

**Jessica Barness + David Singer, Kent State University**

***Translating Science with Design's Personal Voices: Toward a Critical Collaboration***

Design and science are both creative problem-solving disciplines that imagine possibilities. Discoveries and advancements in environmental science can positively impact people's lives, and may be shaped and made accessible to non-scientists through graphic design. Bringing these areas together requires 'heart' and collaboration to design products for publics in need of critical climate change literacy.

As faculty members engaged in collaborative, interdisciplinary research on this topic, we see value in bringing our work into the classroom. Including 'heart' with critical environmental communication is a balancing act for graphic design students. Applying personal voice – the design student's developing style, aesthetic and character – with scientific complexity runs the risk of unintentional misrepresentation. At the same time, it is these personal voices that have the power to speak to communities in need.

Given the ongoing conversations and controversy surrounding climate change issues, we propose a design-science educational agenda that is inherently collaborative: team-taught classes/workshops, graduate-level research and regional outreach projects. As an example, a former coal-mining community in our region is environmentally contaminated. Government assistance is available, but the community lacks the scientific literacy to advocate for remediation. Working with science students to better understand the contamination issues, design students can apply their skills toward developing visual materials for this community – with 'heart' that encourages informed decision-making and social change. Additionally, young scientists gain experience in communicating with audiences affected by their future research.

Considering collaborative publications on visualizing science[1] and the STEM to STEAM initiative[2], we propose ideas and invite discussion on this topic. How might graphic design students communicate scientific information with 'heart' to connect emotionally and logically with a community? In what ways might scientific information be inviting, and still have credibility? Bringing the voices and skills of design and science students together can enhance both disciplines and drive social change.

Notes:

[1] A recent example: Frankel, F., DePace, A., and Sagmeister, S. (2012) *Visual Strategies: A Practical Guide to Graphics for Scientists and Engineers*. New Haven: Yale University Press.

[2] STEM to STEAM is a movement championed by the Rhode Island School of Design, bringing Art and Design into the disciplines of Science, Technology, Engineering and Math. <http://stemtosteam.org/>.

**Frank Baseman, Philadelphia University**

***The Trials and Tribulations of Working on Real-World Interdisciplinary Projects: What I'm still learning about working with students on real-world, collaborative, interdisciplinary projects***

In University corridors and on college campuses across this land, the terms "collaborative," "interdisciplinary," and "real-world" are used in an attempt to simulate for students what they may encounter upon graduation when they will be expected to work with people from various disciplines. Creating and carrying out these simulated situations in the classroom—while conceptually desirable—can be rather difficult. The reality is that there are trials and tribulations that come with working on

collaborative, real-world design projects while students are still in school (there's a reason why post-graduation is called "the real world"). These "speed bumps" can include, among other things: the expectations of real Clients in terms of competencies; level of quality of skillsets of the students and deliverables; the ability of the students to work productively together; expected time working on projects and turnaround time; and interaction with Clients.

Yet the "Catch-22" here is that there is much to gain from this process. Students can gain valuable experience working on real (rather than hypothetical) projects:

- presentation skills: explaining their ideas/their thinking to Clients in a way that is compelling and convincing enough for the Client to approve a particular direction.
- compromise: when a Client likes one approach, and student prefers a different one.
- respect for students from other disciplines: to become knowledgeable about how others approach their work, yet "be expert" in their own discipline.
- production: how to prepare a project for reality, to get produced, to work and communicate with vendors.

And Clients can get:

- professional quality design services.
- the opportunity to work with "young people." Clients like the unbridled enthusiasm, willingness and energy of the students, and their "fresh" perspectives.

The "Catch-22" of this situation is that these kinds of projects are far more difficult to teach in a classroom setting than your typical design class where all of the students are working on the same hypothetical project with no real Client to contend with. Quite simply, it takes a lot more time to: line up the potential Clients; to work out all the necessary details of project logistics, scope and timeframe; to deal with Client interactions; not to mention, actually produce the work.

At my institution, I teach a Design Workshop course where students have the opportunity to work on real-world, collaborative, interdisciplinary projects. There are wonderful upsides to this: teaching this course keeps things interesting and fresh, and I am constantly challenged. It certainly "keeps me on my toes," and I find that I am learning alongside my students.

I propose to present recent case studies from this Design Workshop course involving students working on complex, semester-long, collaborative, interdisciplinary team-based projects. I will discuss what I have learned (and what I am still learning) and some of the trials and tribulations I have encountered along the way.

### **Sherry Blankenship, Ohio University**

#### ***A New Foundations Program: Ohio University, School of Art (and Design) 2012–13***

While the entire university transitioned from a quarter system to a semester system, the curriculum committee within the School of Art and Design at Ohio University totally revised the existing Foundations Program.

Why the change?

