Teaching Design Concepts through Letterpress

A thesis submitted to the School of Visual Communication Design,
College of Communication and Information
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Lastly, thanks and love to my parents, who have always been very supportive of me, even if they weren’t sure quite what I was up to!
Chapter 1

Personal Experience

Born at the Right Time

I consider myself extremely fortunate to have received my undergraduate education at Kent State University in the early 1980s. Graphic Design, as the major was called then, was still a bit of a mysterious art form. As a child and teenager, I had a general awareness —through an insatiable appetite for baseball cards, record albums, and issues of *Mad Magazine* and its “grown-up” big brother *National Lampoon*—that there were careers called “illustrator,” “designer” and “art director.” I loved the artwork in these influential bits of ephemera so much that I cared to look for the credits. My art projects in junior high school were often pale imitations of the work of the illustrators I had seen in *Lampoon* or of my pop art hero, Andy Warhol.

But it wasn’t until high school that a career in graphic design seemed like a possibility. My high school art teacher, Dave Burris, was once a professional illustrator and saw in me some potential as a career artist. This gateway to the arts via educators was fairly common back when art programs were well-funded and programs in K-12 were staffed with professional arts educators. Many of my peers found out about design careers in the same way that I did.

With my art teacher’s encouragement and my parents’ practical European immigrant advice to learn something artistic that “I could actually make money doing” I enrolled at Kent State in the Fall of 1983 and began learning the technical secrets of the design trade. In addition to aesthetic training, students in the program were taught to draw and render accurately by hand. Production artists (or “keyliners,” as they were called, because they were tasked to create production boards for printing called “keylines”) were commonly the entry-level positions at design firms. Applicants without the hand skills to apprentice doing very accurate mechanical work rarely had the opportunity to advance in the trade to the design position.
So my practical education in graphic design advanced, equal parts seeing (the aesthetic) and doing (the mechanical), and they were hopelessly intertwined. If I wanted to show an elaborate idea for a concept, I had to draw it. There was no Photoshop. If I wanted to use a typeface not included in the very limited—and expensive—selection of transfer lettering available in Henry Ford’s full spectrum of Model T colors (black), I had to render the typeface and color it by hand. There was no Illustrator or InDesign. The most advanced technological tools available to students in this era were darkroom cameras and photocopy machines.

Before this descends into a soliloquy reminiscent of Gladys Knight in the song *The Way We Were*, I want to state plainly that I hated the tedious nature of much of this education. It was expensive, time-consuming, and limiting. But all of the drawing, color rendering, measuring, specifying type, etc., prepared me well for the design revolution to come—and for teaching students who would come to accept the computer as an indispensable part of their lives.

In the summer of 1985, I was encouraged by Professor John Buchanan to attend a workshop in the school of technology showcasing the latest Hewlett-Packard computer drafting device. This would be our futures in design, Professor Buchanan assured me. Who was I to doubt him? He owned the first compact disk player I had ever seen. And so we sat in the classroom, using digital drawing pads to make 8-bit images not much more sophisticated than the graphics on the Pong video game of my youth. But, we were interfacing with the computer! No keyboard, just hand to digital pen to flickering green graphics on screen. It was miraculous. And, when the instructor released the graphics to the dot matrix printer—in just short of ten minutes—the printer whirred, chunked and finally spit out a crude series of dots that was supposed to represent what I had struggled an hour to draw. It looked terrible, but at least I had the tactile satisfaction to tear away the perforated printer page edges. If this was the future, I wanted no part of it.

After receiving my BFA in graphic design in 1987, I began working in the design
department at a large public relations firm. I proved myself an accurate and speedy production artist, thanks to my excellent training in school, and soon advanced to a design position. I now had the advantage of many outside sources of typesetting, production and printing, but I still relied heavily on my undergraduate education to successfully navigate design projects and production tasks.

In 1989, the revolution arrived at my doorstep. My firm purchased its first computer for design, the Apple IIci. While the software for applications and typography were very limiting compared to what we could accomplish with traditional production methods—the hand was still superior to the limits of the machine. Clearly, much had progressed in the four years since I had last interfaced with a computer. Luckily, I was young enough to embrace the technology and interested enough to train myself in the software. Not everyone had this good fortune. Typesetters, printers and production houses went out of business if they chose the wrong time on the cost-benefit curve to join the revolution, or worse, if they chose to ignore it entirely. Designers stuck in the old world were quickly obsolete.

This revolution troubled me as an educator, as I had started teaching part-time at my alma mater in 1988. At that time, design at Kent State was still taught utilizing conventional hand skills, but the impact of digital technology could not be ignored for long. From my perspective, Kent State might have been a little late in addressing this issue.

Along with our Apple IIci, my firm had hired a recent graduate from another local university who was supposedly well-versed in “desktop publishing.” Our new hire was to be our guide through this wonderful new world. However, we found that in addition to not really knowing the latest software—which was virtually impossible due to the exponential growth in the industry at that time—she was a woefully inadequate designer. Her time at school was spent learning outdated software, out of context of any design intent. The seeing (aesthetic) and doing (mechanical) had become disconnected. In the rush to produce designers with relevant technological skills, her school had failed to
ensure she had an adequate design education.

Colleges and universities continue to wrestle with technology’s place in the curriculum. Obviously, there’s no separating design from its technological production tools. But, how and when to introduce the technological tools of the trade is not the focus of this thesis. Volumes have been written on this subject. I certainly do not pine for the days when I sat for hours at the drafting table with t-square and triangle. Many of the old tools should stay in the past. Technology has given me creative and lifestyle freedom that I never dreamed I could have in school.

But as a graduate student, it was the chance reintroduction to a relatively very old production method—letterpress printing—that fundamentally changed my way of thinking about design, decades after my undergraduate experience and years into my professional career.

**Well, How Did I Get Here?**

My first experience with letterpress printing came late in my undergraduate studies with Professor Eric May at Kent State University’s Type High Press. Even in the early 1980s, letterpress was an antiquated production method. It was time-consuming and potentially messy compared to the clean drafting table environment. But in those pre-computer days, it did allow for greater typeface selection, as well as ink color choices and the tactile paper experience. I could set type and print a fairly convincing, professional-looking project far better than rendering type by hand. The mixing of ink and choosing of paper stock brought a functional application to earlier color theory and painting classes. And, I could make numerous copies of my project mechanically (Figure 1).

I had fun that semester, but I didn’t really give it much thought after the class was over.

I began teaching part-time at Kent State in 1988, shortly after graduation. At that
time, the Intro to Typography Class I taught was still using conventional tools and methodologies: t-square, triangle, scaling type by hand, etc. Since I was a recent graduate, these practices all still made sense to me. It was at this time that I began my long road to a post-graduate degree.

Credit hours earned from teaching allowed me to take summer workshops and courses that piqued my interest, mostly in the area of letterpress printing and book arts. These intensive two-week immersion sessions were a great contrast to the highly corporate work I did in my professional life. Under the watchful eye of Professor May and with the guidance of some incredible visiting artists, my appreciation of letterpress as a separate art form grew. But while these workshops deepened my appreciation far beyond my undergraduate experience, I felt little connection between what I did in the print shop with what I did in the design workplace (Figure 2). I viewed the experience as a great distraction—as a weekend painter or, dare I say, even hobbyist might. The virus was in me, but would take years to manifest itself in any serious sense.

Fast forward to 2008. I returned to teaching at Kent State after the birth of our children, starting my own business and teaching at other institutions. I was now seriously pursuing my MFA degree and selecting courses. I decided to take the Experimental Type course with Professor Steve Timbrook. I hadn't touched letterpress equipment since 1992, but again, I looked forward to a relaxing diversion from other academics and client work. In class, most students' approach to the presses was rather rudimentary; they used magnets to hold type into place rather than locking up projects properly and used hand rollers to apply ink to the presses indirectly. For many students, it was a very casual diversion.

Professor Timbrook encouraged experimentation with printing objects that were not typically printed, which was possible when they were mounted to proper height.
I began playing with blocks of wood left over from our home addition project. This lead me to ask our carpenter friend to cut numerous dowel rods and basswood to exact .918” in length: the proper “type high” dimension for printing (Figure 3). These modular blocks led me to begin constructing my own modular wooden typeface designs, based loosely on the early work of the Emigre type foundry.

Established by Rudy VanderLans and Zuzana Licko, Emigre was an early adapter of digital design technology. Their eponymous magazine, founded in 1984, was experimental and influential. Copies were highly coveted by fellow undergraduates in the mid 1980s. Licko’s initial typeface designs, such as Oakland, Emperor and Universal faces, were originally designed in 1985 as bitmap fonts for use on the 72 dot per inch computer screen and dot matrix printer before high resolution outline fonts were available (Figure 4). “While other digital fonts imposed the coarse grid of screen displays and dot-matrix printers onto traditional typographic forms, Licko’s embraced the language of digital equipment” (Haley et al., 2012, p. 94). At first, I approached my experiments with this contrast between old and new materials as an ironic statement of sorts. I was restricting myself to the available wooden modular pieces as Licko had herself been restricted to the on/off nature of crude pixel technology. But suddenly, I was forced to consider the space between my modular blocks—the negative space—as true physical space that needed to be filled in order for my typefaces to take form. This was a revelation (Figure 5).

Of course, grid structure had been a staple of my Swiss graphic design education. I taught grid-related
projects. In professional print design, grids were essential for design, organization and production. I had drawn grids, manually and electronically, for almost 25 years. But for the first time, I was regarding negative space as a physical entity—because it had to be for my design to be stable enough to print on the letterpress equipment. The concept that the negative space was every bit as important as the positive space was drilled into me as a student, and I continued the drilling with my students. But the seeing, and holding, of physical negative space in my hands drove this principle home in a way that all the years of talking about grid structure and manipulating imaginary “whitespace” had not.

The switch was thrown. I dove into the drawers of tiny metal type that I had previously considered off-limits because we had been using the rickety magnetic system of locking up layouts. I learned the proper way to compose type. I used leading and word spacing. I filled the press bed up with wooden furniture—the negative building blocks of printing—to shore up increasingly complicated projects for printing. While I shared my new-found enthusiasm with classmates, it still seemed a singular experience. I continued my graduate studies, applying my new-found appreciation for the modular to my environmental graphic design classes and teaching of three-dimensional design classes.

