). Considering that most graphic design education begins by offering a student a signal case study, the clinical approach is just the most appropriate starting point. For example, a student may be given a project that requires them to design a poster promoting a particular product, for instance the new model of company X’s camera. The student would use clinical research to research information specifically on this camera. In addition to this, the student would also research which audiences would tend to purchase this type of camera and how this audience would use the product. Thus, all of this information would then be used to produce a design solution based on decisions informed by the research findings. As students advanced in their educations and became more familiar with the process of research they would be able to work their way through the series of approaches—starting with clinical research and moving on to the more complex approaches. (Realistically, basic research would generally be reserved for graduate students, doctoral students and design theologians.)

Yet, defining the approach or starting point for students to use is not where teaching research ends. Since clinical research, applied research and basic research only provide an approach to take; it does not explain processes or methods for collecting data for the design problem. This can leave the students saying, “Okay, I chose my approach, so what do I do next?” In addition to teaching approaches, educators need to provide students with research methods. Having knowledge in approaches and methods, the student can then say, “I will use the clinical approach to solve this individual problem and I will use the method of one-on-
one interviews with individuals from the intended audience to better understand their feelings about this particular subject." By giving students an understanding of the approaches to take, in addition to the methods to use, it offers them a solid foundation to start researching their design problems. But where do educators get these methods from? Utilizing research methods borrowed from other disciplines (Bayazit 131) can give graphic design educators a model to follow.

The objective for introducing methods from other disciplines into graphic design is the fact that the design discipline, as a whole, has a limited knowledge base of substantial methods from which to select (Cross 15). Chujit Jeamsinkul and Napawan Sawasdichai suggest that the only methods design has at its disposal are those used to enhance creativity in the development process, thus there are few, if any, methods providing insight into design research (161). Over the years some practicing graphic designers have been hesitant about using methods outside of creativity, because it was felt that these methods restricted the design process and diverged from the task of designing. Methods stemming from fields outside of design, especially those associated with science were often thought too constrained, rigid, and logic-based for designers to draw upon (Storkerson 18). But as design theorist, John Christopher Jones has been asserting for years, the “design research we need now is of experimental villages, cities, networks, etc., in which it is possible to explore and experience the social and personal changes that can accompany new products, systems and environments” (xxv). Thus, this type of research can only be obtained through methods outside of creativity. To help strengthen the claims made by Jones, the growth of technology and globalization has made it hard for designers to ignore the benefits other fields have for providing methods in research. With design problems becoming more complex, designers
need to think beyond creativity and think about how methods acquired from other fields can be used to enhance the design development process. Designers have to free themselves from their preconceived notions of what design is and embrace the knowledge that can be gained from fields that are better versed and experienced in the act of research (such as the fields of science and the social sciences). Doing so will get designers to begin thinking strategically about their design problem. Realizing that there needs to be a foundation from which to start, using methods attained from other fields provides a solution. This still leaves the question from which discipline (or disciplines) should graphic design research methods be drawn?

Determining which discipline(s) to draw research methods and techniques from requires a closer look at what graphic design all entails.

Graphic design is a creative process that uses art and technology to communicate. It begins with a message that, in the hands of an experienced graphic designer, is transformed into visual communication that transcends words. By working with color, type, images and ideas, the graphic designer creates and manages the production of materials which convey the message to an intended audience. (Wah 2)

Steven McCarthy and Cristina Melibeu de Almeida further explain that graphic design is the interface between problems and solutions, needs and markets, messages and audiences. Designers mediate, translate and amplify the visualized environment, giving tangible form to the objects and experiences that inform, persuade and entertain. Throughout the design process, graphic designers must integrate various communicative elements: the content of the message with the expectations of the sender, the perception of the audience [and] the subjective and objective qualities of written and pictorial language. (103)

Charles Owen contends that graphic design is concerned with the process of blending design elements such as type, image, color, texture and composition, to communicate an effective message (4). In addition to this, the NASAD defines graphic design as the “planning and execution of design or visual communication according to the needs of audiences and in the context for which communication is intended” (“An Advisory for Art and Design” 1). From
these definitions it becomes clear that graphic design is a blend of art, technology and, most importantly, communication. No matter which sector of design is explored—print design, web design, signage, etc.—it is always concerned with communicating a message to a specified audience. Good communication between a graphic designer and the intended audience depends on how well a designer understands that audience. In order to comprehend an audience the graphic design discipline needs research and methods of research, thus the discipline needs to look to fields that are chiefly concerned with understanding aspects of social life, particularly social behaviors and experiences (Storkerson 18). Inevitably, the social sciences—including fields related to psychology, sociology and anthropology—are the answer to the question from which discipline it would be the most appropriate to borrow research methods. It may seem implausible that social research could play a pivotal role in the graphic design development process, but the relationship between social science and design is not as estranged as one might think. Social research seeks to explore and understand social phenomenon—ways in which we live, work and play, the way we behave in given situations, how we interact with the world around us, and so on. Considering that design is a social medium in the way that it exists in society while at the same time creates it (Lupton), designers need to pay close attention to the questions social researchers are asking to better understand their own audiences. As graphic designers look to the questions social researchers are asking and start asking these questions themselves, it “empower[s] the graphic designer to be more involved with the generation of message content, and not merely its visual form” (McCarthy and Melibeu de Almeida 103).
INTRODUCING QUALITATIVE RESEARCH TO GRAPHIC DESIGN

Historically, the power of communication has been graphic design’s strongest attribute, but it has been overlooked far-too-often by the aesthetic value placed on the final outcome (Lockwood, Bachman, Oldach and Rutter 81-82). Forging new connections between the social sciences and graphic design can begin to alleviate the constant focus on aesthetics and introduce ways to embrace communication by reflecting on the social nature of the design problem. As designers (students, educators and professionals alike) begin to contemplate the social attributes of their problems through social sciences, it can lead to new connections and insights. Acknowledging this, how can the social sciences be used in conjunction with the design process? The answer is through the use of their social research methodologies. Social research methodologies were developed by the social science traditions of anthropology, sociology and psychology as a means for studying, understanding and interpreting social life (Marshall and Rossman 1). In order to explore this social reality, the social sciences specifically enlisted the methods of quantitative and qualitative research to aid in this process (Esterberg 1). Although quantitative and qualitative research methods are used frequently by social researchers as means for understanding various aspects of social life, each has a unique, often opposing approach (Hill, Le Grange and Newmark 64).

Quantitative research is an established method that has been used as long as the social sciences have existed; qualitative research on the other hand, is a fairly new method of research having only been established in the 1970s (Caple 387). Further distinguishing the two, quantitative inquiry is a systematic investigation, in which statistical data is collected, analyzed and interpreted. This measurable data is used to enumerate social phenomena, such as, attitudes, behaviors and experiences. A typical quantitative research study is carefully
planned out from every possible angle before any data is actually collected (Janesick 6). Conducting research in this controlled way means that the researcher has a good idea of what he/she is looking for in advance. Both Charles Reichardt and Sharon F. Rallis assert that "quantitative researchers usually seek to understand relationships, often of a casual nature, without particular emphasis on the participants' perspectives" (11). The main reason the participants' perspectives are not emphasized is due to the fact that this method requires a large number of participants to be surveyed about a single, specific topic. Because of the large sample needed for quantitative research, researchers look to gather participants that are representative of the population they seek to understand. In doing so, variables can be identified and data can be systematically collected and deciphered. As researchers measure and evaluate the statistical data obtained, it helps them to describe trends, attitudes and opinions of that given population (Creswell 2003, 153).

While quantitative research tends to be strategic in nature, qualitative research, on the other hand

is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily but to understand the nature of that setting—what it means for participants to be in that setting, what their lives are like, what's going on for them, what their meanings are, what the world looks like in that particular setting...[all] striv[ing] for depth of understanding. (Patton 1).

This type of research is conducted to help make meaning of social contexts (behaviors, attitudes and experiences) with the goal of learning how individuals construct this meaning in the social world (Bruning 10 Jan. 2005). It investigates social phenomena from the viewpoint of the participant, using words and images. The research process itself is not predetermined, nor does the researcher begin with a hypothesis. Instead, the researcher starts with a research
question about a particular phenomenon they would like to understand better. As the process of research unfolds, further questions and topics emerge leading to new understanding and meaning (Janesick 7). Since qualitative research is open-ended, covering a broad range of topics, sample sizes are much smaller than those of the quantitative method. Even though there are only a small number of participants, the data that is gathered is more in-depth than that of quantitative research. A majority of the data collected through qualitative research comes from interviews, observations and other forms of verbal interactions. This method of research relies on the researcher’s interpretation of data, all resulting in deductions used to formulate a hypothesis describing the underlying meanings and patterns discovered.

Given the context of graphic design, both the quantitative and qualitative methods of inquiry are appropriate and beneficial for use in this discipline. However, determining which method of inquiry would be the most suitable depends on which stage in the development process the designer is concerned with. Quantitative research would be more logical to use in the final, evaluative stages of a design project. Qualitative research, on the other hand, is a research method appropriate to refer to during the conceptual and developmental stages of the design process. Currently, quantitative research has started to surface more in the discipline of design (Bennet). Graphic design practitioners, as well as, students (to some degree) are being introduced to ways of evaluating the results of their design projects through surveys, usability tests, etc. (Don and Petrick 70-71). What the discipline needs now is a consideration of the ways qualitative methods can be used to jumpstart the development process. Introducing designers, especially students, to qualitative research methods will teach them to “replace intuition, trial-and-error...[with] the point-of-view of the potential audience” (Buchanan 1993, 272). It will get students (who eventually become practitioners)
to use "methods that are extensions of normal human activities: looking, listening, speaking, reading and the like" (Lincoln and Guba 199) to obtain answers to their questions, ultimately enhancing the development process.

The remainder of this thesis will focus exclusively on the implications qualitative research has for the graphic design development process. The topic of discussion for this thesis is to develop ways to teach students to include research in the initial and developing stages of the design development process. It also seeks to teach students to learn to design effective messages for the audiences they wish to communicate with, and in order to effectively communicate with an audience the designer needs to know a little about the social meanings these specific audiences have constructed. Just from the brief descriptions given comparing quantitative and qualitative research, it can be determined that quantitative research does not offer this type of insight. "Quantitative research is not particularly useful in revealing the meanings individuals ascribe to particular events or activities, nor is it well suited to understanding complicated social processes in context" (Esterberg 2). Therefore, qualitative research becomes the facilitator to initiate and guide the design development process, as well as, provide insight and awareness into how audiences make meaning out of their social contexts.

**Qualitative research traditions**

Qualitative research has much to offer the graphic design development process. Thus, it is important to understand qualitative research not only from the viewpoint of its definition (as just previously mentioned), but also from the viewpoint of what it all entails. Qualitative research is often considered a universal phrase for describing the approaches and methods it consists of. Qualitative researchers use approaches, or in the words of social scientists,
traditions, as the framework for conducting research. These traditions are comparable to Buchanan’s approaches of clinical, applied and basic research; although the intent of each qualitative research tradition is more specific and specialized in nature. The methods, on the other hand, are how the research is conducted. This alludes to how the approach is structured for actually conducting the research, such as generating a research question, developing a strategy, collecting data and so on. In order to understand how these traditions and methods can be used to benefit the graphic design development process, a thorough investigation of each approach and method is needed.

The qualitative research discipline includes eight traditions, which are interpretivism, phenomenology, grounded theory, case study, ethnography, narrative analysis, critical theory and postmodernism (Briodo and Manning 434). These traditions are all used to understand and describe social reality. Social reality being the “shared meanings, which are constructed, sustained and reproduced through social life” (Greenwood 85). These traditions are the “philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (Briodo and Manning 435). Whichever approach the researcher decides to use depends on the reasons they are embarking on the research and how they will be using the final analysis. Once a researcher has selected a tradition, that approach guides the entire process from the research question asked to the strategies used to the way in which data is collected and analyzed. Knowing how to use each tradition and what each tradition results in becomes vital to the success of the research study.

Interpretivism

Each and every qualitative research study, no matter which tradition is used, consists of interpretation in one way or another, therefore it is easy to understand why interpretivism
is one of the most predominant and authoritative approaches (Trauth 7). While the primary objective of all qualitative research is to understand how individuals construct reality, the interpretivism tradition seeks to develop theories that explain these meanings in a cultural setting. In particular it "looks for culturally derived and historically situated interpretations of the social life-world" (Crotty 67). This means that researchers are looking for how and why people relate to the world and those around them. The social-life world is the way in which individuals negotiate and construct meanings in a given context. This can be a complicated process since every individual is unique and no one's social reality is alike. Nevertheless, the endeavor is an attempt to understand social reality through an individual’s knowledge (knowledge always being inseparable from that person’s experiences). Sharan Merriam affirms this by stating, interpretivism is an exploration in how individuals interpret their experiences, how they construct their experiences, how they construct their social reality that arise out of interaction and, finally, what meanings they attribute to their experiences (38).

