PROCEEDINGS

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1.1 To Develop Students' Design Skills, You Must Strengthen Their Critical Thinking Skills

John O'Neill
University of Minnesota Duluth

Abstract

By its very nature, design education for graphic design students employs critical thinking. From examining the goals and objectives of the project brief, developing concepts and strategies, building visuals and developing the final solution, the design process for students requires them to become critical thinkers. Each of these tasks enable students to gain perspective, have empathy and come to conclusions regarding graphic design theories and principles, which are all signs that they are indeed improving their critical thinking skills.

However, critical thinking may not be achieved at a high level when students do not attain the desirable depth and broadened scope when working on a project. With the complexity of graphic design, the critical thinking components could become an afterthought as students juggle their understanding of the technology, with meeting project requirements, while also staying on task with deadlines.

In these cases, students can become solely focused on the doing, not achieving the level of thought that would provoke questions that lead to well thought out and executed solutions.

This presentation will discuss how teaching methods and strategies branched from the Paul-Elder Model of Critical Thinking will further develop those skills as students proceed through a project. It will also illustrate how this model will provide structure for learning, while helping students generate solid concepts. This is all to assist students in reaching the desirable depth and broadened scope of their work.

The presentation will provide an in-depth examination of the Paul-Elder Model of Critical Thinking and how it improves students' critical thinking skills. It will also give visual examples and outcomes of methods and strategies that install the model into practice, developing an effective environment for learning.

Critical Thinking
within Design Education

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All educators within higher education, regardless of the field of study or discipline, strive to teach students critical thinking within the context of the courses they teach. This is no different for graphic design educators like myself, as there are a lot of things that we have to teach within the subject matter of graphic design. As graphic design educators our success lies in teaching all of the multiple layers of theory, principles and technology, while also showing how all of those things work in professional practice.

As students go through the design process for a graphic design project, do they truly strengthen their critical thinking skills? With all of the multiple layers of theory, principles and technology we know they are gaining aspects of critical thinking. After all, isn't any design process a critical thinking exercise?

The definition of critical thinking as noted in the book, Learning to Think Things Through: A Guide to Critical Thinking Across the Curriculum, is defined into three different parts.

1 **Developing questions**
Better understanding of a topic or issue in detail, comes from answering a variety of in-depth questions. This enables students to see the topic or issue from different viewpoints, giving them the ability to problem solve by coming to a strong conclusion.

2 **Answering questions with the use of reasoning**
A student's understanding will not be complete until they use their reasoning skills to evaluate the answers to the questions they develop. It is only then they can come to a conclusion that broadens their understanding of the topic or issue.

3 **Believing in the results of our reason**
To come to a strong conclusion, students must believe in their reasoning. If not, their understanding of the topic or issue will be superficial.

With this definition, the paper will outline the Paul-Elder Model of Critical Thinking, that has helped me instill strong aspects of critical thinking into the subjects within graphic design that I teach. Using this model in my teaching leaves me with no doubt that students are improving their critical thinking skills in order to develop as a graphic designer. They do so first by pinpointing the roadblocks that prevent students from attaining critical thinkings skills. This enables them to outline methods of using critical thinking throughout the process, start to finish. All of the methods are based upon the Paul-Elder Model of Critical Thinking.

The model was developed by Richard Paul, Director of Research and Professional Development at the Center for Critical Thinking and Chair of the National Council for Excellence in Critical Thinking, and Linda Elder, educational psychologist and a prominent authority on critical thinking. Elder is President of the Foundation for Critical Thinking and Executive Director of the Center for Critical Thinking.

The Foundation for Critical Thinking has valuable information and resources about the Paul-Elder Model for teachers of all disciplines and grade levels, from K–12 to higher education.

About Paul-Elder Model of Critical Thinking
The Paul-Elder Model has two main components:

Elements of Reasoning
These are the tools we use to think things through. Everyone, regardless if they know about the Paul-Elder Model of Critical Thinking or not, uses these elements to make decisions. Being aware of the Paul-Elder Model enables students to know how to better use the elements in order to come to sound critical decisions.

Richard Paul and Linda Elder define the elements as follows:

All reasoning has a PURPOSE:
State your purpose clearly.
Distinguish your purpose from related purposes.
Check periodically to be sure you are still on target.
Choose significant and realistic purposes.

All reasoning has GOALS and OBJECTIVES:
Take time to clearly and precisely state the question at issue.
Express the question in several ways to clarify its meaning and scope.
Break the question into sub questions.
Identify whether the question has one right answer, is a matter of opinion, or requires reasoning from more than one point of view.

All reasoning is based on ASSUMPTIONS:
Clearly identify your assumptions and determine whether they are justifiable.
Consider how your assumptions are shaping your point of view.

All reasoning is done from some POINT OF VIEW:
Identify your point of view.
Seek other points of view and identify their strengths as well as weaknesses.
Strive to be fair-minded in evaluating all points of view.

All reasoning is based on DATA, INFORMATION and EVIDENCE:
Restrict your claims to those supported by the data you have.
Search for information that opposes your position as well as information that supports it.
Make sure that all information used is clear, accurate, and relevant to the question at issue.
Make sure you have gathered sufficient information.

All reasoning is expressed through, and shaped by, CONCEPTS and IDEAS:
Identify key concepts and explain them clearly.
Consider alternative concepts or alternative definitions to concepts.
Make sure you are using concepts with care and precision.

All reasoning contains INFERENCES or INTERPRETATIONS by which we draw CONCLUSIONS and give meaning to data:
Infer only what the evidence implies.
Check inferences for their consistency with each other.
Identify assumptions which lead you to your inferences.

All reasoning leads somewhere or has IMPLICATIONS and CONSEQUENCES:
Trace the implications and consequences that follow from your reasoning.
Search for negative as well as positive implications.
Consider all possible consequences.

Standards of Critical Thinking

This is the set of tools we use to examine our thinking. This is also known as the Universal Intellectual standards which Richard Paul and Linda Elder state must be applied, to measure and examine student's reasoning regarding a problem, issue, or situation.

Clearness

If a thought is unclear, it cannot be determined whether it is accurate or relevant. It is important for students to be clear on their thought processes and the questions they are stating. This will provide the best conclusions possible.

Accuracy

A statement can be clear but not accurate. This is why strong research skills are needed to gather true, well established, confirmed and corroborated information to base their conclusions on.

Importance, Relevance

This standard measures whether the thinking focuses on what is important. It also helps define how relevant, central, and important the thinking is for the problem at hand.

Sufficiency

A topic or issue has to be reasoned out enough to come to a reasonable conclusion.

Depth

This standard helps measure and take adequate account of the questions, underlying theories, explanations, and the complexities of the problem at issue.

Breadth

To gain several viewpoints and understand how the problem at hand relates to other issues, it is important to take into account other perspectives and other aspects of the context.

Precision

Critical thinking cannot be precise if there are not enough details in the information to pinpoint an accurate conclusion. This happens when conclusions are satisfied without getting down to specifics.

The Study of the Paul-Elder Model of Critical Thinking

As much as any design process strengthens students' critical thinking skills, there are factors that could delay their growth as a critical thinker. By using the model, the factors that delay students' critical thinking skills can be addressed by meeting their learning styles.

Poor time management skills.

There are times when students miss sub due dates and critiques, preventing them from exploring in-depth the assignment at hand. When this happens students narrow in on a direction without any perspective or critical thought, leaving their solution without a clear meaning.

Trying too hard to follow directions or feeling a sense of doubt; thereby preventing them from thinking critically about the problem given.

In this case students are too concerned with making "what the professor wants" or believing there is only one conclusion they must arrive at to successfully complete the project.

Learning software, computer programming and other technology.

Students are so focused on grasping technology that they do not have the mindset to think critically about the design process and the possible solutions that may come to them.

Not enough desire or curiosity to explore different ideas or to experiment different possibilities.
With students having employment outside of their studies, while also maintaining relationships with friends and family, students are less likely to be curious and willing to experiment different possibilities.

Eager for the final results.
Students may not understand the value of the design process or underestimate the steps involved to develop an effective design solution.

My Experience Teaching Critical Thinking
It was not until I began to learn and teach the Paul-Elder Model of Critical Thinking, that I was assured that students were indeed becoming better critical thinkers, not only as graphic designers but in their growth as well-rounded people.

I was first exposed to the Paul-Elder Model of Critical Thinking when I was developing and teaching courses within the Chowan University Critical Thinking Program as a Visiting Professor of Graphic Design. Each student at the university, regardless of their major, had to take lower level courses within the Critical Thinking Program. Students also had to take upper level courses that focus on learning critical thinking skills within their major.

While at Chowan University, I was tasked with developing a critical thinking course that examined racial and ethnic stereotype imagery within mass media. The course used the Paul-Elder Model of Critical Thinking to research and evaluate stereotype imagery in its context. It was also my responsibility to instill methods of improving critical thinking skills within the graphic design curriculum. Although I am now an Assistant Professor of Graphic Design at the University of Minnesota Duluth I still use these methods, which arrive from the Paul-Elder Model of Critical Thinking.

I still use these methods because I have found the best way to develop students' design skills is to help them become better critical thinkers, because it makes them more independent thinkers and problem solvers.

Methods Examples

Example 1
Idea Mapping Method
Idea Mapping uses the elements of reason to ask a series of questions that are necessary to produce complex design projects. Each set of questions are based on each element of reasoning. The goal of the questions is to prevent students from having tunnel vision as they develop ideas for their projects. Without critical thinking students do not have the framework to examine their ideas in the context of their own skills, technological abilities and client/target audience, which may cause their tunnel vision. The Idea Mapping Method can be put in place to examine their ideas from different perspectives.

Like a map to guide a student's path, this method maps out the creative process and makes sure there is no stone left unturned to successfully execute the project.

Here are a few questions from the Idea Mapping Method:

Purpose
What are my goals and objectives for this project?

How can I keep the goals and objectives in the forefront of my line of thinking to have successful results?

Question at Issue
What are the problems and issues that I am addressing with this project?

What kind of difficulties could I encounter throughout the process?

Information
What kind of data and facts do I need in my research to attain the information I need about the subject matter?

What kind of information do I need to know regarding the medium and tools that I am using to complete the project?

The questions can change depending upon the course, project or level of students.

What are the objectives when using the Idea Mapping Method?

Self-evaluation
Enables the student to evaluate their ideas by thinking ahead of time of all the things that need to be considered before the research, design and production stages begin.

Knowing the roadblocks ahead of time
Gives students a clear idea of what is possible before they execute an idea within the context of their design skills, technical abilities and time to complete the project.

Project brief
When they complete the Idea Map they will have an in-depth and clear project brief to start the project successfully.

I have found this method most useful when students are assigned a project as they are learning new technical skills, therefore not knowing the capabilities or limitations of the technology they are using. This is why I often use this method to kickstart a new project in a beginner web or interactive course where students are learning HTML/CSS for the first time. I do this to give them context to the design problem that the project is presenting and factors that students may not be aware of due to their lack of experience. This gives them the means to be confident in problem solving using the skills they currently have.

I also use this method when students undertake a project that will take several weeks to complete. As students brainstorm for large projects with multiple steps, they will examine ideas by asking the questions that the method provokes.
This is to be aware of the circumstances that may occur as they go through the design process.

Example 2
Answer Generator Method

This method can be used in two different ways:

Update Questions

When students are asked to turn in a project or told to give a status update regarding their progress on an assignment, they have to answer a series of questions.

Critique Question

To provide more in-depth critiques, each student is asked to post their work on the Learning Management System, in this case Moodle or Blackboard.

Students are asked to post comments about each of their classmates' work in the form of a question. Once a student receives a question, he or she will respond. Other students can also help answer the question.

What are the objectives when using the Answer Generator Method

- The questions reflect on what students have done.
- The questions enable students to know they have the same issues as one other.
- The questions help students to collaborate and problem solve issues.
- Gives the professor insight to the students' understanding and execution of concepts and design principles.
- Gives students a platform to express concerns.
- The questions keep the conversation going.
- The questions give each student a voice while improving their critical thinking skills.

I have only started using this method this past spring semester of 2015 and am very happy with the results it has provided. I used this method at the start of class periods as students settle into their seats. I verbally ask them a question that would not only provide an update, but make a critical connection to what they learned about the principles they are currently studying and/or the content from other courses they have taken in the past.

I also used this method to provide a spark in their minds. I often asked them what was the best work of art or design they encountered that week. I asked this question repeatedly to instill in students to be more observant in their daily lives and ask key questions about the things they see. This is in attempt to become visual thinkers with a critical eye.

I also found this to be an effective method of critiquing that involves all students, including the students who are often quiet. This method is most effective when students are required to use the elements of reason and the critical thinking standards in the questions they develop for each piece they are critiquing. From my experience I am often happy with the amount of in-depth critiques that occur among the students.

When I used this method for critiquing I asked the students to start by posting their work and questions onto the Learning Management System. Depending upon the size of the class I give them 45 minutes to an hour to develop questions for one another. Once the questions are finished I opened the discussion up where the students have a verbal face-to-face discussion in a large group setting. This a time that students answer the questions among each other.

Conclusion

Since learning about the Paul-Elder Model of Critical Thinking I have heavily used it in my teaching because it clearly defines what critical thinking is and provides a structure for students to better instill critical thinking in the subjects they are learning. For this reason I encourage other graphic design educators to learn about the model.

Learning and gaining critical thinking skills is important to all disciplines, but especially for graphic design education given that critical thinking is at the root of design thinking. It is understood by graphic design educators at large the importance of critical thinking to a student's education, as it unlocks their abilities to solve complex design problems by giving them different point of views in all aspects of the design process. Moreover, it will not only help them grow as designers but as people who can make strong personal decisions that would impact their lives and people around them. It can also provide them with the means to be more socially conscious of the behaviors and attitudes that shape society. If students are more socially conscious they will have insight to how they can use design to make a positive contribution to the lives of people.

Citation

Richard, P., & Linda, E. (1997, April 1). Retrieved from http://www.criticalthinking.org/pages/the-elements-of-reasoning-and-the-intellectual-standards/480

1.2 Preparing Future Designers with Critical Design Thinking from the Impact of New Technological Shifting

Young Ae Kim
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Abstract
Everyone is busy. The availability of technology is in our hands and everywhere. It allows gathering in- formation and executing skills in much faster and easier than ever before. Kinzer and Leu (1997) demon- strated positive effects of technology on learning in contents area and learning to use technology itself. In addition, the rapid development of social medias has enriched communication form into a different level. However, we often distracted by technology regardless of its purpose.

Graphic design education is being challenged at unprecedented levels to address the continued technolog- ical shifting of new platforms and processes. Student's responses in terms of design thinking process are various each year, for instance, design concept developments and visual interpretations are often based on shallow perception even with research.

Some questions might follow from this:
What are the new forms of communication from social medias?
What is the cause of distraction of thinking process?
How can a design educator stimulate a deeper level of design thinking?
How can critical pedagogies confront seductive trends?
How can a design educator help students marrying research and design thinking?

By demonstrating an ideation method, "Word/Visual Matrix" I use in senior/graduate level courses, I will discuss the relationship between form and contents, and how it can influence the thinking process into the next level. By explaining some example of students' ideation processes with "Word/Visual Matrix", I will discuss the importance of the questionnaire communication to lead the next level of design process. My research focuses on followings: 1) how does the technological shifting of new platforms and processes impact graphic design education and new generation, 2) what new pedagogies are needed to prepare stu- dents with critical design thinking and match the contemporary circumstances, 3) How can we, as a design educator, enrich the disciplinary objectives and cultivate a deeper interculturality in the design process by engaging with diverse meanings.

1.3 Design Thinking and Self-Development: A Case Study

Meredith James
Portland State University

Abstract

"Design Thinking" commonly refers to a set of cognitive activities one engages in during a design process. These activities are regularly employed by design practitioners to external problems - often in the role of mediation between ourselves and our environments, objects and information ("material culture"). A designer's efforts are intended to solve the problems of others, but this externalization is only one half of the equation. Rarely (specifically in the West) is such energy and focus turned inwards - mastering the self first.

Students from Design Thinking (ART 111, Fall 2014) at Portland State University investigated how specific tactics and tools of design (including divergent thinking, mapping, ethnography, "wicked problems," systems thinking, process) augmented self-discovery and awareness through their own lived experiences. Tasked with addressing a minor personal dilemma, students learned to apply Design Thinking strategies to meaningful outcomes. The goal was not to solve the issue at hand, but to understand how to change one's relationship to it through a series of cognitive, design-based explorations. By applying Design Thinking to one's own lived experience, students become aware of how to approach problems first for their themselves, while also broadening and deepening their understanding of complexity.

DESIGN THINKING + SELF-AWARENESS

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Abstract

"Design Thinking" is both a process and a set of cognitive tools used in acts of design. These activities are regularly employed by design practitioners to external problems, often in the role of mediation between ourselves and our environments, objects and information: also known as our "material culture." As IDEO and Stanford's d.School significantly shaped the concept of design thinking (essentially defining it as a structured process with emphasis on empathy, participatory design, and rapid prototyping), their concept has since broadened in scope and application to efforts beyond a product design / business application, and well beyond their doors. The essence of design thinking as it is used outside of design-proper, is to empower individuals and groups with a set of tools to affect change from within – moving design away from a colonialist activity to a native one. It is through this avenue that I propose we extend the concept further. Using design tactics in a native environment is a powerful idea. First, we are by no means limited to the tools and tactics currently associated with design thinking (divergence for example), but beyond this, a question arises that fundamentally challenges the existing paradigm – if we offer design thinking to non-designers, why not apply the same techniques to our own individual lives – what could be more native?

Introduction

If one is not familiar with the different methodologies of Design Thinking, the University of British Columbia's Sauder School of Business has an accessible introduction, naming the major processes as they have been defined by IDEO, Stanford, CABE, and others (Sauder, n.d.). The most notable processes come from IDEO, the Design Council and Stanford's d.School:

IDEO: Hear, Create, and Do; From a human-centered approach
Design Council: Discover, Define, Develop, and Deliver
Also known as the 'Double Diamond'
Stanford's d.School: Empathize, Define, Ideate, Prototype, and Test

This emphasis on methodology is the first core trait of Design Thinking. Although the process is loose, it has been refined and developed to apply to problems in every social sector.

A second core trait of Design Thinking is latent within the processes themselves, that of a contingent response. Design Thinking demands that *any* outcome, is contingent upon the quality of the various phases of the process that came before it, especially research.

Since the rise of Design Thinking, the concept has found widespread implementation notably in both the business and education sectors (IDEO, n.d., Brown, 2009, Brown and Tz, 2009). The process is easily digestible and accessible, while being flexible enough to adapt to a variety of content.