In the summer of 2010, I was fortunate enough to help Ed Vermue, Oberlin College Special Collections and Preservation Librarian, establish a letterpress facility in the library at Oberlin. In addition to helping plan the space and equipment layout, I also assisted Mr. Vermue with Oberlin’s letterpress Winter Term project, a three-week workshop for students interested in book history, book arts, creative writing and literature. Few, if any, of our students had any art background; certainly, none had any graphic design education. As I pondered my approach to teaching novices letterpress in a relatively short period of time, I was tempted to leave out all of the fine details that had so recently re-energized me. Would creative writers care about the pica measurement system? Could students relate to the architectural precision required to produce serious, quality projects on Oberlin’s antique equipment? I saw this as a unique laboratory to test some of my
anecdotal theories. We discussed grid and page architecture. We learned the points and pica measurement system of the letterpress studio. We discussed ink and paper. In that short span of time, Oberlin students went from knowing next to nothing about design and layout—let alone letterpress equipment—to producing a 16-page book of hand-set poetry (Figure 6).

There was something to this experience that appealed to students who were accustomed to thinking in words alone and composing on laptop computers. My Oberlin students were not artists or designers, but I began to see in them the delight in what author Matthew Crawford (2009) referred to as the difference between “knowing that” and “knowing how.” In Shop Class as Soulcraft, he states:

The current educational regime is based on a certain view about what knowledge is important: “knowing that,” as opposed to “knowing how.” This corresponds roughly to universal knowledge versus the kind that comes from individual experience (p. 161).

These very well-educated liberal arts college students certainly became very engaged in task-specific learning. Winter Term participant and Oberlin student Eli Goldberg blogged:

We run around in aprons, carrying galley trays, hands perpetually covered in ink. Our arms ache from pulling levers, our legs are sore from pumping treadles. We can proofread paragraphs upside-down and backwards, and sort 8 point type in the mysterious order of the California Job Case. We know all too well what it means to “mind your p’s and q’s,” or to “get all out of sorts.” We rejoice at the smell of ink and the feel of a deep, clean impression on a sheet of fine paper. Bad typography makes us cringe (Goldberg, 2011).

If letterpress held this sort of appeal to writers and historians, I imagined that the discipline and modularity involved in letterpress printing would really appeal to graphic design students. In the summer of 2011, I was asked to teach a two-week intensive workshop to graduate and undergraduate visual communication design students at Kent State.
University. Prior to his retirement in 2012, Professor Timbrook was still teaching the Experimental Type course, so I was determined to give students a different experience—one that would complement their prior letterpress courses at Kent.

I got the oldest equipment, our cast iron platen presses, running smoothly and students learned the challenging art of locking typography and image securely into cast iron chases. These chases were then locked vertically on the press bed. All spaces, positive and negative, had to be filled precisely or hours of typesetting and layout work would spill onto the floor beneath the press. Students cursed as they slid thin (1/144 of an inch thick) shims of copper between blocks of 10 point type. It was time consuming and frustrating at times. But in many ways, the accuracy demanded from these tasks far exceeded any computer precision students had encountered in their design courses.

But here was the breakthrough I had been hoping for: even graduate-level students in the workshop told me that the experience in the letterpress lab had changed the way they thought about their design work. So my experience back in Professor Timbrook's class had not been singular. It could be replicated if the course was approached in the right way. Further, students relayed to me anecdotally that they wished the letterpress experience had come much earlier in their educational experience.

Graduate student and Kent State Instructor Jason Richburg reflected on his experience in the summer workshop: “Working in the letterpress lab demands that you slow down. Typesetting even the smallest amount of text becomes a deliberate process that makes you consider every decision. You must yield to the process” (Richburg, personal communication, February 19, 2013). The lessons of letterpress have impacted how Richburg communicates design and type concepts to his undergraduate students as well, as his comments in Chapter 5 attest.

For a program the size of Kent State's Visual Communication Design department, incorporating individual letterpress experience to freshmen curriculum might not be practical. Kent's program—and other programs of our size—have too many students, not
enough equipment, physical space, or time in student schedules. But here was the genesis of my thesis project. Could demonstration projects on letterpress equipment augment undergraduate design instruction? To find this out, I felt I needed to know more about today’s college freshmen.

Chapter 2

Student Survey

In order to understand if a tactile demonstration would be helpful in foundation design courses, I believe it is important to understand the background of current design students. In the past, it has been my experience that many incoming design students had an art background, but I suspected this may not be true of students in today’s or tomorrow’s design classes. With that in mind, I hoped to assess the learning styles of these students to discover the best way to address their needs in the context of providing a comprehensive design education. Do incoming design students consider themselves visual or tactile learners, and does this change over the duration of their instruction in a design program? This type of baseline study could be a valuable tool for curriculum planning.

It is a bit disingenuous to suggest that I don’t pretend to know a little about college freshmen, since my daughter Grace is a freshman student this year. Teaching at Kent State University, The University of Akron, and The Cleveland Institute of Art, I typically teach between 80 and 120 freshman students each year. As part of getting to know my classes, I have been informally surveying my classes concerning their experiences and expectations. I have done this as a “warm up act” in most of my undergraduate courses since I began teaching part time in 1988.

Much has been written about Generation X, the post-baby boom generation which was the first generation to have computers and digital technology impact their lives and education. I consider myself a part of this generation, as were the students in my early teaching career. But our student body now consists of Generation Y, or Millennial Generation students: those who were born between the mid 1980s and the early 2000s.
In *The Codex Project*, a paper presented at the First Annual Friends of St. Bride Conference, Central Saint Martin’s College of Art and Design, author Susanna Edwards (2004) described these students:

The newly defined “generation Y” designers are aiming to differentiate themselves from the previous generation, which was interested in the ambiguity of design and the possibility of deconstructing language. Ironically, the new generation is looking for an orthodoxy that can supply it with the rules for the practice of “good” design. It is characteristically unenamoured with technology, due to familiarity. This is partly a reaction to the excesses of graphic design in the eighties and nineties, which promised much to industry but delivered very little in reality (p. 4).

I was interested in some specifics concerning freshmen in design courses, so I developed a brief survey covering the students’ prior art experiences, prior computer experiences, and self-assessed learning styles. Harvard University Professor of Education Howard Gardner developed a list of seven intelligences to better describe students beyond traditional I.Q. scores. These included Visual/Spacial, Verbal/Linguistic, Logical/Mathematical, Musical/Rhythmic, Bodily/Kinesthetic, Interpersonal, and Intrapersonal Intelligences. These terms are explained below in the body of the survey.

Determining learning styles could prove important, since I believe that despite being surrounded by technology and on-screen interactions, a majority of students majoring in design still relate to their worlds in a tactile manner.

According to Mark K. Smith, Rank Research Fellow and Tutor at the YMCA George Williams College, London:

Howard Gardner’s theory of multiple intelligences has not been readily accepted within academic psychology. However, it has met with a strongly positive response from many educators. It has been embraced by a range of educational theorists and, significantly, applied by teachers and policymakers to the problems of schooling. A number of schools in North America have looked to structure curricula according to the intelligences, and to design classrooms and even whole schools to reflect the understandings that Howard Gardner develops. The theory can also be found in use within pre-school, higher, vocational and adult education initiatives (Smith, 2002, 2008).
The following survey—approved by Kent State University’s Institutional Review Board and
distributed using Qualtrics.com—was administered anonymously on-line in spring 2013
to 136 college freshmen (56 from Kent State University, 45 from The University of Akron
and 35 from the Cleveland Institute of Art) studying design. Forty-five of 136 surveys were
completed, for a 33 percent return rate. I felt that Gardner’s language to explain learning
styles was a bit too complex for an on-line student survey, so I adopted simplified text
from a publication called *Career Advancement Skills for the 21st Century* (Cuyahoga

**Student Survey Text**

The following is the content of the survey sent to students:

As part of my MFA thesis at Kent State University, I have developed this brief survey.
In this survey, I am interested in determining the types of art experiences you have
had in the past and what type of learning style best suits you, with the end goal of
suggesting types of learning experiences and demonstrations that would best suit
incoming design students. Thank you for participating.

**Art Background**

*What is your background/experience in art?*

(please check all that apply)

☐ Elementary School
☐ Junior High School
☐ High School
☐ Post-Secondary (some college experience, not counting your current college
   or university)
☐ Other (community art programs, summer programs)
☐ Self-taught
☐ None
Art Background (continued)

What is your background/experience specifically in graphic design/visual communications? (please check all that apply)
- Elementary School
- Junior High School
- High School
- Post-Secondary (some college experience)
- Other (community art programs, summer programs)
- Self-taught
- None

What would you describe as your particular artistic skills before entering college? (please check all that apply)
- Ability to draw using conventional hand tools, such as pencils and pens
- Ability to paint using conventional hand tools, such as brushes
- Three-dimensional art, such as sculpture
- Photography/film making/animation
- Computer graphics or CAD software
- None
- Other (please describe) __________________________________________________________________________

If you had computer software skills before entering college, what were they? (please check all that apply)
- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign
- Adobe Flash
- Microsoft Word/Powerpoint/Excel
- Other (please list) __________________________________________________________________________
Art Background (continued)

What made you interested in a career in art/design?
(please check all that apply)
☐ Teacher/Guidance counselor
☐ Family member/Friend
☐ Peer
☐ Not sure
☐ Other (please describe) ________________________________

Learning Styles

There are several schools of thought on how students learn. One generally accepted method divides the general population into three types of learners: Visual, Auditory and Tactile. Please read the descriptions below and check the description that you think best describes you.

☐ Visual Learners learn through seeing. Visual learners need to observe body language and pay attention to facial expressions to best understand what they are learning. They often learn faster when looking at videos, illustrations, charts and diagrams. Many visual learners prefer to take detailed notes to help them absorb information faster.

☐ Auditory Learners learn through listening. Auditory learners generally prefer lectures and group discussions. Some Auditory learners prefer to read printed material out loud to help them understand information.

☐ Tactile Learners learn through moving, doing and touching. They prefer to explore the environment around them and may become easily distracted during a lecture.
Another school of thought is the concept of “multiple intelligences,” developed by Harvard University Professor of Education Dr. Howard Gardner. He developed the theory because he thought the traditional idea of intelligence, based on I.Q. testing, was far too limited. He proposed seven different “intelligences” that would account for a broader range of potential. Please review the following seven descriptions and rank them in the order in which you believe they best describe you, with “1” being most like you and “7” being least like you.

___ Visual/Spatial Intelligence. This refers to your ability to understand and manipulate visual objects. People who excel at visual/spatial intelligence prefer to use mental images to remember information. You prefer to look at maps and charts, and enjoy viewing videos, and movies. You have an above average understanding of sense of direction.

___ Verbal/Linguistic Intelligence. This refers to your ability to use language and words. People who excel at verbal/linguistic intelligence have above average listening skills and are generally good public speakers. Your skills include: writing, teaching, remembering information, and debating.

___ Logical/Mathematical Intelligence. This refers to your ability to use reason, logic and numbers. People who excel at logical/mathematical intelligence enjoy logical analysis, number sequences, and mathematical sequences. You are good at analyzing information and prefer to experiment and ask questions. You excel at solving complex problems and organizing information. You may enjoy doing experiments and performing mathematical calculations.

