Graphic designers are lucky. As the people who structure much of the world’s communications, we get to vicariously partake of as many fields of interest as we have clients. In a single day, a designer can talk about real estate with one client, cancer cures with another, and forklift trucks with a third. Imagine how tedious it must be for a dentist who has nothing to do all day but worry about teeth.

- Michael Bierut

The Merriam-Webster Online Dictionary defines graphic design as “the art or profession of using design elements (as typography and images) to convey information or create an effect” (citation needed). In order to effectively convey that information visually, many decisions need to be made in the design process. Critical thinking is the means by which designers observe, learn, analyze and make decisions (Tippey, 2008). Because the clientele and target audiences for which designers design is so vastly broad, today's communications are more global than ever before, and technology keeps changing every day, the job of a graphic designer has become increasingly challenging and important. This paper will address the importance of both critical and creative thinking in the graphic design process, ideas on how to strengthen these thinking skills in undergraduate design education, and ways to continue to foster these skills in professional design practice.

I. OVERVIEW OF THE PROCESS

The typical graphic design process, as it is taught in most graphic design schools (with possible slight modifications), includes the following steps:

1. Identify and understand the problem at hand
2. Gather information and research
3. Create a design brief and a proposal for the client
4. Conceptualize and Design: Initial rough sketches developed into comprehensive designs
5. Critique/Evaluate for best possible solution and revise as needed

Within these main steps are various sub-steps, and they all involve a great deal of thinking, both critical and creative. But how can designers improve their thinking so as to maximize their processes, and how can design instructors strengthen thinking skills in their design classrooms? Let us look at the ways in which critical thinking in particular is crucial to graphic design.

II. THE ROLE OF CRITICAL THINKING IN DESIGN

What do we mean when we refer to a "design problem"? A problem in regards to design is one a designer needs to find and solve. An example could be a new company who needs a logo, marketing collateral, and website—the design problem would be visually representing this company’s image, telling the company's story, in a way that is consistent in a variety of mediums and displays the company’s ideals and business objectives. Before a designer can create a visual solution, they have some research to do, and it all involves critical thinking.
Understand the client – communicate with them; probe and ask good questions about their business, their goals, and their target audience; determine detailed project specifications, listen carefully, explain clearly, use effective language to write proposals.

Understand the problem – analyze, research, investigate, gather background information relevant to the design problem, research the competition, observe, interpret. What is the message to be conveyed? (Bauman, 2004)

Understand the target audience – research, observe, investigate, interpret. Ask questions regarding what appeals to certain demographics of people and why… Be aware of withholding assumptions.

Generate ideas – look for inspirational material, look through different perspectives, experiment, try out many possibilities, withholding premature judgments during this phase (see also section III on Creative Thinking).

Collaborate with others – communicate with art directors, other designers, web programmers, printers, etc; listen and communicate clearly, problem solve, negotiate.

Make strategic decisions – planning and creating appropriate and relevant designs based on research and detailed project specifications; problem solve, evaluate, critique multiple design solutions, test them out, revise if needed.

These are just some of the ways in which designers use critical thinking in the design process. If critical thinking is such an important, if not crucial, aspect of design, why is it not a larger area of focus in undergraduate graphic design programs? Graphic design programs in the United States can vary greatly from school to school because there is no standardization of the profession. While there are programs whose philosophies are stronger in critical thinking, such as Herron School of Art and Design in Indiana, many others focus more on technical design skills or fine arts. The catch-22 about graphic design is that it is a visual art form, so those skills are indeed needed, but in order to effectively solve a design problem, design students need strong thinking skills as well. There is only enough time in a four year program to cover all grounds, which is another reason why these programs tend to vary in curricular. What is driving my personal research is exploring how these programs can embed and instill more critical and creative thinking in the curricula in addition to inspiring students who will become lifelong learners and carry these thinking skills with them.

As Tippey (2008) emphasized in his paper, Critical thinking is not discipline-specific:

**Teaching critical thinking to the beginning design student:**

“Critical thinking is the most interdisciplinary skill we could teach our students. As such, it does not uniquely belong to any one field; rather it is a property shared by all design professionals… Not only is critical thinking the most interdisciplinary design skill, it is also the most crucial. The act of designing is the natural offspring of the act of deciding. If we expect our students to achieve a level of sophistication in their design work, we must teach them to make good decisions during the design process. Good decision-making comes when a student is able to recognize and comprehend all the different facets of the situation at hand and to consider multiple possible solutions to determine which most appropriately addresses the situation.” (p. 1).