Methodology

Students taking ART 111: Design Thinking come from departments all over campus. The course has no prerequisites, and expects students to have (sometimes widely) varying abilities regarding creative problem-solving, cognitive blocks, biases, contextual awareness, and visualization. It is these exact tools the course is meant to address. Students also have generally had little to no exposure to design outside of commercial or pop-cultural applications, they do not yet understand that design is a cognitive activity.

Setting Up the Tactics

Before we address solving any particular problem, we spend some time discussing the nature of problems themselves. The first project is centered around the concept of a 'wicked problem' as defined by Rittel and Webber: a large, complex, contingent problem that has interdependencies with other problems (1973). Social problems are often those of the wicked category, from racism to poverty to inequities in crime. Many contemporary design problems are of the wicked category. And, there are many different influences into a wicked problem, often with opposing interests or perceptions. By assigning each student to map a wicked problem in its entirety, they are confronted with how significant a role context and bias play in their decision-making processes.

Each student chooses his or her own wicked problem to develop, and are regularly grouped into small clusters to get feedback. I intentionally leave the groups to chance and change them, so a variety of perspectives and backgrounds are looking at the work. I have had criminal justice majors and students interested in social justice responding to Ferguson.

With the wicked problems project, students are required to sit with discomfort. It is an awkward space to be confronted with something daunting and complex, while having never had any introduction to problem-solving tactics, let alone a formalized methodology.

Questions the Project Raises

The single most common theme among students is to engage in what is termed 'satisficing' (Simon, 1996 and Adams, 2001). Assuming their first pass is good enough, students stop short of fully mapping the problem. When challenged to go further, the immediate reaction is that their particular problem touches everything, leading to an internal sense of futility. The task is impossible so why bother. Stopping short and giving up are cognitive traps to be directed away from. Social and cultural dilemmas are in fact, large and contextual, but can become familiar with commitment to the mapping process.

Other cognitive challenges the project induces center around missing categories and biases based on what 'should' or 'should not' be included in the mind of the map maker, again leading to an incomplete map. These two pitfalls are central to one's perception. Even in defining their wicked problems, biases emerge. From "the destruction of the ecosystem" we immediately notice a value assigned to it – destruction comes with connotations. This is not to say that man's efforts are not detrimental to the ecosystem, rather it is to point out the key role language plays in betraying our biases and motives, and how those biases can limit our ability to see something more fully – especially from contradictory or controversial perspectives. When mapping a topic students are critical of, the inherent bias is to only map out the perceived 'problem' aspect of the wicked problem, ignoring any positive influences.

For example, during the winter term, three students chose to map out Genetically Modified Organisms (GMOs). In all three cases, there was a reluctance to include the full spectrum of what GMOs are, as well as the full spectrum of agricultural methods. GMOs as an invention still live within the contexts of agriculture and food production at large – of which there are many other approaches. In all three cases (as is also common) students ignored historical information that led to the current state of affairs, answering how this particular problem evolved. Assuming a problem to be fixed and unchangeable is another bias we address. One student working on mapping junk foods like Doritos and soda discovered how these foods became ubiquitous by identifying their origins. Sometimes the methods for solving such problems involves taking steps backwards. Other key topics related to the wicked problems project involve categorization and hierarchies. Overall organization of the maps difficult, what branches off of what, what are the umbrella categories, are other opportunities for cognitive exercise.

The wicked problems project is the prelude to working on a personal dilemma. We carry the following themes forward:
Visualization techniques;

Avoiding satisficing and futility (ie. agency);
Sitting with the discomfort of the unknown;
Self-reflexivity (alerting to bias and perceptual influences);
Divergent thinking to combat conceptual blocks;
Contextual awareness.

Project 2: Self-Awareness

In the second project, the tools listed above are applied to a formalized design thinking process. Different organizations use different methodologies (as mentioned above), but there are similarities among them. The core concepts of design thinking are essentially human-centered design (HCD), empathy, and a research-driven methodology. HCD is the terminology for locating people at the center of the process and outcomes. This can be accomplished several ways, such as participatory design, ethnographic research, audience testing, etc. They key is to involve the people who are directly affected by the problem at hand (and any suggested solutions) at multiple points in the process. Design often runs the risk of being a neo-colonialist activity, we often assume as designers we know more about others' problems than they do. By involving key persons in the process, and vesting them in it, agency exists for the audience, and the risk of colonialism drops. The second core attribute regarding design thinking relates to empathy. We must genuinely care about others and their welfare. Design thinking is not an approach for the apathetic. And third, the use of a research-driven methodology. There are various ones out there, from IDEO (Maer and Lima, 2014, Brown, 2009, Brown and Tz, 2009) to Stanford's d.School (n.d.) to the UK Design Council and the Double Diamond (n.d.). All of these are quite similar, the use of any one of them is a good foundation for the process.

There is a key modification I make to the core concepts, where I differ greatly from the approaches listed above. And that is one of context. I disconnect the core concepts from commercial applications to focus more on the intrinsic value of 'Design as a discipline.' My particular emphasis is on the development of the educated person (Cross, 2001 and Cross 2006). Learning solid problem-solving techniques and awareness of one's own cognition are tools that will serve any student at any point in their lives. How those tools get applied is up to them.

Again, the project itself is more of a prompt for discussion than a matter of creating a final artifact. However, differing from the first project, this one is more overtly aimed at self-awareness. Two of the key objectives are to define who they are, and how they avoid or solve problems in their own lives. If design thinking is a problem-solving mechanism, the quality of the thinking bears direct influence. None of the students I have taught yet have ever spent dedicated time on a problem in their own lives. Because the content

is unique to them, and of personal interest, it is easy to maintain commitment. And they surprise themselves regularly. I make no criteria of solving the problem, as it is about the process, not the outcome. The classroom has to become a safe space where students feel comfortable being honest, and sharing vulnerabilities with each other and me. I do frame the project requirements as selecting a personal dilemma that they are comfortable discussing, however, even a seemingly benign problem places students in a vulnerable position. Empathy is essential. Group trust is essential.

Underpinning the project is a theme of ethics. Students investigating their own problems are at any point free to abandon or course-correct. Design runs the risk of being a neo-colonialist activity when a designer presupposes to know a problem better than those whom the project directly affects (Pruitt-Igoe, 2011). By involving others in the process, vesting them in it, agency exists for the audience and the risk of colonialism drops. We must genuinely care about others and their welfare. An intimate understanding of the complexity of one's own problems augments empathy when working on the problems of others.

There are multiple outcomes involved in this project, all of which enhance self-awareness. First, how students are shaped by their own perceptions, and the role these perceptions play in thoughts, beliefs, words and actions. Second, the class confronts conceptual blocks head on. Third, students take ownership of their own roles in allowing a situation to continue, or in actively changing it (agency). Fourth, the project is another prompt for students to sit with the discomfort of not knowing the outcomes in advance, and allowing the research and process to illuminate them. Fifth, it is an opportunity to work with various research tactics, and learn how to find quality information. Sixth, the beautiful moment when students realize that a well-formed problem statement is almost identical to the solution statement. Student A identifies the following refined problem statement: "make significant strides towards changing my behavior/routine and learn to adapt to new situations" – the problem and solution are nearly identical. Seventh, and perhaps most important, is in answering one of the most crucial questions of any design practice: *who or what needs to change, if anything.* Is it the behavior that must change, the outer circumstance (Norman, 2002), or is the best course of action to let things be as they are?

Responses from students themselves indicate the thought devoted to such topics. Student B: "I realized that the project was not only focusing on my inability to stick to a budget, but instead catered to an underlying pattern of excuses." Student C: "This not-so-proud realization was a definite eye opener. My issue hadn't changed, I still needed to get to bed at a decent hour, but now I had some reason and direction. It was time to get to work." These comments are few of many and again speak towards the challenge

issued by Cross to shape design education as a means of augmenting student development (2001, 2006).

At this point, it is important to note that the particular methodology we use in the course is only a base. Methodologies themselves influence outcomes, and because of this students are exposed to a variety. We use one, but they are informed of others (Dubberly, 2005). Additionally, the documentation, the research, the visualizations students conduct to organize and learn are also unique to the individual and problem itself. For example, each term, a small portion of the class chooses very functional problems like transportation or budgeting or learning English. The majority however, choose qualitative, subjective problems that may or may not be problems for their classmates. We institute a cardinal rule of "no solving someone else's problem" which specifically means, no advice. Class discussions and critiques are not about what someone should or shouldn't do, it is up to the individual student to make those decisions as they quickly become experts on their own topics. What peers can offer is process-driven: highlighting biases, noting holes in the research, or documentation options. When documenting, again models are offered, but each student will direct, alter, modify or abandon different methods as appropriate. Context has such a crucial role in all of this, the particular design student, their particular problem, the current time and place in which the problem exists. A formula or formulaic approach would quickly squash all nuance. So each student, their project, their research, all allowed to be unique.

The course content is cumulative. Having spent time on understanding the complexities and contingencies of problems (first project) as well as a formalized, base methodology to solve them with (second project), students can then take what they've learned and apply design thinking concepts to external problems. But from a more ethically grounded, self-aware perspective. For consistency and repetition, we use the same process for project two as for project three. Students are familiar enough with the process at this point, that they can start to regulate and manipulate it.

Outcomes

The most successful outcome of ART 111 is when a student pulls me aside to tell me of a deeper, more personal problem that can now be solved using the tools and approach we practiced in class. This has happened several times. I cannot hope for a better outcome, as I believe the single most important aspect of education is in developing autonomy. When students identify lateral application of the class methods, they are solidifying an autonomous problem-solving practice.

Beyond this, several other remarkable outcomes occurred, all leading to a sense of empowerment. I have had students quit jobs, catch unhealthy behaviors early on, and be less judgmental or critical of themselves. In reality, I have had students work with the fear of leaving a destructive work environment for the uncertainty of a new one; become aware of cognitive distortions that have significant impact on their sense of self and behaviors; and acknowledge their own differences either from a place of acceptance or from a place of agency regarding change. To me, these are all positives.

Ultimately, I am responsible for modeling these behaviors for my students. I do not ask of them what I do not ask of myself. I try to be equally as honest, empathic, and forthright. Their trust in me is a requirement for working through the uncertain. A trust that must be earned. ■

Notes

At the request of several peers, I am including my presentation along with this paper. It is just another way of saying what I am saying above, but with the inclusion of Bruce Lee – a master in his own right of both learning and teaching, whose method and process align directly.

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2.1 Yes, include those "Hairy Arms": The psychology and practice of design.

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Lynchburg College

Abstract

What is with all of the hairy arms you might ask? Arming students with unique design tactics and teaching how to elicit the proper emotional responses with their work generates savvy designers with groundbreaking work. The phrase, *hairy arms* is design jargon or lingo that holds a lot of weight when it comes to successfully pleasing the critical eye. This session will discuss the role a designer plays in carefully and strategically using psychological affects and the technique of properly placing an obvious flaw or unnecessary design element for necessary distraction.

2.2 Are Art Directors extinct?

Summer Doll-Myers
Kutztown University of Pennsylvania

Ann Lemon
Kutztown University of Pennsylvania

Abstract

"Agencies have increasingly been positioning themselves as integrated entities with cutting-edge innovation labs and marketing technology. The problem is, that might not be true."

- Chick Foxgrover, chief digital officer, The American Association of Advertising Agencies, 2015.

The 4A's predictions for 2015 include: reorganizations of creative departments; shops adding more programming people to staff; opportunities for agencies in wearable tech; and the importance of deep knowledge of smart devices. (Maureen Morrison, "Is Your Agency Ready for 2015?" Advertising Age, December 18, 2014.)

Given the shifting media landscape, Is "Advertising Design" a relevant course today? Has the Art Director / Copywriter team been supplanted by a Designer / Developer team? Are "traditional" advertising forms dead? Where does advertising end... and graphic design, interactive design, user experience, social media management and/or brand strategy begin? What skills do those entering the workforce need most - strategy, writing, design, coding? What job titles are students training for? What type of portfolio will help them compete and win in the job market?

Paper will present an overview of new courses designed to flexibly address such issues, including an "Emerging Media" course and "The Advertising Pitch: Strategy, Copy and Design", as well as data gathered from creative recruiters and human resources managers at national and local portfolio reviews, and will offer suggestions for tweaking course content to stay industry-current.

"...And so we come to this point. It is the point where the mediums inherently cross over and commercials contain hashtags. Where you can hug a vending machine for a soda or where a POS receipt can contain a recipe with a url." (Stacey Mulcahy. "From Traditional to Digital – the Modern Creative Director." October 18, 2013)

2.3 Intellectual Property Rights in Education
What an educator needs to know about Copyright, Fair Use and Creative Commons

Chauncey Huffman
Pittsburg State University

Abstract
Intellectual Property Rights (IP) such as copyright and fair use, play a role in every educator's lives. However, graphic design educators (among others) face a unique challenge in regards to IP because they not only need to know how to avoid infringement in preparation of class materials, they also need to educate their students about IP.

In order for a graphic design educator to be an effective teacher of IP, they must educate themselves outside of their traditional knowledge base. When investigating this topic, one can quickly become overwhelmed with the amount of information, and the high degree of difficulty deciphering the legal terminology surrounding the topic. Compounding the difficulty of IP issues, there is an abundance of misinformation spread through word of mouth within an educational institution about IP. Sometimes IP policies set forth by an educational institution can be a source of misinformation.

In an attempt to eliminate confusion and reduce the time of individually researching this topic, sets of best practices have been established for various educational purposes such as the Code of Best Practices in Fair Use for Media Literacy Education. However, these guidelines do not cover the use of Creative Commons in the classroom, nor are they specific enough for situations that will occur within the graphic classrooms.

There is a need for a best practices guide for graphic design educators. This paper will share the experiences and lessons learned from creating such a guide. The resulting outcome will be a forum for discussion.

Intellectual Property Rights in Education:
What an educator needs to know about Copyright, Fair Use and Creative Commons

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Intellectual Property Rights (IPR) such as copyright and fair use play a role in the life of every educator, regardless of their amount of awareness on the topic. In the graphics classroom, educators must not only worry about their own knowledge on the subject to avoid infringement, but they must also work to educate their students. Graphics educators have the added burden of separating the IPR rules of the classroom from those of industry because of the fair use doctrine.

There are multiple issues that make IPR in education challenging. First, IPR is very complicated. The Copyright Law of the United States Government is a 366-page document written in legal terminology with loopholes and gray areas. The fair use doctrine, which seeks to protect educators, is similarly complicated with very few areas that exhibit objectivity when attempting to judge the validity of an infringement claim. This makes for a difficult situation for educators that seek to enlighten themselves in the area of IPR.

Second, because of the loopholes and gray areas in copyright law, it is very difficult to get factual answers to infringement questions that an educator may have without the services of a copyright attorney. While there is information available on the subject, typically the only true attempt to be made to answer a copyright question will come from studying case law. Many graphics educators, and educators in general, lack the time commitment necessary to investigate a question to this degree. Therefore, it may be easy for an educator to become disenchanted with the idea of educating himself or herself in IPR.

Third, there are many "word of mouth" myths that exist about IPR that may cause an educator to rely upon misinformation. These myths may center on the idea of a certain percentage or page count that cannot be copied. Another myth may be that as long a source is credited, infringement is not possible. Whatever the myth may be, the result is always the same, misinformation that leads to poor decision-making. Poor decision-making may be in the form of using protected materials without regard for the original creator, or less commonly, not using certain materials for fear of infringement although the use may be permitted.

Lastly, even if educators manage to weave their way through the first three issues, they must also be savvy enough to decipher which laws apply in the classroom, and which do not. The fair use doctrine within copyright law does a poor job of clarifying this issue. Educators must understand that certain areas of IPR do not apply in a classroom. However, when a student leaves the classroom setting and enters industry those rules may apply. This adds the burden to the educator to teach students the differences, and hold them to a high standard within the classroom setting. Once again, many educators simply do not have the available time to make

sure they are adhering to all of the IPR laws. With so many roadblocks to educating students and faculty about IPR, it seems to be a fruitless endeavor. However, there are tools that can be used to help students and educators alike.

Creative Commons

Creative Commons (CC) is a nonprofit organization that enables the sharing and use of creativity and knowledge through free legal tools. Their free, easy-to-use copyright licenses provide a simple, standardized way to give the public permission to share and use original creative work on conditions of the original creator's choice.

Creative Commons can play a vital role in education by allowing true academic freedom. By utilizing CC licenses, educators can control how their intellectual property is used, or if they would like it to be used at all. They can also use content that is owned by others without worrying about copyright infringement, as long as they have followed the stipulations of the CC license. CC helps eliminate the gray areas of copyright and fair use by giving clearly defined licenses.

Taking into account the previous four roadblocks to educating about IPR, CC helps to eliminate all of them. The difficulty of navigating loopholes and gray areas is eliminated when using CC because of the straightforward language in which the licenses are written. Word of mouth myths have no validity when a user can easily fact check the rules of the licenses at www.creativecommons.org. And finally, there is no difference in using a CC license in a classroom compared to industry.

It would appear as though CC has solved the IPR problem entirely; however, there are two substantial problems to this being true. First, in order for a CC license to be followed, the original creator would have to choose to apply one, in lieu of a traditional "all rights reserved" copyright license, which is inherent to all materials once the creator captures or creates something on a tangible medium (i.e. hard drive, canvas, digital memory card).

The second issue is that as narrow as the awareness of IPR may be, it is similarly narrow for Creative Commons. Simply put, if people do not know how to use CC tools, they will not. The solution to both is simple to determine, yet difficult to implement. Spreading awareness of Creative Commons while still educating on IPR and the differences between them is essential to keeping students and educators knowledgeable about infringement and protection.

Best Practices

The Code of Best Practices in Fair Use for Media Literacy Education attempts to eliminate confusion and reduce the time of individually investigating IPR topics. However, these guidelines do not cover the use of CC in the classroom. Therefore a modified guide is needed to help graphics educators and all other educators understand CC and how they work together with IPR. One must understand that CC cannot fix all IPR related issues. Rather, they should be used to augment existing knowledge and practices in IPR. It is not enough to create a best practices guide for CC use because so much material already exists without CC licenses. For content that is not licensed under CC, an individual must be aware of IPR laws. Creating a guide that covers CC and the role that it can play in education, as well as how traditional copyright law fits into the picture, would help educators have an understanding of

the basics of IPR and how to implement effective strategies for IPR education in their classrooms.

Some Right Reserved: Creative Commons (CC) in Education brochure

In an effort to help educators and students alike, a brochure was created at Pittsburg State University that covers CC in education as well as IPR in general. This brochure was created with a CC BY license which means that others can distribute, remix, tweak and build upon the work, even commercially as long as the original creators are credited.