Recognizing how experiences are constructed through the interaction with members of a social community helps researchers to realize the meanings behind people’s actions. As reoccurring patterns of meanings are extracted, they can be applied to the social community as a whole, developing a system of meaning that is defined as culture. The goal of this research tradition is not to predict meaning because individuals living in the world simply do not respond to the world, they interpret it; rather it is to provide detailed accounts of experiences and meanings offering insight into how individuals construct their reality.

Phenomenology

Phenomenology and interpretivism are similar in the way that both conduct research to understand the meaning of experience. However these two traditions differ in view of the
fact that phenomenology focuses on a single experience from the perspective of an individual or group of individuals, rather than focusing on the constructed meanings within an entire culture. Concentrating on a single experience, or phenomena, the researcher seeks to answer the question of what essences are derived from an individual’s experience. Therefore, the researcher is looking for understanding of lived experiences, which comes explicitly from firsthand accounts of those who have actually lived it. It is thus the researcher’s task “to enter that dialogue and eavesdrop, as it were, to listen in, and capture the essence of what is perceived by the subject” (van der Mescht 3). Doing so allows the researcher insight into how others view their social world, offering the researcher a better idea of what a particular phenomenon means to an individual. Many researchers strive to explain human action, such as behaviors, experiences, customs, etc., by looking at the same phenomena through the experiences of a variety of individuals. This can be challenging for any researcher, because even if all the individuals experienced the exact same phenomenon the meanings and essences originating from the phenomenon would not necessarily be the same. The essence of any phenomena is reliant on the situation, such as, who was there, the time frame and location of the phenomena. All of these factors result in different realities for different individuals. Although Patton, argues that within every assumption

_There is an essence or essences to shared experience..._ The experiences of different people are bracketed, analyzed and compared to identify the essences of the phenomenon, for example the essences of loneliness, the essence of being a mother or the essence of being a participant in a particular program. (70 emphasis in original)

In Patton’s view, even though reality is different for each individual, the researcher can still find common links in experiences leading to essential truths that explain a given phenomenon within a particular social setting.
Grounded theory

Grounded theory is similar to the other qualitative research traditions in that it “studies experience from the standpoint of those who live it” (Charmaz 522), as well as, exploring the human responses to experiences. What makes this pursuit distinctive from the other research traditions is that the final results of the research study are grounded or based on the data collected. The outcome of grounding the results in the data is the development of a theory. In the process of a grounded theory study, data collection and analysis occur simultaneously. It is through this continuous interchange between the data and the analysis that a theory is brought forth which is embedded in the data. As a result, grounded theory develops theory, rather than tests it. Through this reverse approach, researchers attempt to understand social meaning by systematically testing and retesting data looking for patterns that emerge (Bruning 24 Jan. 2005). The iterative nature of this tradition allows for conflicts to arise in the data. When conflicts do occur, the researcher can reshape the initial research question and retest the data again. While the end product of grounded theory is a theory, it is not classified as traditional theory; it is identified as substantive theory. Substantive theory defined by Anselm Strauss and Juliet Corbin is

inductively derived from the...phenomenon it represents. That is, discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon...One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge. (23)

Constantly looking at the research question, the data collected and the results of the analysis identifies relationships that can accurately result in a theory. Thus, grounded theory aims to produce a theory which explains behavior rather than one that ascribes conclusive meaning to it (Glaser and Strauss 7).
Case study

The case study is distinguished from the other qualitative research traditions in the way that it is an rigorous study of a single unit; the single unit being anything from an individual, a group of individuals, a situation, a place or an event. Even though a case study is restrictive in the way that it only examines a solitary social situation, it is frequently used in conjunction with one of the other research traditions. Consequently it is not uncommon for researchers to conduct phenomenological case studies, ethnographic case studies and so on. Regardless of which type of case study is conducted, the study is always focused on learning about one aspect of a complex problem in-depth. Although the extent of the study is limited, the theoretical perspective a researcher selects from is completely subjective. Often times, the researcher will select a topic that is believed to be interesting, unusually or will benefit their discipline further. To thoroughly describe a phenomenon, the researcher will collect data by observing and interviewing participants in their natural setting over a given period of time. Conducting research in this way constrains, or in the words of the researcher Robert Stake, bounds the case in time and occurrence (2). The study of a bound system refers to the fact that the study takes place in the here and now and is impossible to ever reconstruct. As conclusions are drawn from the context of the study, it offers up generalizations, rather than universal truths. The generalizations resulting from a case study explain and detail a given phenomenon based on real-life situations, but offer no substantial conclusions. The lack of conclusion brings about a holistic understanding which is used to formulate new topics and questions for further research. As Erickson asserts, the general lies in the particular (147) meaning that one has to draw their own conclusions from the results of the study and apply them to whatever situation is most appropriate to their life.
Ethnography

The research tradition of ethnography is not a new approach by any means. It has long been used within the field of anthropology to study human society and culture (Merriam 8). With the recent introduction of qualitative research, ethnography has traversed over and been adopted by the discipline as a tradition of research. Although the approach is utilized by multiple disciplines, it maintains the same definition throughout. Thus, ethnography can be considered a method of research that seeks understanding of social and cultural phenomena from the viewpoint of those who have actually lived it. Studying phenomena in the context in which it exits requires the researcher to immerse him- or herself into the lives of those being studied. This type of immersion engages the researcher in a given setting for a considerable amount of time (Van Maanen 103). Researchers have been known to spend months and even years in a particular research setting studying participants. Despite the significant amount of time needed, the society under investigation has to be studied where it exists; otherwise the data obtained could become obscured and would not reflect the social meanings used and developed by that culture. In order to accurately account for what is taking place in a particular setting, the researcher has to go into the research study with an open mind, therefore no hypothesis is constructed in an ethnographic study for fear that it might bias the results. The same is true for the collection of data; the researcher has to describe what exists in the given environment without making any judgments. Leaving out judgments, summarizations or hypotheses allows the researchers to understand what is normal, valuable and relevant to a specific group of individuals. Closely listening to what is said and watching how things are done, helps the researcher to discover hidden patterns in behaviors, customs and actions. It is from these patterns that the researcher begins to identify the cultural norms
that shape behavior and the meanings people ascribe to their social reality (Frey, Botan, Friedman and Kreps 229).

Narrative analysis

The definitions for the qualitative research traditions covered up to this point have led to the conclusion that all are focused on understanding the meanings associated with various social realities in one way or another, the narrative analysis approach is no different. Narrative analysis is defined precisely as it is stated; it is a story (or narrative) depicting an account of an individual's life. The story is a sequence of events that are chronologically told, having a beginning, middle and end (Cohan and Shires 52-53). The narrative transforms the actual experienced phenomenon into words or a story that can be used to identify social behaviors, attitudes, experiences, actions, etc. Susan Chase, a well-known social researcher, verifies that "most scholars...concur that all forms of narrative share the fundamental interest in making sense of experience" (1). However, understanding the meanings behind an experience requires insight into the lived experience that can only come from the firsthand accounts told by the participant (Creswell 2003, 15). This "method of recapitalizing past experience" (Labov 359) assists the researcher in understanding how a given person has dealt (or is dealing) with a particular event, process or experience. Since everybody tells stories, it is not challenging to find an area of exploration, it is just difficult deciding which story to tell and how best to tell it. Given that one particular event or experience can produce multiple stories (depending on the viewpoint of who is telling the story) it is up to the researcher to decide which story reveals the most about a given culture. As the researcher forms an analysis around the articulated story gathered from the participant, the researcher carefully
interweaves analysis into the framework of the story. Through retelling the participant’s story, Mishler points out that

we [the researcher] too, are storyteller’s and through our concepts and methods—our research strategies, data samples, transcription procedures, specifications of narrative units and structures, and interpretive perspective—we construct the story and its meaning. In a sense the story is always coauthored, either directly in the process of an interviewer eliciting an account or indirectly through our representing and thus transforming others’ text and discourse. (117-118 emphasis in original)

Taking this into account, the participant’s story is no longer solely their own, it is a shared interaction between the researcher and the participant. Even so, to provide the greatest insight, the researcher must remains as close to the respondent’s story as possible so that those who reference the story might benefit from the understanding of the social context.

Critical research

The six qualitative research traditions discussed thus far have focused on interpreting social reality. Whether the researcher is concentrating on an individual’s social reality or an entire culture’s social reality—interpretivism, phenomenology, grounded theory, case study, ethnography and narrative analysis—all share the objective of understanding the social phenomena that exists in various settings and ascribing meaning to them. Conversely, the qualitative research tradition of critical research offers a different perspective on both the act of research and its final outcomes. Acknowledging that the tradition of critical research lies in the works of Karl Marx’s analysis of socioeconomic conditions and class structures (Crotty 115) and Jurgen Habermas’s notions on emancipatory knowledge (130), provides insight into the fact that critical research is a challenge against the normal, prescriptive way of viewing the world. Critical research is thought of as a critique of social norms, which leads “to liberat[ing] human beings from the circumstances that enslave them” (Horkheimer 244).
In the attempt to change oppressive conditions, the researcher explains what is wrong in a given society by reflecting on the relationships that exist in that society. Often times the researcher will look to various social institutions, such as the media, politics, religion, etc., to determine the status quo and establish power relationships. Sharan Merriam explains that researchers using this approach are generally concerned with who has the power in a cultural setting, how that power is then negotiated and what structures within the society reinforce the current distribution of power (327). Once the restrictive structures of the status quo are brought forth, the researcher can determine which groups are benefiting from the status quo and which are being marginalized. Identifying the marginalized groups, the researcher can then seek action to change the oppressive condition. Confronting the injustices head on is the first step to rectifying the problem and bringing about change, but the final action to improve the oppressive conditions in a society are up to the members of that society themselves.

Postmodernism

The most recent approach to be added to the list of qualitative research traditions is postmodernism. Postmodernism arose as a rejection to modernist thought or in the words of John Creswell, a “reaction to or critique of the 19th century Enlightenment and early 20th century emphasis on technology, rationality, reason, universals, science and the positivist scientific method” (1998, 79). The modernist perspective asserted that universal truths exist, which are produced through the scientific exploration of human experience offering up predictable explanations of social reality. Postmodernism is a rejection against all of this. In postmodernist thought all human knowledge is fragmented, thus it is unpredictable. Part of this fragmentation arises from the fact that no one individual has the same interpretation of social reality. Further complicating the matter, every situation, event or experience can be
viewed from multiple perspectives by the same individual. While modernism concludes that the individual is a product of culture, being predictable and classifiable; postmodernism on the other hand, sees culture as a product of endless identities. Therefore, the postmodern tradition of qualitative research seeks to understand what is true for each person, rather than what is true to the society as a whole. Postmodern researchers set out to deconstruct the knowledge claims of universal truths, opting for a pluralist view of the world. Even though pluralism can, at times, present uncertainty and contradictory viewpoints, it does welcome and embrace the multicultural viewpoint. Acknowledging that there are infinite voices, representations and stories, permits the researcher to rethink all that has been thought and evaluate it from new and expanding perspectives. Thus, everything is in question, and every question has endless possibilities.

**The utilization of qualitative research traditions in graphic design**

The recent expansion of graphic design, both in the amount of work it produces and the range of audiences it seeks to address has produced intense competition between graphic designers. A good example of this is Times Square in New York City. The amount of information that a person encounters here is overwhelming to the point where all the graphics are tuned out just so that a person can go about their task. While this information and visual overload is not the fault of the graphic designer, it does put added pressure on designers to be able to produce work that is not only relevant to the intended audience, but also stands out amongst all these other designs. To begin to alleviate this pressure, designers need to be equipped with tools that will aid them in the communication process. Therefore, the tools of research can help designers create messages that are better in tune with their audiences, enabling their message to stand out in the crowd of material otherwise produced for mass
markets. Considering that Richard Buchanan has introduced the discipline to the approaches of clinical, applied and basic research gets the process started, but these approaches are vague and can be confusing to a designer who has never used research before. Thus, exploring the qualitative research traditions (as just explained) provides approaches that are explicitly defined giving designers a logical strategy to follow for solving their design problem. While not all of these traditions may be applicable to graphic design immediately there are several that stand out, specifically interpretivism, phenomenology, case study and grounded theory.