___ Bodily/Kinesthetic Intelligence. This refers to your ability to control body movements and to skillfully handle objects. People who excel at body/kinesthetic intelligence use movement to express themselves. You have a good eye-hand coordination. You excel at remembering and processing information. You may enjoy sports, crafts and acting.

___ Musical/Rhythmic Intelligence. This refers to your ability to produce and appreciate music. People who excel at musical/rhythmic intelligence generally think in sounds and rhythms. You may enjoy singing, composing and playing musical instruments.
Learning Styles (continued)

Interpersonal Intelligence. This refers to your ability to understand and relate to others. People who excel at interpersonal intelligence try to look at things from the perspective of others. You generally have exceptional organizational skills and work well in a team environment using eye contact and body language to better communicate with others. You cooperate in a group environment and generally excel at building trust and resolving conflict.

Intrapersonal Intelligence. This refers to your ability to understand your inner feelings. You excel at identifying your own strengths and weaknesses. You generally have a good understanding of your role in relationship to other people.

What was your favorite toy, game, activity or pastime as a child?

What is your favorite toy, game, activity or pastime now?

What college or university are you attending (optional)?

Student Survey Summary Results

The complete survey results are presented in the appendix of this paper, but there are a few interesting highlights that support the idea of a tactile and visual approach to teaching design concepts.

Fewer than half the students surveyed reported having Elementary School art experiences during formative educational years, but 81% had some art instruction in High School. Forty-four percent reported being “self-taught” at some aspect of art instruction, which I suspect is primarily software-based on the answers to other questions in the survey, while 35% report being “self-taught” in graphic design/visual communications.

While a vast majority of students report having hand skills such as painting and drawing before coming to college, only 40% report having prior skills in computer design software. Not surprisingly, the software skill most frequently reported is familiarity with Microsoft Office products, but 63% of students also reported working in Adobe Photoshop.
Fifty-eight percent of students self-identified as being “Visual Learners,” 37% identified with the description of “Tactile Learners,” but only 2% identified themselves as “Auditory Learners.” These results are supported by finer breakdown from the multiple intelligences question. Students were asked to rank themselves according to the seven intelligences as identified by Harvard professor Dr. Howard Gardner. A majority of respondents, 94%, ranked themselves as having “visual/spacial” intelligence as either their first, second, third or fourth strength. Typical favorite childhood toys/pastimes included building blocks, Legos, drawing, crafts and video games.

Only half of all students reported having similar strengths in “verbal/linguistic” intelligence. Seventy-one percent ranked their “kinesthetic” intelligence as either their first, second, third or fourth strength.

In general, these results seem to indicate that first-year design students are still learning many of their skills by hand prior to college and relate well to being shown demonstrations rather than listening to lectures. So are colleges and universities responding to the learning needs of today’s design students?

Chapter 3

Educational Institution Survey

As part of my research, I was curious to know if design schools continue to teach traditional hand skills when computer instruction is introduced, and most importantly, if letterpress instruction plays any role in their undergraduate design education. In spring 2013, I sent the following survey—approved by Kent State University’s Institutional Review Board and distributed using Qualtrics.com—to 279 contacts from the National Association of Schools of Art and Design (NASAD) list, typically the heads of design or art departments. I also sent the survey to 18 letterpress instructors from the United States and the United Kingdom. Ninety-six of 298 surveys were returned, for a 32 percent return rate.
Educational Institution Survey Text

The following is the content of the survey sent to colleges and universities:

As part of my MFA thesis at Kent State University, I have developed this brief survey. My thesis focuses specifically on using letterpress facilities in undergraduate design instruction and tactile learning experiences, so I am interested in determining how much emphasis, if any, your program places on traditional hand skills instruction, as well as how you might already utilize letterpress facilities in your program. Thank you for participating.

Undergraduate Instruction

What types of traditional hand skills are taught/utilized in your design/visual communication program? (please check all that apply)

☐ Life drawing  
☐ Painting  
☐ Thumbnail sketching  
☐ Story-boarding by hand  
☐ Illustration using traditional (non-electronic) media  
☐ Mechanical drawing/drafting, using t-square, triangle and other tools  
☐ None  
☐ Other (please describe) ________________________________

When do you introduce software instruction into the curriculum? (please check all that apply)

☐ Freshman year  
☐ Sophomore year  
☐ Junior year  
☐ Senior year

How do you introduce software skills? (please check all that apply)

☐ As a specific course teaching software program(s)  
☐ Software skills are introduced as part of specific design classes or assignments  
☐ Other (please describe) ________________________________
Letterpress Facilities

Do you have letterpress facilities?
(if no, see question below)
☐ Yes
☐ No

Is your institution considering adding to current facilities or establishing new letterpress facilities? (if no, your portion of the survey is complete)
☐ Yes
☐ No

Is your institution considering removing letterpress facilities?
☐ Yes
☐ No

Where are your letterpress facilities located?
☐ Print making department
☐ Part of design/visual communications department

How long has letterpress instruction been a part of your curriculum?
☐ 0-5 years
☐ 6-10 years
☐ 11-20 years
☐ 20+ years
☐ Don't know

How do you use your letterpress facilities? (please check all that apply)
☐ Underclass design instruction
☐ Upperclass design instruction
☐ Graduate instruction
☐ Part of print making facilities
☐ Special projects
☐ Self sustaining/for-profit printing
☐ Creative writing/self-publishing
☐ Other (please list) ________________________________
Learning Styles (continued)

If you use letterpress for design instruction, what specifically are your goals? (please check all that apply)

☐ Historical demonstration
☐ Understanding typographic terms
☐ Understanding grid structure and page construction
☐ Understanding Pica and point system of measurement
☐ Color theory
☐ Other (please describe) ________________________________

Your college or university (optional)?

Educational Institution Survey Summary Results

As with the student survey, the complete college and university survey results are presented in the appendix of this paper, but there are some responses worth noting. A large majority of schools continue to instruct students in traditional hand skills, with 67% teaching life drawing, 57% requiring painting and 85% utilizing thumbnail sketching. Surprisingly, 18% of programs still offer instruction in mechanical drawing/drafting using traditional drafting tools such as t-squares and triangles. At the same time, 62% introduce some form of software instruction in the freshman year. Most (83%) introduce software skills as part of a project or assignment, rather than software specific class instruction.

Seventy-three percent of respondents reported having letterpress facilities, or access to letterpress equipment, with 52% indicating planning to add more equipment or establish a new facility if one does not already exist. Only five percent report considering removing present letterpress equipment. Forty-six percent house their letterpress equipment in the print making department, while 40% have letterpress as part of their visual communication design department. Interestingly, 30% of schools have had their equipment for 20 years or more, but 39% of respondents reported that their letterpress facilities have been added in just the last five years. Considering that letterpress is a dead—
and increasingly expensive technology—this statistic was surprising.

Fifty-eight percent of schools use letterpress in instruction of underclass (freshmen/sophomore) design students, in topics such as historical demonstration (76%), understanding typographic terms (80%), understanding grid structure and page construction (80%), and the points/pica measurement system (61%).

In addition to continued instruction in traditional hand skills, letterpress appears to be alive and well in higher education. But is this part of the current letterpress “craze” that is sweeping the design profession or something deeper?

Chapter 4
The Rebirth of Letterpress

Letterpress printing has been enjoying a huge wave of resurgent popularity, greatly driving up the prices of presses, equipment and typography. Relief printing using movable pieces of type and image blocks has been a commercially viable means of printing since Johannes Gutenberg perfected the technique in 15th century Europe. But as the use of offset lithography increased throughout the 20th century, most letterpress printing became less efficient and economically viable.

While in the hands of some craftsmen and printmakers the technology never faded, letterpress faced its greatest threat of extinction at the same time that digital technology began impacting the printing and typesetting industries and educational institutions in the late 1980s. Commercially, small boutique printers and traditional letterpress shops, such as Hatch Show Print in Nashville, barely held on. Schools which once held on to the equipment for vocational training purposes now viewed the old technology as a space-hogging liability. “How many computers would fit into the space of this old press area?” was the question for both commercial printers and universities. At this time, it was difficult to get rid of equipment and metal type for scrap metal value. Digital technology was embraced both aesthetically and economically.
Oddly, a rebirth of interest in the letterpress aesthetic is credited to an unexpected savior. “Largely displaced by cheaper and more versatile offset printing in the second half of the 20th century, letterpress was (re-)popularised in the 1990s by mainstream home improvement guru Martha Stewart, of all people, who espoused its beauty for wedding invitations” (Klanten & Hellige, 2011, p. 3).

Since the 1990s there has been a significant rise in the number of individuals and small companies starting up shop and producing letterpress materials—predominantly in the United States and United Kingdom, but also in Australia, Canada, and many other countries around the world. Collectively, these individuals and studios have revived the fortunes of letterpress printing. Presses that would once have been destined for scrap were, and still are, being bought and restored by letterpress enthusiasts, and once again the craft of letterpress has become the printing method of choice. It is a discipline that is loved for its history and tradition and valued for the time, care, and effort the printing method requires (Rivers, 2010, p. 10).

What is behind all of the enthusiasm? Certainly there is the aesthetic appeal. Today, letterpress appears frequently in popular culture—from the genuine article, such as Hatch Show Print’s work for the group Widespread Panic (Figure 7) to the less-authentic Dodge Ram print and media advertising campaign (Figure 8), which attempts to link letterpress to masculine truck ownership. I wonder how many targeted viewers of this national campaign understand the visual reference?

Letterpress greeting cards are available in Target stores, while a company called Lifestyle Crafts sells an entire line of “home letterpress” accessories that allows crafters to “create stylish handmade projects like cards, invitations, gifts, stationery and more, all from your own home.”
While I chuckle at the novice fetttishizing of letterpress, I do believe that it plays a critical role in attracting some students to the print studio. I also believe that many students who are attracted to letterpress are ready to unplug from technology and constant connectivity and lose themselves in the slow processes of another century. Still others are attracted to the creative freedom allowed by the process. Author and designer David Jury (2004) references this in his book, *Letterpress, The Allure of the Handmade*:

While design is a matter of imposing order on things, the intended results can often be achieved without denying spontaneity and improvisation. Letterpress appears to me to be a natural way to work: order permeated by individuality. It was once the case that high regulated workmanship was admired because it was rare and difficult to produce, but the situation has now been reversed, so design and/or print has individuality—that carries the recognizable characteristics of its maker—is admired, valued, and even anticipated with pleasure (p. 24).

Whatever the reason, it seems that students desire the authentic experience of letterpress—and that can be exploited for a different kind of learning experience.

**Chapter 5**

**Letterpress Demonstration Projects**

As previously stated, it may be impossible—and even inappropriate—to give every undergraduate student in a large design program early letterpress training. But perhaps it would be possible to exploit students' natural curiosity by developing a series of design projects on the letterpress to help augment their understanding of basic design concepts.