This brochure was not only created to spread knowledge about the subject, but to also promote the use of CC, and the idea of sharing in education. This brochure may be used in other educational institutions, and may even be edited to suit specific needs. The brochure is intentionally brief in content in the hopes that many educators across different disciplines would find it to be an easy read, and therefore be motivated to learn about IPR and CC. The brochure contains links and information for those that wish to learn more on the topics.

To accompany the brochure, there is also a PDF, which is located at the following web address: http://www.pittstate.edu/office/tltcenter/. The PDF and brochure may both be edited and redistributed. Original InDesign files may be obtained by contacting the Pittsburg State University Center for Teaching, Learning and Technology at 620-235-4840 or by emailing Rion Huffman at chuffman@pittstate.edu.

When students and educators understand IPR and use CC, new creative avenues will open for those that may have felt their creativity stifled by copyright law in the past. Opening these avenues will undoubtedly have a positive effect upon graphics education and the graphics industry as a whole.

3.1 Teaching Graphic Design Students to be Leaders in our Age of Innovation and Entrepreneurship

Andrew DeRosa
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Abstract
As fast-paced advances in computer technology are showing no signs of letting up, neither is the output of new applications across a variety of devices and the 'internet of things'. New startups continue to innovate by using new technology to 'disrupting' older ways of delivering products and services. V enture capital, as well as contests, incubators, accelerators, and co-workspaces continue to emerge to support the great number of startups.

I was recently a mentor in a student competition seeking new applications to solve urban challenges using IBM's W atson cognitive computing technology . During welcoming remarks at the competition awards event, Allan Dobrin stated that, "the real jobs will be creating interfaces between humans and technology". Creating interfaces between humans and technology is largely what UI/UX designers do. However, despite being naturally well suited for this challenge design students were underrepresented at this competition. Jessica Alter, in her article, "Why Aren't There More Design Founders?" discusses data indicating "lots of demand for designer founders, not enough supply of them".

As design educators, there is an opportunity to give students the skills and exposure necessary to be entrepreneurs. Using the IBM W atson student competition as a case study, this paper will investigate ways design educators can integrate entrepreneurial leadership into the classroom. Focus will be on aligning projects with the mechanics and culture of startups in a way that compliments the teaching of the core skills that bring designers value and differentiate them from businesspeople, engineers, and others collaborators.

Teaching Graphic Design Students to be Leaders in our Age of Innovation and Entrepreneurship

Andrew DeRosa
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May 2015

Abstract

As fast-paced advances in computer technology are showing no signs of letting up, neither is the output of new applications across a variety of devices and the 'internet of things'. New startups continue to innovate by using new technology to 'disrupt' older ways of delivering products and services. Venture capital, as well as contests, incubators, accelerators, and co-workspaces continue to emerge to support the great number of startups.

I was recently a mentor in a student competition seeking new applications to solve urban challenges using IBM's Watson cognitive computing technology. During welcoming remarks at the competition awards event, Allan Dobrin stated that, "the real jobs will be creating interfaces between humans and technology". Creating interfaces between humans and technology is largely what UI/UX designers do. However, despite being naturally well suited for this challenge design students were underrepresented at this competition. Jessica Alter, in her article, "Why Aren't There More Design Founders?" discusses data indicating "lots of demand for designer founders, not enough supply of them" (Alter, 2015).

As design educators, there is an opportunity to give students the skills and exposure necessary to be entrepreneurs. Using the IBM Watson student competition as a case study, this paper will investigate ways design educators can integrate entrepreneurial leadership into the classroom. Focus will be on aligning projects with the mechanics and culture of startups in a way that compliments the teaching of the core skills that bring designers value and differentiate them from businesspeople, engineers, and others collaborators.

Introduction

Everywhere I look there is a new product or service being innovated by information technology. They disrupting the way business used to be done in the industrial age, and connecting people in new ways through computing. The nature of networks, as pointed out in formulas such as Metcalfe's law, is one of rapid growth. This means there are very big winners such as Facebook and Google — and many startups that either grow quickly or fail quickly; or are bought up by the big winners for very large amounts of money. There is clearly a race happening to be the next big winner in every little corner of the economy that can be taken over by digital networks.

In New York City, government and education realize this and they are making an effort to grow the tech sector locally. As someone who works for the city university I see this through the STEM (Science, Tech, Engineering, Math) funding and incentive programs; a New Media Jobs Incubators and Innovation Lab that popped up as part of a program for schools to develop innovative academic programs to connect to local economic development (Cuomo, 2014). I'm seeing hackathons, boot camps, incubators, and more popping up all over the place.

Some of you might be wondering what this has to do with graphic design. Or, if you're like me, this sounds like what designers do. This leads me to wonder why there aren't more designers involved at the inception of these products and services. Why aren't there more designer foundering startups?

Tech companies do investing in design. Nicolas Felton was hired by Facebook (Labarre, 2011), as were the partners of Teehan+Lax (Maeda, 2015, pg 4). Ji Lee was Creative Director of at Google before moving to Facebook (Rosoff, 2011). John Maeda left his post at the Rhode Island School of Design to join venture capital firm Kleiner Perkins Caufield & Byers (Van Siclen, 2013). So perhaps this trend will extend towards a culture of designers founding tech companies. I certainly see an opportunity to prepare design students for this.

Watson Case Study Competition

What led to this insight was my experience as a mentor to teams of students at the CUNY (City University of New York) IBM Watson Case Competition during the 2014/2015 school year.

To give some basic background, Watson is a cognitive computing platform developed by IBM. It's the computer that famously won Jeopardy. It's basically a search engine that can answer questions posed in natural, unstructured language (Gonzalez, 2015).

For the competition, student teams worked with mentors from the university and IBM for an academic semester to come up with ways to use the technology to solve problems related to either the NYC government or high education (think: better 311 calls, or improved academic advising).

I've practiced and taught Graphic Design and Design Thinking, so this task felt very familiar to me. However, with over 100 student participants (Gonzalez, 2015), besides the 4 students that I invited I wasn't aware of any other designers present.

It occurred to me that this is in-line with the mythology of the start up: the business-savvy visionary and the geeky programmer that start something in their garage. This is the origin myth of Apple and others. It is perpetuated in the film Social Network, and the television series, Silicon Valley. It's demographic was roughly true at the Watson competition. The majority of student finalists came from Marketing, Finance, Economics, and Computer Science or Computer Engineering. The event was hosted by business school Baruch College and technology company IBM.

As a designer I had a lot to offer as a mentor. I understood how to define the problem and solve it by learning what the technology could do, and understanding the users that would be using the new product. As a design educator, I was able to learn a great deal from this event about the culture and requirements for successfully participation. One big takeaway was the general perception that designers are the people you hire later to make things look shiny and pretty and work nicely. Even the more savvy mentors didn't realize that defining and solving this sort of problem from the ground up is what designers do.

However, as designers can we really blame everyone for thinking that's what we do? Our primary job is to create layouts, organize information, and make things look and function appropriately. Since it's inception, the field of graphic design has been a trade that's followed around media technology – from printing presses to our current state of digital communication. As things change we can't seem to even agree on what to call ourselves. Common used terms include visual communicator, communication designer, visual designer, and graphic designer. The list goes on and on. Similarly, we can't seem to agree on the scope of our practice. These terms imply different areas of focus but mean different things to different people. Since our field is so tied to business and technology, as design educators we don't always know which way to go and how to keep up.

Recommendations

In light of this, I am proposing ways to keep up with business and technology, and how to prepare students to participate and lead.

1. *Don't Change Anything*

   Tim Brown from IDEO talks about the t-shaped designer, one with deep vertical knowledge of his area of expertise and horizontal lateral skills that are broad and run across multiple domains (Brown, 2010). I'm suggesting giving design students deep core skills. They should be able to craft pixel-perfect user interfaces; layout complex information; communicate effectively with type, image, and other design elements no matter the media. This doesn't happen in a vacuum, so the deeper we get into teaching core skills associated with the graphic design, the more we will get into laterally related study such as systems design, user experience, and design thinking. What exactly constitutes this changing scope of lateral proficiency can informed by the culture of innovation happening in industry.

2. *Just Do It*

   The competitions, hackathons, boot camps, incubators, accelerators, and co-working spaces out there are inviting people who want to just jump in, collaborate, get their hands dirty, and just do it. Bear in mind, that the winners of the IBM Watson Case Competition were not business or computer science students. The winning group was composed of woman's studies, urban studies, biology major, and accounting majors. Their solution was to help social workers aid children and families. Nobody seems overly skilled to do this. The people that win are the people who have the drive to do it; the people that don't ask permission but rather ask forgiveness. Designers are well suited to define these problems, prototype solutions for them, and present the work to stakeholders. As design educators, I feel we need to get students fascinated in the problem and how to solve it, and get them out there doing it.

3. *Align with the Culture*

   Create projects and an environment that prepares students for the culture of innovation entrepreneurship. Learn to talk the talk and then go walk the walk.

Looking Closer

Let's look at the basic format of this case competition: Teams of three to five students were assembled. They were given a brief of the design challenge. The competition is structured around three big 'milestones' (or due dates). The first milestone was to submit a two-page executive summary. This is followed by a 'boot camp' – an all-day event where teams meet mentors and experts, and refine their idea for a two-minute 'pitch' to a panel of judges who offer written feedback. It was basically a charrette with a venture capital elevator pitch attached to it. The second milestone was to submit a three-page business case analysis and an accompanying one-minute video. This determines the finalists. The third milestone involved finalists submitting a PowerPoint document and giving final pitch to a panel of judges with a maximum of eight slides delivered in five minutes. Winners are announced. Awards include cash prizes, internship opportunities, and placement into another contest with a bigger cash prize are distributed.

Taking this format into consideration there are some key takeaways for design educators.

1. *Teach students to collaborate and work well with others. Create opportunities for students to work in teams.*

2. *Writing an executive summary involves understanding the problem, finding a solution, and writing a proposal outlining why the your solution is valuable. This sounds a lot like design thinking to me. Teach students about user research, finding insights, ideating and prototyping rough early solutions. Teach them to compile the results in a cogent presentation.*

3. *A three-page business case analysis and an accompanying one-minute video was required. Again, this is design thinking: user research, insights, ideating, and prototyping. Furthermore, use frameworks such as venn diagrams, 2x2 matrixes, journey maps, and personas. Frameworks not only inform design but validate it to stakeholders.*

4. *Finalists delivered a PowerPoint deck and a final pitch to a panel of judges. Graphic design students bring a lot to this: wireframing, storyboarding, prototyping, identity design, information graphics, motion graphics, and presentation design.*

Conclusion

It would appear that I am advocating deep, core graphic design education, with the addition of UX/UI skills and design thinking. To a degree this is true, I am also in favor of including drawing, illustration, motion graphics, writing skills, coding, speculative design, and the kitchen sink too.

What I'm really saying is something that I heard at the 'bootcamp': that we are, "training for the jobs of the future that don't exist yet". To a degree, I believe this is done through skills, but I think it's really done through attitude. Teaching students to be nimble and to learn new skills again and again. I'm under the impression that many design educators are already doing this. For this reason I am advocating we: 'keep doing what we're doing', 'build culture', and inspire our students to 'just do it'.

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3.2 Entrepreneurship and Undergraduate Graphic Design Education

Mark Willie
Drexel University

Abstract

"GRAPHIC DESIGN is a popular art and a practical art, an applied art and an ancient art. Simply put, it is the art of visualizing ideas."
–Jessica Helfand, AIGA

My paper will explore a wide range of entrepreneurial opportunities as an integrated part of the education of undergraduate graphic design students in a university setting. I will frame this subject in the context of the balance between theory and practicum in design education pedagogy and design history, and discuss the value of internships and professional development, mentorship opportunities both within the university and with professional design organizations, partnerships with business and marketing programs, and liaisons with university-based entrepreneurial centers.

My approach to the subject will draw upon the structure of and the work by an in-house student- run graphic design agency of which I am faculty advisor, illustrating the breadth and depth of the kinds of projects, both internal and external, that our students are tackling in professional practice at the undergraduate level. These include identity/branding projects, event promotion materials, website development, interactive design, illustration and animation among others.
I will also present case studies of cross-disciplinary collaborations that emphasize the value of design teamwork in a variety of projects and initiatives that go beyond the classroom/ studio and engage a larger community of professionals and stakeholders, such as: a) the design of a mobile autism assessment vehicle with an urban public health program, b) a farming tool-making initiative with design and engineering students in rural southeast Asia, and c) a mapping and photo documentation study of architectural landmarks in underserved urban neighborhoods in partnership with a preservation advocacy organization. These projects and others highlight collaborations and community engagement of undergraduate graphic design students and faculty.

Finally I will address the challenges and opportunities of entrepreneurial "design thinking" as it applies to graphic design education, problem solving, and preparing our graduates to navigate and contribute to an exciting and rewarding professional career in design.

ENTREPRENEURSHIP AND UNDERGRADUATE GRAPHIC DESIGN EDUCATION

Mark Willie, Teaching Professor, Graphic Design

Department of Design, Drexel University

UCDA Design Education Summit 2015 Proceedings

"GRAPHIC DESIGN is a popular art and a practical art, an applied art and an ancient art. Simply put, it is the art of visualizing ideas."
–Jessica Helfand, AIGA.

The professional practice of graphic design in the twenty-first century is collaborative and entrepreneurial driven. One could say that has been true since the term "graphic design" was coined in the mid twentieth century and even before. Graphic designers have always been in a collaborative profession with client-based work: photographers, illustrators, editors, writers, printers, developers etc. But the model has changed as professional practice in design has become more interdisciplinary, increasingly requiring a team-based approach to problem solving.

DESIGN THINKING

In design education, "design thinking" has become part of the pedagogy: Design thinking is a multi-disciplinary collaborative methodology of problem solving that crosses boundaries between many professional practices (design, engineering, psychology, language, science, history, etc.) in the service of holistic solutions (or asking the larger questions?) in search of creative ideas for existing or future projects.

How then does "design thinking" play a role in undergraduate graphic design education? Many secondary schools are already experimenting with "design thinking" in project-based curricula. In undergraduate graphic design education "design thinking" is becoming the language of design: intellectual curiosity, research/writing/conceptualization, exploration/experience/looking/seeing, collaboration/cross-disciplinary opportunities, visualization/realization, inspiration/reference/homage, experimentation/play, language/meaning/nuance, structure/chaos, mathematics/science, art/design history, passion/immersion.

Entrepreneurship and design practice is the convergence of "design thinking" and professional practice. Inherent are the many risk factors involved in creating applications or products or ideas or problem solutions that may be potentially successful in the marketplace. Interdisciplinary collaboration, research, innovation, data visualization, interpretation and implementation, are critical to a viable launch of any creative design/business endeavor. Failure is a real possible outcome.

GRAPHIC DESIGN PROCESS AND PROFESSIONAL PRACTICE

Consultation, fact-finding/interviewing/research; brainstorming/ideation (sketching, doodling); rendering and tightening; review with client/stakeholder; refinement; review with client/stakeholder; refinement; etc, etc. In an ideal design world, the designer(s) would be part of the initial launch of any project/initiative/idea.

The Graphic Design Program in the Westphal College, Drexel University prepares students to inform, persuade, educate, imagine and entertain through the creative use of word, image, and technology. Graphic Design students learn to conceptualize, design, and produce visual communication in a wide variety of media. The curriculum provides a balance between theory and practicum through a rigorous 4 year undergraduate course of study, professional practice, cooperative education and University academic coursework in the humanities, the physical and social sciences, as well as through the encouragement of independent investigation and research. The program is supported by the Co-operative Education/Internship Program, independent study, dual majors, interdisciplinary projects, client-based opportunities community engagement, and study abroad.

THE ENVIRONMENT: URBN CENTER, WESTPHAL COLLEGE, DREXEL UNIVERSITY

The URBN Center at Drexel University is a design workshop/laboratory where the physical plant itself encourages and fosters cross-disciplinary engagement. With an open studio environment, unlimited access to resources and research opportunities, student/faculty design/research collaborations and 24/7 access to a vibrant cultural and educational urban campus and the city, the University is a hub of creative activity.

CASE STUDIES:

Drexel Graphics Group [www.drexelgraphicsgroup.com]

Drexel Graphics Group is a student-run organization sanctioned by the University that acts as an in-house design studio within the Graphic Design Program. The group takes on design work for hire at student rates across the College, University and beyond. A database of over 40 student designers drawn from the Junior and Senior classes is maintained by the group's officers who manage the projects, client contact, proposal writing, follow-up and billing. Participation in the group is yet another entry point into professional practice and offers undergraduate students a chance to tackle real-world projects through the business of graphic design.

Selected Graphics Group Projects

Academy of Natural Sciences of Drexel University
Commemorative Calendar
Cora Rivera, Catherine Lewandowski

A collaboration between a Graphic Design/Photgraphy major a Graphic Design major and the marketing staff at the Academy to create a donor gift calendar. The students had access to the immensly rich collections of the ANS as well as the researchers and curators at the insitution.This collaborative project has won several design recognitions including an AIGA award.

2015 Drexel Fashion Show Graphics
Nick Kramer GD '16, Taylor Murphy GD '16

An integrated system of promotional graphics for the award-winning annual Drexel Fashion Show including print design and stop motion animation projected graphics for the event.

Gershon Benjamin Exhibition Catalogue
Marisa Watanabe, GD '16
A collaboration between a Junior Graphic Design student, the director of Collections at Drexel and a New York Gallery to design a 72 page exhibition catalog on a mid-century American painter. The student was immersed in all aspects of book design and had a real-world client-based professional practice experience.

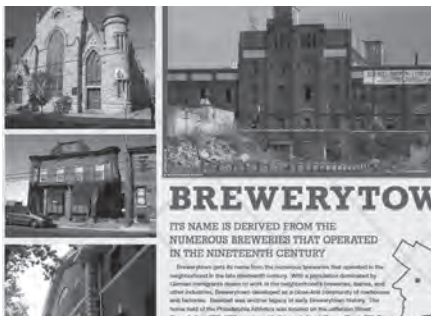
CROSS-DISCIPLINARY COLLABORATIONS

Drexel University, in its position as a major research center, has countless opportunities for cross-disciplinary collaborations.

Graphic Design students work in teams across the University on a variety of projects and endeavors. The nature of all the design professions is centered on collaborations in many settings and relationships. The University, Westphal College and the many entrepreneurial centers housed in the University foster and help facilitate such collaborations.