"Traditional forms of communication are breaking down as consumers continue to shy away from mass marketing and homogenous targeting. Today’s consumer is looking to both people and brands to afford them the opportunity for touch, intimacy, and individual expression" (Ford). As a result, graphic design by its very nature becomes a twofold interpretive approach. First the designer must be able to interpret an intended audience’s wants and needs, and second the intended audience must be able to interpret the concepts presented to them by the designer. This constant interplay between interpreting an audience’s desires and trying to effectively communicate these desires is a difficult task. In addition to this, the time constraints involved in most design situations, along with the designer’s lack of training in acquiring knowledge from their intended audience, results in the designer relying on intuition and the repetitive process of trial-and-error to solve their problems. In the past intuition and trial-and-error produced satisfactory outcomes for audiences because of the mass marketing approach, but as design problems and the world in general become more complex and diversified, designers need additional means for approaching their design problems. Thus, the qualitative research tradition of interpretivism is an approach that can help aid in developing a solid framework from which to design. Using interpretivism in the
Design process places the designer in direct contact with the intended audience, although this contact is contrary to how designers typically approach their audiences. Currently, when a designer sits down with their intended audience, they generally ask questions pertaining to: what colors do you like, are there any existing design examples referencing the styles you prefer or if you were to select from design example A or design example B which would you choose? This information does not offer a great deal of insight into how an intended audience relates to their world; it just offers tidbits of information resulting in an inadequate basis for developing a design solution. Enlisting the use of interpretivism moves the designer away from asking these tedious questions, and gets them to start asking questions about attitudes, behaviors, interactions, etc.—anything that can reveal information about an audience's social reality. After talking to members of an intended audience through interviews, visits to their work or living places, etc., the designer can begin to look for patterns of similar behaviors between the various members of this audience. Establishing these patterns assists the designer in understanding the meanings behind certain actions. Knowing the reasons how and why an audience behaves in a certain way can then be applied to the design. The end product of getting to know the audience better produces design that is more in tune with the intended audience, therefore facilitating better communication.

In conjunction with the need to understand a given audience, the designer may also need to understand a specific phenomenon that surrounds that audience, thus phenomenology is another approach to research that a graphic designer can enlist to enhance design solutions. Soliciting the use of phenomenology in the design process encourages the designer to start asking questions pertaining to why things are the way they are and how things are perceived by an audience. This type of research leads to a description of experiences that are relevant to
the audience; experiences that are then applicable to the design solution. In order for the designer to understand a phenomenon better, he or she has to begin their research study with a question about the phenomenon. For example, a designer may question the difference between attending a university versus attending a private college. The phenomenon focused on is the experience of attending a higher educational institute. Approaching the problem through the research tradition of phenomenology stimulates the designer to try and capture the lived experience of attending both types of educational institutions. Through firsthand accounts, generally gathered from interviews and observations, the various experiences are explained providing new insights into the phenomenon. Analyzing the data obtained from these interviews and observations assists the designer in developing an understanding of what types of behaviors and actions are appropriate for each institute. Hypothetically (in this example) the university experience may be more receptive to contemporary ideas and beliefs, while the private college holds tight to age-old traditions. This knowledge can then be used to shape designs for each institution. Therefore, the promotional material designed for the university may reflect current trends and fashions, in contrast to the private college’s conventional appearance. Acknowledging that attitudes specific to one type of institution may not be appropriate for the other again helps the designer communicate better with their intended audience.

Given that each design problem presents itself as an individual case, the case study is the qualitative research tradition that is closest in thought with the graphic design discipline. The example just provided pertaining to the higher educational institutions is a comparative case study. The reason that this example is classified as such, is because it is study into a particular experience, hence the single unit. Comparative case studies recognize that there are
certain phenomena that can be experienced in various settings. These settings are alike in many regards, yet at the same time different. For that reason, the study seeks to explain these similarities and differences. Another reason the higher educational example is a case study is because it is bound to the time period in which the study took place; therefore any duplicate research studies conducted during a different point in time would not necessarily produce the same results. Even with these variances, any case study conducted in the realm of graphic design (or otherwise) is a study in search of in-depth understanding and explanations for ideologies pertinent to a given phenomenon, individual or group of individuals. Whether the designer/researcher is conducting interviews with various people, observing the interactions of members of an intended audience, reviewing historical documents or a combination of the three, the designer/researcher is formulating generalizations that could be applied to the development of a design concept. Again going back to the higher educational example, the data retrieved from the study does not develop universal truths, but generalizations that are specific to the administration, professors and students studied. The generalizations obtained from this group of individuals are also specific to its time. Given a change in administration or a change in the student body may result in very different generalizations.

As the demand grows for graphic designers to get to know their intended audience to better facilitate communication, grounded theory becomes the approach that should be incorporated into every graphic design problem. Grounded theory is a tradition which will teach designers to base (or ground) all of their design exploration in their research findings. As the designer collects data from their intended audience, it offers explanations about behaviors, actions, attitudes, experiences, etc.—all of which can then be translated into the design concept. Grounding design concepts in the data, allows the designer to speak to the
intended audience because there is a shared understanding of what is relevant for that audience. Using the hypothetical example of the experience of attending a higher educational institute again, any and all data obtained from this study can be used as a basis for design decisions. For example, in-depth interviews and observations in the natural settings of each type of institution reveals that the university setting consists of a diversity body of students, all with varying ethnicities, genders, social statuses, etc. The private college on the other hand is almost entirely made up of the same ethnicity and many of the students attending this type of institution have family ties to the college. From these findings the designer comes to the generalization that promotional material for the university will be styled in a way that resembles current trends. Also, the material made available for this audience will consist of an array of printed material, in addition to various forms of digital media. The promotional material for the private college will be consistent with the traditional look and feel of the college and will not only be directed to students, but to the parents of these students as well. Even though this is only a theoretical example, it still displays that understanding the experience of the intended audience does help give the designer a basis from which to begin designing concepts.

The examples just explained illustrate that interpretivism, phenomenology, case study and grounded theory are four examples of some of the qualitative research traditions that would fit nicely into the design development process. However the ethnographic tradition is one that could merit further investigation. Due to the time restrictions (and money constraints for many professional cases), the idea of conducting an ethnographic study is not always the most fitting for the design problem. What designer (student, professional or otherwise) has the time or money to immerse him- or herself into a culture for an extended amount of time
(which could range from a week, a month to a year)? Yet, the idea of using the tradition of ethnography is one that could truly offer graphic designers new insight into their audiences. An ethnographic study in graphic design would not be a traditional ethnographic study by any means; there just are not the resources available to make this possible. Therefore, immersion into another’s culture would have to be limited compared to the time that social researchers actually have for conducting their studies. In a way the design study would become a condensed or mini-ethnography, in which the designer would spend a day or even a week (if possible) immersed into another’s culture. Acknowledging this shortcoming, even if the designer only had the opportunity to spend a day with members of the intended audience, it is still time that normally would not have been spent with this audience. In the professional realm the designer probably would only use such an approach on projects that were quite extensive. If the condensed or mini-ethnography were to be used as a tool to enhance design communication, what would it all entail? Conducting a mini-ethnographic study would begin (as all design problems do) by identifying the intended audience. From this point the designer would develop a strategy for getting acquainted with members of this audience. This may include visiting members from this group or observing cultural behaviors, habits, attitudes and actions. The interviews and observations gathered by the designer, from individuals in their natural setting, would introduce the designer to aspects that cannot be acquired from reading books or looking at a variety of visuals. From this brief introduction into the culture of the audience, the designer would gain a bit of knowledge of what it means to be part of this society. This knowledge would then be used to shape design concepts relevant to that audience. When design concepts are relevant and meaningful to an audience there is a greater chance that there was a connection made and the communication was successful.
Qualitative research methods

The eight traditions to qualitative research have much to bestow upon the discipline of graphic design, both academically and professionally. It is these traditions that become the avenue for graphic design to position research into the design development process. As such, research not only helps the designer become acquainted with the intended audience, but it also facilitates in communicating more efficiently with that audience. Yet, these traditions are just the prelude into the implications qualitative research has for the design development process. Qualitative research traditions are essentially the framework used for conducting the study, meaning that each tradition informs or defines how the actual research will be carried out. For example, if the researcher selected the tradition of ethnography as the guiding tradition, the methods enlisted would involve questioning the behaviors, customs, attitudes or experiences of a society and then seeking understanding through immersion into that culture. By concentrating on observations and personal interviews, the researcher begins to understand how this society goes about constructing their social meaning. While the tradition of ethnography requires immersion into a given culture, the other traditions involve different approaches. For instance, the case study involves focusing on a single unit, narrative analysis seeks to tell a participant’s lived story, phenomenology searches for understanding of the essence of a particular experience, and so on. Acknowledging this, one can understand that selecting different approaches leads to slightly different outcomes. The reason for this is that each research tradition has a unique underlying structure which guides the research process. Knowing that each tradition can take a somewhat different path does not complicate the act of conducting research though. The main reason for this is that the basic methodology (or set of methods) used is essentially the same for each tradition. Thus, the qualitative research
methods become the tools researchers use to plan and structure their research studies. These methods consist of the following: conceptualizing a research problem, developing a research strategy, selecting a sample, collecting and analyzing data and writing up the findings (Bruning 7 Feb. 2005). Building upon the knowledge gained from the qualitative research traditions, graphic design has even more to learn from these methods.

Taking a look at the graphic design development process, Paul Nini explains that this process consists of identifying a problem, gathering information, analyzing this information, developing a plan of action, designing concepts, evaluating the design concepts, producing a solution and finally, evaluating the responses to the solution ("Steps that Can Make Up a Typical Design Process"). Comparing the graphic design development process to the methods used to structure a qualitative research study, there is not much difference in the methodologies used. Both qualitative research and graphic design identify problems. In addition, both processes seek to solve problems by gathering data, analyzing that data and then applying the analysis to the solution. While these comparisons appear to be true, graphic designers rarely use all the steps in the design development process as just defined. It is accurate to state that most educational institutions (especially those classified by AIGA as offering a four-year professional degree with majors in graphic design) provide their graphic design students with an overview of this eight step process. However, the issue is that most educators tend to spend more time focusing on the form-making components of the design rather than the research and analysis aspects (McCarthy and Melibeu de Almedia 104). Due to the fact that research components tend to be overlooked in most educational institutes, Nini contends that the lack of understanding in how to conduct research then transfers into the professional realm. Nini states,
Through my experience in the field I have noticed an emphasis on stylistic and technical issues (the ‘how?’ of producing messages), with little attention paid to determining effective use of design efforts (the ‘why?’)…My experience in and observation of the field seems to suggest that we are quite adept at designing, producing and introducing solutions (messages), but that these are based on little if any information gathering and analysis. (“Graphic Design or Visual Communication: Product vs. Process”)

To begin to address the inadequacies in conducting research and analyzing the results, Brenda Laurel asserts that “designers need to understand the tools of research, how they are developed, how they map into various stages in the design process and how research findings can contribute to both innovative and evolutionary design” (2003, 17). From Laurel’s statement, it becomes clear that the reason that not all of the steps are used in the design development process is because designers have not acquired the tools for research, or quite simply, they do not have an understanding of what tools to use, when to use them or how to use them. Therefore, the set of tools that become the most applicable to graphic design are the qualitative research traditions and methods (with the methods being the tools for actually gathering and analyzing the data). Incorporating qualitative research into the graphic design development process puts the designer in the same social and cultural settings as the intended audience and it is through exploration, discovery and understanding of these social and cultural settings that open the designer up to new and innovative design possibilities. Thus, to better understand how qualitative research can be applied to the design development process, it becomes important to acknowledge and learn how these methods are used.

**Conceptualizing a Research Problem**

The initial step in any qualitative research study is to come up with a topic. Topics can range from questions a researcher has about normal everyday situations to questions about social behaviors, experiences, customs and attitudes that explain social structures. The
topic a researcher selects can offer better understanding of the meanings constructed by an individual, a group of individuals or the entire society in general. Due to the infinite options to choose from, it can be challenging for researchers to select an area for study. In qualitative research there are not necessarily topics that are right or wrong, but there are topics that may be more relevant and worthwhile. When deciding on a general topic of study, researchers usually consider what interests them (or what they are curious about), what benefits the research may have to the society studied or how the research could be used to further knowledge claims in their discipline. As the researcher begins to focus on an area of inquiry, they need to explore it from multiple aspects by questioning the topic. Questioning the selected topic helps the researcher narrow the topic down. The process of narrowing the topic down is an essential step in the conceptualization phase, because a researcher can become overwhelmed by a broad topic and frustrated by a topic that is too narrow. Many times the key factors in narrowing the scope of a topic have to do with its feasibility, the time and money constraints. Nevertheless, the narrowed topic leads to the development of a research question. It is this research question that provides focus for the rest of the investigation. However, in the process of conducting the study, new information may emerge that could cause both the research topic and the research question to change focus and shift. The emergence of unexpected topics and questions are not uncommon in qualitative research study, because a researcher never sets out to prove or disprove a hypothesis. Thus, qualitative researchers do not develop hypotheses in the initial stages for fear it would bias the results. Since qualitative research has little to do with scientific investigation (whether the combination of two chemicals has a given reaction) but more to do with the unpredictability of people, developing a hypothesis would be ill-advised. With the research question, not the
hypothesis guiding the study, the researcher remains open to new topics as they come along. These new questions can often lead to even more important questions than the one originally devised (Esterberg 29). As a consequence, the aim of the research question is to constantly probe looking for answers that do not necessarily resolve the question but provide a better understanding of a given social context.

