Abstract
The work of the practicing graphic designer has become increasingly diverse, market driven and highly experimental. As the demands on designers as well as the tools for meeting those demands multiply, graphic design students are expected to master often obtuse digital disciplines while staying in touch with the fundamental premises informing their potential careers.

The pace of technology and the proliferation of mass-distributed authorship tools have changed the designer’s approach to the creative process. What changes to general design premises when virtually anyone can alter, customize, create and publish content? How do we approach new skill sets for idea generation, for powerful conceptualization, for creativity?

This paper explores how the creative process can shaken up, challenged, indeed disrupted, by demonstrating to students in this model of the interactive classroom they can ‘learn’ key digital skills often without realizing it, and they can actually enjoy the process while producing startling, compelling results and artifacts of their disrupted creative process.
Technological expertise is critical to the practice of graphic design. The graphic design profession was among the first fine arts and design disciplines to embrace the computer, and the use of digital media has grown, evolved, produced a continuum of its own. It is virtually impossible to practice graphic design today using only traditional hand processes, such as physical paste-up of mechanicals. Electronic output and pre-press services and the once-separate functions of graphic design and production have collapsed into a single effort now often under the control of the designer. The impact of technology has dramatically altered the work in design offices, expanding from print-based projects to include digital media, and most designers today handle a blend of print work and digitally-based work.

The placement of technology instruction within the Communication/Graphic Design curriculum is determined not only by programmatic orientation and infrastructure, but just as importantly by faculty philosophy about how and when to introduce technological issues. The focus of instruction at the School of Visual Arts at the University of North Texas has always been on results sufficient to support the efforts of an entry-level professional... indeed, the development of a graphic design professional able to make thoughtful, insightful choices relative to problem-solving as well as visual and theoretical issues. The BFA in Communication Design seeks as its primary objective (aside from teaching the basic principles of design, image making, color theory and typography) to help students learn to be effective conceptual thinkers and, most importantly, creative problem solvers in the disciplines of advertising and of graphic design.

Our undergraduate curriculum is a three-year sequence of coursework, requiring acceptance through an entry portfolio review, then sequentially introduces basic skill sets for communication design such as typography, rendering and creative methodologies for problem solving. At the end of the first year of the sequence, students must participate in a mid-point review, used to select those who have demonstrated an appropriate degree of proficiency necessary to continue in the program. From that review, students choose from a variety of classes featuring different design experiences in advertising, package design, and publication design, and ultimately, they are required to make a career choice of either graphic design or art direction. At the end of the undergraduate program (whether in art direction or graphic design) a graduate of the program should be able to successfully identify problems; develop strong, appropriate, conceptual strategies for specific target audiences; and implement, design and produce those concepts in a manner that effectively communicates to an intended audience.

Communication design students are taught to view technology as a means for achieving human-centered communication goals, but technology is a production tool and not a conceptual device,
and ours is not a program designed for the student who is merely interested in learning the most advanced technology. Indeed, throughout the undergraduate program, enrollees have opportunities to take one basic computer class, and can choose from a selection of advanced computer-based classes, such as web design and development and animation, to help complete an 18-hour minor, or to round out a selection of nine hours of advanced electives.

As the only digital media professor in the design division, and one of only two in the entire School of Visual Arts (with more than 2000 students enrolled, SOVA is one of the nation’s largest and most comprehensive visual arts programs in the country) I continually grapple with the challenge of teaching fundamentals as well as advanced techniques and concepts within the vast scope of interaction design. With an ever-growing variety of complex, detail-oriented programs, coupled with software and hardware issues and new releases, where does one even begin to address the needs of communication design students within such a broad, multidisciplinary area? I find myself constantly struggling to help many students past that ‘beginning’ state of learning, specifically the point in digitally-based instruction where the user no longer grapples with the software, but really ‘defines’ the use of the software… essentially, that wonderful, almost magical point of intuitive knowledge, when the user feels empowered to make conceptual, creative decisions in front of a computer screen without having to call up some abstract note from a recent lecture, or thumb through a manual or how-to book, when those decisions made with a mouse or a tablet simply feel ‘right’…essentially, when the computer screen or the desktop becomes an interactive, animated or motion-capable window.

Beginning core level technology classes at UNT are based on the constructs of objectivity and subjectivity, in ways very similar to other universities. For example, California State University, Northridge, bases their motion curriculum on an understanding of objectivity/subjectivity enabling them to teach the fundamentals of motion, while also creating a framework from which to examine their beliefs about art and design.2

Since our interactive experiences at UNT, at least on the formal level of the teaching lab, are very limited, it is imperative to quickly move the student from the constructs of objectivity/subjectivity to a deeper understanding of not just absolutes, but possibilities in their objective/subjective creative environment.

I have noticed in most of my classes, whether advanced techniques or beginning core-level classes, that while several students struggle and just manage to keep up with lectures and assignments, many are able to delve deeply into the technology, almost as if they were creating
their own ‘computer language,’ an intensely personalized way of using keystrokes and clicks to produce distinctive interactive art. The continual problem presented every semester is, essentially, I end up teaching two classes within one: a group of students working within the schedule set out for the semester, often struggling just to keep up, and another segment of students, outpacing everyone else with their own, often frenetic and ultimately advanced pace.