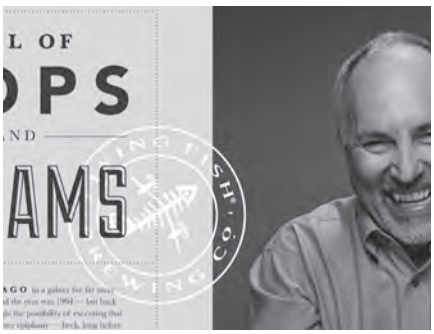
Drexel University SEED Lab (Sustainable Engineering and Entrepreneurship for Development): Thai Harvest Initiative
Engineering and graphic design students develop innovative, low cost rice harvesting tools for remote rural Thailand villagers to assist in enabling the farmers to go beyond subsistence farming into new economic markets. Farmers and their advocates are integral to the design process, and the primary deliverables are open-source pictorial manuals. This empowers the farmers to design, adapt, build, and control each device and beyond.

Drexel Autism Mobile REACH Van
The autism Mobile REACH van contains everything needed for outreach, assessment and research, down to the kitchen sink. The vehicle's custom interior and exterior was designed by a team of students from Drexel's Westphal College of Media Arts & Design, who competed against several other groups as part of a special Architecture + Interiors course that was a collaboration of interior design, graphic design undergraduate students with consultation from Drexel's College of Public Health.



Mapping North Philadelphia
North Philadelphia has a rich architectural and historic heritage dating to the early 19th century. The distinct neighborhoods of the district have been woefully underserved in numerous ways including architectural and historic preservation. The Preservation Alliance of Greater Philadelphia engaged teams of Drexel photography and graphic design students to document and map four neighborhoods. What the students discovered (surprisingly) was presented to community groups in the form of an exhibition.

Rwanda Sunflower Oil Initiative
Rugerero Survivors Village Sunflower Oil Cooperative
Since helping to establish the Rugerero Survivors Village Sunflower Oil Cooperative in 2008, near the western Rwandan village of Gisenyi, the ex;it Foundation and its founder, Alan Jacobson, continue to support the cooperative in promoting the sales of its locally produced cooking oil. The foundation has worked with 50 Rwandan genocide survivors to create this rare opportunity for income-producing activities, with the goal of improving living conditions in the village, including health and education. With funding from Sappi Fine Paper North America, the foundation and villagers collaborated with Drexel Graphic Design students to provide brand identity and marketing materials for the cooperative.



SENIOR THESIS/INDEPENDENT STUDY

The Senior Thesis in Graphic Design is a self-driven, one term capstone project that involves research and design on a subject of the student's choosing. Students meet with a faculty advisor through the design process and present at the end of the term to a faculty jury. Thesis projects are can be entrepreneurial in nature and often involve cross-disciplinary reseach and skill sets.

Independent Study projects also are self-driven with faculty advising and often move into explorations of various delivery platforms that may expand beyond the classroom.

Senior Thesis and Independent Study Projects

Parachute: Biomimmicry in Architecture
Mackenzie Anderson GD '15

Using emerging technology to explore emerging technologies: employing interactive digital publication tools to review the growing trend of biomimetic architecture and its applications in the built environment.

Re-imagining the Whole Earth Catalog
Julia Parlade GD '15

A package of brochures, pamphlets, posters and guides to a sustainable lifestyle inspired by the Whole Earth Catalog. Purposely analog in format and referencing design history, this project is intended to provide access to information and resources through a non-digital print-based platform.

Fractal Geometry:
A Tactile Exploration Through Visual Media
Karen Yee GD '15

Through paper-based interactive elements housed in a book format, including overlays, tabbed reveals, and paper folding, math concepts become a hands-on experience that facilitates learning and makes math a visually interesting and interactive experience for anyone, regardless of their knowledge of mathematics.

ASK Magazine redesign
Courtney Sabo GD '15

As a Junior Graphic Design major, Courtney was engaged as a work-study student in a top to bottom redesign of the Drexel College of Arts and Sciences magazine ASK, addressing all aspects of publication design, including devoloping typographic grids, photo and illustration art direction and conceptulization and visual interpretation of editorial content. Courtney worked in collaboration with editorial staff and print production specialists.

D & M Magazine
Nick Masserelli, GD '15

A collaboration between Graphic Design and Design and Merchandising students to design, write and produce a annually published magazine. Students are responsible for editorial content, design. photography/illustration and production to prinnt and an online version.

CONCLUSION

Assessment

Co-ops, internships, independent study, client-based projects, professional practice, cross-disciplinary collaborations, etc. offer graphic design students supplements to traditional studio-based coursework. With a clear balance between theory and practically-based learning, an emphasis on personal exploration and research, combined with opportunities outside the classroom/studio, students are better prepared to enter the profession at a more advanced level than many of their peers.

3.3 Interdisciplinary Collaborative Experiences in Graphic Design Education for Real World Success.

Christopher Graves
Northwest Missouri State University

Abstract

Description:

One of the challenges that graduates of graphic design programs face upon entering the workforce and meeting industry needs is having to work in a team setting, with colleagues from different disciplines and backgrounds, put together to solve complex problems. Real world design often requires team-oriented problem solving skills. Interdisciplinary team opportunities will enhance student collaborative abilities for real world success.

The practice of graphic design has many participants, and most are not a designer: developer, user experience, project manager, copywriter, printer, marketing, finance, production, researcher, etc. How do we help our students prepare to work with such diversity? Design and advertising agencies are devoting vast resources into communications for their clients which require these increasingly diverse teams. This presentation will show the successes and challenges of current interdisciplinary programs, and how design educators can possibly model such a course into their respective programs.

Presentation Goals and Activities:

This presentation will focus on providing practical ways to provide interdisciplinary team based experiences to a design curriculum, and discuss the following:

1. How can we provide graphic design students with an interdisciplinary team based experience?
2. How do you bring multiple departments, faculty and administration together to make it function across campus?
3. How important is administration support for an interdisciplinary course?
4. How will this be funded?
5. How do you promote and attract students to this course?
6. What ways can assessment be given to determine strengths and weaknesses of the course?
7. Is this considered research for faculty?
8. Is input from industry important? Why?

The presentation will also provide samples and examples demonstrating successful interdisciplinary collaborative educational experiences.

4.1 Learning Portfolio: The Integrating Factor in Design History

Leda Cempellin
South Dakota State University

Abstract
Can design history provide the necessary complement to the visual communicators' professional skillset? With my extensive background in SoTL I looked into the learning portfolio. This is a format that has appeared in academia around the mid-Nineties and has caught on in the most recent years, with the shift of focus from the traditional acquisition of "content knowledge" to assessing "growth in learning." My particular approach to the learning portfolio is inspired by the recent surge of interest towards metacognition. The learning portfolio concept for design education that I have developed is structured as an explorative path that progressively integrates knowledge acquired through the course and through individual research by alternating reflections and activities to guide students towards integration of knowledge and progressive development of those skills of critical reading and thinking, concept mapping, time management, thesis focus, argumentation skills that are necessary for effective and persuasive writing and presentation within the design discipline. I will share my experience on a pilot learning portfolio introduced in my History of Modern Design class in fall 2013, the structure that I devised, the lessons learned, and its upgrade in Spring 2015.

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4.2 The Forgotten Method

Alexander Alter
Ryerson University

Abstract
Reflecting upon early 20th century graphic design, we can ask ourselves is there something more that we can learn from the design practices of our predecessors beyond simply contextualizing our current work? How can the knowledge that was the genesis of current practices be examined anew?

As a student studying in the late 1970's there was a renewed interest in the Euro- pean Pioneers of Design. There was something very different and distinct from the universal post-war grid-system style of the time. At the core of their work is a freedom of creative expression and richness that I would argue is absent from much of graphic design, today. Can we discover what makes these works so in- triguing and rich and put the knowledge to use, today?

Through careful study and by the process of visually dissecting historic design compositions, their sub-structured systems are revealed. In examining the work of key figures such as; Tschichold, Zwart, Sutnar, I have come to understand their compositional methods, and unique approaches to structuring complex content.

Our understanding of "grid systems", in use today were established mainly for the organization of typographic information. The Design Pioneers however, inte- grated the "grid" into a sub-structure that combined all the elements on the page, enabling them to have full control on how the eye moved through space. What is even more fascinating is that these methods had been used within western art and architecture for centuries.

This research reveals previously undocumented interpretations from the work of the early pioneers and demonstrates how they created and controlled two-dimen- sional space adding value to the small body of graphic design's historic record and to our continuous search for visual innovation.

4.3 Teaching the iGeneration: Engaging Students in Graphic Design History

Archana Shekara
Illinois State University

Abstract
Students take pride in multitasking and desire to succeed at an instance. They want an "A+" for their assignments and exams, but are threatened by process. Prior to taking the Graphic Design History course, students generally perceive it as "memorization and boring," the paper will present six years of case studies, and pedagogical approaches that were used to transform student perceptions and understandings. It will address learning objectives, interactions and outcomes that truly motivates the new iGeneration so they become active learners and admirers of history.

As a faculty teaching Graphic Design History, I encourage students to understand their own work and that of their contemporaries. I emphasize certain movements, significant designers and artists, interdisciplinary relationship of graphic design with other studio arts, and technological advancements in the field since the 1800's. The course material also promotes development of specific skills and points of view needed by professionals in the design field. Finally, it helps students to truly understand the importance and role of graphic design in today's world.

5.1 Engaging Industry in Design Education

Kent Smith
Western Washington University

Abstract

THIS PRESENTATION REVEALS ADVANTAGES OF A PARTNERSHIP WITH THE DESIGN INDUSTRY AS A WAY OF STRENGTHENING CURRICULUM AND ADDRESSING INCREASING STRUGGLES TO FUND DESIGN PROGRAMS. THE FOCUS WILL BE ON A RESTRUCTURED DESIGN MAJOR THAT INCLUDES PAID SUMMER INTERNSHIPS, WORKSHOPS TAUGHT BY PROFESSIONALS, SEMINARS FOCUSED ON PROJECTS FROM THE COMMUNITY AND FIELD TRIPS AS IMMERSIVE EXPERIENCES.

THE INTERNSHIP SEGMENT DISCUSSES ADVANTAGES AND STRATEGIES IN SECURING PAID INTERNSHIPS AND HOW TO FACILITATE THEM TO INFORM CURRICULUM FOR THE SUBSEQUENT ACADEMIC YEAR. PRESENTATION WILL COVER A SELECTION OF FIRMS AND OUTCOME OF RESPECTIVE INTERNSHIPS.

THE FOCUS ON WORKSHOPS WILL REVEAL HOW DESIGN PROFESSIONALS CAN BE UTILIZED TO MANAGE INCUBATOR OPPORTUNITIES – ALLOWING STUDENTS TO APPLY THEIR SKILLS TO PROFESSIONAL PROJECTS. STUDENTS GET AN INTRODUCTION TO PROFESSIONAL PRACTICES, METHODOLOGIES AND WORK FLOW AS WELL AS EXPECTATIONS FOR DELIVERABLE STANDARDS AND WORK PACE.

THE SEMINARS INCLUDE SENIOR-LEVEL HYPOTHETICAL ASSIGNMENTS BUT ALSO INCLUDE PROJECTS THAT UTILIZE SERVICE- LEARNING OPPORTUNITIES, WHERE STUDENTS WORK IN COLLABORATIVE TEAMS TO ADDRESS DESIGN PROJECTS FROM THE COM- MUNITY. THE RANGE OF OPPORTUNITIES ALLOW THE STUDENTS TO EXPERIENCE AUTHORING SITUATIONS WHERE THEY IDENTIFY PROBLEMS AS WELL AS PARTICIPATE IN NON-PROFIT PROJECTS CATEGORIZED AS DESIGN-FOR-THE-PUBLIC-GOOD.

PRESENTATION WILL SHOW HOW AN ANNUAL FIELD TRIP SATISFIES NUMEROUS GOALS. THE OBVIOUS EDUCATIONAL BENEFIT AND ADVANTAGE OF NETWORKING WITH ALUMNI IS AUGMENTED BY STRATEGIC SCHEDULING THAT CROSS-POLLINATES ASPECTS OF INCUBATOR WORKSHOPS, CONCURRENT SEMINARS AND GROOMING FUTURE INTERNSHIPS.

LEARN HOW ALL FACETS OF THE CURRICULUM NOW INFORM ONE ANOTHER AND HOW A NEWLY-ESTABLISHED ADVISORY BOARD SERVES AS A CATALYST. IN ADDITION TO PEDAGOGICAL ADVANTAGES OF CURRICULUM REDESIGN, PRESENTER WILL REVEAL HOW IT HAS HELPED REMEDY FINANCIAL LIMITATIONS, STRUGGLES TO STAY ABREAST OF INDUSTRY CHANGES, DIFFICULTIES IN ATTRACTING ADJUNCTS AND ULTIMATELY ENHANCING FUNDING OPPORTUNITIES BY CREATING A STRENGTHENED NETWORK OF ALUMNI, FIRMS AND PROFESSIONALS.

5.2 Daring Design: *preparing future graphic design professionals for unchartered territories*

Abstract

Only those who risk going too far can possibly find out how far they can go
— T.S. Eliot

Andrea Quam
Iowa State University

This paper and presentation will share the case study of a graphic design capstone class' outcomes and development. In this class graduating seniors were introduced to the seemingly juxtaposing frameworks of risk-taking and research in preparation for professional practice. Today, the average professional in the United States holds more than 10 jobs in a lifetime. (Bialik) It's become increasingly common to hold more than one job at a time, to reeducate yourself continuously and reinvent your career three to four times. The simple inquiry "what do you do?" has become a complex question unanswerable with a simple title or function. (Giudice, Ireland)

This is especially true in the graphic design industry. Preparing our students for the industry as it's traditionally been defined would be a foolish endeavor. But instead of focusing efforts on "roadmapping" the future of the profession, our time and energy is best spent on determining how to cultivate the skills and qualities needed by our students—not to merely navigate an evolving industry, but to lead and collaborate with other leaders. How can we best shape our curriculum and pedagogy to prepare students for these undefineable roles? Maria Giudice and Christopher Ireland's book, Rise of the DEO, outlines a new

generation of leaders who combine traits typically thought of as opposites. They call these leaders DEOs: Design Executive Officers. Risk taking is defined as one of the defining characteristics of a DEO. (Giudice, Ireland)

Could the unique combination of research and risk-taking in the educational space be the particular competencies that will best prepare graduates for the evolving landscape of the graphic design profession, creating future Design Executive Officers ready to lead? Visual and theoretical outcomes of a pedagogy focused on these ideals will be presented.

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5.3 Report from the 3%

Summer Doll-Myers
Kutztown University of Pennsylvania

Ann Lemon
Kutztown University of Pennsylvania

Abstract
This year the percentage of female Creative Directors listed in *Communication Arts'* advertising annual reached 11%, an improvement over the 3% of a prior survey.

The positive streak is also reflected in the Art Director's Club global *Let's Make The Industry 50/50 Initiative,* a plan to bring equal gender representation to the creative industry's show juries, boards of directors, and speaker lineups.

The discrepancy between the percentage of female students in creative fields, versus entry-level jobs, versus owner / manager roles, is well documented. "A 2013 Guardian survey reports that 72.5% of the students at the University of the Arts London, are female. What ... deserves scrutiny, is that this female domination in graphic design education appears to be reversed when it comes to the graphic design industry." (Rebecca Wright, quoted by Liv Siddal, Its NiceThat.com, Tuesday 28 October 2014).

What can design educators (both male and female) do in today's classrooms (filled with both male and female students) to increase the presence and retention of women as culture producers, creating future female leadership and management in agencies, studios and media companies?

This presentation reports news from the November 2014 3% conference in San Francisco, and provides data and anecdotal evidence of what design educators are doing right, what can we do better, specific classroom methods to use, and a selection of new role models to present to both male and female students.

Today's students are our future culture-makers, both male and female. Generation Y (Millenials) have changing gender expectations and view gender roles differently than those who came before, and educators can help them now to achieve the goal of 50/50 creative leadership.

6.1 Is one semester enough to learn about information design?
Spreading the practice of information design throughout the graphic design program.

Maria Teresa Treviño
University of the Incarnate Word

Abstract

If considering Nigel Holmes' map of Infographia as the complete spectrum of Information Design, it is a hard task to cover everything in one semester. Some design programs offer one design studio on the subject. Other programs offer more punctual courses like Data Visualization, Signage, Wayfinding and Exhibition Design, but in both cases many topics are left aside. In addition, and due to its complexity, Information Design courses are offered until the junior or senior year, not giving enough time for students to transfer and apply all the learned skills into future design projects.

Promoting the skills of data visualization, the use of visuals to increase knowledge, the practice of clear communication, as well as making information available for many, can turn design students into better communicators and social conscious citizens.

Because one semester is not enough, this paper presents actions on how to spread the practice of Information Design throughout a design program without making major changes on the curriculum.

6.2 Interdisciplinary Team-Taught Courses: The Good (and the Bad)

Josh Miller
Kutztown University

Abstract

Capstone courses in graphic and interactive design are, traditionally, insular and focused on a single student creating a polished deliverable as a portfolio piece. As educators, we are trying to prepare students for a post-graduation environment, but we're ignoring a skill that's especially critical in our field: collaboration between designers and developers.

Over the past two years I've team-taught an interdisciplinary course which pairs graphic and web design students with software development students from the Computer Science department. The goal of the course is to pitch a team project in the first few weeks of the semester. Then students plan the design, branding, usability, and functionality of the project, and gather the resources necessary to build the project. Over the course of the semester the teams prototype concepts and develop a functioning "product" by the end of the semester. The students perform user testing and debugging, and meticulously document the process of design and development, and the outcomes.

This presentation covers examples of student success and failure in the courses, "best practices" of interdisciplinary coordination, and tools for collaboration organization and resource sharing. The feedback from these courses have been overwhelmingly positive, and students feel that the collaboration helps prepare them for a rapidly changing workforce.

6.3 Flipped Textbooks

Abstract
Active learning, project-based, learn by doing, flipping the classroom. Teaching strategies in the trenches of the studio classroom have spawned a massive amount of research, trials, and high level intellectual effort to engage students in learning and retain knowledge.

Rose Gonnella
Kean University

We see a robust change in climate in the studio classroom when students break out into teams to work. We know students trust each other in that they share notes and discuss problems and issues among themselves. The active classroom has proven its worth. New and exciting techniques such as the flipped classroom are known to succeed.

Yet, our textbooks remain as they have been since the Bauhaus: a written lecture, paragraphs of grey type, narrative designed in a good or bad grid (depending on the publisher and if they actually hired a designer), information unfolding page after page the same, with reproductions of historic and iconic design. Textbooks are necessary. The printed (or Kindle) word, reviews, reinforces, and references information presented in class. But do the students read books? Do textbooks work? As design educators, we know that students of the 21st century do not read (enough). They do not buy the book. Or, students buy and sell the book immediately with no desire to add it to their library.