The intention is to provide students with the conceptual and making skills required to move forward in any of the School's programs—ceramics, painting + drawing, photography + integrated media, sculpture + expanded practices, printmaking, graphic design and interior architecture. All entering students would work through a series of learning experiences designed

to address traditional, interdisciplinary, and innovative approaches to the technical and conceptual practices involved in the production of contemporary art and design. Faculty expertise would serve as a guiding principle for both formal and conceptual studio problem solving as well as cultivating synergy among all four Foundations courses. Students who complete the Foundations Program would acquire the skills to creatively produce and reflectively discuss their work and that of their peers. The Foundations' curriculum would serve as a modeling of the practices of art and design as research activities. Instructors (Every faculty member is required to teach at least one Foundations course per year.) in these courses would work to promote and enact diverse definitions of artists and designers such as critic, writer, intellectual, educator, collaborator and provocateur while also integrating studio practice with the history, theory, and criticism of art and design.

This presentation will look at the program from the viewpoints of the faculty as well as the students and the work that has been executed during the first year. Has this new vision of preparation for the arts and design accomplished the goals as stated by the committee?

**Karen Bright, Monmouth University**

*For the Love of Type*

I would like to share with the AIGA design educator's community a specific project from the course, Advanced Typography, which was recently developed for the BFA in Graphic Design at Monmouth University.

The project brief requires the design of a series of three posters or broadsides. The series must be connected to each other in some way— by invention, by association, by date, by concept, by geography. The students are also required to research and use a typeface from the same time period associated with their poster content, and to develop an event associated with the subject matter. The style of the posters could be reflective of the time period, related to the content, or be set in current time.

Over the past three course cycles not only has there been a steady elevation of the complexity of each assignment, but the visual direction of each series has begun to communicate more relevant messaging. For example, one of the students, Amanda Stojanov, decided that the consistent element connecting her posters would be "the empowerment of women." The time frame of her series ranged from Joan of Arc in 1429, to Florence Nightingale in 1860, to present day with Malala Yousafzai in 2013. Through research, Amanda was able to find a real occasion for which to construct her posters. In doing so Amanda was able to prove, through different points in history when and how women began to be empowered. Another student, Carolyn Walker, decided her topic would comment on our relational exposure to violence. Beginning with Popeye (1919), moving on to Computer Space (1971), and ending with present day gun violence, Carolyn created a 'voice' for her posters, writing commentary reflective of a society in the midst of change from exposure to increasing amounts of violence. The resulting sets of posters are powerful visual statements while still fulfilling the criteria of the initial project brief. Although I have described here only two examples, there are other solutions that are just as compelling.

In conclusion, students are bringing more heart to the table than in previous years, they want to create work that is meaningful, has impact, and can make a difference. What in the past may have been a poster on the history of type design, has given way to creating opportunities for a more unique learning experience, one with greater reach and cross-pollination of disciplines. My students love type because they are using it for something they believe in. They are not handed a list of designers to research, or an existing brand to re-design, they are the builders of their own brand. They have buy in. They are

still learning about the nuances of type and its history – still tweaking and kerning – but the way in has changed, for the love of type.

**Erica Ciesielski Chaikin, University of Houston**

***Making by Hand: Why stepping away from the screen can allow us to be better digital designers***

Many designers spend their lives in front of a screen, calling wherever the laptop is open their studio. We mix colors with numbers, and see photos in pixels. When we allow ourselves to step away from the screen, to make not with a mouse or tablet but with a blade or needle, we are allowing ourselves to experience design (both the creation and the final product) in a different way. It is neither better nor worse than experiencing design via a screen, but it changes how we see and make.

The challenge of making by hand provides not only a more in depth exploration of materials, but to strive for the perfection of the digital in hand work not only pushes designers to create with better thought and better craft, it may force them to embrace the imperfections, pushing them to see a solution not thought of before.

Our challenge, as educators, is to make sure our students don't only work in front of a screen, to push them beyond their comfort zone and into working with their hands. Allowing them to create away from the expected digital means is a task, one which should not be shied away from in this age of digital production and perfection. The skills and aesthetics used in the hand created designed can be easily translated into a final pieces, be that physical or digital, and the skills explored will push the designs created.

**Jonathan Cook, University of Washington**

***Preparing Students for the Growing Context of Design Practice***

Applications of design and interactive technologies have recently broadened to include larger, more complex problems in society than in past decades. To prepare students to approach these larger issues that encompass multiple areas of study, I argue that educators should teach students methods to facilitate collaborative work and the application of knowledge from other disciplines into studio practice. Richard Buchanan's perspective on design's lack of specific subject matter provides a theoretical foundation for bringing outside knowledge into design practice. Synthesis methods, familiar in the field of interaction design, can help foster communication with other disciplines by forcing designers to externalize connections between proposed solutions and the outside knowledge surrounding a problem space. Analyzing how some design studios are currently using these methods in collaborative work can provide valuable lessons to guide how design educators should prepare students for this new complexity of design practice.

**Heather Corcoran, Washington University**

***Building Digital Tools in Health and Education: new opportunities for group and individual learning***

Collaboration is much discussed in design practice today. The argument is that problems of head and heart are bigger than traditional problems of hand and require broader teams of people. How is collaboration taught? And does this kind of learning come at the expense of individual design learning?

I hope to present "Idea to Market" a project in my undergraduate course "Visual Information." The project merges group and individual learning approaches to concept, realization, and the development of a refined visual artifact. It allows students to synthesize head, hand, and a bit of heart. In this project, activities of head are generally shared; activities of hand are both shared and individual. Students gain individual and collective ownership of their work—tailored and collaborative learning.