My survey of students showed that they consider themselves both visual and tactile learners. It has long been understood that “the hand is involved in human learning … (it) is not merely a metaphor or icon for humanness, but often the real-life focal point—the lever or launching pad—of a successful and genuinely fulfilling life” (Wilson, 1998, p. 277). German educator Friedrich Frobel, inventor of the original kindergarten experience in the 1830s, recognized the value of learning through manipulation of physical objects. He developed a series of learning tools, which he called “gifts.” These were simple
blocks, wooden shapes, balls, sticks, etc. “Froebel made *objective work*, or object teaching, central to his pedagogy, recognizing that the handling of material things aided children in the development of their creative faculties and provided varied and complex experiences through simple means” (Brosterman, 1997, p. 34).

So much of what we teach in the classroom is through discussion and lecture. Would physical interaction with materials enhance the learning experience? Looking at 6 point type on screen is one experience; holding a piece of 6 point type in your hand is something else entirely. Talking about color interaction is fine, but seeing it happen in front of you would be better.

There are many basic concepts beyond point, line and plane that undergraduates need to understand. From my experience in the classroom, I have chosen four basic concepts—subtractive color, typographic scale, point and Pica measurement, and grid structure—as the subjects of my demonstrations. The challenges of teaching these concepts are discussed in the individual project discussions to follow.

I chose these four as a manageable number, but I could easily see this methodology being expanded to any number of other projects to explain other design principles and concepts. Students would observe these demonstrations in the letterpress studio and have a chance to see and touch the materials in person. Concepts discussed in lecture and practiced on software could be shown in this different physical reality.

For the sake of visual unity, I wanted all four of my demonstrations to relate and form a larger whole when completed. In my sketches, I knew that I wanted a somewhat modular feel to relate the four projects, so I chose to render the individual letters in the word TYPE as both a tribute to Type High Press and as a sensible four-letter word relating to my subject matter. I also wanted to include letter forms that contained the four basic mark-making styles utilized in Roman letter forms: horizontal, vertical, diagonal and curvilinear. In all capital letters, the word TYPE was the perfect choice.
The Letter “T”: A Lesson in Subtractive Color

From personal observation—and confirmed by the survey—many freshman students have familiarity with the Adobe Photoshop program prior to college. Students use the program to process, retouch and edit photos, as well as create images for on-line postings. The default color setting for Photoshop is RGB (red, green, blue). On-screen technologies—including televisions, digital cameras, cell phones and computer monitors—utilize RGB technology to create the appearance of a full spectrum of color by combining red, green and blue light in varying degrees.

RGB is an additive color technology; that is, when all of the three colors are present in full, they create the appearance of white light (Figure 9). Conversely, when none of the RGB colors are present it creates the appearance of black. Digital cameras, cell phone cameras and scanners also capture images in the default RGB color mode. So whether they appreciate it or not, students are accustomed to using the additive color mixing method whenever they create digital images.

Conversely, print production requires images be converted to the CMYK (cyan, magenta, yellow and key—or black) color model, also called 4-color process. Ink jet, and laser color printers use a combination of CMYK inks and toners. Conventional offset lithography, used to print the majority of books, magazines and publications, also uses 4-color process printing. CMYK is a subtractive color model; that is, when all cyan, magenta and yellow are present, a murky dark brown is the result (Figure 10). Black is added into the color rotation to create a true black hue and add details in shadow areas. When none of the colors are present, the absence of these colors equates to white.
Most of the students in my survey have experience with conventional drawing and painting tools and therefore are familiar with mixing paints and pigments to achieve colors using the subtractive color method. Some students are initially confused by the CMYK color model, because rather than literally mixing hues together like paint pigments, each of the four colors are applied by a separate ink fountain and optically “mix” through a series of small halftone dots, which are typically only visible under magnification (Figure 11).

The overall appearance of color in a specific area of a printed surface is determined by location, size, and number of halftone dots of each of the CMYK colors in that area. An area that appears to be green would reveal yellow and cyan halftone dots under magnification, as an area that appears to be orange would be created with yellow and magenta dots. Because printing inks and toner pigments are transparent, some of the optical mixing occurs through overprinting one color and size of dot over another. Adding black halftone dots to the mix gives the appearance of shade, while smaller overall dot sizes—revealing more of the white paper surface—gives the appearance of tint. While the 4-color printing process cannot recreate the entire visible spectrum accurately.

Short of taking a field trip to a commercial offset printer, it is difficult to illustrate this concept to students so I developed an in-person demonstration on the letterpress. I experimented with a series of copper engraved plates of an architectural subject (Figure 12) before I had decided on the overall TYPE theme.

I knew that I needed geometric shapes in precise patterns to demonstrate the optical color mixing involved in CMYK printing. In 2011, I experimented with creating digital typefaces from modular Lego™ construction tiles. These
type experiments (*Figure 13*) were a further exploration of the work I had done using wooden dowel rods and dimensional stock. But the advantages of Lego blocks were numerous: they were smooth rather than textured; they were much smaller than the smallest wood blocks—allowing greater flexibility in design; they were available in a variety of shapes and dimensions; and they could be locked into precise configurations using the Lego base plates (*Figure 13*).

I purchased stocks of square and circular Lego tiles in two sizes, along with four base plates measuring 15” square. I carefully mounted the base plates to 3/4” medium density fiberboard, which when the tiles were attached brought them up to an almost perfect type high. Rather than attaching and detaching tiles to a single plate, which is time consuming and confusing, each of the colors in my CMYK demonstration have their own separate plate. This made the production process simpler and more importantly, made for a better visual demonstration.

Based on the size of the press I used for my demonstration projects and the size of the paper stock, I determined that each letter should be about 8” wide by 14” tall (or 48 Picas by 84 Picas—more on that in the letter “P” demonstration). Basing the size of the letter forms on even inches, and therefore even Picas, would allow me to have modular construction using existing spacing material from the lab. Frustratingly, the Lego tiles did not measure to exact inches. This was not an issue, however, since the tiles locked into their own base plates and their dimensions appeared close enough.

To create the complex random structure of the “T,”
I created a scale layout in Adobe Illustrator using the Lego base plate dimensions as the grid (Figure 15). The traditional printing order of colors in offset printing is yellow first, followed by magenta, cyan and black. I chose to make the larger Lego square tile yellow and the larger circle tile magenta, while the smaller square tile printed cyan and the smaller circle tile printed black. I used a combination of circle and square tiles in different sizes to allow overlapping of color fields, replicating the look of halftone dots, but at a much larger scale.

I experimented with my Illustrator layout until I achieved the look of random complexity that I was seeking. I then reflected the layout files as they would have to appear as a printing plate and used these files to guide the placement of the Lego tiles on their respective plates.

I began by printing the yellow plate. It was very critical that each color print in registration to one another to create the proper overlapping effect. For both print quality and aesthetic reasons, I chose to use Stonehenge, a paper stock that has a deckle edge at the top and bottom of the sheet. This made registering four colors to one another difficult, since the variable deckle slightly changed the alignment of the sheet to the gripper edge of the press on every sheet. The gripper aligns the stock on the vertical edge and holds it in place as the sheet is printed. My solution was to carefully place Post-it notes on both corners of the top of the sheet, using a grid board for proper perpendicular alignment. I positioned the Post-its just beyond the deckle, creating level edge corners for the gripper (Figure 16). This proved to work extremely well.

I used oil-based inks on this demonstration project, as process color inks were not available in the rubber-based inks we typically use in Type High Press. The oil-based inks dried much more quickly and were slightly less transparent than rubber-based inks.

The printing process went fairly smoothly (Figure 17). I printed a series of progressive
proofs on white Stonehenge paper stock, which meant printing a series of yellow-only, magenta-only, and cyan-only sheets. These were then printed in combinations of yellow and magenta-only, yellow and cyan-only, and magenta and cyan-only. Another series was printed with yellow, magenta and cyan-only, and then finally all four colors in combination.

The concept of subtractive color mixing was made very clear as the progressive proofs were printed. I feel this project could prove very useful in demonstrating CMYK process printing to students.

**The Letter “Y”: A Lesson in Comparative Type Size and Weight**

One thing I find frustrating when teaching students is their resistance to printing out developmental stages of projects prior to handing in final solutions. Whether this is due to the cost of printing, lack of access to printers, poor planning, laziness—or some combination of all of the above—the results are typically disastrous. Clearly, selecting the proper type size, style and weight is problematic to inexperienced designers.

When teaching type classes, I often draw a bell curve on the board with peaks on the far left and right, and a deep valley in the center (*Figure 18*).
The x-axis represents time from freshman year through a career in design, while the y-axis represents increasing point size. I explain that when students first start designing, larger point sizes like 14 point seem reasonable choices—the peak on the far left size. Freshmen come to class with a word-processing mentality, where reports in high school were often requested to be presented in 12 point Times Roman or the like. It is a hard habit to shake, and only after repeated rebukes will the new designer make more sensible choices for the scale of the project.

The pendulum swings toward the other extreme as the student progresses to their senior year. Their tastes become “hyper-sophisticated,” to the degree that 4 point type, in a thin stroke weight, reversed to white out of a solid color field seems very reasonable. This is represented by the low valley of the curve.

Upon graduation, the point size curve begins to rise again, as art directors and account executives urge the point size ever larger to “accommodate aging readers,” until we arrive back at 14 point type. I encourage students to enjoy the tasteful middle ground of point sizes while they can!

Of course, this tongue-in-cheek graph is designed to elicit occasional laughs from students, but it underscores an important point—students are poor judges of typographic scale and size. This is exacerbated by the ability of students to constantly change the zoom enlargement on their computer screens. Unless they work on large screen desktop computers, they cannot even view the average 8.5" by 11" page layout all at once at 100% enlargement on their monitors. Very small type can be made to look very large and vice versa. The relationships are in flux until the student hits the print command.

Before computers, students had a fairly good sense of 10 point Garamond’s true size when they had tried to render it by hand. It was difficult and tedious work. But the hand/eye coordination and length of time on task required to hand draw small type left an impression. Would it be valuable to propose going back to hand rendering type when we have an accurate way to set type digitally? Certainly not. But there is great value to having
a very tiny piece of physical type in your hand to not only see, but to feel, its scale. So, I developed my typographic size/scale/value demonstration project: the letter “Y” from the word “type.”

It is somewhat ironic that I chose the letter “Y” for this demonstration, because I frequently found myself asking “why” I even tried to create a project of this minute complexity. My original plan was to hand-set cold type; that is, metal type with letter forms on individual matrices, or blocks. I was going to set a given text from left to right, in ascending point size from smallest to largest as the text approached the bottom of the letter form. There were more than a few problems with that plan.