Students share their notebooks frequently. Miss a class? "Borrow the notes". Student notebooks are succinct. They are filled with illustrations, lettering, doodles, and distilled information covering the major points presented.

The "flipped textbook" offers the same approach as "note-swapping" in the classroom simulating a student notebook to connect with students in their own language.

This presentation shares the development, method and madness that created the first ever flipped textbook while also providing ideas and direction that encourage students to turn their notebook into a engaging and memorable visual journal.

7.1 Design Condensed... Extended!

Beverly Krumm
Iowa State University

Jennifer Drinkwater
Iowa State University

Patience Lueth
Iowa State University

Paula Streeter
Iowa State University

Abstract

Introducing and engaging youth in the variety of design disciplines offered at our university through day and residential camps and workshops has proven to be a successful recruitment tool for the university. For the past fifteen years an assortment of camps has been offered to middle and high school students as a way of introducing and engaging the youth in the broad selection of disciplines offered in the design college, but these camps have evolved over time. Regardless of grade level and career interest, helping youth make connections from their conceptual framework in ideation through production has given the students confidence, to show-off their ideas and gain an active understanding of the process of design, without the fear of rejection. Day camps range from one to three days in length and fun is the main objective. The residential high school camps offer a pre-college experience, where the youth move from "class to class" with different instructors, yet offer traditional camp activities in the evenings.

As the camps have become more and more successful, new outreach programs have been added, including daylong workshops targeting neighboring school districts on teacher in-service days and a short series of art and design workshops that discover what it means to produce art within and among the community. The newest venture of this outreach program has been the partnership with Extension, building a program that will take advantage of the resources Extension has to offer with the goal of starting Art and Design 4-H clubs across the state.

This paper/presentation will outline the procedures used in the development of successful outreach programs. Photos will be shared to show the variety of the programs.

7.2 Developing a Curricular Framework for Community Design Projects

Bonnie Sadler Takach
University of Alberta

Abstract

I will present the development of a curricular framework for a collaborative, inquiry-based approach to design education through community design projects. Although this pedagogical approach effectively supports meaningful and experiential learning, it can be a challenge to create effective learning outcomes, activities and assessment for open-ended design projects that emerge through discovery and participatory methods. My proposed framework is based on pedagogical theory, activities in educational development as a faculty affiliate with a centre for teaching and learning, and my reflections on leading numerous community design projects over several years. These projects often connect across levels, disciplines and communities to engage participants in confronting uncertainty when dealing with human concerns and in developing design concepts that are not tied to specific representations, strategies or media. Projects include: the creation of a digital quilt with youth in Uganda to share perspectives on social issues; the design of large 3D letters that are handmade from recycled materials to foster sustainability; and the design of an awareness, advocacy and fundraising campaign for a non-profit society to support interculturalism and self-efficacy for new immigrant and refugee families. I will share my vision for a framework for community design projects, based on pedagogical theory and reflective teaching practice, that can be flexible and responsive, yet provide sufficient structure for students, instructors and community partners.

7.3 Living Learning Communities: Lessons Learned

Jessica Hawkins
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Abstract
Service learning and design are natural bedfellows; combining the two has generated many successful (and not-so-successful) curricular experiences. In fact, one would be hard-pressed to find a design curriculum that doesn't contain some aspect of service learning, even if it's simply a poster design for a social cause. What would it look like, though, for undergraduate service learning to go beyond an assignment? Beyond a course? Beyond a major, even?

This paper examines one college's implementation of Living Learning Communities, a distinct approach to service learning where students from a cross-section of academic areas, whom often choose to live together in a residence hall, converge to address a social issue (or issues) in a hybrid curricular/co-curricular format. Varying in format and focus, these Living Learning Communities are entering their fourth year on campus and thus are ripe for examination and reflection.

The communities are defined differently in terms of subject matter, structure, and scope. Some are focused on a specific issue like sustainability or poverty, while others are centered on exploring a specific approach to addressing social issues (for instance, using technology/social media for social change). Some of the communities require students to enroll in a credit-bearing course, others do not. Some emphasize the communal living experience, while it matters little to others. These differences, and the effects of those differences on the perceived success of those communities, are explored in this paper.

Finally, the role of the student designer as participant, mediator, and communicator within these Living Learning Communities is also examined. How does the student designer intersect with students from other academic areas? Has design been relegated to the creation of artifacts or is design embraced as a way of thinking? You're invited to hear these tales from someone who's lived them – and learned from them.

LIVING LEARNING COMMUNITIES:

Lessons Learned

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Design for social good. This phrase may be so overused that, like the word *unique*, it no longer carries the full weight of its meaning. Things are now *very unique*. And *design* has stretched into a vaguely-defined activity that accomplishes *social good*, a concept with innumerable interpretations. This paper aims to reinvigorate our understanding of *design for social good*, and make a case for stretching beyond traditional models of service learning by employing a social model of entrepreneurship and a mental model of innovation self-efficacy. We will examine Node Living Learning Community at Centenary College as a case study, evaluating its successes and failures.

FROM SERVICE LEARNING TO WICKED PROBLEMS

Service learning and design education are natural bedfellows. Visual communication is a necessary task for just about any endeavor, and the work of non-profit organizations is no exception.

Commonly, design educators – including myself – use real-world projects serving worthy causes as a tool to deliver course content and achieve student learning outcomes. This approach falls under the broad umbrella of service learning, defined by the National Community Service Act of 1990 as "a process whereby students learn and develop through active participation in organized service experiences that actually meet community needs." (Burns).

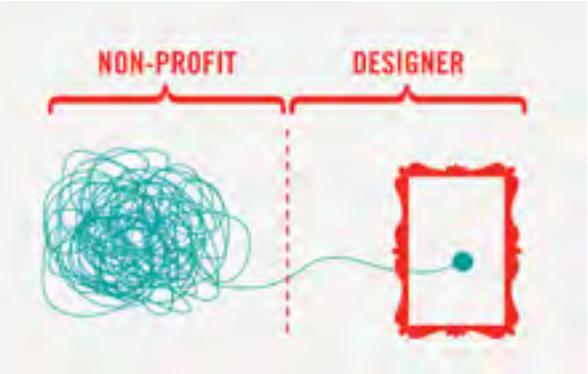
Much of the time, the design problems featured in a service learning assignment are already well defined. A client needs a logo or a poster or website, the student engages in the design process, and a final product is delivered to the client. It is a fixed problem with a fixed format and a (relatively) fixed solution. While this approach to service learning in design is often appropriate and useful, it can also be problematic for two reasons:

First, the real social problems of the world are messy, defying conformation to our default formats and linear processes. Enzo Manzini, founder of Design for Social Innovation and Sustainability (DESIS), discusses challenges common to the broad spectrum of design disciplines. Among them, he cites:

- increasingly ambiguous boundaries between artifacts, structure, and process;
- increasingly large-scale social, economic, and industrial frames;
- an increasingly complex environment of needs, requirements, and constraints; and
- a complex environment in which many projects or products cross the boundaries of several organizations or stakeholder, producer, and user groups.

In many ways, his categories echo the famous label of *wicked problems*, coined by Horst Rittel in 1972 and further popularized by Richard Buchanan's 1992 article in Design Issues. According to Rittel, wicked problems are a "class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing" (Rittel).

Importantly, this conception points toward a fundamental issue: the relationship between determinacy and indeterminacy in design thinking. "The linear model of design thinking is based on determinate problems which have definite conditions… In contrast, the wicked-problems approach suggests that there is a fundamental indeterminacy in all but the most trivial design problems" (Buchanan). Thus, this model of service learning often oversimplifies the problems designers will encounter when designing for social good outside of the classroom.



The second problem is that this traditional model of service learning design work tends to limit the scope of the designer's role, relegating the designer to a surface-level "gussying up" of content at the end of the process. Even once the indeterminacy of wicked problems is recognized, there is often still a tendency to segregate roles when tackling the problem, where designated experts and NGOs operate in isolation to construct solutions which are only then handed off to designers for presentation. Ironically, it's

the very processes that a designer goes through to clarify information for presentation that can also bring clarity and innovation to the problem itself.

This concept, of course, is often discussed under the ubiquitous and frequently misunderstood label of *design thinking*. At its best, though, design thinking can create new frames for problems through the investigation of themes, resulting in a deep transformation of practices (Dorst). This is where design-based practices and innovation are most intimately linked and directly relate to processes that have been described in terms of 'entrepreneuring' (Steyaert).

SOCIAL ENTREPRENEURSHIP

I posit that using a fixed design problem in service should be only a first step. In design curricula, a natural next-step is for students to employ design thinking in the context of *social entrepreneurship*.

Entrepreneurial endeavors in education are commonly associated with the fields of business and finance, yet they are equally suited to the liberal arts. At its base, entrepreneurship encompasses an innovative and often experimental set of practices that aim to transform organizations, networks, industries, markets, protocols and policies in productive ways (Dees). The subfield of social entrepreneurship has the same goal along with two others: to benefit society and to enable social changes.

Creativity is inherently interdisciplinary and cross-sectoral, making it essential to the social entrepreneurship formula. Creative and entrepreneurial practices together can break down disciplinary and community boundaries by enabling practitioners to envision alternative structures and approaches, and make contributions that can revitalize established fields of knowledge (Phillips). Multidisciplinary models like crossover and combined laboratories, studios, networks and centers are on the rise and provide 'in-between' spaces for new knowledge production to address social issues like the environmental crisis, social inequities, racism and oppression (Edwards).

Thus, creativity and design thinking, employed through a multidisciplinary social entrepreneurship model, is aptly suited to tackle today's wicked problems.

NODE: A LIVING LEARNING COMMUNITY

It is from this framework that several colleagues and I conceived and implemented Node, a living learning community at Centenary College of Louisiana.

Node is one of four living learning communities (LLCs) on Centenary's campus. LLC students join with a team of faculty, professionals, and community members to identify a problem, understand it, and take steps to overcome it.

Node Living Learning Community was conceived following the seminal events of the Arab Spring and Occupy Wall Street, where smart phones and social technologies empowered people to create change. They connected citizens to information. They connected citizens to each other. And, in some cases, they connected citizens to resources. The convergence of these forces is what has inspired my fellow colleagues and me to begin Node at Centenary College, an endeavor that engages students in leveraging those emerging technologies for sustainable social change.

So what exactly is Node? The Oxford Dictionary defines a node as "a point at which lines or pathways intersect or branch; a central connecting point." We've appropriated this term, not just because it sounds tech-y, but because it reflects and addresses convergence on many levels:

- First, it's students coming together from a variety of academic areas to work together toward common projects;
- Second, it's the confluence of virtual reality and physical reality through social media and games
- And third, it's the intersection and interaction of Centenary students with the larger Shreveport-Bossier community.

Students in Node are exploring research and creating projects that focus on interactive, transmedia technologies, including the Internet, social media, video games, and mobile devices. This exploration incorporates and builds on the theories and methods of sociology, rhetoric, design thinking and human-computer interaction.

Node is unique among the other LLCs at Centenary in that it focuses on the potential of a specific set of tools with which to solve/address issues, rather than pre-selecting a given issue to address, like sustainability (Greenhouse LLC) or poverty & healthcare (Santé LLC).

Node Format

Planning for Node began in 2011, led by four faculty members: a filmmaker and a graphic designer from the Communication Department, a Computer Scientist, and a Sociologist. Student applicants were solicited in Spring 2012 through global campus emails, in-class announcements, and posters around campus, with the recruitment process culminating in in-person interviews with Node faculty. The inaugural team in Fall 2012 was comprised of ten students whose majors spanned Sociology, Psychology, Computer Science, Business and Communication Design, making Node a truly multi-disciplinary endeavor. 75% of the eligible (re-enrolling) participants returned for a second year and half returned for a third year, with new participants added each year.

As a living learning community, Node is more than just a class. Students are encouraged, but not required, to live on a specific hall of an on-campus dorm, the RA for which is a member of Node and is responsible for connecting residence hall programming to Node-related subject matter. On this hall, the college has designated an entire suite as a dedicated common area for the living learning community. Using startup funds allocated by the college, the suite was outfitted with a conference table and chairs, modular couches, a large HD TV, and a new iMac running Adobe Creative Suite. Effort was made to make the space attractive, using paint, lamps, and rugs. Students have 24/7 access to the suite and, during the first two years, the suite served as the primary classroom space. Drawing on the entrepreneurial incubator model, the shared space was conceived as a place not just for class, but as a place for students to socialize and work on other projects, creating opportunities for cross-pollination.

The curricular format for Node has undergone several iterations over the past three years, including: a two credit hour class offered in a twice-a-week, hour-long class period during the day; a two credit hour class offered in a once-a-week/three hour evening class period; and, a bi-weekly meetings with no attached credit-bearing course. The associated issues with each format will be discussed further on.

The first semester, students were assigned specific chapters from the following texts to provide a conceptual framework from which to address wicked problems, drawing from design, game theory, sociology, psychology, and communication studies. The texts were:

- *Designing for Social Change* by Andrew Shea
- *How to Do Things with Videogames* by Ian Bogost
- *Nudge* by Richard Thaler and Cass Sunstein
- *The Networked Nonprofit* by Beth Kanter and Allison Fine
- *Digitally Enabled Social Change* by Jennifer Earl and Katrina Kimport

In addition to the texts, students were responsible for finding and presenting case studies of projects for social good that used the media and technologies that we were studying. Examples include the game *SPENT,* an online game about surviving poverty and homelessness created by ad agency McKinney for pro bono client Urban Ministries of Durham. The game recreates the circumstances and choices that leave millions without a roof over their head. No matter how the game is played, the choices *SPENT* presents are never easy to make.

Another case study that the students surfaced was the game *Dys4ia*. *Dsy4ia* is a series of mini-games that explore the cultural challenges and personal hardships of being a transgender person. The game is broken up into four sections that show players the intricacies of gender representation, hormone therapy complications, financial and medical issues, and the journey to things "getting better".

With a foundational knowledge of the theories underpinning their efforts and armed with case studies of existing projects, students developed their own project proposals that they pitched to the group and then voted on. Two of these projects will be highlighted, one (Bird Shipping) that was conceived and executed in 36 hours, and another (We All Gotta Go) that took almost three full years to come to fruition.

Bird Shipping

In Fall 2013, the faculty encouraged the students to participate in a game jam being held in conjunction with a local digital art festival. A game jam is

a gathering of game developers for the purpose of planning, designing, and creating one or more games within a short span of time, usually ranging between 24 and 72 hours. Game developers are generally made up of programmers, game designers, artists, and others in game development-related fields.

This project forced the students to step outside of their comfort zones: none of the students had any programming experience, and only half the students were familiar with design software. Furthermore, the compact time frame for producing the work forced students into a rapid prototyping model of working that reflects current practice in the gaming industry.

The idea for the game and its subject matter was actually developed at the game jam. Part of the effectiveness of the jam is the emphasis on collaboration and rapid iteration, both in terms of concept and production. The students chose to focus on the invisibility of human trafficking, using surprise and learning to raise awareness.

Because Node is comprised of students from different academic areas and with different skill sets, some students worked on conceptualizing the game, others took on the role of storyboarding, others did research on human

Screenshots from Bird Shipping Game, 2013

trafficking, some created graphics using Adobe Illustrator, and still others programmed scenes using the Processing programming language.

Mark Goadrich (the computer science faculty member) and I offered technical assistance while the students created discrete parts/elements. In order to have a working game completed by the end of the jam (just 36 hours long), he and I synthesized those elements into a working game. The jam culminated in our game being played and critiqued by other game designers participating in the jam.

The project continued to evolve during the rest of the semester in response to the feedback received at the jam as well as feedback from further testing. Finally, the students distributed the game through social networking platforms like Facebook and Twitter.

Furthermore, we encouraged the students to submit their game to the 2014 Games for Change Game Awards, sponsored by GamesForChange.com. Games for Change facilitates the creation and distribution of social impact games that serve as critical tools in humanitarian and educational efforts. Bird Shipping was one of 140 submissions, of which 8 were recognized. While the students' submission did not win, submitting a project for consideration was a valuable experience.

We All Gotta Go

Inspired in part by the aforementioned game *Dys4ia*, one student highlighted that, though several members of our campus community express their gender in ways that don't conform to the gender binary, almost all of the restrooms – even most of the single stall restrooms – were labeled using the Male/Female dichotomy. This student proposed that Node identify the single stall restrooms on campus and re-label them as Gender Inclusive Restrooms. These signs would include a QR code that would lead to a website called *We All Gotta Go*, where further information and resources could be accessed, including a map of campus highlighting the location of other gender inclusive restrooms on campus. The student wrote the following rationale:

The Bathroom Dilemma. Image credit: http://lgbtq.missouri.edu/bathrooms/

Gender Inclusive Restrooms are a way to create a safer campus environment for trans and non-gender conforming students, staff, faculty and community members at Centenary College because they allow for a space without pressure to conform to gender norms. The absence of*

this space can lead to aggressive behavior by those feeling threatened by persons exhibiting non-typical gender expression, as well as social pressure for the non-conforming genders who enter into it. The creation of this safe space is a way for Centenary to show non-gender conforming people that our community values their presence and cares about their health and safety.

Student-proposed signage

Gender Inclusive Restrooms can benefit several different groups of people including parents with children of the opposite gender, people who necessitate an attendant in the restroom who may be of a different gender, and those who may not conform to the gender binaries. These restrooms are not strictly for the use of those that find themselves in these categories, but for EVERYONE in need of a safe space.

Student-designed forum flyer

The project initially seemed rather low-impact in terms of timeline and effort. After all, it was simply about creating some signs and a WordPress site. However, neither the students nor the professors anticipated the challenges associated with working with often intractable organizational systems, including college administration, student affairs, and the students themselves – a wicked problem, indeed. Ultimately, the students had to hone their rhetorical skills in order to create a more supportive campus climate. To accomplish this, they developed a persuasive presentation that garnered a unanimous resolution of support by the Student Government Association; they organized and led a forum aimed at increasing empathy for *trans issues; and they submitted a formal proposal to the Board of Trustees for approval, presenting it to members of the administration. Just one month prior to the graduation of students who began this project the beginning of their sophomore year, Node was notified that the signs have been ordered by Facilities and will be installed over the summer.

Challenges

Not surprisingly, the degree of project success seemed to hinge primarily on the students' level of effort and ability to self-initiate (or lack thereof). Through personal observation as well as the responses gathered from a Node LLC exit survey, I suggest that there are several contributing factors to this student disengagement.