Students are divided into teams of three. They are asked to develop an informational service in health or education, delivered through digital technology. They invent the idea, do competitive research, name and develop prototypes for their product or service, and make a printed book to document the project. Each student on the team is assigned a role (identity designer, writer/designer, scribe). Some deliverables are assigned by role; others are expected from the group. Each student makes the final documentation book individually, but may borrow on jointly developed material.

I have refined this project over a two-year period. In the first iteration, students designed effectively in groups, but writing and typography were less refined than desired. In the second year, I restructured the project and emphasized each student's process of book development. The results have been much stronger. Topics have included a water delivery system, a tool for toddlers expecting a sibling, a lunch delivery service, and a job shadowing program.

**Don Dempsey, Cabrini College**

***Graphic Design and the Capstone Project: Connecting With the Core***

Most capstone projects in graphic design are designed to demonstrate the abilities and skills developed by students in their major over their academic career. What is often overlooked in this important statement of learning outcome in the major is the link between what students have learned as graphic designers and what they have gleaned as participants in the college's general education curriculum. The development of a distinctive individual voice is the hallmark concept behind the core-curriculum developed at Cabrini College. Entitled "Justice Matters", Cabrini's core curriculum evolved from the College's mission of "commitment to social justice." This four-year sequence of courses entitled Engagements with the Common Good (ECG), Justice Matters is meant to raise awareness of social problems, explore their root causes, involve students in hands-on social justice issues, and ultimately connect the theory and practice of social justice to each student's major. The first through third-year ECG courses are taught by faculty from different departments, the fourth year course deals specifically with connecting the learning objectives of these past courses to specific skills developed in the major. In Graphic Design, this course employs speculative pedagogy by allowing students to incorporate the "common good" within their major through the choice of specific topics, organization of projects, research, and use of their professional skills to promote and educate a call to action.

My presentation will give an overview of this approach particularly highlighting the "Ad Council" style advertising campaign and supporting website employed by students. I will offer examples of finished student work to illustrate how we work to tie together the cumulative learning of both the justice matters curriculum and graphic design education enabling students to see themselves as participating in both value-driven decision making and a unified educational experience.

**Lisa Fontaine, Iowa State University**

***Learning Design by Designing Learning Experiences: A case study in the development of strategic thinking skills through the design of interactive exhibitions***

Realities of contemporary graphic design seem to mandate the development of broad thinking skills, since graphic designers are increasingly asked to design innovative solutions that go beyond the boundaries of print and web-based media. It is vital for design educators to prepare students to view themselves as problem-solvers first, and image-makers second. A popular response to this need has been the introduction of user-centered design problems that involve the design of experiences rather than of objects.

This case study will present a model for expanding students' thinking skills through the design of interactive learning experiences for museums. For the past 20 years, the author has incorporated museum exhibition into the graphic design curriculum in order to introduce students to design thinking and user-centered design. This paper will present recent work, where students have designed interactive exhibits for the Field Museum of Chicago. Each semester the museum's Design Director presents a different exhibit theme, as well as the museum's content outline, learning objectives, and relevant artifacts. Students design several exhibits that include experiential learning components to help visitors learn about subtopics within the exhibit theme.

Design of these interactive experiences involves the following steps:

1. Students learn about multiple learning styles;
2. Students study a taxonomy of interaction types;
3. Each student proposes 3 different designs for visitor engagement;
4. Museum staff selects one proposal from each student to be completed;
5. Students design the interactive learning components;
6. Students design the exhibition kiosk and graphic elements.

There are several benefits to teaching interactive exhibition design: achieving the museum's learning objective is only possible with a focus on user needs and learning styles. Also, students can only rely on images, type, and style after they have devised the goals, methods, and execution of the visitor's experience.

**Leslie Friesen, University of Louisville**

***Successes and Challenges in Teaching a Pro Bono Community Engagement Course***

As a capstone course for BFA students, the Design for Public Issues class offers an important learning experience that differs from the theoretical assignments they have had in most of their undergraduate courses. This presentation, based on developing the course and teaching it for four semesters, outlines both the successes and challenges of working with a pro bono client in a semester-long graphic design class project.

The course benefits the students in a number of aspects, including

- instilling the design process, especially research phase;
- learning to work on a team where they share responsibility, control, and results;
- learning to work with "real-world" parameters;

- fostering the values of giving back to the community and making a difference through application of their design skills.

The course benefits the pro bono client by

- providing them access to high-quality design services they may not be able to otherwise afford;
- creating a visual identity system they can use going forward; and
- developing specific design pieces that are “implementation-ready.”

Challenges for the students include

- learning to work in teams after having had sole control of most of their undergraduate design projects;
- staying true to the parameters developed with the client and outlined in a client brief;
- dealing with a client where schedules slip and materials needed may be slow to come or non-existent.

Challenges for the client may include

- lack of resources to provide some materials (copy, photos) needed or to produce the materials (printing, web development) created by the student designers; and
- lack of on-going design assistance after the semester project is completed.

This type of course is becoming an integral part of a many design programs. Sharing our experience as educators can help us all improve this educational experience.