Because I had allocated the capital letter “Y” for this project, there was a vast counter shape between the two branches, or arms of the “Y.” This made the plan for setting running text seem pointless. It would be difficult, if not impossible, to read a line in very small point size from the arm on the left to the arm on the right. And, since running text would involve a somewhat random set of letters, it would be harder for students to compare one line to the next, which was part of the stated goal of the demonstration. I settled on having one letter of the alphabet only on each line, with lowercase a’s on the first line, followed by uppercase A’s and so on.

I had no idea how difficult it was going to be to find enough cold type letters, or “sorts” as they are called, to complete the Y shape. I quickly found myself to be “out of sorts”—yes, that is the origin of the expression—with our limited collection of type fonts and sizes at Kent State University’s Type High Press. I looked to others in the regional letterpress community, but could not locate a complete enough family of type fonts for my experiment.

I became acquainted with Madison Press in Lakewood, Ohio, on my search for cold type. While they had a fairly large selection of cold type fonts, their hot metal typesetting capabilities intrigued me. I had recently viewed a documentary about the Linotype hot metal typesetting machine, but had never witnessed one in action.
Fortunately, Frank Underwood at Madison Press was more than willing to entertain my curiosity and spend a few hours explaining the history of his equipment and providing a demonstration of how it all worked.

Linotype is a method of setting type in singular lines of type rather than character by character. From the time of Johannes Gutenberg’s perfection of movable type in the middle 1400s through the late 1800s, typesetting was basically done in the same fashion—type was set letter by letter, by hand. This method was not only tedious—it also involved a great deal of resources. Printers and typesetters had to invest in many drawers, or “fonts,” of precast, “cold” metal letter forms. Printers were limited to how many words, lines of type and pages they could produce daily not only by the time it took to set these pages by hand, but also by the amount of physical typographic fonts they owned. The difficulty of their daily task became apparent in the demonstration project I was attempting.

While there were many inventors trying to perfect a more automated method of typesetting, Ottmar Merganthler finally succeeded in 1885 with a machine called the Linotype. “Although it compromised some of the refinements in type design, the Linotype was an almost immediate success in the U.S.” (Jury, 2004. p. 51). As an operator typed copy on a keyboard, the Linotype machine gravity-dropped brass matrices containing the concave shape for each letter into the proper order from a magazine containing all of the characters of the selected font. Once the line of type was composed, the brass matrices slid as a unit into the mold box and were injected by a molten mixture of lead, antimony, and tin (Figure 19). Once cast, the matrices returned to the magazine to be reused.

This method of “hot metal” typecasting allowed typesetters and printers to not only work much more quickly than the hand-set methodology, but also gave them the ability to cast multiple lines of the same text for distribution to multiple printing presses, and the ability to recycle mistakes and
previously printed texts by melting them down and starting over—a great material savings.

Linotype seemed the answer to my problem. I could have Madison Press cast my lines of type, and I could have greater flexibility in selecting type size, weight and style—critical to this demonstration project. I described my intentions to Mr. Underwood and he agreed to help me.

In order to give the typesetter an accurate image of what I needed, and to double check if what I was proposing would even work, I created a mock layout in Adobe Illustrator. I set up my layout in Illustrator, printed it out and marked it up with my instructions in pencil (Figure 20), in the same manner as I had been taught as an undergraduate.

While Linotype did allow me greater flexibility in selecting type for my project, it still had restrictions that did not initially occur to me. Since Linotype was invented to cast a single line of text at a time, it had a limited number of letter matrices in each magazine of fonts, based on their commonness in the English language. My demonstration project involved all 26 letters of the alphabet in both upper and lowercase letters, repeated to create individual lines to compose an uppercase letter “Y.” In smaller point sizes, this meant up to 50 of the same letter per line. Even with common letters such as vowels, the Linotype magazine did not contain enough matrices to cast a solid line of 50 of the same letter. So Madison Press cast numerous lines containing each letter, which I then had to piece together (Figure 21).
Initially, I thought this would be a relatively simple task, despite the warning and tutorial I received from Frank at Madison Press. He had specialized saws to cut the relatively soft metal into accurate pieces. I did a test using my hand-held Dremel saw. The saw blade cut through the soft metal easily, but even at its lowest speed the friction caused by the rotation of the circular blade melted the metal, dulling the blade quickly. But, I was undeterred. How difficult could fitting all of this type together be?

I soon found out. I spent an entire day, from 8:30 a.m. to 9 p.m., sitting at a desk in Type High, carefully sawing, piecing together and cursing the tedious nature of the task. The Dremel tool made quick work of cutting through the Linotype slugs—too quick. I found myself accidentally cutting into and damaging the soft faces of the letters. Compounding this frustration was the complexity of my layout. The lines started at the base of the “Y” at 14 point and worked upward in descending size, branching into the two arms of the “Y” and ending at 6 point type.

I had to develop a methodology of construction that would allow me to bring pressure from both the horizontal and vertical directions to properly lock up the layout on press. I decided to start at the base of the stem of the “Y.” On both sides of the stem, I filled the negative space with large metal “furniture,” or spacing. Each line was separated vertically by a one-point thin piece of leading, allowing me to fill out lines with appropriate metal, brass, or copper spacing components to bring the lines flush to one another.

This method worked very well until the stem branched out to the diagonal arms of the “Y.” Not only did I have to trim the type to make a convincing angle, I had to figure out a way to secure this diagonal slope both horizontally and vertically. I trimmed out a series of lead spacing strips to the full width of the top of the “Y” and used them to construct the remainder of the letter. Each line of type needed to be properly centered and filled out with metal, brass or copper spacers. This proved
to be the most challenging aspect of the project. I initially “rough set” the type and printed it quickly (Figure 20) to determine where lines needed to be cut. I then noticed that the areas I had cut away were still printing because they were too close to being type high. My frustration reached a peak, and I had to stop working for the day.

On the next day, I took a different approach to cutting and fitting the type. Instead of using the power tool, I resorted to a series of hand files (Figure 23). Although this method proved much more time-consuming, it allowed me greater ability to file down small areas with precision and accuracy. Finally, I was able to assemble the lines and properly prepare them for the press. I still had to insert all of the spacing material very carefully to ensure that there would be no movement in even the smallest lines of type.

The final prints were made on tan Stonehenge stock using warm red ink. This demonstration project taught me the most, from Linotype typesetting to the intense precision required to create the layout. Not only would this project be invaluable as a demonstration of type size, weight and style to undergraduate design students, but it would also be a great way to show precision lockup techniques to advanced letterpress students (Figure 24).

The Letter “P”: A Lesson in the Points and Pica Measurement System

Two-thirds of all freshman in my survey rated “Logical/Mathematical” intelligence as the intelligence model that least described them, while only five percent rated “Visual/Spacial” intelligence as least descriptive. Intuitively, this finding does not surprise me. Students find art and art-related fields because they are visual people. But as I frequently say in the classroom, if students are trying to find refuge from math in graphic design, they have
come to the wrong place. Every design project requires intense attention to detail, whether it is digital, print or environmental. Mistakes in measurement can create problems ranging from slightly annoying to very costly.

In my undergraduate experience, we were given precise project dimensions and asked to render projects to these specifications. If it was not clear to you when working in class that your measurements were off with a quick glance to your neighbor’s drafting board, it was painfully obvious when projects were hung on the board for critique that you had suffered a catastrophic measurement failure. Typically, your measurement tools were only demarcated in inches, so it was usually was an inability to understand fractional inches, or a basic inability to follow directions that caused the failure. Since in over 20 years I have not been able to devise an exercise to compel students to read and follow directions more carefully, I have not attempted an exercise to address this issue. But I have developed an exercise that I believe might help students measure with more accuracy and appreciate some of the terms we presently use when describing type and type-related subjects.

Not to sound like a troglodyte (again), but I think some of the issues of measurement can be traced back to the misuse of computer technology. Recalling that 63% of students reported experience with Photoshop software, it is easy to see where some of the confusion arises. Photoshop is a raster, image-based program that defaults to the pixels per inch measurement system. Image quality, or resolution, is based on the number of pixels captured and displayed per inch. Pixels per inch is a variable measurement. Images can be created at lower resolution—72 ppi (pixels per inch) is the standard for screen-based imagery—or higher for print resolution. Without getting into a Photoshop lecture, changes to an image’s resolution (in pixels) may have an effect on the image’s overall size (in inches) depending on how the changes are made. This relationship is taught and reviewed in basic computer courses, but this variability can confuse students. As with all Adobe products, Photoshop’s measurement system can be changed from the default pixels setting to inches, metric, points or percentage.
Conversely, when students are instructed to use print software programs, such as Adobe InDesign or Illustrator, they are first asked to create a document in inches, quite typically to a standard paper size for printers—more on that in the section entitled “The Letter ‘E’: A Lesson in Grid Structure.” The default measurement setting for InDesign is inches, and the default page size is U.S. Letter, or 8.5" by 11.” Students can more easily grasp the tangible paper size, since it is something they have considered since working with computers and printers. Since InDesign is a vector-based, rather than raster-based program, there is no variability in resolution and therefore no variability in size once the size of the document is set. That is, if it is properly set up as a print-based document.

InDesign and Illustrator give students an even broader range of page measurements than Photoshop: inches, metric, points, pixels, ciceros (early French type measurement system, based on the French inch and used in continental Europe, but no longer in wide use), agates (used in some newspaper publishing to indicate column depth—an odd 14 units to an inch), and pixels for use in designing Web-related documents. For practical purposes, students are instructed to measure in inches, although an increasing number of international students in my classes find it simpler to set up the English measurement page size and then quickly convert their page rulers to the more familiar metric system measurement.

Most students prefer to stay in the inches unit of measurement, which causes confusion and challenges to the inexperienced designer. On the average laptop computer, a standard letter-sized document viewed at 100% enlargement reveals page rulers that have delineation at every eighth of an inch, but measurement labels only at every full inch: 1, 2, 3, etc. At 150% magnification, delineation occurs at every 1/16 of an inch, but labeling only occurs at full and half inches. At 300%, delineation occurs at every 1/32 of an inch, with labeling at full, half and quarter inches. Delineation and labeling increased in
this fashion until the maximum of 4000% view size is reached (Figure 25), with delineation shown at every 1/128 of an inch, but labeling topping out at sixteenth inches. Students are forced to work at intense magnification to see detailed measurement, which intensifies the problem of type scale discussed in my second demonstration project.

As designers become more familiar with page layout programs, they discover tools and functions that aid in accurate measurement. Grids can be established, and ruler guides can be pulled on to the design page. These tools are controlled by dialogue boxes, which can only show decimal equivalents of fractional inches. One-fourth inch becomes 0.25; 1/8” becomes 0.125; 1/16” becomes 0.0625” and so on. What was somewhat familiar (fractional inches) becomes confusing (decimal inches). To avoid complex math, students frequently default to page layouts involving very simple alignment system, or worse, no alignment system at all.