1) Over-commitment to extracurricular activities. Because of the very small size of Centenary's student body (550 students), opportunities for campus involvement abound. The typical Node student was simultaneously involved with two or more of the following: Greek Life, Student Government, Residence Life, College Activities Board, and the student-run graphic design agency. In survey responses, students often cited frustration with not having enough time. Pulled in so many different directions, students are unable to delve deeply into any one thing.

2) The academic credit Catch 22. Offering academic credit attached to a course was a bit of a 'damned if you do, damned if you don't' scenario. Because Centenary classes are base 4 credits, student schedules fill up quickly, and students often couldn't fit another 2 hour course into a given semester. Recurrently, if some students didn't take the course for credit, those students put in less effort and sometimes withdrew from the group entirely. On the other hand, offering credit for the course can be seen as contradictory to the entrepreneurial intent of the course. By virtue of giving a grade, a faculty-directed power structure is established, potentially paralyzing student initiative. The grade implies that there is a "right" and "wrong" outcome and therefore students taking the course for a grade experience a high level of discomfort with the ambiguity of a student-led structure. One might infer from the discussion above that perhaps the answer is no academic credit course at all. However, the result from experimenting with that option was almost complete disengagement, particularly toward the end of the semester (likely due in large part to the fact that 5 out of 6 members were graduating seniors).

3) No specific theme to attach to. Students who apply to other LLCs are typically attracted because they are passionate about (or at least interested in) the thematic issue, like sustainability or poverty. Perhaps focusing on a method of creating change – using social media, design, and technology – is less compelling. This focus on method becomes particularly problematic when a specific project is chosen and that specific subject matter doesn't align with a student's interests, or is subject matter about which the student is ambivalent (for instance, Node's Gender Inclusive Restroom project). By allowing the variability in theme, some students become very invested as their project is chosen for implementation, while others sometimes become alienated.

4) Self-Limiting Scope. Another interesting (and frustrating) challenge was the persistent pattern of students introducing an idea that could be implemented in the Shreveport community at large, but then scaling back to

just addressing the issue on Centenary's campus. At first I, rather cynically, attributed the pattern to simply a lack of grit and investment on the part of the students. However, upon further reflection, I think Liz Gerber's research on *innovation self-efficacy* sheds light on this phenomenon.

INNOVATION SELF-EFFICACY & AN ACTION PLAN

Gerber, a design professor at Northwestern University and faculty founder of Design for America, asserts that "the ability to act is tied to a belief that it is possible to do so. Without a firm belief in our potential to develop and implement innovative solutions, which we call innovation self-efficacy, good or even great ideas are of no use at all" (Gerber, 2011). Without believing in our ability to develop and implement innovative solutions that can address the world's challenges, we will not even act.

The nature of innovation requires a high level of persistence to overcome setbacks. Positive self-efficacy beliefs are not only tied to persistence, but also have the potential to influence innovation by strengthening creative performance, increasing the tendency to engage in expended effort, and inducing learning from failure.

In her research, Gerber identified six strategies for fostering innovation self-efficacy. Through the lens of these strategies, I will reflect on specific opportunities to address corollary issues experienced in Node.

1. **Structure learning for small wins and small failures.** Beliefs about ability are constructed over time through small successful experiences. Though initial failures can challenge feelings of success and progress, we should prepare students for a combination of wins and failures throughout a project and track that process to help illustrate that even the greatest challenges can be overcome through sustained effort (as evidenced by the *We All Gotta Go* project).
2. **Reframe failed attempts as learning opportunities.** In a supportive design and learning environment, failures can be reframed as opportunities for learning and design progress rather than an indication of failed performance. As one student noted in a survey, "The biggest challenge was keeping up morale. It often seemed like we weren't making any progress."

3. **Reframe uncertainty as curiosity.** People are often overwhelmed by uncertainty, and yet curiosity about things that are unknown can drive and support learning as a pleasurable experience. People find satisfaction closing the gap between what they want to know and what they know. If we highlight to students that the ambiguity of Node's course structure is an intentional opportunity for innovation (reframing), perhaps the frustration can be transmuted into excitement.

4. **Scope projects for ongoing authentic feedback rather than final evaluation.** When designers receive immediate and authentic feedback on performance, they can link it directly to their actions. Feedback can come from seeing the work in process or from hearing those who are impacted by the work. This authentic feedback is motivating and meaningful for the designer and can inform reiterations of the design work throughout a design cycle. Conversely, designing while expecting a final evaluation from an outside party not directly related to the actual design (i.e. manager) can have dysfunctional consequences for intrinsic motivation and creativity. Thus, for future Node Projects, it could be beneficial for feedback/evaluation to be given routinely by an authentic project stakeholder, as opposed to a faculty member.

5. **Broadcast successes immediately.** Sharing stories allows people to make sense of events and understand the values of their solution. Subsequent feedback on the stories and work that is shared reinforces confidence in the ability to innovate and creates a community of collaborators. Members of Node repeatedly mentioned feeling isolated and invisible on campus. Perhaps formalizing a public relations role within the group might make this process of sharing successes a more automatic part of the group culture.

6. **Articulate a routine process for innovation.** While innovations are, by definition, not routine, innovation processes may be. Processes give structure when facing the inevitable uncertainty inherent in innovation work. Though there are different pathways that will make sense for different projects and problems, allowing designers to have a recognizable and shared process will help them navigate through long-term complex work. People experience a sense of progress when engaged in an articulated design progress independently of whether they are meeting their objective goals within a stated timeline. I feel that this is the biggest opportunity for transformation within Node. While the desire is for the class/organization to be malleable and student-led, the perception of operating in a vacuum can be immobilizing. Articulating a shared/common process would give students greater confidence in addressing the problems at hand.

CONCLUSION

Node Living Learning Community is working to tackle wicked problems through the model of social entrepreneurship using design, technology and social media. Using the lens of Liz Gerber's research on innovation self-efficacy, an action plan is surfacing that will address many of the challenges faced in Node's first years of operation. Despite the challenges, many student learning outcomes are being met, providing transformative experiences for students. In the words of two students: "I believe so many of the skills I gained while working in my LLC such as time management, delegation, leadership, working with others, and the ability to focus on multiple projects, have all been large assets for me in the workplace" and, "The most rewarding part was collaborating with other students to create something meaningful and rewarding for not only the school and nonprofits, but ourselves."

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8.1 Collaboration Between Art and Science: A Dynamic Combination

Carol Faber
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Abstract
In academia and in society, science commands center stage. It garners respect, whether through research, educational understanding or disciplines with clear benefits to society. While it may be argued that all things stem from science, the arts support humanity's innate drive to understand and interpret the world. This understanding of our environment or how things work, pairs well with artistic disciplines to find unique way to interact with science.

Artists and designers benefit greatly from science. Many disciplines in science use observation and material processes as a way to learn from nature. This correlates to art and design disciplines through the use of materials, visual observation, image-making strategies and design research. Artist and designers can harness science to develop dynamic collaborations and a new vocabulary of understanding. Visualizing this understanding of our environment and how things work provides an opportunity for science and artistic disciplines to establish an equal footing and a symbiotic relationship.

This presentation will show projects between the sciences and a digital artist. Each project of this partnership produced strategies later implemented in the studio classroom. Examples of art and science collaborations range from microcopy, veterinary anatomy and radiology and how these explorations informed the imagery of a studio artist and curriculum in the design classroom. This presentation shows how artistic and scientific collaboration leads to curriculum and conceptual development, how the design student can benefit and brings visual exploration to interesting and innovative design solutions.

8.2 Network Science as Design Tool: The Assumptions and Issues Behind the Structure and Visual Rhetoric Behind Networks

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Abstract
Once an interest confided in Euclidean mathematics, networks have expanded and integrated itself into research endeavors across the academic spectrum. The visual representations of complex networks, primarily composed of nodes and links distributed within a 2d surface, are used as research tools to study patterns behind various specialized topics ranging from the distribution of diseases to the internal workings of the nervous system. The primary objective behind network science is to offer visual connections and unforeseen patterns behind the data that otherwise might have been difficult, if not impossible, to grasp with the unaided eye. And combined with the foundations of information and user experience designs, network science can also be used and applied as a versatile tool that can inform design process, structure, systems, and research. This is an exploratory work that draws in from the history and theories from network science to discover and evaluate the opportunities that can extend and sharpen design research, practice, and pedagogy.

8.3 Sustainability Through a Systems-Based Design Process

Abstract

Sustainability is the wicked problem of design in the 21st century.[1]

—D.C. Wahl

Todd Barsanti
Sheridan College

As a design professor with a Masters Degree in Environmental Studies, I am keenly aware of the role design can and must play in moving toward a more sustainable existence on this planet. In 1992, Richard Buchanan suggested that design problems are indeterminate and wicked because design has no special subject matter of its own apart from what a designer conceives it to be. The subject matter of design is potentially universal in scope, because design thinking may be applied to any area of human experience. [2]

Integral to both sustainability and the design process is a systems-based perspective. Approaching a problem from a sustainable perspective requires attention to ecological, economic, and social perspectives, while approaching a problem from a design perspective requires open-minded inquiry, analysis, and disciplined imagination. Both perspectives require, as in systems thinking, that a holistic vision be held while exploring their constituent elements.

In working with my students, I have found that opening up options for more self-direction (such as providing a variety of media options—drawing, painting, 3-D construction, and/or digital—for the production of their projects) as well as spaces for collaborative discussions in interpreting their processes (with classmates of differing socio-economic backgrounds, genders, sexuality, and dis/abilities) encourage open-minded inquiry, analysis, and imagination such that they are experiencing a type of systems thinking. In structuring foundations-level design courses in this manner, I am giving students an exciting glimpse at the possibilities a career in design might hold as well as providing them with a holistic view of their own creative processes. I believe that this holistic view has the potential to empower students to navigate evolving technologies and to tackle political, social, economic, and ecological problems we cannot possibly foretell.

This paper will present an analysis of assignments that exemplify my approach to designing projects that encourage systems-based thinking.

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Keywords
Sustainability, Design Process, Systems Thinking, Wicked Problems, Design Education, Media Options, Open- Minded Enquiry, Analysis, Disciplined Imagination

Sustainability Through A Systems-Based Design Process

Todd Barsanti, MES
Professor, Sheridan College

As a design professor with a Masters Degree in Environmental Studies, I am keenly aware of the role design can and must play in moving toward a more sustainable existence on this planet. In 1992, Richard Buchanan suggested that the creative power behind design thinking is "turning to the modality of impossibility" and suggests that "what many people call impossible may actually only be a limitation of imagination that can be overcome by better design thinking." (Buchanan, 1992)

> Design problems are "indeterminate" and "wicked" because design has no special subject matter of its own apart from what a designer conceives it to be. The subject matter of design is potentially universal in scope, because design thinking may be applied to any area of human experience. (Buchanan, 1992)

It has been suggested that the transition towards a sustainable human presence in the world is *the* wicked problem of the 21st century. (D. C. Wahl, 2006) But sustainability is not some ultimate endpoint, there is no stopping rule. "Designing for sustainability not only requires the redesign of our habits, lifestyles, and practices, but also the way we think about design." (D. C. Wahl & Baxter, 2008) There are no quick fixes to this wicked problem, only better or worse outcomes. Designing for sustainability requires constant evolution and evaluation and diverse communities making flexible and adaptable design decisions on local, regional, national, and global scales. Transdisciplinary design dialogue is imperative and it needs to begin—for our young designers—in the classroom. The design process provides a roadmap for navigating the cyclical, adaptive, and unique qualities of wicked problems, but young designers need to be educated about their potential as the facilitators of this change.

In allowing students to work with multiple medias and approach problems from multiple perspectives, we can train students to prepare for the constant evolution of wicked problems. Being flexible and adaptable will be absolutely necessary and these are traits that must be nurtured and learned over a period of time, from foundational design studies onward.

When I began my Masters-level research in Environmental Studies, I did not necessarily consider myself to be an environmentalist. A mentor of mine suggested that I look into the Environmental Studies program at York University in Toronto and I was impressed by the broad range of scholars who called the faculty home. The MES program was receptive to my approaching my studies from a designer's perspective, so it seemed a good fit.

When I embarked on my research, I learned more about sustainability. Many—including myself—have associated the term with environmental perspectives, but by most accounts, sustainability is a perspective that focuses on social, economic, and environmental factors. According to the online Dictionary of

Sustainable Management, many organizations use the following criteria to assess sustainable products, services, and other activities:

Social Criteria:
- Socially desirable
- Culturally acceptable
- Psychologically nurturing

Financial Criteria:
- Economically sustainable
- Technologically feasible
- Operationally viable

Environmental Criteria:
- Environmentally robust
- Generationally sensitive
- Capable of continuous learning (The Presidio Graduate School,)

Sustainability refers to human and financial issues as much as environmental ones. The multiple perspectives inherent in sustainability encompass cultural impacts as well as ecological ones, financial constraints as well as physical limits, heritage and legacy as well as perspectives of our collective future.

As a designer, I began to see correlations between sustainability perspectives, and the design process.

The design process is at the heart of what I, and every other designer on the planet contributes to their practice, their studio, and their communities. The design process may differ somewhat with each designer, but at its core it is the means with which we are able to distinguish ourselves and make our services invaluable to any number of constituencies. The design process is what designers use to solve problems. It is a cyclical process which involves identifying a problem, imagining solutions, developing a plan, devising a solution, evaluating the results, and if necessary repeating the process over and over again. The process is malleable and can be applied to an entire system of complexities or used to focus on the minutest of details.

In the Nature of Design, David Orr writes:

> Designing with nature disciplines human intentions with the growing knowledge of how the world works as a physical system. The goal is not total mastery but harmony that causes no ugliness, human or ecological, somewhere else or at some later time. And it is not just about making things, but rather remaking the human presence in the world in a way that honors life and protects human dignity. (Orr, 2002)

By its structure and by its *nature*, the design process lends itself well to this approach. Design problems often deal with improving upon existing systems, not just inventing new solutions. The design process is comprised of a set of stages that asks the designer to constantly engage with her subject matter, to envision ways of improving upon what is at hand, and to imagine new possibilities. If the designer is given the opportunity to use the process while

engaging with others (be they other designers, specialists, or stakeholders in the problem) then the range of possibilities and the directions that her imagination will take her, will grow exponentially.

In *Tackling Wicked Problems*, Valerie A. Brown (et al.) writes:

> Being transdisciplinary in the broad sense requires the use of imagination. Without exhausting the possibilities, imagination is associated with creativity, insight, vision and originality; and is also related to memory, perception and invention. All of these are necessary in addressing the uncertainty associated with wicked problems in a world of continual change. (Brown, Harris, & Russell, 2010)

Design has often been labeled as being concerned primarily with the appearance of things. Be it graphic, interior, industrial, fashion, furniture, automotive, architectural, or any other mode of design, the societal perception is that designers are most concerned with aesthetics. But in truth, design has never really been about aesthetics, not exclusively. Design's expression of intentionality is also associated with creativity; and creativity with imagination; and imagination can be focused into much more than aesthetics.

Brown continues:

> Imagination has been central to the work of anyone who is involved in change in the society in which they live... It should come as little surprise that imagination plays an essential role in decision-making on complex issues. Accepting a central role for the imagination does not mean that we abandon standards for assessing the validity and reliability of the knowledge so generated; it indicates the potential for change and shows us where to look. (Brown et al., 2010)

In combining their understanding of the design process with the benefits of collaborative working environments as well as their gifted sense of imagination, designers—and perhaps even moreso: young designers—are in a unique position to help show us all where to look for the potentials for change.

Wahl and Baxter offer this sobering viewpoint:

> The transformation towards a more sustainable human civilization requires a process of inclusive and participatory dialogue that ultimately will turn visions of sustainability into reality. This will require the individual and collective participation of everyone. In the face of climate change, national and international inequity, social and ecological disintegration, and rapid resource depletion, nothing less than a societal and civilizational change—without precedence in scale and profundity in the history of our species—is urgently required. It

> has to occur during the next few decades if humanity wants to avoid ecological and social meltdown. (D. C. Wahl & Baxter, 2008)

I am not suggesting that designers are the only citizens equipped to tackle the wicked problems Brown mentioned earlier, but I am suggesting that designers have the imagination and the creativity to contribute, and design education has a role to play in getting future generations of designers to be a part of the dialogue.

With regards to the systems-based perspective, Nathan Shedroff writes that the only way to address sustainability effectively is from a systems perspective. While I appreciate his wanting to simplify the terminology, we have to be careful—especially when things are already confusing—not to mix or blend our terminology too readily. 'A systems perspective' could easily be confused with Systems Theory, a specialization of Systems Thinking, popularized by Fritjof Capra, amongst others. In a talk entitled *The Systems View of Life*, Capra says that; "a sustainable community is designed in such a way, that its ways of life, its technologies and its social institutions honour, support and cooperate with nature's inherent ability to sustain life." (Capra, 2007) So there is obviously a great deal of overlap, and the sentiments are similar, but the knock against Systems Thinking is that if you are always trying to focus on the entire system, then you will never be able to focus on any one thing, and you may never find solutions to anything.

Shedroff qualifies his perspective of systems as: "the sum total of everything affected by an activity." (Shedroff & Lovins, 2009) Which is to me, an interesting distinction. With this statement, Shedroff recognizes that there is a quantifiable amount of information that needs to be addressed, specifically within the activity that you are currently trying to work with. This approach to problem solving will still necessitate a great deal of effort, specifically in the research and development phases, to map out the actual systems that are affected by the issue at hand. This approach also focuses on many factors that are often not addressed in current development/design/problem solving ventures, which is why it is so important. Where Systems Thinking fails in that its perspectives are often too broad, sustainability prevails because it requires the developer/designer/problem solver to view as many perspectives as possible—to be certain—but within the parameters of the problem itself.

To simplify (or perhaps clarify) his thinking, Shedroff adds: "A systems perspective [from his perspective] requires an appreciation (at minimum) and an understanding (at best) of how various systems interact with each other. These include environmental, financial, and social systems." (Shedroff & Lovins, 2009)

Sustainability does not require that our future developers/designers/problem solvers be experts in all fields, but in acknowledging all of the multiple perspectives related to the task at hand, they will approach their activities with more empathy and appreciation for all factors involved than most have up to this point in history.