Tippey is an instructor at Ball State University, and in his paper he discusses how he embeds critical thinking in existing design courses “both overtly and subliminally in the curricula design and delivery for beginning design students” (p. 9). I believe it is important to carry the encouragement of these skills through a four-year curriculum, not only for beginning design students. Tippey also discusses the critical and creative as complimentary:

“This emphasis on good decision-making and critical thinking should in no way limit the essential task of designers to one of problem solving. It should work with and augment the creative, intuitive spirit of design, by lending it structure, logic and rigor. Creativity, ingenuity and intuition are traits typically inherent in one’s personality. As design educators our most effective method of teaching these traits to someone who does not possess them naturally is to overtly mold them in our own approach to design. It remains, therefore, that the primary role of the design educator is to engage the student in the more teachable traits of structure, rigor, insatiable questioning and the use of logic as a critical thinking skill.” (p. 1)

While I do not think that creativity is entirely inherent, and believe it can be encouraged and inspired in the right environment. Tippey’s statement is a great segue into the following section on the necessary balance of critical and creative thinking in design.

**III. THE YIN/YANG OF CRITICAL AND CREATIVE THINKING IN DESIGN**

Graphic design is known primarily as a creative field—Designers create designs. In any creative community, there must be a time for making and a time for thinking about what’s being made (Gianpietro, 2007). Without critical thinking, the creativity of graphic design could not be appropriately applied, and without creative thinking, novel ideas might become stagnant. Knowing when to be critical and when to be creative, and knowing that those skills complement each other, is a yin and yang in the design process.

During the design process, there is a creative phase of idea generation. This involves being inspired, brainstorming (individually or with a group), “opening wide,” “off-the-wall” thinking, harnessing a sense of play, experimenting with many different ideas and unexpected combinations, and withholding premature judgments. Peter Elbow (1998) refers to the process of writing: “in two stages— being first creative and then critical— you will get practice in the larger skill of moving back and forth between conflicting temperaments so they enhance each other instead of fighting each other,” and, “By saying that you should go through two stages when you write I don’t mean to suggest that every scrap of writing must go through two stages. For if you get yourself to write freely during the first stage you will warm up all your faculties and some passages will come out just right the first time. You will achieve a kind of focus and concentration so that these passages— sometimes even entire pieces— will cook perfectly in your head. They grow out of that magic which some excellent writers can call on at will: simultaneous creativity and critical thinking.” (p. 10). This speaks to the design process as well. The more you learn and seek knowledge, and the more you create, the more habitual it becomes to think and to generate new ideas.
Creativity in design is not only important for the sake of the designer’s portfolio and reputation, but the utmost important for the sake of the business or message the design project is for. In today’s global economy and overloaded information age, consumers have many choices. The more useful a service or product is, and the more creatively it is marketed, the more a consumer remembers it and is likely to buy that service or product. I believe that a major issue in education is that creativity is all too often approached by instructors as something that is either inherent or not in students. In retrospect of my own design education, I recall being taught some basic creative thinking techniques, such as brainstorming, in a Concept Development course, but beyond that class, instructors could not dedicate much time into really fostering creative thinking in each student because they had to focus on the lesson plans.

Would it not be very beneficial for design students to spend some time in their education strictly on critical and creative thinking skills? Perkins believes that creativity can be taught (Costa, 2001). Integrating special courses on thinking into design curricula would require a major shift in the philosophies of many existing design schools, but many design professionals and educators have been discussing the idea for some time now. Drawing from themes in the CCT program, the following section discusses some ways that I can personally envision thinking skills being strengthened in design education.