I suggest that undergraduate students be introduced to the points and Pica system of measurement, which allows them to subdivide inches into 72 equal segments without the use of fractions or decimals. Further, points and Picas have historical significance and relate to terms still used today when describing typographic attributes. The Pica was established in the late 1800s as a standardized unit of typographic measurement, replacing the cicero. While the actual dimension of an American Pica is 6.0225 per inch, the digital Pica rounds this to 6 Picas per inch. Each Pica is then subdivided into 12 segments called points, yielding 72 points per inch. Since point and Pica measurement is a duodecimal (12-based) system, it does relate to measuring in inches and feet.

To help students visualize the point and Pica system, I developed a demonstration project using wooden furniture and reglet, which is cut to specific pica dimensions and used to fill in the negative space of a locked up layout on press. Furniture refers to the larger wooden filler blocks, while reglet refers to thin strips of wood in either one Pica or six point thicknesses. The letter “P” seemed natural for this project, since the uppercase letter “P” is used to abbreviate Pica, while the lowercase “p” signifies point. Creating a
letter form with curvilinear shape using block forms was a challenge, but the rounded shoulder of the curved portion of the “P” also allowed me to use a stepped approach that emphasized the modular nature of the Pica reglet strips (Figure 26).

Furniture and reglet is spacing material, so it is less than type high, measuring only .625.” Type high is .91875.” Because I had to use the same spacing material to fill the negative space that wasn’t the body of the letter “P,” I had to devise a way to raise up just the furniture and reglet that I used to compose the letter “P” to type high, while leaving the rest of the material less than type high. After some experimentation, I decided to construct a basswood base (Figure 27) for my letter “P” that would raise up the furniture and reglet to proper height. I had to take great care to ensure that the basswood did not extend beyond the boundaries of the raised furniture and reglet, because this would cause problems in locking up the form. Once all of the basswood was trimmed and fitted into place, I was able to fit the components of the letter “P” into place.

In this demonstration, it was important to show the modular nature of furniture, which is available in widths of 2, 3, 4, 5, 6, 8 and 10 Picas and is trimmed to lengths of 10, 15, 20, 30, 40, 50 and 60 Picas. Reglet is available in widths of one Pica or one-half Pica (6 points) and is trimmed at one Pica intervals from 10 Picas to 60 Picas. I used furniture for all vertical elements of the “P” and reglet for the horizontal elements. Since I wanted students to understand the relationship of Picas to inches, I used furniture that matched up to whole inch lengths as much as possible.

Once I established the overall height and width to match the dimension of the previously printed letter “T,” I selected the appropriate lengths and widths of furniture and
reglet to create the shape of the “P,” taking care to interlock the furniture for stability. The negative spaces around the letter had to be filled in with spacing material as well, so I chose to use metal furniture to contrast the wooden letter form (Figure 28).

Once the form was locked in place, printing went fairly smoothly. Final prints were made on gray Stonehenge stock using brown rubber-based ink (Figure 29). Rubber-based inks are slower drying and provided better overall ink coverage. I had to make height adjustments to some of the pieces of reglet where the old wood had shrunk from its original dimensions.

I feel this demonstration project makes clear the relationship between the Pica and inch measurements, in addition to showing the modular of letterpress spacing material, which is explored further in the next demonstration project.

The Letter “E”: A Lesson in the Grid System

By my experience, I find that many freshmen design students have difficulty appreciating the need to use grid structures in even their simplest layouts. While assignments in introductory type and design classes stress the need to establish grids as an organizational device, and software provides the tools to place elements with extreme accuracy, students still struggle to use grids effectively.

Prior to the digital age, students were forced to consider the grid with each new sheet of paper pulled from the pad. They had to tape the sheet to a drafting board, establish specific page edges—an essential basic consideration in grid construction—and draw pencil lines to subdivide the page and indicate alignments. Type and image elements were
painstakingly cut and pasted into place using a t-square, triangle, and pencil lines for guidance. Everything was given prior thought in the time of pasted-up layouts, because correcting mistakes was difficult and time-consuming. Grid structure was given careful consideration, and students often built the page from the inside out; that is, they established the grid structure necessary for the type of project, and let the page size be dictated by the internal grid structure and number of columns established. Students were forced to make accurate measurements and calculations to divide their layout into modular units.

Today, students approach page layout and grid structure from a different perspective. The first decision to be made when opening a new digital file is page size. For many projects, students hesitate choosing anything other than a standard page size that prints easily from their printer. So the page becomes a fixed dimension far before consideration of page functionality. Rather than being an inside-out decision, page structure is determined from the outside in. Establishing a grid becomes an afterthought and the software does all of the calculations for the student, based on number of column and grid alignments specified. This structure can be very fluid, with students applying changes to the construction of the page grid frequently.

I often introduce the necessity of the grid by comparing graphic design to the architecture of the surrounding classroom. We talk about structural considerations such as standardized building material sizes and building codes, functional considerations such as user convenience and accessibility, and aesthetic considerations, such as rhythm—and of course, point, line and plane. I tell students that page structure is as critical as building structure to hold everything together, and while not all structural elements are seen or expressed, they are critical to the success of the finished project.

A quick review of the design shelf of the local bookstore—if you can still find one—or on-line booksellers reveals that books about the grid are second only in number to books about logo design. I own many of these books and use them frequently in class. While the books have volumes of great information and examples of creating and using
effective grids, I am surprised that I have not seen a discussion or illustration in these texts about the physical necessity of grids in historical printing.

As I mentioned in the introductory section of this thesis, the connection of grid structure to printing was not always obvious to me either. Much of my initial experience in letterpress involved finding the simplest way to get projects printed, often involving magnets and (shudder) tape. I did not appreciate why we even stored the numerous cabinets filled with furniture and reglet spacing. It was not until my graduate course in letterpress that I came to understand that good printing required good planning, and good planning required as much thought about the spaces around the type and design elements as the elements themselves.

As an instructor, I began integrating grid demonstrations into my own letterpress classes, using the same wooden dowel blocks I had used in early type experiments. The dowel rods and blocks had fractional inch measurements which made them easy to integrate with Pica spacing material. I chose to demonstrate with the wooden blocks because they were abstract in nature, but my impulse as a designer always lead me to find a purpose or create an illustration with these demonstrations (Figure 30).

These demonstrations were very popular with my seniors and graduate students. Student and fellow graduate student Jason Richburg brings the experience into his classroom:

From a technical aspect, understanding how to build a lock-up and measure in picas has helped me communicate to students how important it is to really consider the structure of the page when setting type digitally. Just because there are no physical restrictions on where things can move in InDesign doesn't mean that they should ignore the process of measuring space and controlling point size. I've learned to communicate the fine point that setting type isn't hard; but that it is hard to set type correctly; and that one must continue to make adjustments until this is achieved (Jason Richburg, email communication, April 20, 2013).
I believe that envisioning the space around design does help students at all levels of experience understand grid structure on a more physical level, so I tailored a grid demonstration specific to my thesis using the capital letter “E.” The structure of the “E” allowed me to completely enclose the strokes of the letter in modular furniture. I chose to use a combination of square and round wooden dowel rods to reflect back to the shapes found in my “T” project, bookending “TYPE” with similar forms at each end of the word.

Since I had created several similar demonstrations in the past, the major challenge was to construct a letter form to the same size and proportions of the previous letters. As with my other grid projects, I built the letter “E” from the inside out; that is, I first constructed the letter and then filled out the space to square in the press bed (Figure 31).

I chose to print the letter “E” in gold metallic ink on black Stonehenge paper stock to emphasize the negative space around the letterform. Through experience, I found that only metallic inks are opaque enough to print effectively on dark paper stock. The project ran the smoothest of all of my four demonstrations, again probably due to my experience with similar experiments (Figure 32).

While the small detail figures throughout Chapter 5 document the process of the four demonstration projects, I felt it important to present each project in larger format images. Although the project demonstrations are more about showing the process than achieving a finished object, I did take great care in creating final finished prints of each. The following five pages show enlarged image plates of each finished demonstration project. The original size of each print is 15” wide by 22.5” deep.
Figure 33: Letter "T" progressive proof, yellow

Figure 34: Letter "T" progressive proof, magenta

Figure 35: Letter "T" progressive proof, cyan

Figure 36: Letter "T" progressive proof, black
Figure 37: Letter "T" progressive proof, yellow and magenta

Figure 38: Letter "T" progressive proof, yellow and cyan

Figure 39: Letter "T" progressive proof, magenta and cyan

Figure 40: Letter "T" progressive proof, yellow, magenta and cyan
Figure 41: Letter “T” final
Figure 42: Letter “Y” final
Figure 43: Letter “P” final
Figure 44: Letter “E” final
Chapter 6

Conclusion

Lessons Learned

When I initially proposed my thesis in fall 2010, I was not sure what format my project would take. I knew from personal experience that letterpress had changed the way I thought about my own work, but I had not taught enough undergraduate letterpress courses to put my ideas into practice and see if other students had the same reaction.

I also had an ulterior motive in deciding on a letterpress-based thesis: I wanted to make sure that I at least started a dialogue concerning our particular facilities—Type High Press—at Kent State University. For some time, I had been worried that our square footage per student would begin to provide a challenge for the department. How could we continue to justify all of this space for a class that only seniors and graduate students could use?

These two motivations dovetailed wonderfully when I decided that my thesis would be a series of design demonstration projects for undergraduates. While not everyone can use the letterpress lab, certainly most students could benefit from seeing things explained outside of their usual digital settings. While this thesis does not propose specific design curriculum, I hope that faculty might consider utilizing some of these demonstrations in their classes. It is also my hope that another graduate student might be inspired by this thesis and perhaps test the efficacy of this or a similar approach.

I found the information discovered in both the student and educational institution surveys very interesting. I would propose that a survey of all incoming freshman visual communication design students at Kent State University be developed to help us better understand the students of today and anticipate the learning needs of the students of tomorrow. I would have loved to see survey results over the past decades in the face of changing technologies. I am sure that the pace of technology will continue to change the type of students attracted to our major and the skills they bring with them to college.

I have also learned much about myself and my craft in the course of this project.
There are so many technical and historical details concerning this craft that completely surprised me, and I am sure that there are volumes yet to discover about letterpress, despite being considered a “dead” technology. But most importantly, I believe I have come to a deeper understanding of why letterpress holds such great appeal to me. It gives me a chance to play the role of player/manager.

In the earlier days of baseball, teams were often skippered by a player/manager who not only coached the team, but also was a position player on the field. I relish the opportunity to create work along with my students, challenging myself to create more elaborate projects while at the same time challenging students to do better work themselves. This arrangement allows me to continue learning and pushing the boundaries of what I thought was possible and motivating my students to do the same.