Developing a Research Strategy

Developing a research strategy is basically like creating an outline for the research study. Having come up with the research question, the researcher looks to one of the eight traditions or a combination of these traditions to guide the research study. The research question in conjunction with the tradition(s) selected sets the basis for how the research is structured and what the strategy of investigation will be. This strategy explains how the research objectives will be met and which methods will be used to achieve these objectives. As was explained earlier, depending on the tradition selected, the final outcome can vary. Hence, it is in the researcher’s best interest to explore the specific aims of the research question and what exactly the research is setting out to accomplish, before selecting a tradition. For example, the researcher’s may begin with a research question that wishes to describe the influence violent cartoons have on young children. Depending on the tradition selected and the methods used, the research can take varying approaches resulting in different outcomes. The results of an ethnographic study focusing on the children watching these types of cartoons would be extremely different to an ethnographic study focusing on the parents of these children. Similarly the researcher could find that conducting a critical research study focusing only on boys rather than girls provides different outcomes as well. Within an ethnographic study, the researcher would immerse him- or herself into the environment
where the children are watching these violent cartoons, and through the process of observations, interviews, etc. the researcher would begin to identify specific behavioral and cognitive aspects shared by this group. On the other hand, if the researcher took the critical approach, they would frame their research in a way that would promote social change about the access young children have to violent cartoons. Just by looking at this example of the influence violent cartoons have on young children, one can see that depending on which research tradition is selected, different perspectives can be explored and different conclusions can be made. Therefore, when designing a research study, researchers need to think about which tradition is the most appropriate for the research question.

Selecting a Sample

Following the development of a research question and the development of a research strategy, the researcher needs to concentrate on how the data will be collected and from whom the data will be gathered. Since all qualitative research studies involve people who can be observed and interviewed, documents that can be read and studied, as well as, locations that can be visited, the researcher has to focus on which individuals, documents and locations should be included in the study to provide the most valuable data (Merriam 12). When selecting samples to study, the researcher needs to select individuals and material that exhibit characteristics relevant to the research question. For instance, a researcher conducting a study on how hip-hop markets street culture to teenagers would select samples from the teenage hip-hop audience, hip-hop marketers and possibly even hip-hop performers. Specifically targeting these groups to sample provides the researcher with insight that is pertinent to the research question. If the researcher were to sample young adults (from the age of 21-25) or individuals who market country music, rather than hip-hop music, the researcher would miss
the valuable information needed to answer the research question. For this reason, Michael Patton argues that it is important to select "information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling" (169 emphasis in original). Purposeful sampling is the deliberate selection of individuals or material to study. These individuals and/or material are selected because they offer specific qualities valuable to the research study (Esterberg 93). Hence, many qualitative researchers use purposeful sampling to understand phenomena in-depth, because these researchers are able to gain more knowledge from smaller samples that match the criteria of the research question than those samples that obtain information from a large random sample of the population.

Collecting Data

After completing the preliminary steps of conceptualizing a research question, developing a research strategy and selecting a sample to study, the next procedure is to begin the process of actually collecting the data. There are a variety of ways in which data can be collected, but the four primary sources that qualitative researchers use include: observations, interviews, unobtrusive measures and triangulation. Selecting the data collection method that is the most appropriate for guiding the research study depends on the initial research question and the strategy selected. For instance, researchers utilizing the narrative analysis tradition tend to use interviews as the primary source for collecting data. Through the various interviews conducted with a participant, the researcher can then formulate a story explaining the lived experience of that individual. While the underlying structure of the narrative analysis often leads data collection in the direction of interviews, researchers conducting ethnographic studies are inclined to use observations as their main source of data, since
researchers need to immerse themselves into the culture to understand it. Even though the narrative analysis tradition is prone to using interviews and ethnography to using observations, this does not mean that the researcher cannot use one of the other approaches. Researchers are encourage to explore how all of the methods can benefit the study before selecting a method, and many times researchers will use more than one method in the process of data collection.

**Observations.** One of the main sources qualitative researchers use for collecting data is the method of observation. Other than the interview, no other method is used as often. The main reason observations are used so extensively is due to the fact that they offer a unique insight into human culture that the other methods cannot provide. This unique feature allows researchers the ability “to see the world as his subjects see it, to live in their time frames, to capture the phenomenon [being studied] in and on its own terms and to grasp the culture in its own natural, ongoing environment” (Guba and Lincoln 193). Observational studies, therefore, remove the researcher from their sterile environment, where many studies tend to be conducted, into the environment of those being studied. Within this context, researchers are able to witness individuals in their normal, daily activities. Researchers can then observe how various individuals interact with other members of their community, as well as, observing the behaviors these individuals exhibit and what activities they participant in. Studying phenomenon from this insider’s perspective provides deep understanding of how people actually act, rather than how they say they act.

Observations are not exclusive to the field of qualitative research study; the act of observing is something everyone does everyday. The average person uses observation to study and function within the environment in which they live. Thus, a person can use
observations to determine when it is safe to cross the street, to bring an umbrella to work due to rain or to simply observe other people’s interactions at the local café. The way the average person observes the world around them is not necessarily any different from the way a researcher observes, it is just the degree of how focused the observations are. Whereas the average person tends to forget or take for granted much of what they observe during a day, a researcher will take note of all the interactions taking place. To help the researcher remember these observations, he or she takes detailed notes, which are referred to as field notes. (See Appendix A, for an example of field notes.) These field notes describe the people being observed, the actions taking place and the physical characteristics of the surroundings. In addition to helping the researcher remember all that was witnessed during the observations, the process of taking field notes also helps the researcher to make sense of what was observed. Robert Emerson, Rachel Fretz and Linda Shaw contend that taking detailed field notes “is not so much a matter of passively copying down ‘facts’ about ‘what happened.’ Rather, such writing involves active processes of interpretation and sense-making” (8). Thus, field notes are just as essential to the study as the actual observations.

Even though the process of conducting observational studies is fairly straightforward, there are a couple of ways to approach such studies. The first approach researchers can take is the non-participant observation. Non-participant observations are often considered indirect or covert, because the researcher observes people and their surrounding without actually interacting or participating in the social activities. In addition to this, those being studies are generally unaware of the fact that they are being observed. Acknowledging the nature of this approach, there are both advantages and disadvantages to performing non-participant observations. One of the advantages is that those being studied are less likely to change their
behavior because the researcher’s presence is unknown. When the researcher is visible and actively taking part in a social setting, those being observed often alter their behavior to try to look good for the researcher. For instance, an individual who typically uses vulgar language in their everyday conversation may pay close attention to their language when the researcher is present so that the researcher does not classify them as a crude person. While preventing altered behavior is a major advantage of non-participant observations, another advantage is that the researcher has fewer tasks to deal with. Trying to concentrate on the task of observing and taking notes, while at the same time interacting with participants can be difficult. Therefore, non-participant observation allows the researcher to solely concentrate on observing and writing field notes. The problem with this is that the researcher is only a bystander and cannot ask questions to clarify why certain members of the society are exhibiting the behaviors they are. When the researcher is unable to ask clarifying questions, they have to interpret (to the best of their ability) the behavior in question, which can lead to misinterpreting the data. Although misinterpretations can be harmful to the validity a study, the most problematic issue with conducting non-participant observations is the ethnical issues it raises. When conducting observations in a social setting, such as at a shopping mall, in the city park or at a sporting event, there are fewer ethical concerns because these individuals are in the public eye where they can be observed by many people (researchers and non-researchers alike). But when the researcher covertly enters private domains, such as an individual’s home, issues of “right to privacy” can become extremely important.

Considering that the downfalls of non-participant observation can overshadow the benefits, many qualitative researchers choose to use an entirely different approach for conducting observations. This approach is the participant observation. In contrast to the non-
participant observation, the researcher’s presence is known in participant observations and
the researcher takes part in the social activities. Robert Bogdan and Steve Taylor explain this
type of observation as an “intense social interaction between the researcher and the subjects,
in the milieu of the latter” (5). Gathering data from observations as a participant gives the
researcher direct experience into the lives of their participants, thus explaining phenomena
such as behaviors, attitudes, experiences, customs and beliefs. In view of the advantages
participant observations have for giving researchers invaluable, first-hand knowledge into the
lives of those being observed, it too has disadvantages much like non-participant observation.
The greatest weakness of the participant observation (along with its greatest strength) is the
known presence of the researcher. When the researcher’s presence is known it affects the
behavior of those being studied. Therefore, the observations are no longer true-to-life. A way
qualitative researchers have been able to remedy the effects of altered behavior is to remain
immersed in a culture for a prolonged period of time (several months or longer). The longer
the researcher is able to remain in the field the more members of the society being studied
expect the researcher as an actual member. This expectance results in the participants
temporally forgetting the researcher is a researcher. Thus, behavior ceases to be altered and
the researcher can observe the natural behavior of the participants. However, when time is
not a luxury, another way to alleviate the effects of altered behavior is to use the process of
triangulation (explained in detail later). Triangulation allows the researcher to cross-check
observations with interviews and document research to obtain a thorough understanding of a
given phenomenon. Another disadvantage of participant observation, which ties in closely
with a participant’s altered behavior, is the way the researcher can bias the research study. If
participants have a good idea of what a researcher’s study is about they have the ability to
bias the study in the way of telling and showing the researchers what they think he or she wants to hear. To eliminate this type of bias, researchers have to be careful about how much information they reveal about the study, in addition, to being aware that they do not lead the participants to act in a particular way. Although qualitative researchers acknowledge the disadvantages of using participant observation, the advantages directly connect with members of a given society have far surpass the disadvantages, because directly observing an individual gives the researchers a chance to learn more than they ever could from merely conducting interviews or using document research alone.

To alleviate the shortcomings of both non-participant and participant observations, the researcher can employ a third approach, which is using both of these observational methods in a signal study. At the onset of a given study the researcher may decide to conduct non-participant observations in a public setting to get a better idea of what takes place in the environment and which individuals may become valuable assets later on. Once the researcher as obtained "the lay of the land" through non-participant observations, the researcher may then switch to using participant observations to interact with members of this society, and thus, obtain information that may be obvious to that society but not to an outsider. Since the researcher enlists the use of both participant and non-participant observations the issue of modified behavior is eliminated because the researcher observed how the members of the given culture acted before he or she began interacting with them. In addition, the issue of ethnics is eliminated because the participants are aware of the fact that they are being observed. No matter which method of observation a researcher takes, either as a participating observer or strictly as an unknown observer or through both techniques, all of these methods seek to make meaning of various social contexts.
Interviews. The interview is the most frequently utilized method of data collection in qualitative research studies (Rogers and Bouey 52). One of the main reasons interviews are so widely used is due to the fact that the interview process is flexible both in time and in its approaches. While researchers conducting observations find it difficult to leave a setting due to the intense amount of time immersion in the field requires (to properly observe the individuals and the phenomena), researchers conducting interviews have more flexibility to come and go as they see fit. Considering this, interviews are less-time consuming compared to observations, because researchers using interviews can go straight to the source and directly ask questions about the phenomena being studied, instead of, as in the case of conducting observations, waiting for the phenomena to emerge so it can be observed and questioned. Using interviews as a method of data collection allows the researcher a chance to understand a participant's story from the perceptive of the participant. This method allows the participant a chance to comment, in their own words, on an experience, an event or some other topic. Therefore, the way a researcher goes about collecting this type of information is through the “exchange [of] information and ideas through questions and responses, resulting in communication and joint construction of meaning about a particular topic” (30). Even though the interview process can resemble real conversation, the formality of that conversation depends on the approach taken by the researcher. As the researcher and the participant(s) engage in conversation, the questions asked can range from those that are thought out in advance, to questions that the researcher spontaneously comes up with on the spot. The responses a participant provides, too, can range from selecting from a list of predetermined answers to being free to openly answer the questions and provide whatever additional information they would like. Due to the wide range of approaches for conducting
interviews, researchers can select from three unique styles which include structured interviews, semi-structured interviews and unstructured interviews. Since each of these different approaches to interviewing is unique, the researcher needs to determine the degree in which they want to be guiding the interview process and directing the responses from the participants. Knowing this will help the researcher select the most appropriate approach.