#### **Aaron Ganci, Herron School of Art and Design**

##### ***Finding real problems: Using participatory design research to help students propose and design new applications***

As design educators, we often ask students to propose and design user interfaces for a course as preparation for their professional work. In my experience, students are enthralled by these projects. They become absorbed with the idea of making the next big app. However, there is often a lack of understanding from the student around what makes an app useful and therefore successful. They are often blinded by ambition—wanting to get rich quick or make something that looks cool—and lose sight of what will ultimately be a successful and potentially marketable product. Students tend to rush the first phase: the big idea or disruptive functionality. Great apps allow people to express themselves, improve their productivity, or connect them to loved ones. They solve problems that are at the core of human life. As we educate students about designing new digital experiences, we also have to instill in them the ability to investigate and identify tools that will truly impact people’s lives.

The use of participatory design methods can help students understand potential users’ real problems. In this presentation, I will share a case study on the use of participatory research methods within the context of digital design course- work. Examples of objectives and deliverables will be shared about the integration of these methods into course projects. From this presentation, design educators will take away the ability to integrate participatory design learning outcomes into traditional web and application design projects. In addition, by using the documented approach, educators will provide their students with the ability to conceptualize realistic, useful, and potentially patentable new products in the context of their course.

**Dori Griffin, University of Southern Mississippi**

***How to Wrap Your Head around the Question of Relative Merit: Teaching Students to Evaluate Their Design Solutions***

It's final critique day in my upper-division design studio. The class of 22 students has spent four weeks working on educational card games for beginning design students. We've discussed the usual range of conceptual and formal issues: audience needs, communication strategies, use of type and image, composition. After brief individual presentations, I hand out ballots and ask everyone to rank their own solutions in comparison to the others. I explain that this entirely anonymous exercise has no impact on their grades. The ranking categories are: well above average, slightly above average, average, slightly below average, and well below average. Zero students rank their work below average, and 18 out of 22 rank their work above average.

How do we teach students to evaluate the merit of their own design solutions? This is a critical question, not only at the end of a project (or when grades are returned) but at every stage along the way. Which initial ideas are worth pursuing? When has a potential solution failed? How successful is a proposed solution in relationship to its competition? These are difficult questions, and students need tools for learning how to ask – and answer – them in ways that are useful and productive.

This paper explores a range of critique strategies focused on teaching students to evaluate the relative merit of their design solutions. It addresses two primary areas of concern. First, what factors stand in the way of learning self-evaluation, and how can we as design educators mitigate these factors? Second, what are useful strategies for critique at all stages of the design process, and how do these function in the studio classroom? Understandably, it can be difficult to engage in selfcritique. This paper focuses on concrete strategies for facilitating the process of learning how to evaluate one's own work.

**Cassie Hester + Joey Hannaford, University of West Georgia**

***The Play Instinct in Design Education***

Russian Formalist, Viktor Shklovsky, stated that "perception becomes habitual, it becomes automatic." The recourse against habitualization is defamiliarization, the conscientious creation of strange, unfamiliar, and challenging work in order to stimulate a different perception. "Playful" design investigations—that is to say investigations that are less concerned with the outcome as they are with the process—are essential in the creation of interesting, engaging, and pleasurable artifacts. Rigorous, play-ful investigations challenge the perceptions of the designer as well as the viewer as process quickly leads to the invigorating unknown.

Our presentation will share a range of experiments and projects derived from classes we teach, Experimental Typography and Materials & Methods. In these courses, we encourage students to thoughtfully and critically explore materials/methods and visual language through dedicated and rigorous experimentation. In sharing explorations, ours included, the class is able to learn from and build upon the knowledge and discoveries of others.

Through the investigation of familiar materials such as wood, iron, clay, concrete, crayons, paper, sequins, stamps, laser pointers and thread with typographic form in unfamiliar formats and contexts, we are creating objects that are refreshing in construction and perception. We are also researching how mediums and methods learned in other art disciplines may enhance and expand our process and design vocabularies. A hybrid of analog and digital, the classes seek to challenge typographic conventions and bridge the gap between material and form, art and design, as well as heart, head, and hand.



**Laura Rodman Huaracha, Carthage College**

***Utilizing interdisciplinary heads; Teaching the visualization of ecological and conservation issues***

How can ecological visuals leave a mark on the viewer—create an emotional and intellectual connection, which provokes them to make change? How can we teach a range of interdisciplinary students to create such images?

Carthage College's Interpreting Nature: Effective Visual Communication About the Environment course was designed to answer these questions. Team taught by a Graphic Design professor and Biology professor, the course brought together interdisciplinary teams to complete community-based service projects to facilitate learning about ecological concepts and conservation issues. During the course, Graphic Design majors partnered with students from the Natural Sciences to produce environmental education materials for a local state park. After intensive research, the group worked together to create a thorough identity system for the park. Group projects then ranged from brochures to newly designed exhibits for the nature center to large interpretive signs.

Throughout the course, students worked collaboratively with the community partner to learn about relevant ecological concepts in order to effectively communicate the desired messaging to the public. For example, students developing a brochure about the "Burn an Acre" program learned how fire is used to control invasive species in a prairie community, thus learning about prairie communities, adaptations of native and exotic species, conservation issues related to small population size in remnant prairies, etc. With their knowledge of the importance of prescribed burns, they created effective visuals and iconography to encourage public donations.