In the online article Graphic Design Family Values¹, published at the AIGA education forum website (www.aiga.org), author Paul J. Nini proposes that to effectively teach graphic design, educators must examine our own convictions, and determine which of those we wish to stress through our courses and the experiences we provide to our students.

As author Nini goes on to say, “The answer to the question ‘what are your individual core beliefs’ will, of course, differ for each of us. But there are some basic issues that we would all probably do well to consider in the contexts of our courses and programs. In a talk entitled “Legacy of a Sixties Credo” (presented at the 2004 AIGA FutureHistory design education conference), professor and author Ken Hiebert suggests the following issues for our consideration: 1) Deception vs. Veracity; 2) Posturing vs. Substance; 3) Congestion vs. Clarity; 4) Literalism vs. Abstraction; and 5) Exploitation vs. Accountability (among others).” Similar to Ken Garland’s well-known “First Things First” manifesto (originally published in the UK in 1964 and revised in 2000)³ expresses similar sentiments.”

But how do the core beliefs of the graphic designer impact the teaching of technology? How we disseminate, extend and encourage students to not only examine our own core beliefs, but challenge them to deconstruct, toss aside and inevitably build their own set of core beliefs about design greatly enhances their likelihood of becoming effective interactive designers, and well-rounded, complete graphic designers. To assume that interactive, digitally-based design requires less thought, experimentation, research and planning than more traditional venues of design is a mistake, and can diminish a designer’s global impact. And globalization is a reality, with all its posturing, repositioning and oftentimes distressing extremes.

Core beliefs as a designer also mark ‘what makes us human’ …what enables us to be the purveyors of messages on branding and identity, on what’s real and not so real, what’s important, what’s irrelevant, what’s hot and not so hot. That humanization of the design process also led me to Tom Peters’ book design³ which included an especially-compelling list of the attributes of leadership: Passion, Enthusiasms, Appetite for Life, Engagement, Great Causes & Determination to Make
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*a Damn Difference, Commitment to Excellence, Shared Adventures, Bizarre Failures, Growth Beyond Measure and an Insatiable Appetite for Change.*

To admit to the design student that, in spite of the best work ethic, the toughest rigor and the greatest goal setting, a designer can fail, can grow, can make a difference and can always get up after a fall, the design process becomes a real, living, breathing part of who they are, why they are as they are and who they will ultimately become.

Reinventing the class *Basic Web Design in Macromedia® Flash*

Interactive design is an unwieldy challenge for both student and professor. Once I presented these core beliefs to my students, as well as these attributes outlined by Tom Peters, I decided to restructure how to approach the subject matter, which, in this particular semester, was the basics of motion and interactivity in Macromedia® Flash. I wanted to focus students to make detailed inquiries into the broad field of interactive design and to reflect on their processes.

In their projects, students sketched windows of how they wanted the world to view them (and their work as designers). Still using pencils and markers, they designed paper diagrams of their global interface window, specifically for the web, ultimately refining their prototype design. During this time they were inundated with digital examples of Flash web design and interaction, while they also studied basic fundamentals of animation through assigned readings and demonstrations and lectures in class. Once the building of their interactive models commenced, they were immersed in the process of trial-and-error and learn by doing. Three primary rules of immersion emerged, and controlled to a great degree the outcomes of the projects for the students:

- Confront students with attainable design challenges.
- Maintain a high degree of rigor, but remain realistic. In a 16-week, six hours per week classroom environment, there is only so much that can realistically be accomplished. Communication design students receive a great deal of instruction in strategic, user-centered design methods, including translating research into design concepts. Using these methodologies learned from their other classes allowed this class a chance to focus on just interactivity, and tactical layout that affords the most access for users. We accepted as a group that their designs were already given the green light; their product strategies were already in place and the process had proceeded to the point of designing the actual interface. It was time to get down to details. It was time to build the interactive web site.
- Emphasize methods and tools for a broad range of problems within a design interface, while also giving them an approach which helps them work on details regardless of technology
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context. Direct their focus and their intent on the heart of the interface design, and assume they can go read about specific topics when necessary.

Their exposure to animation and interactivity on the internet was vast, because in great part they have grown up in a multi-layered media-based environment, so they knew ‘what it was supposed to look like, but did not yet know how to build it.’ I considered that a great asset to learning, and built their interactive models and tutorials around the fact that they would always be able to predict the outcomes. So, when I would explain, for example, how a compelling animation could be achieved in Flash© with a series of still photographs, a collage background of color and typography, they could build on one way of animating to expand to several ways… essentially, they discovered that there was more than one way to ‘get’ from point A to point B, and use that knowledge to expand into experimentation.

Basing their learned interactivity skills on the communication design foundation courses enabled me to build upon constructs that the students already knew, which reinforced important theoretical ideas while also broadening the students’ understanding of interaction design. It provided a framework that enabled them to visualize the possibilities for interactivity in their own work and helped to contextualize interactivity within a familiar context. And perhaps most importantly, it gave students the ability and the safety to experiment, to fail and to rebuild.

In the accompanying brief presentation, the following is illustrated by examples of students’ work:
1) the basic thumbnail; the concept of the window
2) the finished pencils of the window
3) the finished animations/websites.
Students featured include: Patrick Macomber, Aaron Eiland, Ashley Shroeder, Jason Greenwood, Cory Say, Ashley Hathaway, all graduating seniors in the BFA Communication Design undergraduate program at UNT.