Since the different interviewing styles span a gamut ranging from the preplanned and highly controlled interview that leaves little to chance to the spontaneous and free-flowing interview that relies on chance for topic development, the structured interview falls on the conservative side of this gamut. Due to the conservative nature of the structured interview, it tends to be classified as the most formal and rigid approach to interviewing. In a structured interview, the researcher develops a questionnaire well in advance of actually conducting the interview. The questionnaire consists of a series of carefully worded questions to pose to interviewees that becomes the

theatrical script to be followed in a standardized and straightforward manner. Thus all respondents receive the same set of questions asked in the same order or sequence...[as a result] there is very little flexibility in the way questions are asked or answered in the structured interview setting. (Fontana and Frey 649)

By asking the same series of questions to all participants, the researcher develops a set of standardized results which maximizes validity, although it does not provide in-depth understanding for describing the participants’ point-of-view in their own words. In view of this, structured interviews are similar to survey research, which enables the researcher to enumerate the findings. Because qualitative researchers are more interested in the meanings and the perceptions various individual have about a phenomena, the structured interview is rarely used in qualitative research study.
The semi-structured interview is the most popular interviewing style in qualitative research (Merriam 13). The reason being, it is considered the median between the structure and unstructured approaches. The semi-structured interview does provide an organized and structured approach, but the process of interviewing is allowed to flow more openly with the responses of the interviewees. Thus, the researcher develops in interview guide, consisting of a list of questions that the researcher may ask. This guide is not a fix questionnaire; rather the semi-structured interview guide is used to initiate conversation between the researcher and the interviewee(s). Of the questions posed by the researcher, many are considered open-ended. This means the researcher asks questions that explore the participants’ perspective through questions such as: “Can you tell me about...,” “How would you define...” or “Tell me about how this affects you.” The reason that researchers prefer to use open-ended questions is to prevent the researcher from controlling the interview process. When the researcher controls the interview process, participants’ are unable to explain phenomena in their own words, and once this happens the researcher misses beneficial data. In addition to using open-ended questions to prevent researchers from controlling and directing the interviewing process, open-ended questions can lead to unexpected topics emerging from the interviewee’s responses. These expected topics may lead the researcher to set aside the interview guide and pose new questions about the emerging issues. With this in mind, no two semi-structured interviews are alike, even if the same topic is discussed by a variety of participants. This is because each participant explores their own personal perspective through their own words. Thus, the goal of the semi-structured interview is to explore a phenomenon openly, giving the respondent a chance to express their experiences and perception in their own way (Esterberg 87).
The third approach researchers’ use for interviewing is the unstructured interview.
Out of the three styles of interviewing, unstructured interviewing provides the most in-depth information, because unstructured interviews focus on what participants think is important, rather than what the researcher thinks is important. Often times, the researcher will approach interviewees with a single question or topic that they wish to know more about, and from that point on the participants are allowed to speak opening. Thus, the unstructured approach is unprompted and allowed to flow freely. It becomes an “attempt to understand the complex behavior of members of society without imposing any a priori categorization that may limit the field of inquiry” (Fontana and Frey 653). Since the researcher does not approach the interviewees with a list of pre-established questions, this style of interviewing is more flexible to follow the lead of the participant. But this means that the researcher must be able think on their feet to come up with questions based on what the interviewee said. As Penny Oldfather and Jane West have suggested, “qualitative researchers learn to ‘read’ their participants—discovering which questions or issues are important to the insiders of the culture they are hoping to understand, and collaborating to shape the directions of the inquiry accordingly” (24). In order for the interview to follow the lead of the participant, the researcher must develop a rapport with the interviewee. One of the best ways to develop this rapport is to make the interview as similar to real conversation as possible. In the course of interviewing, both the interviewer and the interviewee share stories that resemble “real” conversation (Reinharz and Davidman 32). This informal conversation leads to rich, detailed answers that cannot always be derived at from the other two styles of interviewing.

Considering the differing styles for approaching interviews, qualitative researchers who conduct multiple interviews with the same participants generally use more than one of
the interviewing methods just described for accessing data. For instance, the researcher may begin with semi-structured interviews and as the researcher and the participant get to know each other better the interviewing method may become less structured and more spontaneous, leaving the respondent room to answer questions openly. In addition to using more than one approach to interviewing, when researchers use any of the three styles of interviewing, they generally combine the interview with participant observations. Using interviews in conjunction with participant observations is a way for researchers to informally ask questions in the process of observing. Asking questions in this way helps to put the participant at ease. When the participant(s) are relaxed they are inclined to provide richer data. Therefore, the blending of interviews and observations provides valuable insight to confirm or expand the information already obtained from unobtrusive measure or previous observations.

**Unobtrusive Measures.** An entirely different approach to data collection is through the use of unobtrusive measures. Unobtrusive measures can be classified as a way of collecting data that does not rely on direct contact with participants and is based on information that already exists. This type of data includes physical trace material, material artifacts, documents and records, electronic text and historical research. Information obtained from any of these sources is considered a second-hand account in contrast to the observation and interview methods which focus on first-hand accounts (either from the perspective of the researchers as in the former or from the perspective of the participant in the case of the latter). Considering that qualitative research studies are defined as a search for understanding to describe the meanings individuals have for experiences, many qualitative researchers believe the best way to understand these experiences is through an insider’s perspective (Creswell 2003, 181). Because of this, the use of unobtrusive measures has often been
ignored and forgotten. Ignoring this method dismisses a valuable source of information that can provide a researcher with the insights into phenomena that cannot otherwise be obtained from interviews or observations alone. Therefore, using unobtrusive measures is a way researcher's can supplement first-hand information. Unobtrusive measures are valuable for many reasons, but the most important reasons, according to Elizabeth Whitt, are that they “are readily available, stable and nonintrusive sources of information: unlike human respondents, documents do not react to the process of data collection” (411). Due to the stability and unaltered findings unobtrusive measures offer, data collected through this method tend to be considered more valid that data collected through the other means.

One of the ways qualitative researchers explore phenomena through unobtrusive measures is through the use of physical trace material. Physical traces are the remnants of human activity. These remnants can be classified as measures of accretion or measures of erosion (Webb, Campbell, Schwartz, Sechrest and Grove 36). Physical traces classified as measures of accretion include any found material that an individual discards or accumulates. On an average day a person will discard or accumulate a variety of physical trace materials, which can include the daily newspaper read on the train to work to the takeout food container the individual’s lunch was in to the dry cleaning receipt the individual used to pick up their clothing. All of these physical traces can be collected by the researcher and analyzed. Analyzing this type of material can help the researcher understand patterns of behavior in a specific environment. For example, a researcher may go through the garbage in a given neighborhood to determine how many times persons within this neighborhood eat fast-food a week. Analyzing the garbage helps the researcher make inferences about fast-food consumption. The other kind of physical trace, the measure of erosion, shows wear and tear
on surfaces. Measures of erosion can, therefore, provide the researcher with information that describes typical human activity. For instance, researchers can determine which exhibit at a museum is the most popular by the wear on the floor. In addition to this researchers can also describe the path most likely to be taken by college students from their dorm room to the cafeteria by the path worn in the grass.

Given that physical traces are the materials people gather and/or leave behind in their daily lives, material artifacts are the objects in which people produce. There are endless human-made artifacts that researchers can select to analyze in any given social setting. These artifacts can range from those produced in years past to those produced currently. With all the artifacts, past and present, that can be analyzed; it can become a complex process to try to understand all of the meanings that producers and users have for these artifacts. Mass-produced artifacts are easier to analyze because multiple individuals use them providing a more universal understanding, but artifacts produced by individuals for personal or small group use are extremely difficult to analyze especially when the researcher is not a member of that culture or does not have direct access to the producers and/or users of the artifacts.

When a researcher is unable to directly observe how individuals use a given artifact or interview the producer as to why he/she made the artifact, the researcher has to examine the social setting in which the artifact was discovered and determine meaning based on the context of that setting.

Interpreting material artifacts thus involves a hermeneutical process, a process of making meaning. [The researcher] needs to try to situate the artifact both in the context in which it was made and produced and in the context in which [the researcher] (as the analyst) is situated. [The researcher] needs to try to understand not only how the item was produced but also how it came to [the researcher’s] attention for analysis. (Esterberg 119)
An artifact’s meaning has a lot to do with its context, but the researcher’s interpretation of the artifact also has a lot to do with the meaning. Thus, examining the history of the artifact, the culture it is used in, how it is used and the researcher’s understanding of all this information gives that researchers a context in which to “hunt for patterns” (Glassie 255). In the search for patterns the researcher’s analysis examines the difference “between past and present or between different examples of material culture [to help the researcher make] analogies between” the two (Hodder 121). Considering the multiple meanings this strategy provides, a researcher may never truly decipher all of the meanings an artifact holds, but it will open a window into what is valued within a give social setting.

Qualitative researchers using unobtrusive measures not only study tangible object through physical material and material artifacts, but they also study various forms of written texts. The written texts that qualitative researchers access for their studies are generally categorized as documents and records (Macdonald and Tipton 189). To distinguish the difference between these two forms of written texts, Yvonna Lincoln and Egon Guba have defined have

‘record’ to mean any written or recorded statement prepared by or for an individual or organization for the purpose of attesting to an event or providing an accounting. Examples of records would thus include airline schedules, audit reports, tax forms, government directories, birth certificates, school grade files for pupils and minutes of meetings. The term ‘document’ is used to denote any written or recorded material other than a record that was not prepared specifically in response to a request from the inquirer...Examples of documents include letters, diaries, [schedules, calendars and scrapbooks]. (277 emphasis in original)

Another distinction between documents and records is that records tend to exit in the public realm of society while documents tend to exist in the private realm. Due to this fact, public records are much easier sources of information for researchers to access. No matter which
sources of written texts are tapped into both can provide valuable and beneficial insight into understanding human behavior.

Public records are a plentiful source of information for several reasons. First, as just mentioned the information records provide is readily available for researchers to use. Having information readily available means researchers do not have to gather participants and/or conduct a study for information. Second, records are generally based on facts and figures, providing less bias and more validity. And finally, records are a source of information that will remain consistent regardless of the study’s focus, the researcher’s intentions or the participants’ perspectives. Since a majority of public records are created for official documentation (Berg 182), they are used the most by social institutions, such as the federal government, hospitals, educational institutions, etc. The records produced by these various institutions often rely more on statistical information than descriptive information. While quantitative researchers place more value in statistics, qualitative researchers should not abandon the idea of using records, because they can be used as a tool for making valid inferences about human experiences and behavior. When qualitative researchers do consult various forms of records for their research study, the federal government becomes a prime source for accessing this information. Although the federal governments is one of the largest sources for public records other sources, such as state, city and local governments, in addition to, public and university libraries have records that can be accessed by qualitative researchers (Esterberg 121). With an abundance of public records in existence, researchers just have to search out these resources. But researchers must keep in mind that collecting sources of records can be a time consuming process and many times the information records provide are incomplete or inclusive (because the data is restricted to what already exists).
Thus, the unobtrusive measure of records should always be supplemented with another data collection method.

In contrast to the public records’ ease of accessibility, personal documents are much more difficult for researchers to obtain due to their private nature. But when a researcher does gain access to these personal documents it can provide beneficial knowledge into the experiences of an individual that are sometimes difficult to obtain through the other methods of data collection. Personal documents exist for everyone, whether they choose to keep a journal or not. Considering that personal documents are more than the previously mentioned examples laid out by Lincoln and Guba (such as diaries, personal correspondences, etc.); personal documents can also include bank statements, credit information, pay stubs and personal memos just to name a few (Esterberg 123). By studying and analyzing personal documents, it helps the researcher to “understand how the participant sees [their] world” (Mahoney). Whether it is understanding the self-contemplation written about in diaries and journals or understanding the social realities stated in credit reports, Louise Corti, asserts that there are three advantages personal documents have over the other forms of data collection. First, personal documents can provide true-to-life accounts of a social phenomenon that are not always mentioned in interviews. Second, personal documents can reveal information that is considered too sensitive to express to an interviewer who is a stranger to the participant. Finally, personal documents, such as journal entries, can supply a broader range of behaviors and experiences expressed in the context of the participant own words (Corti). By accessing the daily entries of a journal (or other sources of personal documents) the researcher can investigate behaviors and experiences that occur on a daily basis and examine how the behaviors and experiences have changed over an extended period of time. These first-person
accounts are a valuable source of data that cannot be expressed to a researcher in the course of an interview or two.