Letterpress appeals to my visual, tactile and even olfactory senses. When practiced properly, it can be an enormous mechanical and mathematical puzzle to vex the mind. The physicality of the problem-solving process is immensely satisfying, and the challenge of leaving behind my everyday conventional digital tools and work only with what exists in the type lab is exhilarating. But most gratifying of all is when this enthusiasm spills over on a student and letterpress changes his way of thinking as well. Such was the case with fellow graduate student and Type High student Andrew Schwanbeck in fall 2012. Because his experience was prototypical of what I wished happen to every one of my students, I asked Andy to reflect on his experience. Although it may be unconventional to do so, I decided to include his response to me in its entirety to help close my thesis. Thanks Andy—I could not have said it better myself.

*How I came to love letterpress printing*

If you told me a year ago, that I’d own two platen presses and 80+ drawers of lead type, I would have laughed at you. Letterpress printing was a distant activity that I knew nothing about and honestly had just a little interest in. Thankfully, this course at Kent stuck with me and showed me the excitement that comes with this slower, more tedious, and often times utterly frustrating process.

I remember the first lockup I’d ever made. It was a small business card, four
lines of type, nothing overly complicated. I remember pulling each piece of type out, carefully placing it into a composing stick and thinking, this is supposed to be fun? This is what everyone is so excited about? With a headache fueled by the musty smell of old wood drawers and the distant scent of ink and turpentine, I left the Type High classroom thinking, maybe this isn't for me.

My second design only made matters worse. This time I proudly came into classroom with a complex design for a voting poster, completely worked out on my computer. I had carefully crafted the composition and chosen all the right typefaces. As I began to try and replicate what I had made on the computer, I realized that I had once again missed the point. Trying to compose a layout based on something digital is not only nearly impossible it's also no fun at all. Defeated twice.

With two failed attempts at printing, something had to change. With much encouragement, my next few projects were simpler, and left the computer behind. I began to see this printing process as a way to make something that I could not make with traditional digital publishing. I started experimenting with larger wooden typefaces, different printing materials, getting more creative with design ideas and most importantly, working with what was in the studio. This shift in my thinking, created that 'aha' moment that I was looking for and my attitude towards letterpress printing quickly changed.

I began to find beauty in the slowness of the process, the materials, the no command Z mentality, and the natural imperfections that come with 100+ year old equipment. Slowing down and thinking about design in a more tangible sense started to feel more natural, and I accepted the fact that printing takes time, and adjusting mechanical components on the press to get the perfect print became one more step in my new design process.

What's most exciting is that here I can do something that no one else can make with a computer, I love that feeling. If you're good, you can print something that will ‘wow’ someone else, stop them in their tracks and make them think, how did they make that? I find that infinitely exciting.

There's no doubt the future of design lies in the computer, but for me, placing type with my hands, making composition decisions with physical pieces of material and learning to design with these physical elements, has brought a new light to my work. Words like leading and kerning actually have meaning to me now. On the computer, changing the leading in a paragraph takes a few simple
mouse clicks and not much thinking. In my studio, changing the leading means
crossing the room, pulling strips of lead from a rack and carefully readjusting
the materials in my lock up … no easy feat. It's a time consuming process and
forces me to think about each decision carefully and apply a deeper methodology
to my work.

This may sound like a stretch, but for me, letterpress printing has made
graphic design fun again. Now that I have my own shop, if I spend a day a week
getting grime and grease and ink on my hands, working a press with my own
physical power, touching each letter and carefully composing just the right layout,
I feel a sense of gratification that has long since been lost for me in my digital
work (Andrew Schwanbeck, email communication, April 19, 2013).

I warn students at the beginning of each letterpress class that they are about to
embark on a journey to another century that might just leave them thinking “good
riddance” to all of this old junk, but more than likely will leave them searching for
letterpress facilities that they can use for the rest of their lives.

If these demonstration projects can bring just a little sense of surprise and wonder
into undergraduate type and design classes, this thesis will have been worth the effort.
Appendix

Survey Statistics

Student Survey

1. What is your background/experience in art?
(please check all that apply)
Elementary School .................................................................47%
Junior High School .................................................................60%
High School ...........................................................................81%
Post-Secondary (some college experience, not counting your current college or university) ..........40%
Other (community art programs, summer programs) .................................................................26%
Self-taught ............................................................................44%
None .....................................................................................0%
Total Responses ....................................................................43

2. What is your background/experience specifically in graphic design/visual communications?
(please check all that apply)
Elementary School .....................................................................0%
Junior High School ....................................................................2%
High School ...........................................................................35%
Post-Secondary (some college experience, not counting your current college or university) ..........35%
Other (community art programs, summer programs) .................................................................14%
Self-taught ............................................................................35%
None .....................................................................................0%
Total Responses ....................................................................21%

3. What would you describe as your particular artistic skills before entering college?
(please check all that apply)
Ability to draw using conventional hand tools, such as pencils and pens .........................88%
Ability to paint using conventional hand tools, such as brushes .......................................67%
Three-dimensional art, such as sculpture ...........................................................................38%
Photography/film making/animation ..................................................................................50%
Computer graphics or CAD software ..................................................................................40%
None .....................................................................................0%
Other (please describe) ........................................................................5%
cutting and pasting brochures; creating letterhead and logos; Graffiti
Total Responses ....................................................................42

4. If you had computer software skills before entering college, what were they?
(please check all that apply)
Adobe Photoshop .....................................................................63%
Adobe Illustrator .....................................................................20%
Adobe InDesign .......................................................................17%
Adobe Flash ............................................................................12%
Microsoft Word/Powerpoint/Excel ..................................................80%
Other (please list): .......................................................................12%
Auto CAD; Pinnacle Studio video editing; Paint Tool Sai; Opencanvas;
Clip Studio Paint Ex; Dreamweaver
Total Responses ....................................................................41
5. What made you interested in a career in art/design? (please check all that apply)
Teacher/Guidance counselor .................................................................................................................................43%
Family member/Friend ...........................................................................................................................................50%
Peer ..........................................................................................................................................................................17%
Not sure .....................................................................................................................................................................12%
Other (please describe) ...........................................................................................................................................21%
Passion funnest part of my career; I've always wanted to do this; I want to be an artist, but I
don't want to do the full-blown fine art thing; my passion; To continue my education;
Own interests; Career Placement Test in 7th Grade
Total Responses .................................................................................................................................................42

6. There are several schools of thought on how students learn. One generally accepted method divides
the general population into three types of learners: Visual, Auditory and Tactile. Please read the
descriptions below and check the description that you think best describes you.

VISUAL LEARNERS learn through seeing. Visual learners need to observe body language and pay
attention to facial expressions to best understand what they are learning. They often learn faster when
looking at videos, illustrations, charts and diagrams. Many visual learners prefer to take detailed notes
to help them absorb information faster. ................................................................................................................58%

AUDITORY LEARNERS learn through listening. Auditory learners generally prefer lectures and
group discussions. Some auditory learners prefer to read printed material out loud to help them
understand information. ...........................................................................................................................................5%

TACTILE LEARNERS learn through moving, doing and touching. They prefer to explore the
environment around them and may become easily distracted during a lecture .............................................37%

Total Responses ................................................................................................................................................38

7. Another school of thought is the concept of “multiple intelligence,” developed by Harvard University
professor of education Dr. Howard Gardner. He developed the theory because he thought the
traditional idea of intelligence, based on I.Q. testing, was far too limited. He proposed seven different
“intelligences” that would account for a broader range of potential. Please review the following seven
descriptions and drag them to the order that you think best describes you, with most like you at
number 1 and least like you at number 7.

VERBAL/LINGUISTIC INTELLIGENCE. This refers to your ability
to use language and words. People who excel at verbal/linguistic
intelligence have above average listening skills and are generally good
public speakers. Your skills include: writing, teaching, remembering
information, and debating.

LOGICAL/MATHEMATICAL INTELLIGENCE. This refers to your
ability to use reason, logic and numbers. People who excel at logical/
mathematical intelligence enjoy logical analysis, number sequences,
and mathematical sequences. You are good at analyzing information
and prefer to experiment and ask questions. You excel at solving complex
problems and organizing information. You may enjoy doing experiments
and performing mathematical calculations.
Visual/Spacial Intelligence. This refers to your ability to understand and manipulate visual objects. People who excel at visual/spatial intelligence prefer to use mental images to remember information. You prefer to look at maps and charts, and enjoy viewing videos, and movies. You have an above average understanding of sense of direction.

Bodily/Kinesthetic Intelligence. This refers to your ability to control body movements and to skillfully handle objects. People who excel at body/kinesthetic intelligence use movement to express themselves. You have good eye-hand co-ordination. You excel at remembering and processing information. You may enjoy sports, crafts, and acting.

Interpersonal Intelligence. This refers to your ability to understand and relate to others. People who excel at interpersonal intelligence try to look at things from the perspective of others. You generally have exceptional organizational skills and work well in a team environment using eye contact and body language to better communicate with others. You cooperate in a group environment and generally excel at building trust and resolving conflict.

Musical/Rhythmic Intelligence. This refers to your ability to produce and appreciate music. People who excel at musical/rhythmic intelligence generally think in sounds and rhythms. You may enjoy singing, composing and playing musical instruments.

Intrapersonal Intelligence. This refers to your ability to understand your inner feelings. You excel at identifying your own strengths and weaknesses. You generally have a good understanding of your role in relationship to other people.