The visualization of ecological and conservation issues can be successfully taught with a combination of research, partnering with a natural sciences colleague, interpretive planning, obtaining a naturalist partner, covering the theories of visual communication, graphic design, typography and Adobe InDesign and Photoshop. This list of topics may sound daunting, but this highly rewarding venture is quite possible.

**Jeanne Komp, Cabrini College**

***Multidisciplinary Learning in Graphic Design Education***

Graphic design by nature is an interdisciplinary profession. Designers are not trained in finance, healthcare, or music for example; however, we must visualize and infuse additional meaning into client communications in these and other diverse industries. One's ability to comprehend new information outside of their discipline comes from research and collaboration with clients. Most interdisciplinary models used in graphic design education focus on assigning students to work with "real-world" clients. While these scenarios are wonderful opportunities for students to learn, there are challenges to negotiate: time, logistics, scope, client expectations, and varied student capabilities. Although there are hindrances, these career-building experiences should not be avoided, but rather approached in a manner that benefits both the client and student. In addition to working to build offcampus clients, design faculty can also create opportunities to collaborate with other campusbased colleagues to enhance undergraduate research across disciplines and create student clients. In this presentation, I would like to share one example of a successful collaboration that was developed as a multidisciplinary project implemented by three faculty members at my institution.

This project brought together the knowledge and expertise of faculty from graphic design, environmental science, and science

education to implement a novel educational program for an middle school. This collaboration across three courses and with a community partner provided unique learning opportunities for the college students in three different disciplines. Graphic design students developed skills in data visualization and working with clients. Education students developed instructional strategies for a real classroom. Environmental science students improved their quantitative literacy skills and understanding of environmental impacts. In addition, this project provided middle school students in an underserved district with instruction utilizing cutting-edge pedagogy in science.

This paper will serve as a case study. It will address the process, challenges, and hindsight of this multidisciplinary project.

**Maribeth Kradel-Weitzel + Ronald Kander, Philadelphia University**

### ***A New Model for Interdisciplinary Education***

In Fall 2011, a small, private university in the Northeast launched an unprecedented core curriculum for all students in its newly formed College of Design, Engineering and Commerce (DEC). This core curriculum brings together students from 16 different majors and consists of a series of five courses, taught as give segments of a whole experience. The names of these courses and the primary question they each seek to answer are as follows:

1. Integrative Design Process (IDP): How do I discover opportunities?
2. Business Models: What is value and how do I create it?
3. Research Methods: How do I ask the right questions?
4. Systems Thinking: How do I deal with complexity?
5. Senior Capstone: How do I put it all together?

The first of these courses, Integrative Design Process (IDP) is taken by all students in design, engineering and business fields as a required course in the freshman year. Students learn the principles and value of incorporating “design thinking” into their entrepreneurial process. The students learn to become comfortable dealing with ambiguity as they identify user need, ideate, prototype solutions, test and evaluate. All of this work is done in interdisciplinary teams. Faculty pairs with diverse disciplinary backgrounds teach each section of the course.

This presentation will share why the unique combination of design, engineering, and business disciplines, as cultivated by the DEC core curriculum, will equip students with the ability to create desirable, feasible and valuable solutions to complex problems.

**Marty Maxwell Lane + Jamie Gray, Kansas City Art Institute**

### ***Tailoring Communication Experiences***

‘Tailoring communication experiences’ is an undergraduate project run as a cross-studio, collaborative learning environment that spans three phases including design research, tailored visual communication and tailorable mobile applications.

The learning outcomes aim to prepare students for professional practice that address context and audience; to expand student’s understanding of designing for niche audiences by considering needs, values and obstacles; and to provide the next generation of designer’s with the tools to be thoughtful problem solvers, rather than creators of isolated artifacts.

Introducing user research at the undergraduate level leads students to discover and define the design problem themselves. This open approach reveals symbolism and obstacles about the audience, and creates conditions for meaningful experiences in the applications. Direct contact with the audience creates an empathetic connection between designer and content (past years ranged from roller derby girls and urban chicken farmers to urban cyclist and marathon runners). Students work collaboratively towards an understanding of user motivations and goals that move beyond demographics, then visualize the research in a well crafted book.

Research is applied in two concrete applications, one of which is tailored visual communication and the other is tailorable interaction design. (1) Students propose and develop an engaging communications strategy in which the call to action, visual messaging and choice of channel are appropriately tailored. (2) Students create a smartphone app that assists the user in overcoming identified obstacles while tailoring their experience. The resulting outcomes span print and screen based media (past years have included food truck branding and road safety campaigns to fashion inspiration and civic resource apps).

We would like to present the details of this project, and examples, to other educators in hopes of providing a path to creating educational experiences that allow for user research at the undergraduate level.