All of the forms of documents discussed thus far have been in the form of tangible objects and documents, but developing technology has spawned a whole new approach to unobtrusive data collection, which is the use of electronic texts. Electronic texts include email, chat rooms, blogs (online personal journals and diaries), message boards and personal web spaces. Many public records, as just discussed, are now accessible via the internet, saving the researcher significant time. These electronic texts are treated and analyzed in a similar way as other forms of written texts and material artifacts; they are just easier to access. Noting the ease of accessibility, this method has both strengths and weaknesses. The main advantage to using electronic text is that the researcher can conduct interviews or access blogs in settings where the researcher and the participant do not meet in person. Not meeting in person can help put the participant(s) at ease, allowing them to be more open and frank about their personal experiences and behaviors. Because the participant does not feel the burden or pressure of the researcher’s presence, the researcher can gain a more accurate account of an individual’s behavior. This in turn, can give the researcher a better idea of how the individual’s social reality is constructed. Another advantage to electronic text is simply that more information is available to researchers. Using the internet, the researcher is not limited to a confined area. The researcher can use the internet to reach participants worldwide. However, one of the disadvantages of using electronic text is researchers may not always be able to decipher all the forms of communication being used, both verbal and nonverbal. As the use of chat rooms, instant messaging and online journaling has become more prominent, individuals using these forms of electronic texts have developed an entirely
new language. For example the acronyms lol = laugh out loud or ttyl = talk to you later are commonly used as forms of verbal communication. Also, symbols called emoticons, such as : ) = smiling, : ( = frowning or ; ) = winking, are used for expressing nonverbal expressions. Analysis of these forms of communication can be difficult if the researcher does not understand the verbal and nonverbal codes. In addition, conducting an online interview can result in the researcher not being able to pick-up on the body language being used. Body language, such as shrugs, long pauses or looking away while answering a question, can reveal just as much about the participant as the answer itself. While difficulties in translating verbal and nonverbal communication and missing information gained from observing body language are both areas of weakness in using electronic texts, the greatest weakness in using electronic texts is the researchers inability to verify that participants are who they say they are. “Because individuals may be more anonymous on the internet, they may be more inclined to ‘play’ with identities, presenting themselves as holding different genders, race/ethnicities or other identities than they may in fact possess” (Esterberg 126). When researchers choose to access this method of data, they need to be aware of both its advantages and disadvantages and develop strategies for dealing with the pros and cons. Since the internet is a continually and rapidly changing source, researchers need to be aware that the information they accessed today may not be there tomorrow. This should not discourage researchers from using the internet as a source, because the internet provides a wealth of material to be used. It is just important to verify facts as much as possible.

The final category of unobtrusive research is historical research. Since “research topics do not exit in isolation [it is useful] to understand fully and accurately...what scholars in the discipline have found” (Frey, Botan, Friedman and Kreps 17) by reviewing the past
through historical research. Historical research asks the researcher to think beyond history as just being a series of dates and facts memorized by students, and “ask what it means to live in a particular time period...to identify what assumptions can be made about how people live, what are the meanings of things in particular times and places and how the past impinges on the present” (Esterberg 129). Therefore, looking to historical research tends to focus on answering questions that explain the larger human or social issues rather than the smaller issues. In exploring larger social issues, these researchers can begin to understand how societal changes took place, when these changes took place and how they differ from various places and times. An example of how a social researcher would access historical records would be if the researcher were studying the impact of the current Iraqi insertion and how this has had an impact on Iraqi women’s rights. The researcher could study the history of various women’s rights movements in other societies and at different periods in time, or the researcher could choose a completely different approach and investigate how other wars throughout history have brought about this type of social change. Acknowledging this, one can see that it is not enough to understand the current moment; one has to study history to answer current questions about society and in doing so they can begin to more fully understand and recognize how the past has shaped the present.

**Triangulation.** In selecting sources for data collection—whether observations, interviews or unobtrusive measures—the researcher must realize that each of these methods has its own set of strengths and weaknesses. Since “no single source of data can provide as comprehensive a picture of the phenomenon as is needed for understanding” (Whitt 412), a majority of social researchers choose to combine data collection techniques, using a mixed methods approach. This mixed methods approach is called triangulation (Denzin 26).
Triangulation involves gathering data from two or more research methods, such as using interviews in conjunction with observations, observations in combination with unobtrusive measures or a mixture of all three of these methods to enhance the strengths and help reduce the weaknesses of the methods used, resulting in a more valid study. If the researcher conducts interviews, observes behavior and collects data from documents, all the findings derived from one source of data can then be cross-checked with the other methods. This gives the researcher the ability to verify if the participants act as they say they act, by comparing what was said in the interview verses what was observed or read about. Considering that the various methods of data collection can produce value information on their own, when these methods are used together the information is that much more abounding. Triangulation, thus, gives the final analysis greater validity and credibility.

Evaluating findings by analyzing the data

Although data collection and data analysis have been laid out thus far as individual steps in the qualitative research process, these two procedures should always be conducted simultaneously. Consequently, waiting until all the data has been collected before starting the process of analysis has several downfalls. First and foremost, refraining from analysis until the end overwhelms the researcher. Trying to sort through piles of interview transcripts, field notes and documents is intimidating, and ultimately the researcher can lose sight of the initial research question because of the sheer immensity of data to analyze. A second downfall of not conducting data analysis in conjunction with data collection is that many times additional topics and questions emerge from the process of actually analyzing the data. The emergence of new questions and topics can modify the original problem statement, thus leading the research study in new directions. By waiting to analyze data until after all the data has been
collected makes it impossible for the researcher to adjust the study to the emerging topics. Yet another issue that arises from not conducting analysis at the same time as data collection is that the researcher loses the opportunity to re-question participants or observe conditions with the new understanding from the emerging data. Hence, analysis must begin as soon as the first interview or first observation is conducted. Keeping this in mind, how does the researcher actually go about making sense of all this data? According to Robert Bogdan and Knopp Biklen, the process of developing meaning out of analyzed data involves “working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned and deciding what [to] tell others” (145).

Whenever a researcher begins the process of analyzing data it is a good idea to have some way to manage all this data. Managing the data could be as simple as placing all the interview transcripts together or all the field notes from the observations together. Instead of organizing by type, other researchers prefer to keep their data in chronological order. Whichever way is selected, the researcher begins to categorize and catalog the data. Each researcher may take a different approach to cataloging data; it just depends on the researcher’s strategy. Just as there are no right or wrong topics to research, there are no right or wrong ways to manage data. Even though there may be no single, correct way to manage the data, it should start as soon as the data gathering begins. Remaining organized in the way of devising a cataloging system helps the researcher to find data quickly, in addition to starting the analysis process.

Subsequent to cataloging and organizing the data, the next step is to dive into the data to better understand what is going on in it. Diving into the data means rereading field notes,
listening to any taped interviews and/or looking at the sources of unobtrusive measures again. This gives the researcher a chance to really get to know what is being said in each form a data. In addition, reexamining all of this material is meant to get the researcher thinking, thus beginning the process of looking for patterns. Researchers do not have to make sense of all of their data at this stage in the data analysis process, but they should be able to distinguish what is important information and what is not.

After rereading the material and getting acquainted with it again, the researcher then starts the process of devising a system of codes. The process of coding consists of open coding and focused coding. Coding begins to reduce the enormous amount of data into more manageable amounts. According to Amanda Coffey and Paul Atkinson there are three processes for coding data. These include “noticing relevant phenomena, collecting examples of those phenomena and analyzing those phenomena in order to find commonalities, differences, patterns and structures” (29). It is important to look at all the data and come up with initial speculations of what meanings the data holds. As more data is collected these initial speculations often evolve into reoccurring patterns and themes.

To begin to understand the data, the researcher begins with open coding. How open coding works is that it requires the researchers to go line-by-line through the data looking for patterns or ideas that reoccur. Whenever the researcher notices these themes, he or she should remain open to it. It could be harmful to the analysis if the researcher were to begin the coding process with any pre-established ideas. Also, the researcher must be open to themes that may not be pertinent to the original research question. This can lead to new questions and topics. The more familiar one becomes with the data, the more the researcher will begin to notice patterns and themes. Thus, open coding requires the researcher to go through the
data more than once, in order to accurately establish the apparent themes. When the researcher begins to see the same code over and over again (especially in various forms of data) the researcher has established a theme. (See an example of open coding in Appendix B.) After the themes have been established by the researcher, he or she then moves on to the phase called focused coding. The process of focused coding again requires the researcher to go line-by-line through the data. However, researchers only concentrate on the themes developed through the process of open coding and ignore all other themes that appear. Qualitative researchers generally compile all the similar themes from all sources of data in a single document. They will state the theme at the top of the page and then list all the sources in which the themes appears. Considering all the steps involved in coding, both in open and focused coding, analyzing data is a difficult process that requires a great deal of time and energy, but the process of coding is essential for better understanding human behavior.

The process of coding data does not conclude the qualitative research study, because the researcher still has to make sense of what the data means. The researcher has to take all the discovered themes and interpret their meanings in a way that is relevant to the individual, society or phenomena under study. To do this, the researcher will take the themes discovered in the coding process and compare the results with other studies or other resources. In comparing results, the researcher may find that their findings are similar to another, therefore verifying the results. However, the findings of one research study may not produce the same findings as another source, even if the two were similar in nature. This is not problematic in qualitative research study, because qualitative research is meant to assemble the themes, experiences and behaviors pertinent to that particular study. The difference in results between the two may then be the consequence of different study frameworks or methods, or the
difference between the time periods. Regardless of producing similar results, all analysis must be grounded in the data collected, because the final analysis, in order to be valid and valuable, must be supported by the data.

Writing up the findings

The final phase in any qualitative research study is to write-up the findings. There is no pre-determined way to write-up a research study. Qualitative research study write-ups have varied from the traditional report presented to the academic communities to books written as narratives for general audiences to scripts used for performing the findings on stage or on film (Ellis and Bochner 761 and Merriam 14). No matter which writing style a researcher selects, it should be relevant to the audience receiving it. “Regardless of the format, a report of qualitative research should be viewed by the researchers as a story that will engage the interests, insights and understanding of the readers” (Whitt 413).

The use of qualitative research methods in graphic design

The methods just outlined for conducting research have been powerful research tools for qualitative researchers, but what benefits would the discipline of graphic design gain if qualitative research methods were implemented into the design process? The main benefit would be that graphic designers would have a structured way to approach design problems through inquiry into cultural contexts. Looking into the cultural contexts of a given audience enables the designer to learn more about that audience, which in turn facilitates in producing designs that can efficiently communicate. As has been mentioned numerous times throughout this thesis, the current approach many designers use for solving a design problem is through one’s own personal knowledge or intuition. For many designers starting out in professional practice, using intuition is the easy solution because it does not require the time consuming
task of research. The problem this creates is that these young designers have not had enough experience in the field to develop the skills many veteran designers have acquired for acknowledging when a design problem needs more than just an intuitive response. For design problems addressing cultures, environments, customs and ideas different from that of the designer’s own, the designer needs something more than just intuition alone to solve these problems. Thus, the qualitative research methods become the methodologies which graphic designers can use to get to know their intended audience better. Adapting and employing the use of qualitative research methodologies in the design development process not only allow the designer to understand what they are designing for, but it also provides insight into those in which the design is aimed. Transitioning qualitative research methods into graphic design should not be as difficult as one might think, considering that there are a number of similarities between the design development process and the methods used for conducting a qualitative research study. Since most graphic designers complete their educational careers with an ample knowledge in developing and identifying a design problem, constructing a strategy for solving the problem, designing concepts and producing final solutions, there is little need to explore these in-depth. However, the area that graphic design education needs to concentrate on more is developing the ways for teaching designers how to gather, analyze and use research for solving design problems.

In view of the data collection methods previously explained, unobtrusive measures is the method that most designers currently use. Generally, when a designer is presented with a problem, they will search for information about audiences and topics through unobtrusive measures. That is the designer may conduct internet searches, consult various publications or even go to the library to find historical information on the given audiences or topics. In most
university settings this type of research is a requirement for studio design projects. The reason students need to include this kind of research is to explain the ideology behind their design solutions, and conducting research through unobtrusive measures helps provide the student with some backing for their solutions. While using obtrusive measures to learn more about audiences and topics is beneficial, using this method inclusively does not always provide the student with a thorough description of the given audience or topic. Given that all the information the designer is gathering is strictly from publications, websites and other forms of unobtrusive measures, all of this information is the interpretation of another author. When designer’s use obtrusive measures alone, they miss out on the firsthand knowledge that can be gained from talking and observing the intended audience. Thus, graphic designers need to look beyond just using unobtrusive measures for collecting data; they need to go one step further to get to know their intended audience by actually meeting its members and in doing so they can ask them questions and observe how they live in their natural environment. As Buffy Shutt explains, “if you are not talking to them [the intended audience] where they live and breathe, then you are missing an important link in your journey to connect” (299) and communicate effectively.

Understanding that there is more to research than just using unobtrusive measures, leads into incorporating the use of interviews and observations in the design development process. The use of both of these techniques moves the designer away from studying inanimate objects (such as the books collected from the library or an article from a website) to studying living, breathing human beings. Introducing firsthand accounts into the design process can be complex, but yet the information it provides is far more beneficial. Interviews and observations conducted by a designer to understand a give audience provide in-depth
information directly from the source. In any design problem, understanding is essential, thus what better way to understand an audience than to meet with them and learn about what is valued and meaningful from them.
The recent changes in communication, caused by the internet and globalization, have brought about new challenges for the discipline of graphic design. With professional graphic designers taking on more and more complex problems, it is becoming increasingly important for graphic design students to be able to comprehend complex problems before entering the professional field. As mentioned earlier, design students study technique and technology (technique being the study of design principles and design theories, with technology being the study of the computer software used by designers in the workplace). Both technique and technology have a place in the design curriculum (technique more so than technology), but neither offers much in the way of understanding audiences, especially audiences that are outside of the mainstream. Given that audiences have become much more diversified in recent years, it is becoming progressively difficult to design for the mainstream. Therefore, design educators’ need to think about how to teach students to get to know their audiences better. The problem, as Brenda Laurel states, is that “design curricula in higher education rarely include research as a set of skills with extremely high strategy value” (2003, 17). What academia is producing are designers who are experts at arranging typographic and pictorial elements on the page, but amateurs at understanding the intended audience. It is this lack of knowledge in understanding audiences that becomes the issue educators’ must address. By educating designers to seek out knowledge about an audience teaches them to create designs that are more in tune with the intended audience. As designers learn to understand their audiences better through qualitative research, they will be able to look above and beyond the typical response to their design problem; they will be able to search for, understand and integrate ideas from the social aspects of their audiences. This puts the designer on an
entirely new playing field, a playing field in which designers become independent and intelligent thinkers, and not just producers of aesthetically pleasing designs.