IV. ENHANCING THINKING IN DESIGN EDUCATION

The first and foremost approach to an enhancement of thinking within a graphic design program is for instructors to come together and agree to foster it in the classroom. Instructors should encourage thinking-in-practice (Resnick, 2001) and probe students to think deeply and communicate confidently. They should be models for critical and creative thinking. Students also need more time for their own reflection and metacognition. They can be taught all of the design techniques and thinking skills in the world, but without time to reflect on how they are using them and how they could improve upon their processes, they are less likely to grow and carry those skills with them. Instructors could allow some time for students to reflect by having them do think-pair-share groups, or write reflections. I personally do not think that art and design students are required to write as much as they should. Being able to speak, write, and communicate clearly is such an integral part of being a designer, and it certainly would not hurt to have students write more in both their design researching and in their reflecting.

As Drenttel and Hollander stated, “there is little in the culture of design education that places a premium on achieving a level of literacy which, in our view, goes hand-in-hand with designers being truly knowledgeable, and capable, and thereby empowered to participate, in an increasingly cross-disciplinary world” (Culture is not always popular, 2001). One way design curricula could encourage students to become knowledge-thirsty, self-directed learners while exposing them to interdisciplinary work is through problem-based and work-based learning projects. While some innovative schools, such as Herron School of Art and Design, are already doing this, I was personally disappointed in that regard in my own education. In the real world, graphic designers work with a variety of other professionals, such as web developers, photographers, film producers, marketing directors, interior designers, and many more. By giving students-collaborative projects in which they work with students from these various other department majors (within the same school), they will learn how to function and problem-solve in an interdisciplinary team atmosphere. With the instructor acting as facilitator instead of teacher, and if these projects are facilitated effectively by cooperative course instructors, the students should gain valuable skills in self-directed learning.

More real-world exposure would also be highly beneficial to design students. They should learn to take responsibility for their work, and as a direct result take responsibility for their learning. They should be exposed to things outside of the classroom so they can see that learning can happen everywhere, everyday. This idea could take affect by partnering with businesses, such as non-profits, so that students can get hands-on experience actively transferring classroom lessons to real-life problems. Reflection comes back into play here— instructors should lead students in metacognition during the semester and require them to write reflection papers on their experiences. The inclusion of a reflective framework in traditional graphic design pedagogy has the potential to provide a scaffold for the learner to engage with the design process. Reflection as a means to enhance learning in education has been well documented: (Dewey, 1933; Boud, Keogh & Walker, 1985; Erst, 1994; Lasskeysy, 1994; Hatten & Smith, 1995 in Ellmers, 2006). However, literature engaging specifically with graphic design pedagogy is limited (Ellmers, 2006).

In a recent online discussion in the AIGA (American Institute of Graphic Arts) Design Educators forum, graphic design educators talked about the issue of students having difficulties transferring concepts from one class to another. One of the reasons for this is that programs with adjunct faculty sometimes become compartmentalized—meaning that there is less ongoing communication between instructors on core competencies, and instructors have different teaching methods, so students are more likely to “separate” what they are learning. In addition to programs trying to increase faculty coordination and communication, individual instructors can try to probe their students during class to find out what they are learning from their other classes, ask them how they think they can best apply it to their projects, and encourage them to make connections.

The critique process is another aspect that could be improved in many design schools. Usually led by the instructor, students critique each other's work and give and receive feedback. The problem with this is that the feedback given often tends to be purely surface related, meaning that it refers to the visual elements and technical design details. The purely “visual” critique tends to undermine the lessons taught in critical theory classes, and a student's hard work and attempts at dealing with content, interpretation, information, and context are not rewarded (Mayer, 2004). The way that a critique is facilitated is very important to how much the students will benefit from it. Instructors should gently probe students to look for deeper meaning and to ask their peers better questions. In addition, students should learn how to speak clearly about their informed design work, so that the class discussions can have deeper meaning rather than just touch the surface. Accountable talk seriously responds to and further develops what others in the group have said (Resnick, 2001). This is a great standard for graphic design instructors to implement in critiques.

It is especially important for design students and professional designers alike to get inside the minds, so to speak, of their clients and target audiences. Learning how to become a more empathetic listener and insightful inquirer could benefit designers in trying to understand a new idea or demographic. I think it is crucial for design students to learn how to look for and through different perspectives, not only for a specific project, but everyday. They need to be aware of their own assumptions, and be exposed to and observe different cultures and norms. Instructors could guide activities (relevant to their design projects) in active and empathetic listening and methodological believing. Hollander, Kennial, and Cappy reported that the highest retention rates for adult learning activity lies in the learner teaching others, active participation, and discussion groups (Weber, 1999). These ways of learning can be facilitated in many creative-thinking ways, such as role-playing (also beneficial to students learning how to understand other perspectives), creative play, group brainstorming, even doing creative-person performances.