**Julie Longo, University of Minnesota**

***Change by Design: Stories of Experience, Strength and Hope***

Addiction touches many people. Children with a connection to addiction; their own, or a friend or family member's, carry a heavy burden. Because of stigma, they typically feel isolated. Parents, peers, and the media all influence a child's decision to consume alcohol or not. Studies have found that fear-based Public Service Announcements (PSAs) have a profound impact on younger children, but that this type of appeal has little effect once they hit puberty and are actually faced with decisions about consuming alcohol. Researchers Atkin and Freimuth (2001) found that designers without the benefit of background research often create these campaigns which, may be aesthetically pleasing, but may not have the desired effect of reducing unhealthy behavior. Atkin (2001) found that message acceptance is most effective where campaigners are stakeholders in the issue, because they communicate in their own interest. Participatory design processes, involving methods of co-creating where designers act as facilitators and consultants on community-based projects by soliciting content from end users, have been shown to facilitate mutual understanding and behavioral change by addressing complex social problems such as homelessness, innercity crime, and teen pregnancy.

There is a gap in literature concerning both peer-based efforts at countering alcohol advertising, and the role of participatory design towards this end, as participatory design is an emerging practice. My paper will summarize my current collaborative project involving a college-level design class and a group of recovering teens. Specifically, I am looking at how participatory design can act as a platform to facilitate understanding, empower under-served communities, and dismantle stereotypes, by addressing underage drinking and addiction.

In conclusion, I argue that a peer-based collaboration incorporating the personal narratives and visual language of addiction as an alternative to typical PSA design will resonate with teens, because it will contain the appropriate codes of youth culture.

**Andrea Marks, Oregon State University**

### *A Senior Project*

The senior thesis project is a required two-term project that all graphic design majors must take at Oregon State University. Students choose a topic of their choice that they are passionate about and that is the jumping off point for the next 20 weeks. In the first term, students learn research strategies including the different ways graphic designers use research in their work. This includes the use of primary, secondary and tertiary research methodologies and evaluating, analyzing and synthesizing various source materials. Each student is expected to develop a research strategy, which they visualize in the form of an information graphic.

The topics are varied, but many encompass an empathetic theme. In the winter of 2013, themes included issues of homelessness, sustainability, the value of play, emotional branding and the concept of creative bartering.

The spring term is where the crafting of the project begins. Each student is required to develop a “making” /schedule or plan and begin with a set of at least 3 experiments, which will yield more information as they craft their final project. An example of these may be a series of patterns, that communicate a message or an icon created to identify an issue. Students are expected to get outside feedback (in the form of surveys or questionnaires), based on these visual experiments. The entire 20 week process is bound into a beautifully crafted process book and the students present their projects at a senior show.

**Andre Murnieks, University of Notre Dame**

### *Telling a Design Story*

Through a deliberative and careful process considering all the options, a solution to a design problem is found. It is novel, efficient and even groundbreaking. It has the potential to affect positive change or otherwise improve the human condition. But through all the careful planning and execution, the concept is difficult to comprehend. It is systems design. Or it is a component of an overall communication strategy. Or it does not fit with any relatable metaphor. What is the best method to relate to the audience? A story. Designers are taking on problems that defy typical means of presentation. The idea must to speak for itself, and reveal its value in a complex or unobservable system.

Call it a movie trailer for a design idea, but a time-based and descriptive narrative can be employed to convey the gist or complicated nature of a design's intent. In lieu of a better term, it is a motion infographic. It tells the story of the design problem while including both the empathic and emphatic dimensions of the solution. Designers employ a variety of methods to explain their concept, but creating a motion presentation is not usually one of them.

Every designer can benefit by the clarity of a well-structured narrative that showcases the benefit of the communication, object or environment. And rather than leave it to an expert in the domain of animation and video, student designers should be learning to craft their own narratives to complement the idea—especially when a designer is not present to explain it. The value of motion design is apparent through a series of student case studies that quite literally speak for themselves. Through example, technique and some inspiration from Charles and Ray Eames, the most incomprehensible, yet innovative, ideas can be brought to light.

**Pamela Napier, Herron School of Art and Design**

**Terri Wada, Collabo Creative**

***The Power of Design Thinking***

The power of design thinking lies in the attitudes we bring, the methods and tools we use, and the skills we cultivate. It is the combination of multiple facets that enable and enhance a person's ability to effectively use design thinking.

John Thakara, author of "In The Bubble: Designing in a Complex World," challenges us "to learn new ways to collaborate and do projects ... to enhance the ability of all citizens to engage in meaningful dialogue ... and foster new relationships between the people who make things and the people who use them." Within design practice today, new ways are continuously being developed to utilize design thinking in response to social, environmental, economic, and cultural factors.

Recently, there have been several great examples emerge around self-driven, human-centered design thinking tools, such as IDEO's Human-Centered Design Toolkit and Frog's Collective Action Toolkit. While design processes, along with tools for carrying them out, remain important factors for collaborative, participatory design, two seemingly less mentioned factors—Environment (i.e., space and place), and Facilitation—are equally important in enhancing people's ability to utilize design thinking in order to creatively solve problems in meaningful and innovative ways.

In this paper we will discuss how these three factors: Tools, Environment, and Facilitation, are conducive to developing a culture that uses a human-centered approach to design thinking within both a graduate-level studio, as well as a professional practice context. In addition, we will explore how these attributes impact and influence the changing role of future designers.