Recognizing the changing needs of graphic design, educators have to find ways to remedy the lack of research applied to design study, so that students will be better prepared to solve design problems through analytical thinking, as well as creative thinking. The solution proposed thus far is to incorporate qualitative research traditions and methods into the design development process. Considering that graphic design, by definition, is the process of combining design elements to communicate an effective message (Owen 4), it makes qualitative research an ideal fit. The reason qualitative research suits graphic design so well is because design needs to be right in the center of questioning and investigating the society it seeks to inform. Thus, qualitative research becomes the tool designers need for understanding the patterns of social behavior, in addition to understanding the environment and cultural characteristics that influence an intended audience. Integrating qualitative research into the graphic design curriculum will profoundly change the way graphic design operates. It will require students to be able to obtain social knowledge from a given audience through interviews and observations instead of just solely relying on studying documents. Researching in this way becomes the means for connecting the designer with an audience, producing better communication between the two. As a result, qualitative research becomes a way to provide deeper meaning to design; a way to communicate effectively with cultures different from one’s own. Acknowledging the positive implications qualitative research has for the discipline of graphic design, it still leaves the question of how do educators get students to think through design problems using qualitative research? The following sample course will provide insight of how to ideally insert qualitative research traditions and
methods into the graphic design development process, which will ultimately get students to connect their designs with their audiences.

**Sample Course**

There are a number of higher educational institutions in the United States that a course requirement in qualitative research could be introduced into, but the focus here will be on the graphic design curriculum at Iowa State University. The graphic design major, housed in the Department of Art & Design, at Iowa State University has always been on the forefront of providing its students with the latest techniques and technologies. Continuing to look for innovative ways to further a student’s education and the discipline in general, implementing a course requirement that teaches research skills to students would be the next plausible direction for this curriculum. However, before suggestions can be made for including such a course, there needs to be an examination of the current curriculum. Table 1 shows that in addition to general education requirements, a graphic design major must fulfill coursework which introduces them to technology, design history, design practicum and the fundamental component of any designer’s study, the graphic design studio courses. Bearing in mind that all these courses are jam-packed into four-years, it seems far-fetched to add yet another course into the curriculum. Doing so could possibly stretch the student’s educational journey out to a fifth year. To prevent having to extend the length of the program, the other option is to eliminate one of the other courses, but what would have to go to make room for the new research requirement? The way the Iowa State curriculum is presently set up teaches students graphic design software in two technology courses. If the two courses were condensed into one comprehensive module this could make room for a course in design research. Therefore, eliminating Graphic Technology II from the student’s spring semester (of their second year)
TABLE 1: The typical four-year schedule for an Iowa State Graphic Design major. All information was obtained from the College of Design—Graphic Design website. View this information at http://www.design.iastate.edu/GD/typicalscheduel.php or http://www.iastate.edu/~catalog.curriculum05-07.pdf

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TABLE 2: The modified Iowa State curriculum including a design research requirement.

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would change the typical schedule to resemble that of Table 2. Removing this technology course would mean that the students would either have to move one of the two credit option classes or a general education course from their third year into the spring semester of their second year. The reason for rearranging the schedule as such is because it would be best for the student to take the design research component in their third year. The rationale for this is, in order for the student to take full advantage of this research component, the student would need to have a strong foundation in the design principles and theories. Having this previous knowledge in design principles and theories allows the student to concentrate more on the process of learning the new skill of research and allows them to use these previous skills to compliment the process of designing through research. Additionally, students would need to be mature enough in their development to be able to comprehend using qualitative research, because using these traditions and methodologies can be complex.

Introducing a graphic design research course in the student’s junior year of study not only allows the student a chance to mature before adding one more tool to the array of skills they will acquire in their education, but it also fits well into the timeframe for the project being proposed in this thesis. The projected project is a system design for the Iowa Latino Heritage Festival. Although this project is not new to Iowa State (Graphic Design Studio IV has been creating material for the Iowa Latino Heritage Festival for the last several years), the way it is approached will be slightly different. Students will still be required to develop an entire system design consisting of business collateral, posters, postcards, brochures, etc., but students will obtain their knowledge for developing this material through qualitative research. This new approach would use the qualitative research traditions of ethnography, case study and grounded theory, as well as, the methods of interviews, observations and
document research as a way to guide the process of design. Situating this course in the fall semester positions it within the time-period of both the observation of National Hispanic Heritage Month, running from September 15 to October 15 ("Hispanic Heritage Month") and during the celebration of the Iowa Latino Heritage Festival taking place this year on September 9-10 ("Iowa's Latino Heritage Festival"). Since both of these events take place within the fall semester various forms of documents would be available for students from on-campus observations and celebrations. Besides gathering this material, part of the course requirement could give students the opportunity to spend a day at the Iowa Latino Heritage Festival familiarizing themselves with their audience. While gathering material from on-campus activities, attending related events off-campus and/or collecting information from the library are ways in which design studio courses are currently taught, the new element qualitative research introduces is the way students would get to know the Latino audience by interviewing members of this audience and observing how they live in their actual settings.

The increase in the Latino population throughout the United States makes this project well suited for a design research course. According to the United States Census Bureau, the Latino population has grown from 35,305,818 in 2000 ("Hispanic or Latino by Type: 2000") to 40,459,196 in 2004 ("Hispanic or Latino Origin"). This increase of over five million people is not just occurring in major cities or in the states bordering Mexico; the spread is occurring throughout the entire country. As such, Iowa has seen a similar surge in the Latino population. Iowa's Latino population has more than double in the ten-year span from 1990 to 2000 increasing the Latino population from 32,647 in 1990 to 82,473 in 2000 (Petroski). Des Moines has experienced some of the largest statewide growth, where the Latino population is now 6.6% of the total population ("Des Moines, Iowa – Fact Sheet"). The recent and rapid
expansion of the Latino population has promoted many to take notice. Although the Latino population is still low in comparison to the Anglo-American population, the cultural values and heritage inherent of the Latino people are impacting national and local governments. In addition to this the Latino heritage is being recognized to a greater extent in marketing and advertising campaigns.

The Iowa Latino Heritage project is unique in several ways. One such aspect is that the project is a competition. Each year the festival holds a poster competition that is open to any student enrolled in an Iowa university or college. The winner of the completion gets to have their poster displayed and used for promotional material for the following year’s Latino Heritage Festival. In view of the fact that this is a competition it gives the student a taste of what it would be like to design for a real client. The other, more significant, aspect though is that it gets students to design for an audience they normally would not have designed for in their undergraduate studies. Considering that the demographics of the Iowa State graphic design student body is a majority Caucasian, introducing this project to the students gets students thinking about how to design for a culture different from their own. The importance of using research in this project is to avoid creating the obvious or superficial solution that can lead to stereotypes. Getting to know an audience should lead to an understanding of what meanings this culture attributes to the world around them, what customs they have and how their behavior is shaped around their interpretation of the world they live in. The whole point of the project is to introduce students to designing for another culture outside of their own. Teaching students to look beyond themselves moves away from the cliché and beyond the student’s knowledge of this particular culture. It opens the door to explore new ideas based on the knowledge gained from research.
Course Description

This course is an introduction into the traditions and methods of qualitative research and its application for graphic design problems. The objective is to conduct an actual qualitative research study which includes observations, interviews and document analysis, from which the knowledge derived, will lead to patterns that can be applied to the design problem.

Course Objectives

• Introduce the use of qualitative research into the design development process.
• Provide practice in using qualitative research methods.
• Learn and understand how to collect, analyze and interpret data.
• Use patterns derived from data analysis to guide the actual process of design.

Course Activities

Students will complete a number of exercises that introduce them to the qualitative research traditions and methods. All of these exercises will build upon each other, leading to the development and implementation of an actual qualitative research study used to enhance the development of the design.

Week 1: Introduction to qualitative research/IRB Testing
Week 2: Qualitative research traditions/Introduction to Latino Project
Week 3: Unobtrusive Measures
Week 4: Observations/Field notes
Week 5: Latino observations
Week 6: Interviews/Transcriptions
Week 7: Latino interviews
Week 8: Coding and analysis
Week 9: Interpretation

Week 10: Design brief/Begin design

Week 11: Design

Week 12: Design

Week 13: Design

Week 14: Design

Week 15: Finish system design/Turn in Project

What each week entails

The first week would be an introduction into the course and the discipline of qualitative research. There would be lectures and discussions comparing and contrasting the qualitative and quantitative research disciplines. Further discussion would focus on the value of these contrasting disciplines for solving complex graphic design problems. The undergraduate graphic designers would learn when the two approaches would be the most appropriate to use in the design development process. Since the intent of this course is teaching students the value of research and how research can be used as a tool for guiding the design process, the focus would shift to understanding the discipline of qualitative research. During this first week of instruction, students would also need to complete human subjects training through IRB (Institutional Review Board). Even though the project is part of an official university course, students should still have an understanding of this procedure for further research studies. In addition to this fact, the designs developed during this course would be submitted for completion, so it is best to have all of the bases covered.

Week two, would familiarize the student with the qualitative research traditions. A brief overview would be given for the traditions of interpretivism, phenomenology, grounded
theory, case study, ethnography, narrative analysis, critical research and postmodernism. However, a majority of the time would be spent understanding the traditions of ethnography, case study and grounded theory since those would be the traditions that would actually get instituted into the main project. Also, during this time a detailed project description of the Iowa Latino Heritage Festival would be given to each student.

The next several weeks would include learning about the various qualitative research methods. In addition to learning about each approach, the students would actually conduct several exercises to familiarize them with each approach, leading to using these methods in their main project. In week three, students would be presented with information on using unobtrusive measures in the research process. This is a process that most Iowa State graphic design students are familiar with. Unobtrusive measures include gathering information from the library that may offer insight into a given culture’s history. In addition to the documents that can be retrieved from the library, a student can use electronic means to gather additional documents, records or other histories. The unique aspect about using the Latino Heritage project is that following this third week of lecture the Iowa Latino Heritage Festival is hosted in Des Moines, IA. As part of the course requirement students would spend a day at the festival. Here students would be able to experience aspects of the Latino heritage firsthand. In addition, students would be assigned to collect material artifacts and physical traces that could be used to begin the process of understanding the Latino culture. Also during this timeframe, students would begin to conduct the unobtrusive measures research on their Latino heritage project.

The fourth week of this research course would get the students acquainted with gathering data through observations. The students would learn the difference between
observations without the audience knowing that they are being observed and participant observations. To gain a better understanding of what it means to be in both situations the students would conduct two observation exercises to learn this process. The first exercise would take place during class. The professor would take the students to a busy and well-populated part of campus (Memorial Union or in the College of Art & Design atrium during the lunch hour would be excellent locations for observing). In the location of choice, students would spend 20 minutes recording everything that took place in detailed field notes. The second exercise would be conducted by the student outside of the classroom environment. This second exercise would include 30 minutes of participant observations (meaning that the student has to take part in the process). Since the students would be conducting these observations outside of the classroom setting, students should be encouraged to conduct their observations in a surrounding that they are comfortable in, but also an area where there is adequate activity. While conducting these observations the students would be describing the physical environment, the participants in the surroundings and the interaction taking place between the participants and the student, in condensed field notes. After the student has completed these observations they should immediately begin writing about their reflections and expanding upon the condensed field notes. They would also be commenting on any physical traces or artifacts collected from the setting. The student would then submit a report of the participant observation exercise which would include both the condensed and expanded field notes, a written interpretation of the patterns observed during the observation and personal reflections of the process.

Having a thorough understanding of what it means to conduct observations, the fifth week of class would be devoted to the Latino Heritage project. This is the week that students
would be conducting their observations in a Latino setting. Considering that Ames has a fairly small Latino population, many of these observations would need to take place in Des Moines. Using the entire week to focus on the process of conducting observations, several fieldtrips could be arranged to help bus students to these locations. Latino Resources, Inc., the non-profit organization in charge of putting on the Iowa Latino Heritage Festival may be able to help professors get in contact with a variety of safe environments for students to observe in. The process for observing in these environments would be similar to the participant observation exercise. Students would be required to observe the location, various individuals within the environment and the activities that these individuals engage in. The observations should be for at least a one-hour time period. While in the field, students would be requested to keep condensed field notes, and immediately following the observation they would be required to type up expanded field notes. During the process of observing the student can choose to conduct participant observations or non-participant observations. In addition the student can move around the environment to view it from several vantage points. The student may collect any physical traces or material artifacts to aid in the development. Once the student has completed the observations they should then start to look for patterns emerging from the data. Again the students would be requested to turn in the condensed and expanded field notes, written interpretation of patterns obtained from the observations, trace material and artifacts and a paper on the student’s reflections.