I became a full-time Professor in the Art Fundamentals program at Sheridan College in the Fall of 2011 after ten years of part-time teaching in the York/Sheridan Bachelor of Design program. At the time, I realized that I had certain assumptions about the creative mind, but quickly realized that my perspectives had more to do with design-oriented creativity. The Art Fundamentals program is a 1-year certificate program for post-secondary students who wish to improve their portfolios and be exposed to a number of visual arts; 2D-Design being only one of their core subjects. Most of our students dream of becoming animators and illustrators. It was an opportunity for me to focus primarily on foundational design studies and to refine my own language when discussing design so that it might be understood by students who may have never been exposed to design thinking.

Adding to the challenge, the Art Fundamentals program at Sheridan College accepts 400 students every year and had not yet found the means or space to provide computers to each of these students. I was faced with having to teach a discipline whose industry is very much reliant upon the computer and its software using techniques that were decades-since extinct (primarily with marker renderings and gouache).

In choosing to see this situation as an opportunity, rather than a setback in my career, I began to shift my own perspectives of foundation-level design education away from the technical applications of design and toward the design process and how it is applicable to my students, regardless of the career path they choose in the visual arts.

This was also an opportunity to put my research into the connections between sustainability and the design process into practice.

Could projects be written so that multiple approaches in media might still accommodate learning outcomes? Could opening up options to the students in terms of *how* they create their work, become a metaphor for the kind of systems-based thinking that is required in approaches to sustainability?

As discussed, a sustainable approach to problem solving must include ecological, social, and economic perspectives. Additionally, the design process has a number of stages that help the designer to navigate the nuances of any particular problem. In both cases, holistic thinking is imperative and the perspectives of the former can absolutely be applied to the stages of the latter.

In working with my students, I have found that opening up options for more self-direction (such as providing a variety of media options—drawing, painting, 3-D construction, photography, and/or digital—for the production of their projects) as well as spaces for collaborative discussions in interpreting their processes (with classmates of differing socio-economic backgrounds, genders, sexuality, and dis/abilities) encourages open-minded inquiry, analysis, and imagination such that they are experiencing a type of systems thinking. In structuring foundations-level design courses in this manner, I am giving students an exciting glimpse at the possibilities a career in design might hold

as well as providing them with a holistic view of their own creative processes. I believe that this holistic view has the potential to empower students to navigate evolving technologies and to tackle political, social, economic, and ecological problems we cannot possibly foretell.

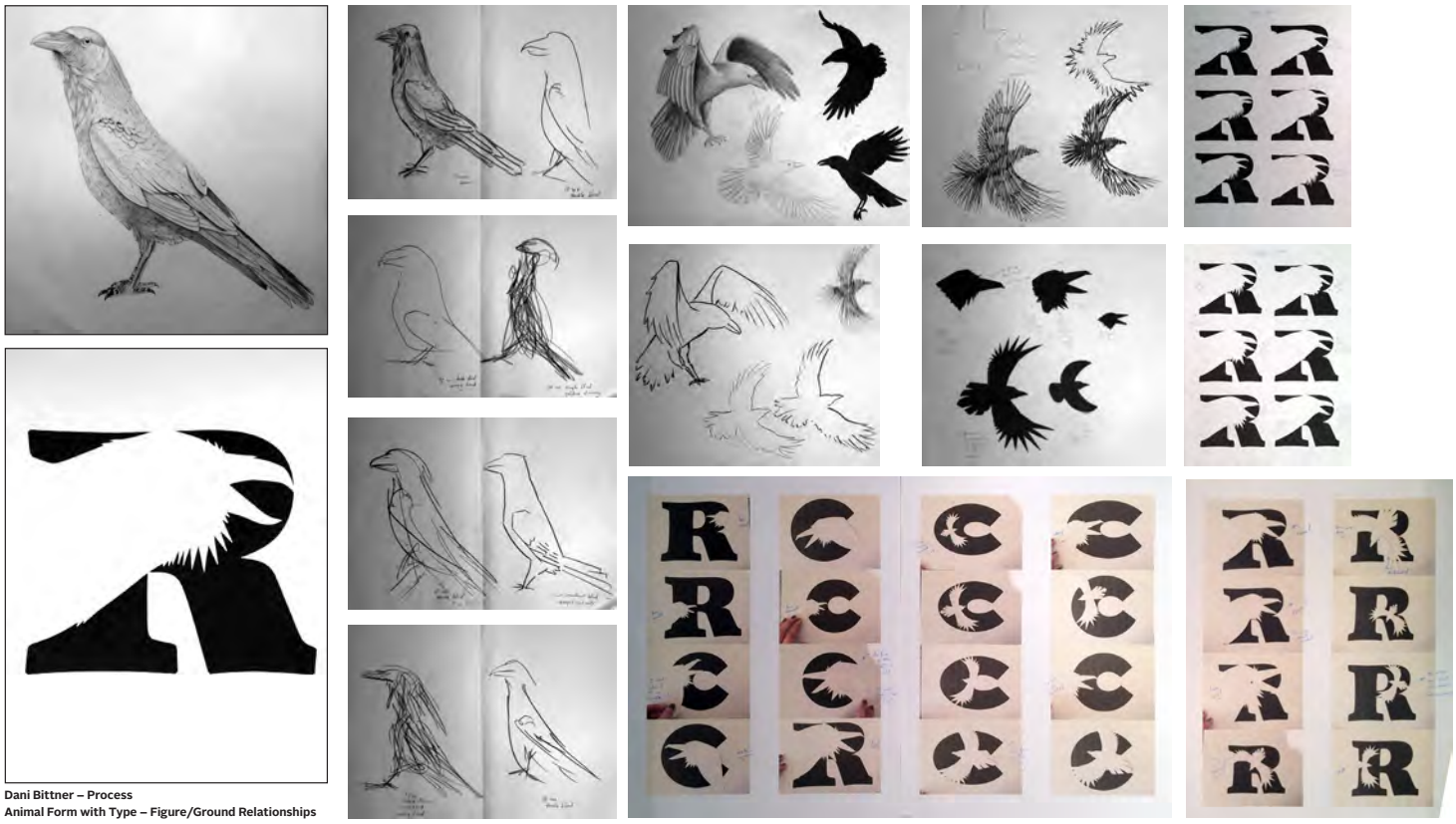
For young designers, I see sustainability as an agreement with themselves, their peers, and their communities. It is an acknowledgment on the part of the individual that they will take more factors into account than an assignment or job stipulates. Sustainability requires more work; more research, more development, more trial and error, more refining. But if we can train our young designers to see beyond the immediate benefits of a product or service, and to look at the long term effects of its existence, then we can begin to move towards creating products and services that last longer, reach more people, and not only have less impact upon, but perhaps even improve the ecological, economic and social systems that impact our lives.

In conclusion, I feel I should add that not all students are created equal. Certainly, there is always a large portion of the students that simply don't engage in as much process as I would like to see and certainly don't always experiment with multiple medias on a consistent basis. But in interacting with classmates who are approaching the same project from different perspectives and in viewing the range of possibilities for a project when final solutions are presented to the class as a whole, I do feel that each of my students are exposed to the possibilities of a more systems-based approach. As the year progresses, I do see a sharp increase in the amount of process submitted by most all students. At the foundations level, perhaps that is all we can expect from most, but it is the exposure to the possibilities of the creative process—of a more systems-based way of thinking—that opens the door for more sustainable solutions moving forward.

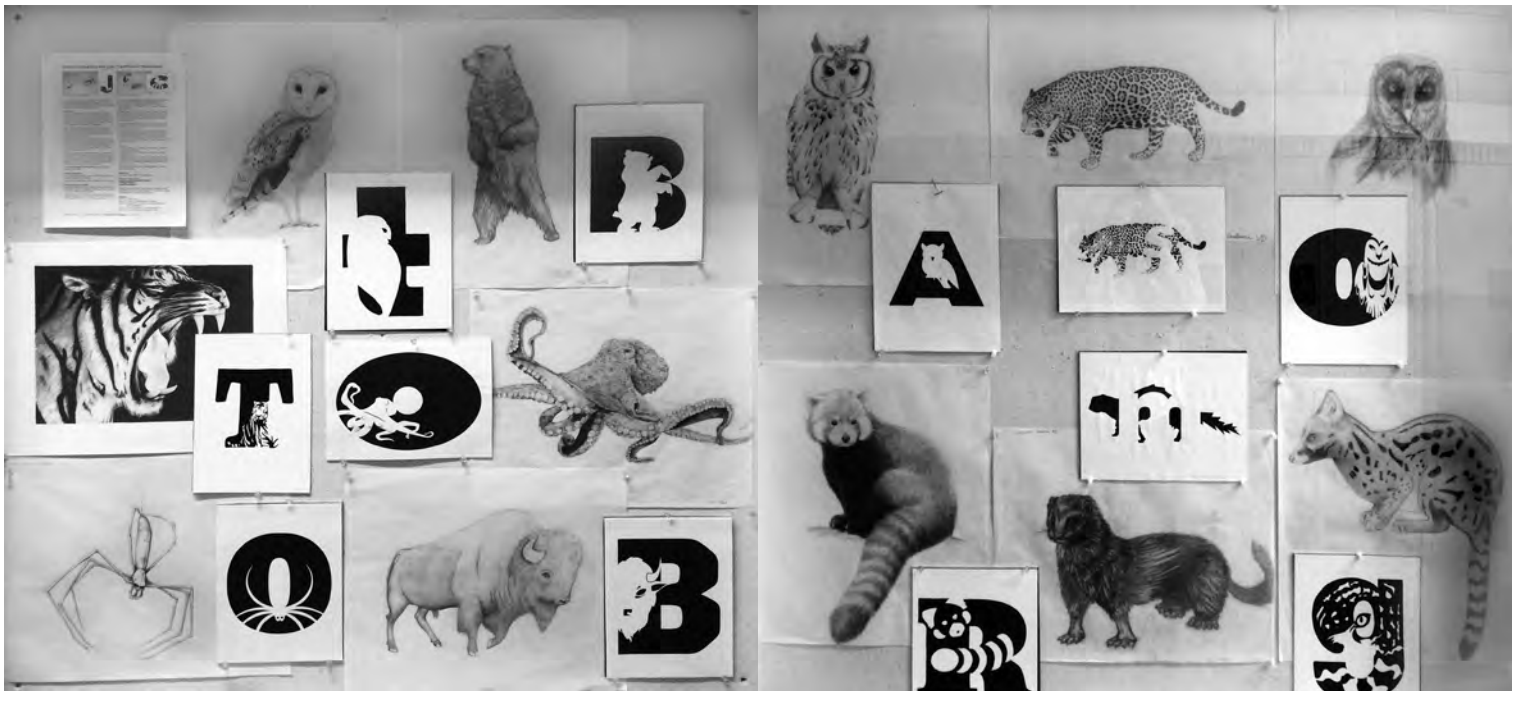
Herewith, I include samples of work done by students of the Art Fundamentals program, within my 2D Design course at Sheridan College. I have written that my assumptions about the creative mind had more to do with design-oriented creativity. In teaching students who might not yet have considered design as a possible career option, I have found that many of my students don't have any pre-conceived notions of what design should look like. The range of artistic styles and abilities that they bring to the interpretations of these projects is inspirational.

Project: Animal Form with Type – Figure/Ground Relationships

Students start by creating a scientific illustration of an animal of their choice. They must then go through a series of abstractions of form until they achieve an iconic representation of their animal. This icon is then superimposed onto a letter form so that gestalt principles might be explored.

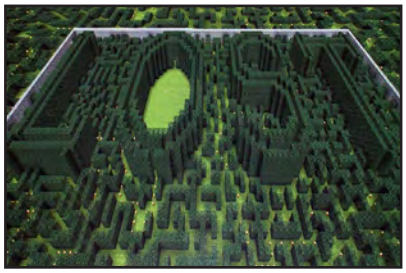


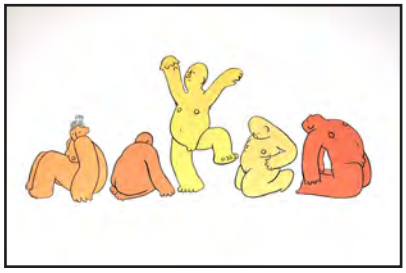
Dani Bittner – Process
Animal Form with Type – Figure/Ground Relationships



Project: Communicate the Meaning of a Word Typographically

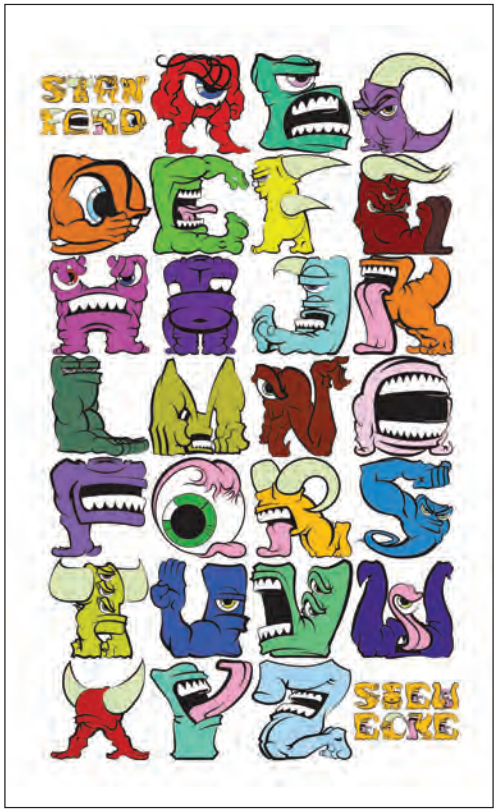
Students must illustrate the meaning of a verb or descriptive (no nouns) through composition. There are no limitations in terms of the media used to complete the project.





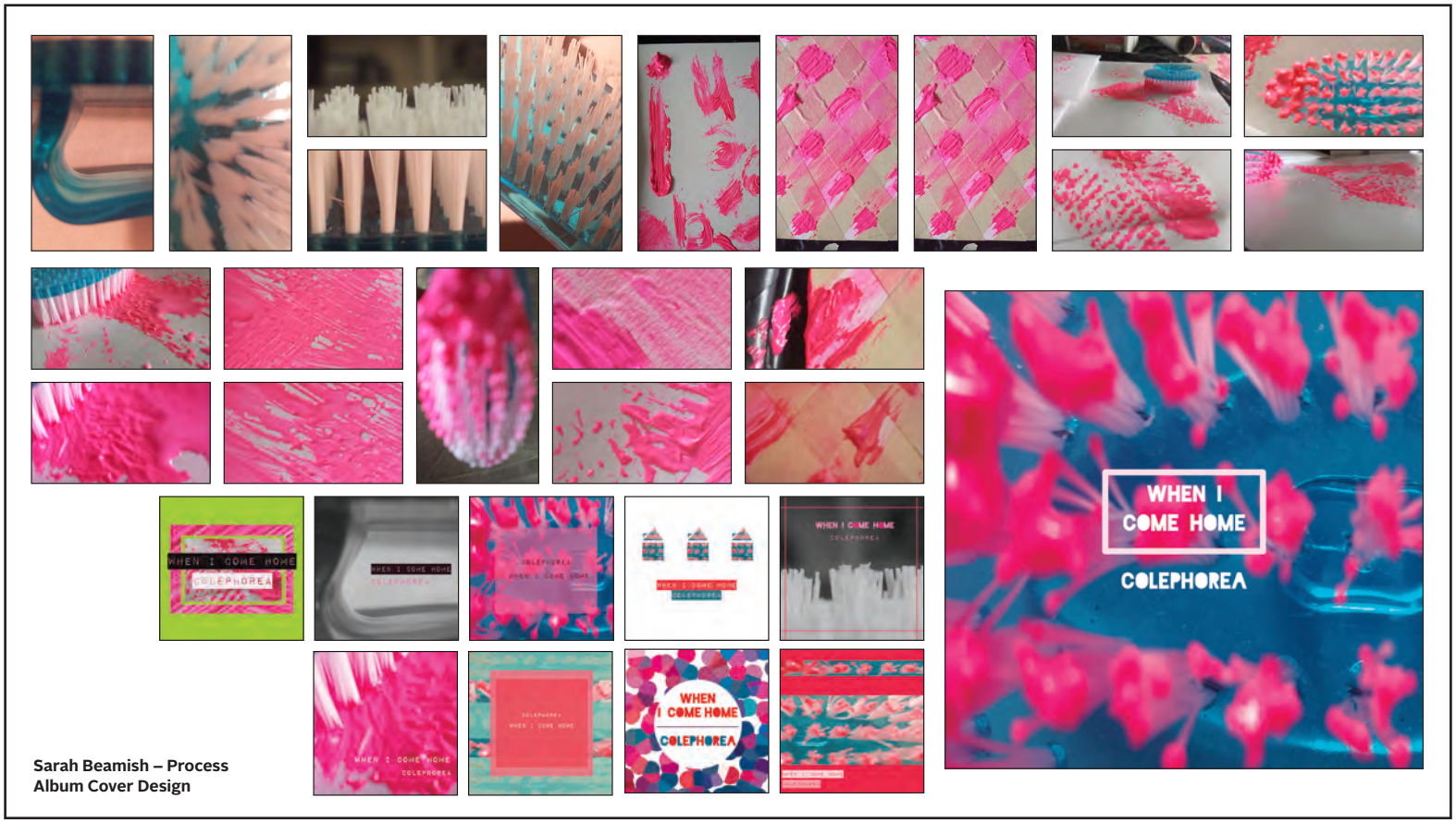
Project: Easy As ABC

Inspired by Rick Valicenti's Playground project, students design an alphabet using only found objects or environments of their creation. Letters may be documented through collage, photography, photocopying, digital and/or traditional illustration, and other appropriate mediums.



Project: Album Cover Design

Students design the album cover for a fictitious band of their creation. The names of the band and album are generated through a set of randomized procedures. Imagery for the album cover is created using a dollar store item selected in class. Students may photograph their object, illustrate it, or even use it as a drawing instrument.



Sarah Beamish – Process
Album Cover Design

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9.1 Creating a STEAMY classroom climate: Emotional Intelligence and the 3 C's — Classy Classroom Competition

Ursula Bryant
Lynchburg College

Abstract

Don't put the kibosh on heated critiques and highly competitive classroom dynamics. Instead transform the energy and use it to maximize student engagement. This session will address how a balanced social emotional learning experience and a healthy competitive environment can guide students towards cooperative learning and award winning design work. Learn how to facilitate student success and enjoy their motivation, personal development, and uncompromised success. Course projects and examples that offer sturdy framework where students are excited and empowered to take the reins and run.