**Suzanne Powney, Mississippi State University**

**Roselynn Newton, Texas State University**

***Tactile Impression: The Reemergence of Craft through Letterpress in a Typographic Design Curriculum***

Kern, leading, points, and picas are terms that are commonly used in basic typography classes, but few students have had the opportunity to really understand where these terms originated and to experience what was common place in the printing industry before the introduction of the computer. In the past few years there has been a resurgence and a demand for the tactile nature of letterpress work. Learning the craft of letterpress among typographic studies, outside of traditional book arts programs, is cited by students of graphic design as providing a necessary wealth of knowledge to their typographic education and understanding to the historical relevance. A new set of designers are now embracing what once was old, contemporizing the use of these presses, and giving them new life. The traditions, techniques, and appreciation of the art of letterpress is being rediscover and passed on to new generations of designers. The reemergence of letterpress work is quite a shift from our current instantaneous, immediate lifestyle we now enjoy with new technology, but the importance of slowing down and appreciating the value in taking time in design, layout, and execution of work is something that should not be forgotten. Also combining the old with the new, using photopolymer plates and computer generated designs on mostly ancient, forgotten presses to create meaningful work in the digital age speaks to haptic learning and tactile investigations for design students. This study will address the incorporation of new technology and the historical nature of letterpress work in a typographic design curriculum.

**Maria Rogal, University of Florida**

***Out of the Studio, Into the Field***

In the Design for Development (D4D) initiative design students and faculty work in context with marginalized people to help them communicate their own ideas and cultures as they make, market, and sell their own products. In this presentation I will share the range of interdisciplinary methods we use to work in context, or “in the field.” I will explain how students develop a more informed design practice and accumulate competencies that help them understand and work in complex global environments. The fieldwork students carry out in D4D is an example of how communication designers can collaborate on projects for social, economic, and environmental development, one that can be replicated by designers in other contexts.

D4D’s fieldwork includes ethnographic methods drawn from cultural anthropology: semistructured interviews, observation, shadowing, and other interactions. Through an intensive and immersive experience, designers learn about the contexts in which project partners and target consumers operate. They expand on and apply their prior knowledge, thereby learning more about design and design processes. They develop global competencies that bear on both design process and outcomes: learning to listen, observe, and interact with others; working with interdisciplinary teams; documenting and analyzing fieldwork findings to support the project; and empathizing with diverse cultures, peoples, and environments. They gain an understanding of communication in multilingual environments, and they learn to work through communication problems. In short, they gain a more informed design practice, one in which they understand that their work has implications for producers (partners/clients), users, and cultures.

**Gary Rozanc, Columbia College Chicago**

***Instituting an Inquiry Based Design Pedagogy***

Design students are often given prompts to create artifacts as a random solutions to theoretical problems. By assigning the solution—posters, books and websites—we ignore the critical step of determining if these artifacts are the appropriate solution. Design educators must shift from assigning solutions to problems. Instead educators must assign the observation and analysis of problems.

Creating a website and mailer for a daycare center needing increased enrollment is a logical class project. However, the actual need isn’t a website or a mailer, but increased enrollment. What if the problem of the daycare wasn’t awareness, but an uninviting waiting area that limited enrollment? The proper solution in this instance would be creating engaging graphics in the waiting area. This demonstrates the need to assign the observation and analysis of the day care, not readymade solutions like websites and mailers.

To assign problems educators need to use an inquiry based teaching method scaffolded by the observation and analysis of human made systems. Instead of assigning a project to increase bike safety awareness in a pilot course students were assigned the task of observing transportation systems. Through guided critiques of the students’ observations of foot, bike, vehicular and public modes of transportation it was discovered that biking was a very dangerous method of transportation in both urban and suburban areas.

The students’ observations became the basis for both group and individual projects that ranged from the creation of a bike and pedestrian only avenue to a bike centric hotel and diner. Because these solutions grew from research, not pre determined

artifacts later researched to target a specific audience, the outcomes went beyond print and digital media and became a true expression of design thinking.

By teaching students how to research and understand problems, not close ended solutions, they are better prepared to create the best solutions to solve a community or organization's needs.

**Sherry Saunders, Lamar University**

### *Coding as Craft?*

What does it mean to be a graphic designer in today's digital age? As job titles such as visual designer distinguish themselves from graphic design and advertising firms specialize in digital promotions, how are we to teach our students about craft? Is it more important to understand how to wield an Xacto blade or HTML5?

Graphic design professors are tasked with teaching the fundamentals of typography, layout and composition as well as develop an understanding of the technological tools available today, such as the Adobe Creative Suite. As if that weren't enough, students are to become skilled critical thinkers and problem solvers, so they can navigate this complex field that is always in a state of flux. When I consider my role as an educator, I am struggling with how to incorporate coding into more projects. In a program with just one web design course, I try to incorporate more digital assignments into other graphic design courses such as creating animated gifs, youtube skins, and wire frames for apps. I also build in discussions and writings that reflect on these changing mediums. These assignments incorporate digital media, but do not involve coding. I'm now considering whether or not students should be coding in every class, or is it something students should learn on their own?