Week six would focus on understanding the interview method. To learn this process the students would again conduct two exercises. The first exercise would be an in-class exercise. The students would be asked to bring in a tape or video recorder. In the given class period the students would be given a general topic. The students would start by developing
an interview guide for that topic. After spending several minutes developing the interview
guide, the students would be paired up and then take turns interviewing each other. This
would give the student their first taste of conducting qualitative research interviews. The
second exercise would again take place outside of the classroom environment. The student
would be asked to conduct an interview with a stranger. For example, the friend of a friend
could be an individual that the student could choose to interview. Interviewing a stranger
helps to get the student familiar and comfortable interviewing individuals they do not know.
The interview conducted outside of class should be at least 15 minutes long. Students would
develop an interview guide before conducting the actual interview. While interviewing the
stranger the student would need to record the proceedings for later use. Several important
points should be made about the interview process. Student should always inform the
participant that they are a student doing this interview to fill a requirement for a university
course, that their participation is completely voluntary and any additional contact information
is available at the request of the participant. Students must also realize that their interview
guide and questionnaire should not contain any sensitive questions that may pertain to
drug/alcohol abuse, sexual activity, criminal record or medical history. The participants, also,
should not be from groups with special protections, such as children, pregnant women,
mentally impaired, etc. After completing the process of actually conducting the interview the
student should then begin transcribing the tape and save the transcripts for another exercise at
a later date.

With the techniques of how to conduct observations and interviews under the
students’ belt, the next phase is to conduct an actual interview with a member of the Latino
community for the Latino Heritage project. Each student would be requested to conduct an
interview with a different member of the Latino culture, but they must have the individual approved by the professor before actually conducting the interview. Students could search for an individual within the Ames community or if they met a contact from the earlier Latino observation project they could contact that individual. Considering that the student has already collected a wealth of information from the gathering of unobtrusive material and the observations, the student may discover that their initial research question has changed or shifted into a new direction. This is considered normal for any qualitative research study and students should expect it to happen at least once in the process of their project. With the research question in mind the student should develop an interview guide and questionnaire. It is important that the interview guide not be too structured so that the participant has room to express him/herself. The student should be concerned with asking questions pertaining to the individual’s culture and leaving these questions open-end for further understanding. The interview itself should be at least 30 minutes long and be conduct in the participant’s natural setting, if at all possible. A second 30 minute interview should be conduct within 2-5 days after the first interview to ask any follow-up questions, etc. It is a good idea to go back and ask clarifying questions after the interviewer has had the opportunity to look over the data. Following the interview process students should begin transcription. Transcribing allows the student to get a more in-depth look at the data.

The eighth week would start to get to the core of the matter, actually coding and analyzing the data gathered. The exercise for teaching this procedure to the students would require them to use the transcripts from their exercise interview with a stranger. Using this data the student would learn to look for emerging patterns in the document and try to analyze these patterns. Learning how to code and analyze data is a long and difficult process, so the
students would need encouragement throughout this exercise. With the interview transcripts in hand the designer should start to look for recurring themes. This can include repeated comments about a particular topic or certain behavior(s) that were expressed when answering questions. Students will first use open coding, that is they would go line-by-line through the data looking for patterns to emerge. Once the patterns have started to become clear, the student will then begin the process of focused coding. Again the student would go line-by-line through the data, but this time only focusing on the patterns that emerged during the open coding process. The student should then construct a short paper to explain the patterns.

While the stranger interview is an exercise that will be completed mostly in-class, students will be expected to begin the process of coding and analyzing their interviews gathered from the Latino community.

Week nine will consist of making generalizations and broad interpretations of the Latino culture. Each student should have developed a thorough analysis from the unobtrusive material collected, the observations and the interviews. By analyzing this material, the student should start to see patterns emerging from the three sets of data, but to expand this view and get a better picture of the culture as a whole; the students would participate in an in-class exercise that codes all of their projects together. All of the students will bring in the analysis of their unobtrusive material, the analysis of the observations and the analysis from the interview. Each student will post this material on a wall in the classroom. From here the instructor would encourage the students to look for the patterns between their own personal research and the research of their classmates. Once one pattern is noted, the instructor would place a tack in that pattern. When a similar pattern is discovered in a different student's work the instructor would place another tack in that pattern and use string to connect the two. This
would go on until all connections have been made for that one particular behavior. Then all
the tacks would be removed and the class would look for the next pattern. The final outcome

Observation Field Notes

Interview Transcripts

Analysis of Patterns

FIGURE 1: shows the triangulation process that would be conducted as part of the in-class exercise to get students to begin to look for emerging patterns. The emerging patterns would help provide insight into the Latino culture in general, that could then be translated into a design.

should be a list of patterns that are common to the culture as a whole. The completion of this interpretation exercise that uses triangulation would leave each student with a list of behaviors, attitudes and experiences that are common to the Latino culture, therefore helping to explain this particular culture and the way in which they interpret their social world.

By week nine each student would take all of this newfound knowledge and write a design brief, therefore beginning the design process. The rest of the semester would comprise
of actually designing the system design, but even in the process of designing the students should continually refer to the design brief and the wall of interpretation to continually ground all their designs in their findings. The incorporation of real life experiences should make the solutions more meaningful to both the student and the audience. It is both an interactive and collaborative approach to the design development process.

**Final thoughts**

The sample course just outlined is only one example of how to incorporate a research component into the graphic design undergraduate curriculum. It is important to acknowledge that integrating such a component goes beyond this single course. Depending on the institution implementing such a component, the number of courses specifically dedicated to it may range from one to multiple courses. However, in many higher educational institutions it would be difficult to require multiple classes, because there is neither the time nor the resources to devote an extensive portion of the curriculum to courses dealing with research exclusively. Considering that the graphic design curriculum introduces the student to a broad range of topics, such as design theory, principles, history, technology and the plethora of graphic design specializations (including print design, web design and multimedia—just to name a few) it is understandable that a limited amount of time can be spent solely on one topic. Thus, the knowledge gained from this one course would be treated in the same way many of the topics covered in the design curriculum are; the student would be expected to take the knowledge gained and apply this knowledge to all design coursework throughout the rest of their education. For example, in the current curriculum, when a student learns the design principles and theories taught in their first studio courses of their sophomore year, the student is expected to use and apply the principles and theories learned to all studio
coursework following. Bearing this in mind, when a student has completed the research aspect of their education, using research would not end there. Students would be expected to use the qualitative research traditions and methods they have learned for solving problems in all ensuing studio courses.

A majority of this thesis has focused on teaching students to appreciate design research and then in turn teaching them how to use research tools to enhance the design development process. But if a design research course like the one presented here were to be implemented into undergraduate graphic design curriculum who would teach the professors the qualitative research methods so that they can in turn teach students? The students graduating from the new graphic design Ph.D. programs have the knowledge to teach qualitative research techniques, but the number of Ph.D. graduates is insufficient to cover the needs of academia. In addition to this, graphic design professors should not be expected to get a Ph.D. degree to maintain their teaching position (since the Ph.D. program is so new and few institutions offer the program). There are several options that professors can take to obtain knowledge in qualitative research. First, graphic design professors could seek out the social science departments within their institutions and either take some of the social science department’s classes in qualitative research or (if the social science professors are willing) they could meet one-on-one with the social science professors to learn these skills. An alternative approach is to offer workshops and conferences, gathering a multitude of graphic design professors together to teach them research skills. Hosting conferences has several advantages. One of the most important being that a large number of professors would be taught the same skills, and there would not be extreme differences and variations in the way it was taught. The other advantage is conducting conferences allows for those hosting the
event to seek out well-known and reputable qualitative researchers or even the graphic
designers, such as Richard Buchanan, Terrance Love or Ken Friedman who have a wealth of
qualitative research knowledge to share. These well-known and reputable researchers (both
social scientists and graphic designer alike), have more experience and can offer insights that
newly trained social scientists or graphic designer might not have yet.

After the professors have been educated about teaching qualitative research skills, and
having transferred this knowledge on to their students, the next groups to consider are the
corporations and clients hiring designers to work for them. As students venture into
professional practice a major issue they face is: How can one teach the client to see the value
in investing time and money into the research process? One of the ways to begin to introduce
the value of research is to reflect on some of the successes the design Ph.D. programs have
had in familiarizing clients and corporations with design research. The way these doctoral
programs have taught corporations and their clients the value of research is through the use
of corporate sponsorships. Enlisting corporations to join forces with Ph.D. students has lead
some professionals to acknowledge that research is essential to providing solutions that are
relevant to the audience it seeks to communicate with. In addition to the Steelcase example
briefly described in the introduction, the Ph.D. program at the Institute of Design (within the
Illinois Institute of Technology) has also developed a corporate sponsorship with Motorola.
The director of Motorola’s user experience research department, Joe Laviana, explains their
corporate sponsorship has given the company “access into the discovery of new processes
and tools that broaden [their] ability to produce new technologies and products based on an
understanding of user needs” (qtd. in McCarron 266). As a result, Motorola is using
knowledge from doctoral student research studies to understand the user’s experience, which
in turn helps them to develop better products and communicate more efficiently with their clients. From this example and the one referred to in the introduction, the research studies carried out by these doctoral students have benefited clients, corporations and the discipline of design in general on numerous occasions. But how does one transfer the understanding, use and acceptance of research found in the corporate sponsorship programs into work environments that are beyond those attached to academia? The best way is to acknowledge and publish the success stories that are currently taking place. As more corporations and clients hear of the successful design solutions that have been provided from design research, the more other clients will be intrigued by this idea and hopefully seek out students who have been taught this methodology.
APPENDIX A: EXAMPLE OF FIELD NOTES FROM OBSERVATIONS

FIELD NOTES: OBSERVATION AT LOCAL CAFÉ

Date: February 23, 2006  
Time: 12:20 PM - 12:50 PM  
Participants: Customers at the local café  
Location: Any town, USA

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<thead>
<tr>
<th>OBSERVATIONS</th>
<th>NOTES TO SELF</th>
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<tbody>
<tr>
<td>My attention was drawn to an elderly couple sitting a few tables in front of me.</td>
<td>This older couple, probably in their late 60s to early 70s did not appear to be pressed for time. Many of the other people that I saw come into the café quickly came in and just as quickly left. Side note, most those coming and going from the café were either young (teenagers) or middle aged (dress in business-casual attire).</td>
</tr>
<tr>
<td>Both of these individuals were well-dressed (wearing slacks instead of jeans or sweatpants). Both were drinking coffee.</td>
<td></td>
</tr>
<tr>
<td>Neither one was talking to the other. Occasionally the man look up at the café sign above the main cashier’s work station. The would also repeatedly sip his coffee slowly while the woman he was with just held her cup between her hands. The woman just continually stared out of the window in front of her, that viewed out into the city street.</td>
<td></td>
</tr>
<tr>
<td>Finally, the woman began talking to the man. As she spoke to him she tapped her cup against the table. The man rarely replied to her, he just slowly sipped his coffee.</td>
<td>The woman appeared to use the cup that she was holding to drive home her points in her stories. Her facial features were stern as she talked and she only animated her conversation with the cup.</td>
</tr>
</tbody>
</table>
APPENDIX B: OPEN CODING OF INTERVIEW TRANSCRIPTS

The following example illustrates how qualitative researchers use open coding to analyze data. The example below is based on a fictional account with fictional interview transcripts. The research topic poses the question: “What are your feelings about friendship?” The notes to the side of the transcripts exhibit emerging patterns and themes noted by the researcher, as the researcher goes line-by-line through the data.

Transcripts from interview

Interviewer: Explain how your childhood friendship define how you view friendships now.

Interviewee: When I was younger, I actually had a lack of friendships become of moving so much. I didn’t fit in, so I basically just had my own perspective of friendship, just because I knew that school age children are more into what’s popular. It’s not same as what is really important in a real friendship. It was pretty horrible when I was a kid cause I didn’t really have any friends. The only people that actually talked to me were ones trying to get homework answers, or stupid things like that. And, I didn’t get into the mainstream popular name brand clothes and all that, and that was what was important for school-aged kids at the time. These experiences has made me realize that life itself it what is important in friendship, and the thing that happen as opposed to what you are wearing and all of that stuff.
WORKS CITED


Lockwood, Tom, Tim Bachman, Mark Oldach and Bryce Rutter. “Perspectives on Communicating the Value of Design.” Design Management Journal. 12.3 (Summer 2001): 75-83