These are only some of the many ways critical and creative thinking could be enhanced in graphic design education. Thinking could be more deeply embedded into existing design courses, so that the...
standards are raised consistently throughout a curriculum. Schools could become more interdisciplinary as whole. Critical and creative thinking classes could also be offered separately, either as core classes or as electives. Ideas such as “Research for Design,” “Understanding your Audience,” and “Advanced Concept Development” are courses I wish I was offered in my undergraduate education.

The most important things for design educators to foster in a positively reinforcing way is reflection and motivation—motivating students extrinsically to foster their own intrinsic motivation—to teach them to look outside of the classroom for knowledge, and to become self-directed lifelong learners. Instructors should show their students intelligence-in-practice and instill the habits of persistently trying to understand things and make them function better (Resnick in Costa, 4). Those are priceless skills for designers and communicators to gain. Technology continues to rapidly change, and the world is increasingly flooded with information—students cannot possibly learn all they need to know within the confines of an undergraduate program, or graduate program for that matter.

V. CONTINUOUS THINKING IN PROFESSIONAL PRACTICES

A designer's most critical tool is her mind, not her pencil or computer. Professional designers should continue to be reflective and metacognitive in their design processes. They need to periodically check-in with themselves and ask questions like: What are the habits of mind I need to break, and what are some habits of mind that I could practice in order to become more effective in my design process? Do I sometimes overlook critical steps and overlook critical questions in my process? Could I be looking and thinking deeper and as a result generating more creative and effective design work?

But the everyday work environment of a designer is not always conducive to fostering deeper thinking and reflection. As a freelance designer who works in solitude often, I have recently realized that I need to step outside of my proverbial box, outside of my comfort zone, and reach out to create a community, a support system, where I can actively quench my thirst for lifelong learning. By doing this I am simultaneously making new professional connections. It is important for me to be inspired by outside sources, but then to reflect on my own design processes. Continuous metacognition, increased awareness, and reflection on the design process are ways in which professional designers can enhance their thinking, and ways in which I strive to become a deeper thinker.

As graphic design today is an interdisciplinary practice, one idea I am in the process of developing is that of a local organization for designers to convene and learn each other, designers of other specialties, design employees, educators, students, and professionals from any and all other fields. This organization would be a place for diversity, encouragement of group collaboration, creative play, and reflection in our design processes. It could function as a resource center, networking group, discussion group, and could host workshops and conferences. It could be a designer's local mecca for the exchange of ideas. This would benefit educators and students because they would be communicating with today's practicing professionals and design employers, and they could discover new ways to improve their teaching and learning. They could build relationships leading to internships and work-based learning partnerships with businesses.

It would benefit professional designers by serving as a place to network face-to-face, to exchange resources, give and receive feedback, and to have guest speakers from various other fields share their knowledge and information. My vision for this is still developing, and in this vision I see myself bringing elements of critical and creative thinking practices into my role as facilitator of this plan.

The designer-client communication is another area that could be enhanced in a critical way. It is the responsibility of both designers and clients to communicate, but it is especially up to the designer to foster that dialogue. As the layman may not be aware of the details in the design process, it is up to the designer to educate their client on the practice. Through this dialogue, the designer can also probe the client for ideas that might improve their process in the future. Reflection should also be practiced by the designer during and after the design process, as she might refine it each time.

CONCLUSION

As educators, one of the most important tools we can teach future designers is to be self-motivated lifelong learners and thinkers. As professionals, we often get stuck in habitual ruts, and it is crucial to our growth as thinkers to foster our own metacognition and create support systems we can reach out to for inspiration and information. It is also crucial to remember to take all information we receive with a grain of salt—to continue to seek clarification and form our own opinions and hypotheses. We have a big responsibility in seeking knowledge and communicating. Therefore, it is beneficial for us to be aware of and continuously work on our critical and creative thinking.

References