Total Responses

8. What was your favorite toy, game, activity or pastime as a child?

Reading, drawing; My stuffed bear.; Swimming; Soccer; Warcraft; Barbie, trains, K’Nex, Lincoln Logs, Lite Bright, coloring.; Monopoly; crafts; Exploring woods, outdoors; guitar; Riding horses and swimming; arts and crafts; board games; Sega Genesis; Playing with Legos.; dolls, dress up, crafts; Drawing/video games; My gameboy was my favorite toy. Art was my favorite pastime.; Baseball; Building, designing, Legos, Lincoln Logs, The Sims computer games; I had this stuffed scarecrow, I called him care crow, because his arms were always open like he wanted to hug. we went on adventures and such.; Legos; Playing with dolls and building with blocks, legos, etc.; Playing pretend, barbies, board games, cards, video games; Hide and Seek; Drawing; Running around with friends; Freeze tag; Basketball; coloring books; Make believe and video games; Drawing; Minecraft; Drawing; video games, anything related to art, playing outside, stuffed animals; Drawing; Hide and go seek tag; The Nintendo 64

Total Responses
9. What is your favorite toy, game, activity or pastime now?

the same; I enjoy reading and writing.; camping; Volleyball; Warcraft; Drawing, Tumblr (website),
chatting with friends, Guild Wars 2 and The Sims 3 Medieval (video games); Quelf; movies; Making
art; guitar, computer; Creating art; same; cards; Dancing; Watching movies.; collecting bottle caps,
collecting records, making jewelry; Drawing/video games; Photography; Art; Wasting all my time
on the internet; The Sims computer games, designing; i paint a lot; Videogames; Listening to music;
Museums, zoos, cards; Watching movies or playing dungeons and dragons.; Drawing; Cooking; Music;
Friends; Snowboarding; track; Reading, writing and video games; Drawing; Minecraft; Drawing; video
games, blogging, digital art, crafts, movies; Misc. art; Playing piano, Dance dance revolution, games
that require hand eye coordination; The Nintendo 64; i like to read and draw Disney characters, music
and tv

Total Responses ................................................................................................................................................40

10. What college or university are you attending? (optional)

The Cleveland Institute of Art .................................................................................................................................3%
Kent State University ...............................................................................................................................................35%
The University of Akron .........................................................................................................................................33%
Total Responses ................................................................................................................................................40

Educational Institution Survey Statistics

1. What types of traditional hand skills are taught/utilized in your design/visual
communication program? (please check all that apply)

Life drawing .............................................................................................................................................................67%
Painting .....................................................................................................................................................................57%
Thumbnail sketching ...............................................................................................................................................85%
Story-boarding by hand ..........................................................................................................................................59%
Illustration using traditional (non-electronic) media ........................................................................................59%
Mechanical drawing/drafting, using t-square, triangle and other tools ............................................................18%
None .............................................................................................................................................................................1%
Other (please describe) ...........................................................................................................................................29%

Object drawing, perspective drawing, diagram, concept mapping, 3D prototyping, mind mapping;
printmaking, photography, ceramics; hand printing processes, ceramics, sculpture, 3-D design
construction; The GD program begins second year with all BFA students 20 sophomores, 20 juniors,
20 seniors. Foundation studies provide life and object drawing that we continue to work with in; the
program melding hand/traditional skills with electronic media skills. Color for Graphic Design with
hand-painted studies in gouache and computer studies in InDesign and Illustrator.; Letterform
Drawing in Typography, Graphic Translation/Form with paint and brushes as well as Illustrator,
Object Drawing, Drawing Processes with pencil, charcoal, etc., B&W film; photography; cut, paste
and hand construction for mock-ups and book arts; hand skills for construction and prototyping;
Stamps and Transfers; print processes; Letterpress; after a foundation of drawing and design courses
for architects, artists and design students round out their design work with selections from design and
fine arts classes at the 200 level; and above; letterpress printing and hand type composition; lettering;
printmaking; calligraphy, drawing letters, some letterpress and book arts; painting with tempera not
oil or acrylic; paper engineering; lettering, material explorations; bookbinding; letterpress, ceramics;
Bookbinding, cutting and mounting, drawing type, use of materials and techniques; letterpress

Total Responses ..................................................................................................................................................79
2. When do you introduce software instruction into the curriculum? (please check all that apply)
   - Freshman year .................................................................62%
   - Sophomore year .............................................................62%
   - Junior year .....................................................................32%
   - Senior year ....................................................................21%
   Total Responses ..................................................................76

3. How do you introduce software skills? (please check all that apply)
   - As a specific course teaching software program(s) ..................40%
   - Software skills are introduced as part of specific design classes or assignments .................................83%
   - Other (please describe) ....................................................10%
     - never; test; students are encouraged to take tutorial in the computer lab, run by TAs; There is no explicit software instruction in the program. Students are assumed to have a certain level of exposure culturally, and are taught skills to acquire software skills on their own; rather than simply teaching software explicitly; software is taught in the context of ideas and practices in new media; 2D design; computers are introduced in the first graphic design course; usually we offer outside workshops and lynda.com

   Total Responses ..................................................................77

4. Do you have letterpress facilities? (if no, please see next question)
   - Yes 73%
   - No 27%
   Total Responses ..................................................................77

5. Is your institution considering adding to current facilities or establishing new letterpress facilities?
   (if no, your portion of the survey is complete)
   - Yes 52%
   - No 48%
   Total Responses ..................................................................69

6. Is your institution considering removing letterpress facilities?
   - Yes 5%
   - No 95%
   Total Responses ..................................................................66
7. Where are your letterpress facilities located?

Print making/Fine Arts department .................................................................46%
Part of Design/Visual communications department .......................................40%
Other area (please describe) ...........................................................................30%

teds; Art also has a letterpress; The Art & Design Department; N/A; we currently own a press but have not incorporated it into a course yet; We plan to add letter press as above; We collaborate with the Kalamazoo Book Arts Center where some of our presses and type were donated and we have one press located in printmaking that used to be housed in graphic; design previous to moving to a new facility. Hard to keep it all running. Need a faculty member who knows letterpress to take over. I am now the Director of the School of Art and no longer; teaching in GD another faculty member who knows letterpress is retiring. Right now the use is limited for demonstrations and special projects and is mainly at the Book Arts Center; where some students intern for credit. We had letterpress for many years dating back to the 60’s before I was here teaching. It was used in late 80’s and early 90’s went dormant for a while due to repairs needed on presses. Trying to make progress to bring it back on site with a single press and continue with the book arts center as well; Off campus at a vintage village with a press shop; local artist Co-op has facilites we can use; Design is a division of the Department of Art & Art History, but confers a BFA & MFA in Design; presently moving from printmaking to design; There were letterpress facilities as part of printmaking, graphic design, and in the library before the 1994 earthquake in Northridge, CA. The vandercook was sold off in auction after, and; two small clam shell presses are currently in storage with the intention of renovation and reintroduction of letterpress in the next couple years; not applicable; offsite in a professor’s studio; College wide facilities; combo printmaking and Design; connected to both; Design/Fine Arts dept.

Total Responses .................................................................63

8. How long has letterpress instruction been a part of your curriculum?

0-5 years ........................................................................................................39%
6-10 years .....................................................................................................18%
11-20 years ..................................................................................................5%
20+ years ......................................................................................................30%
Don’t know ..................................................................................................9%

Total Responses ..................................................................................57
9. How do you use your letterpress facilities? (please check all that apply)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underclass design instruction</td>
<td>58%</td>
</tr>
<tr>
<td>Upperclass design instruction</td>
<td>52%</td>
</tr>
<tr>
<td>Graduate instruction</td>
<td>35%</td>
</tr>
<tr>
<td>Part of print making facilities</td>
<td>50%</td>
</tr>
<tr>
<td>Special projects</td>
<td>58%</td>
</tr>
<tr>
<td>Self sustaining/for-profit printing</td>
<td>8%</td>
</tr>
<tr>
<td>Creative writing/self-publishing</td>
<td>13%</td>
</tr>
<tr>
<td>Other (please list)</td>
<td>27%</td>
</tr>
</tbody>
</table>

Letterpress is an elective; both undergrads and grads can take it, though a relatively small percentage of our students do; Letterpress and Book Arts classes; Traditional and concrete bookmaking, broadside design and production, mostly at the Book Arts Center downtown; Space is small, so it is a resource for all faculty + students with only projects assigned, not a full course.; Bookarts; There is no explicit letterpress instruction on the class level, beyond the introduction in the Sophomore year Typography course. All skills are acquired through running extracurricular; workshops offered throughout the academic year. A student is granted individual access to the TypeLab after performing a hands-on demonstration of letterpress skills to the TypeLab; manager; elective course; supplemental; undergraduate art instruction, offerings every term; GD history and GD production; These will be the intended uses once the facilities are again running; none, yet; I bring design classes to a local studio with master printer, as facilities at school are slim; experimental text; an undergrad class not required open to anyone; Dedicated “Alternative Hand Media” Letterpress course.

Total Responses: 60

10. If you use letterpress for design instruction, what specifically are your goals? (please check all that apply)

<table>
<thead>
<tr>
<th>Goal Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical demonstration</td>
<td>76%</td>
</tr>
<tr>
<td>Understanding typographic terms</td>
<td>80%</td>
</tr>
<tr>
<td>Understanding grid structure and page construction</td>
<td>55%</td>
</tr>
<tr>
<td>Understanding Pica and point system of measurement</td>
<td>61%</td>
</tr>
<tr>
<td>Color theory</td>
<td>20%</td>
</tr>
<tr>
<td>Other (please describe)</td>
<td>33%</td>
</tr>
</tbody>
</table>

Encouraging student to work in traditional media; book arts; play; creative problem solving; design within limits; none; Relationship between text and image, artist's books; Analog Production Methods; unique properties of the media; innovation using old technology; design thinking in a variety of environments; understanding production; learn patience, understand the physicality of type; artists books; Understanding the plastic qualities of the letterpress; Understanding hand processes involved with printing/production.

Total Responses: 51
11. Your institution's name and location (optional)

Carnegie Mellon University; University of Kansas; Southern Utah University, Cedar City, Utah; University of Wisconsin-Stevens Point; Skidmore College, Saratoga Springs, NY; Messiah College, Mechanicsburg, PA; Art University Bournemouth; Washburn University, Topeka, KS; Frostic School of Art; Western Michigan University, Kalamazoo, Michigan; Union University in Jackson, TN; University of Georgia, Athens, GA; Converse College, Spartanburg, SC; University of Tennessee, Knoxville, TN; State University of New York, College at Oswego; Virginia Commonwealth University, Department of Graphic Design (Richmond, Virginia); Hartford Art School, University of Hartford; Design Division, Department of Art & Art History, The University of Texas at Austin; University of Oregon, Eugene, OR; Auburn University; Miami University, Oxford, Ohio; Kennesaw State University; Auburn University; University of the Pacific, Stockton, CA; University of Florida, School of Art + Art History; Weber State University, Ogden, Utah; University of Kansas, Lawrence, Kansas; Virginia Commonwealth University School of the Arts, Richmond, VA; University of North Alabama, Florence, Alabama; California State University, Northridge; Northeastern Illinois University; Marywood University; William Paterson University, 300 Pompton Road, Wayne, NJ 07470; Benedict College, Columbia, SC; UMass Dartmouth; Nicholls State University, Department of Art, P.O. Box 2025, Thibodaux, LA 70310; MICA; Maryland Institute College of Art (MICA), Baltimore, MD; Maryland Institute College of Art, Baltimore; North Carolina State University College of Design, Raleigh, NC; University of Massachusetts Dartmouth; The Sage Colleges - Albany, NY; Rowan University, Glassboro, NJ; University of Brighton, UK; Northumbria University, United Kingdom; George Mason University; Maine College of Art; Southeastern Louisiana University; Somerset College - School of Art and Design - Taunton, Somerset, United Kingdom; Ohio University, Athens, Ohio; University of Wisconsin-Madison; Miami University, Oxford, Ohio (Curmudgeon Press)

Total Responses ................................................................................................................................................51
References