This paper considers the role of coding as craft as a new pedagogical model in teaching graphic design. Some schools have separate majors for interactive and graphic designers, but as digital media becomes more prevalent in the field of graphic design, can we ever completely separate the two? Can the emerging graphic designer afford to be print and layout specialists, or will they be pushed out of their own discipline?

**Brooke Scherer, University of Tampa**

### *Consciously Creative: Where Sustainability Meets Design Education*

In a time of great change, where societal focus has dramatically shifted toward ecofriendliness and the sustainably conscious, graphic designers find themselves at the cusp of a new revolution that bears extraordinary potential to change the world.

Being key contributors in helping guide populations into this new and exciting age, our primary responsibilities have shifted substantially toward promoting the use of renewable energy and sustainable printing materials, as well as for the design and creation of more ecofriendly products. As educators helping guide future professionals toward a more environmentally mindful future, the goal of this presentation is to explore various methods of teaching sustainability and sustainable design within the classroom. Topics and subject matter aim to provide pedagogical tactics, assigned projects, and methods of promoting active involvement between student and the community as experiential learning tools.

**Joshua Singer, San Francisco State University**

**Stacy Asher, University of Nebraska**

***Crafting Stories about Water and the City: Transdisciplinary Design Collaboration for Social Impact and Pedagogical Methods***

The trends in graphic design are proving that the practice is no longer limited to simply layout, type, and discrete artifacts. Critical and divergent thinking, transdisciplinary collaboration, as well as the call to design working for social good (rather than the expectations of consumption) are reshaping and expanding the practice. How can graphic design education, and specifically curriculum, engage students in these new practices as well as create experiences resulting in real outcomes outside of the idealized confines of the classroom?

In this presentation we will present the collaboration of students in the Advanced Graphic Design class at San Francisco State University and Arup, a world leader in engineering, design, and planning. Students worked with Arup's research group Foresight and Innovation whose work raises awareness about the major challenges affecting the built environment and to think more creatively about the long term future. Over the course of the semester students explored the issues and social implications of water in the city of San Francisco. Utilizing design research exercises, prompts, and direction from Arup students created a small published "Thought Piece" for internal distribution to Arup's engineers. This collection of visual narratives articulates for Arup's engineers water's diverse social and cultural impacts in the urban environment, raising awareness of important issues that are not typically considered in their discipline or processes.

In this presentation we will give an overview of the project and it's incorporation of design research methods, social engagement, and transdisciplinary collaboration with industry. We will give examples of student work, workshops, and review the successes and failures as well as the next steps for developing and expanding this model of curriculum.

**Cary Staples, University of Tennessee**

**Neil Ward, Illinois State University**

***Designer Research Game***

The game was designed to foster an understanding of the importance of "Head, Heart + Hand" to the development of design practice by showing examples through time.

Instructors found students were compartmentalizing assignments designed to encourage transference between the natural environment, the history of the discipline and the materials available to visually articulate ideas. During critiques and in subsequent classes, students exhibited little synthesis of the materials that they had been exposed to in beginning level course work. Using inspiration generated in the "MetaGame as Teaching Game" (Sharp, J., Macklin, C., Daer, A., Duncan, S., Nealen, A., 2012) workshop, the authors developed a game model to foster research and discussion within a design historical context. Students generate questions, select work to represent their views and finally compete in discussions to see who can mount the most compelling argument. Students explore the aspects of concept generation, visual composition and technical use of materials (head, heart + hand) through the lens of historical decades. Students who have created materials, played the game and documented discussion as opposed to performing traditional "compare and contrast" analysis, exhibit a better understanding of the material and exhibit synthesis, both visually and verbally in concept as well as visualization.



**Cyndi Wiley, Grand View University**

***Empathy, connectivity, authenticity, trust, and spirituality: A pedagogical framework for interaction design***

Relationships are synergistic. Relational theories describe how we create and sustain relationships and take into consideration our own experiences, our own social location and include broad cultural signifiers. Spirituality is defined in this paper as, "... the diverse ways we answer the heart's longing to be connected with the largeness of life ..." as stated by Parker Palmer. Part of our development as people is to learn about power; our own power, and others' power. This study offers the combinational addition of Relational-Cultural Theory and the Connectivity Model (which uses Activity Theory and Kansei Engineering) to the spectrum of interaction design through the e-CATs framework. Since interaction design is about designing mediating tools for people and their subsequent behaviors, particular attention is needed into establishing and maintaining relationship between designer and audience.

Relational-Cultural Theory pushes against typical patriarchal structures and values in the United States. These typical "power over" values/structures include men over women, whites over blacks, logic over emotion, provider over nurturer, teacher over student, and so on. Relational-Cultural Theory seeks a flatness of power. It creates a sense of shared power, or "power with" others. This idea of shared power can lead to collaborative creation in interaction design to produce useful, good designs that are pleasurable in which to interact. Within the classroom, shared power between student and instructor leads to mutual respect, trust, and greater student engagement.

Empathy, mutuality, authenticity, and spirituality, are essential in recognizing our own limits and strengths in connection with others. Building trust requires a mix of all of these tenets, as well as evolution through conflict. Interaction designers and educators can move toward co-creating an inclusive theory for this discipline by becoming vulnerable and sharing power with the people with whom they design interactions in industry, by first designing with and sharing power with students in the classroom.