9.2 Infusing 3D Printing into Design Education

Ed Johnston
Kean University

Abstract
Letterpress blocks, architectural details, wearables, promotional items, and prosthetics are all objects that are currently being digitally designed and 3D printed. Recently, I was watching Mick Ebeling's presentation at the One Show about Project Daniel through his non-profit Not Impossible Labs. Through Project Daniel, Ebeling's group traveled to an active warzone in Sudan and helped a young man named Daniel feed himself for the first time in 2 years with a 3D-printed prosthetic arm. Then, they set up a 3D-printing prosthetic lab in the Nuba Mountains and trained a village how to continue making 3D-printed prosthetics.[1] An overarching challenge of every designer and creative person is to articulate the larger questions or problems that one wants to address in the world and to find ways to effectively address them.

Martinez and Stager point out in their recent book that 3D printing is a valuable toolset for digital designing in the contemporary creative classroom. It embraces the "iterative tinkering process" that is essential to shaping confidence in students and effective creative practices.[2]

How can design educators effectively incorporate 3D printing across current design curricula? What is its educational significance? This paper argues that 3D printing is an important skillset for undergraduate design students across design fields. Embracing the constructionism of Martinez, Papert, and Stager, it demonstrates how 3D printing provides design students with another toolset to transform their ideas into reality, giving them the opportunity to take ownership and improve their digital designs through iterative tinkering. Furthermore, this paper provides an account of how a current undergraduate design educator has approached introducing 3D printing into a design curriculum.

1 One Show. "Interactive Gold Winner: Project Daniel: 3D Printing Prosthetic Arms - Not Impossible Labs / Venice" Online video clip. *YouTube.* YouTube, 29 July 2014. Web. 30 Jan. 2015.

2 Martinez, Sylvia L., and Gary Stager. *Invent to Learn: Making, Tinkering, and Engineering in the Classroom.* Torrance: Constructing Modern Knowledge Press, 2013. Print.

Infusing 3D Printing into Design Education

Ed Johnston
Robert Busch School of Design
Michael Graves College | Kean University

Earlier this spring, I experienced Mick Ebeling's presentation at the One Show about Project Daniel and Not Impossible Labs. Through Project Daniel, Ebeling's group traveled to an active warzone in Sudan and helped a young man named Daniel feed himself for the first time in 2 years with a 3D-printed prosthetic arm. Then, they set up a 3D-printing prosthetic lab in the Nuba Mountains and trained a village how to continue making 3D-printed prosthetics. [1] I was strongly moved by Ebeling's presentation, and it inspired me to reflect on my own practice as a design educator. In my teaching experience, I have noticed an overarching challenge of every creative person is to articulate the larger questions or problems that one wants to address in the world.

Once those are articulated, one must find ways to effectively respond with a wide range of skill sets. As Hernan Diaz Alonso states in the October 2014 issue of Metropolis Magazine, "The opportunities open to designers today are clearly unprecedented, mainly due to the shifting nature of contemporary culture, which promotes a peculiar mix of hyper-specialization and intellectual holism. Designers are required to constantly negotiate between these extremes and to be an expert in their projects. This means having to be fluent in skill sets ranging from theoretical writing to cutting-edge fabrication methods. Dexterity is mandatory, and this is definitely something that contemporary design education stimulates and fine-tunes in students." [2]

In this paper, I present evidence that 3D printing is a technical skill set that supports developing dexterity in contemporary design education. Also, I provide some useful information to get started on using 3D printing in the design classroom.

Significance of 3D Printing to Design Education

1. Design Learning Theory

After seeing Mick Ebeling's presentation, I invited him to speak at the Human Rights by Design event at Kean University this past March. One thing that

Ebeling emphasized in his talk to our design students and the Kean community was, "The more you fail the closer you get to success." This notion of being willing to fail and reiterate is essential to design practices.

Sylvia Martinez and Dr. Gary Stager point out in their recent book that 3D printing embraces the "iterative tinkering process" that is essential to shaping confidence in students and effective creative practices. [3] "The game-changing aspect of 3D printing extends beyond the ability to print something cool. The iterative tinkering process is employed while users continuously improve upon their own design possibilities…" [4] 3D printing has the capability of not only being a skill set that is useful for making objects. It also has the potential to catalyze confidence in design students by providing them with a creative method that embraces iterative tinkering.

I was recently given the opportunity to teach a cross-disciplinary special topics course involving 3D printing. One of the three major projects that I implemented in that course was a project focused on using 3D printing to create a promotional object related to a student's personal brand or a conceptual prototype for a product. Below is one example. This object stood as a promotional item that related to the student's personal brand. The three-dimensional tree was fabricated in a bronze alloy through Shapeways, a 3D printing company addressed later in this paper.

Figure 1. 3D-printed Promotional Item

Figure 2. 3D-printed Promotional Item as a Business Card Stand

3D printing is an important skill set to establish in contemporary design students because of its confidence-building potential. It is also important in preparing design students for employment.

2. Employment

As stated by the U.S. Bureau of Labor Statistics, employment of graphic designers is projected to grow by 35 percent in computer systems design and related services from 2012 to 2022. [5] Computer systems design includes user interface and user experience design. This connects with 3D printing in some very interesting ways, including the prototyping of wearables and other products with accompanying screen-based user experiences.

Prospects are best for industrial design job applicants with a strong background in two- and three-dimensional computer-aided design (CAD) and computer-aided industrial design (CAID). [6] Access to 3D printing technologies supports this. In regards to interior design, employment in specialized design services is projected to grow by 20 percent from 2012 to 2022. It will be essential for those interior designers to collaborate with other designers across fields. [7]

Being able to create 3D-printed models of spaces is a useful skillset within collaborative environments.

3. Wearables and Makerspaces in Higher Education

The New Media Consortium (NMC) Horizon Report 2015 Higher Education Edition has released some compelling information regarding 3D printing in the context of makerspaces and wearable technology. The NMC is projecting that the time to adopting the use of makerspaces and wearable technology in higher education is two to three years. Makerspaces are workshops where people are free to experiment and make things. [8] 3D printers are used in makerspaces, and prototypes for wearables could be fabricated and iterated on using those 3D printers and other resources.

NMC defines wearable technology as computer-based devices that can be worn by users, taking the form of an accessory such as jewelry, eyewear, or even actual items of clothing such as shoes or a jacket. [9] Some examples of wearables include the Apple Watch, GoFit, Google Glass, and Microsoft HoloLens.

> *…[A] recent poll showed that 21% of US adult students use wearables. Further, another report by GlobalWebIndex revealed that 71% of students ages 16 to 24 want to use wearable technology such as smart watches, wristbands, or glasses. The global wearable technology market as a whole is expected to grow at a compound annual rate of 35% over the next five years primarily dominated by Apple and Google, who already comprise 90% of the mobile platform market. [10]*

Design education needs to respond to these trends. I need to find ways of enabling my design students to design screen-based interfaces and explore how those interfaces exist within or interact with objects. I had the opportunity of teaching a Design for Mobile course this past semester. One of my students was able to take this course while simultaneously taking his senior portfolio course. Also, he was able to take my special topics course involving 3D printing. His concept that he worked through across these courses was a smart spoon that can monitor, track and calculate nutritional information in real-time. Via Bluetooth, the user would be able to send information to his mobile device to track and monitor the information.

As part of my Design for Mobile course, the student created an interactive app prototype for this experience. The link to this prototype can be found here: https://marvelapp.com/a02b1h
(NOTE: The URL to this project may change in the future.)

The link to the developed brand created in conjunction with Professor Denise Anderson's Portfolio course can be found here:
http://ds-design.co/banthia.html
(NOTE: The URL to this project may change in the future.)

Please see the conceptual prototype for the smart utensil and screens from the app prototype below.

Figure 3. View of the smart utensil conceptual prototype.

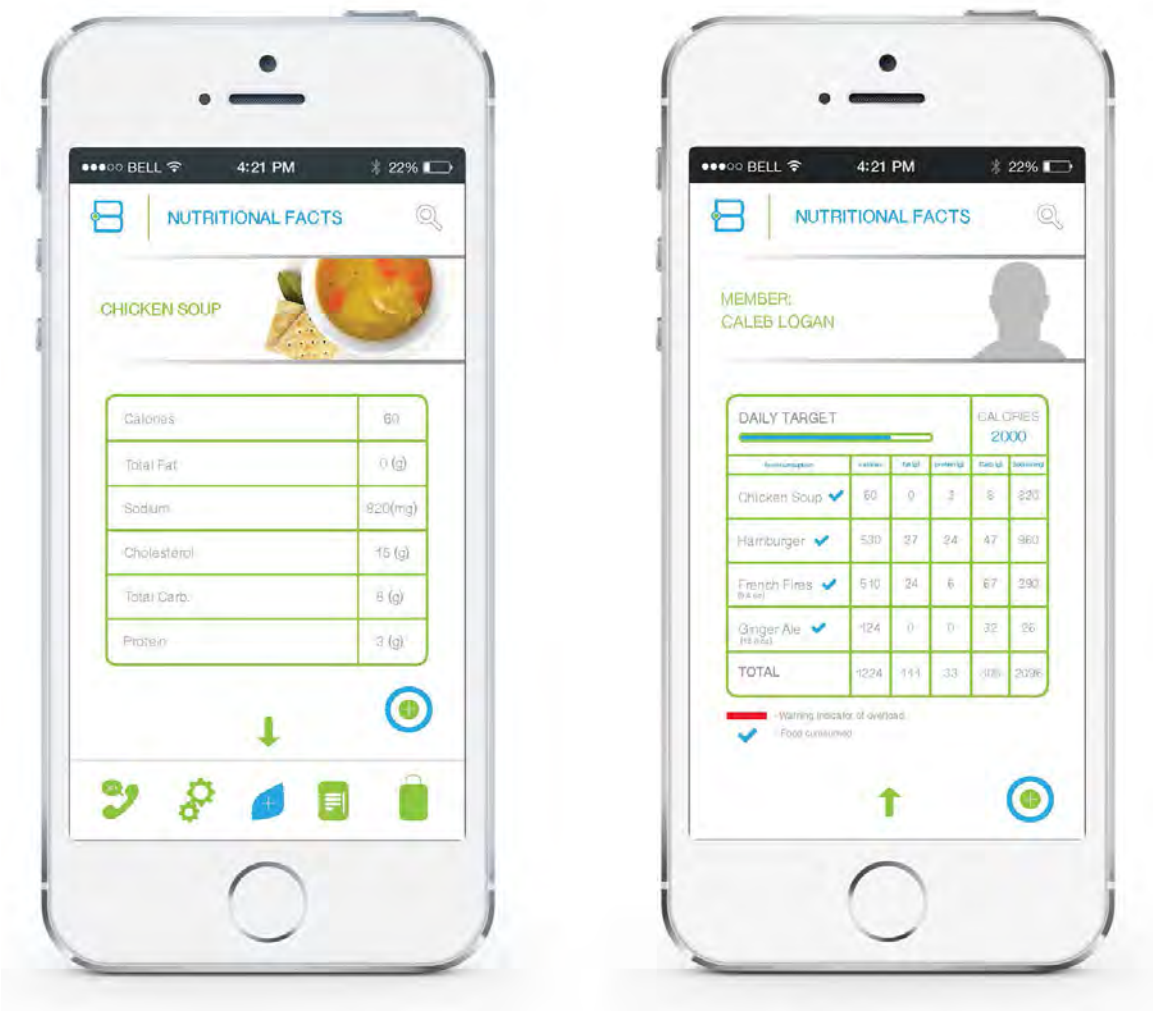

Figure 4. Two screens from the app prototype experience.

Getting Started with 3D Printing in the Classroom

Through the Autodesk Education Community, faculty and students can get free access to full academic versions of Maya, Inventor, and several other programs on their personal laptops that can be used for designing objects for 3D printing. You can get access here: http://www.autodesk.com/education/home

There are some excellent online video tutorials through Lynda.com specifically for how to use Maya for 3D printing and to get up and running with certain 3D printers. I use Lynda.com in many of my courses.

Shapeways is an online on-demand 3D print shop. You can send your designs there to be printed in many different materials. I have used this in my courses. I have students purchase a gift card at the beginning of the semester as a course material, which they will use later on in the semester. The advantage of using

Shapeways is that you do not need a makerspace to get up and running with introducing students to digital 3D design and 3D printing.
Shapeways: http://www.shapeways.com/

MakerBot is a 3D printing company that does well at getting organized with academic institutions and enables students to fabricate plastic objects.
MakerBot: http://www.makerbot.com/

There are many app prototyping tools out there now. My students have had success with Marvel App prototyping and Invision.
Marvel App: https://marvelapp.com/
Invision App: http://www.invisionapp.com/

Conclusion

As a design educator, I need to develop methods to stimulate dexterity in my students. I need to develop methods and provide opportunities for my students to be able to articulate the questions or problems that they want to address in the world. Furthermore, I need to implement technologies in the curriculum that are industry relevant and that anticipate adoption in higher education. 3D printing supports these needs, and I plan to continue developing makerspaces and opportunities to create concepts involving wearable technologies for my students.

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9. *NMC Horizon Report : 2015 Higher Education Edition.* Austin Texas S.l: New Media Consortium EDUCAUSE Learning Initiative, 2015. Pg. 42

10. *NMC Horizon Report : 2015 Higher Education Edition.* Austin Texas S.l: New Media Consortium EDUCAUSE Learning Initiative, 2015. Pg. 42

9.3 Teaching Web-Design to New Students

Nanhee Kim
California State University, Chico

Abstract

The web is constantly evolving everyday. Although web design has a relatively recent history, web design skills have become one of the basic skills in modern design techniques.

The term "web design" can mean different things to different people. To some, it can mean design layout. To others, it can also mean creating an HTML and CSS layout with JavaScript interaction. In other words, web design has become more specialized.

As responsive web design is an emerging trend due to the various devices used to browse the Internet, Photoshop mock-up cannot illustrate all layouts and solid coding skills are more emphasized than before in designing web. When considering a responsive design for a website, it is important to understand JavaScript and get started developing J-Query plugins.

While technology evolves so rapidly, it is not easy to update a course with the latest material every year due to a lack of time. Another challenge to teach web design, instructors can often faced with classes that include students who have different levels of skills when the course is open to all major students.

This paper seeks how one teaches students who knows nothing about HTML and CSS using modern techniques such as responsive and mobile first. It also explores some of the issues surrounding the designing web course and provides some guidelines and online resources for educational technology.

Teaching Web-Design to New Students

Nanhee Kim
Communication Design
California State University, Chico

INTRODUCTION

Web technology evolves rapidly. Coding techniques such as Html and CSS have affected major changes on front-end web development since they have been introduced. In addition, new technologies such as HTML5 JavaScript API and mobile first responsive web are added to the coding techniques lately. However, it is hard to keep up to date with the current technology or revisit courses with updated materials. This study seeks how one should teach the basic introductory web design classes to new students.

EVOLVING WEB

The concept of web design is not so much old. The first published website was introduced by Tim Berners-Lee in 1991(India, 2008-2010). As Web technology has changed gradually, the markup language has become more complex than before. For example, the tables were used to employ for tabular information but tables were used to create invisible layouts. As CSS and HTML introduced, the table-based layout considered out-of-date.

BASIC WEB DESIGN CLASS

The basic web design class in Communication Design, CSU Chico is an introductory web design course and it is required for all Communication Design students. The following is the details of the course.

- 25 students (4 sections)
- 4 hours a week for 16weeks
- Requirement for all communication design majors and open to any major (Media arts, Graphic design, Communication design, and etc.)
- Mostly freshmen or sophomore

CHALLENGES FOR TEACHING

A broad range of concepts and skills such as website planning, mobile first responsive web, JavaScript and jQuery, information architecture, usability, Document Object Module DOM (DOM) and so forth need to be covered in the curriculum. However, it is

difficult to update a course with the latest materials every year due to a lack of time while technology evolves so rapidly. Instructors can also often face with classes that include students who have different levels of skills when the course does not have any prerequisite and is open to all major students. In addition, the term “web design” can mean differently to different people. For example, it can mean designing layout with Photoshop to some or it can mean creating an HTML and CSS layout with JavaScript to others.

WEB TREND 2015

Web is a moving target which is constantly changing and evolving. It is important to reflect the latest new trend. The following are web design trends in 2015.

Responsive Web

As responsive web design is an emerging trend due to the various devices used to browse the Internet, Photoshop mock-up cannot illustrate all layouts and solid coding skills are more emphasized than before in designing web. When considering a responsive design for a website, it is important to understand JavaScript and get started developing J-Query plugins.

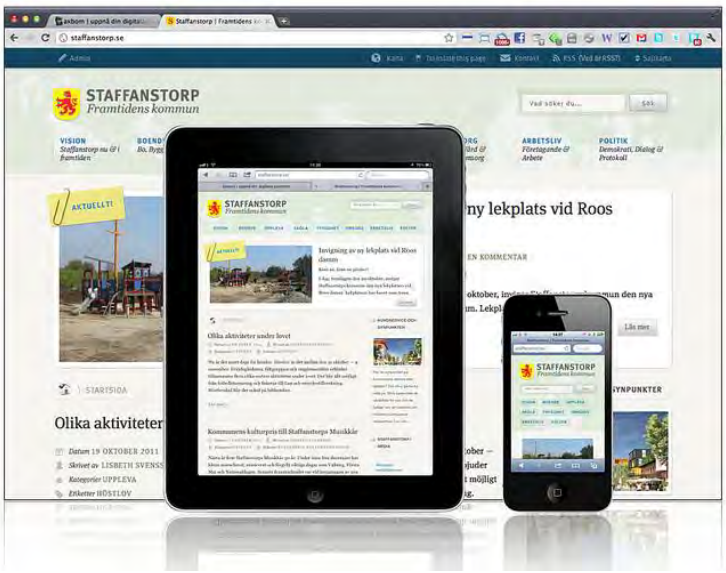

FIGURE 1. " RESPONSIVE WEB DESIGN" BY PER AXBOM IS LICENSED UNDER CC BY 2.0

Flat Design

Flat design refers to the minimalistic design approach that emphasizes usability. In the past, web designers attempted to bring real life to the screen, with textures, shadows, and real object characteristics. Then came a shift toward flat design, which is quick to load and get rid of ‘artificial’ design techniques. It features crisp edge, clean lines and dynamic colors.

Long scrolling site

Long scrolling site is one of the most impressive area in web design, 2015. Parallax scroll has become mainstream and this make the background of the website move more

slowly than the foreground. As a result, it creates 3D effects and helps to keep visitors engaged. This makes website highly interactive and tell wonderful stories.

Typography on the web
Fonts used to be limited to a few standard choices and designers only had a few choices when it came to using type on the web. The introduction of web fonts in recent years has improved typography on the web. Websites are much more visually appealing and typographically expressive.

High quality custom photography
Use of large and prominent images that explicitly express the idea is on the rise. A good picture makes more sense for mobile users as the tendency to read content is limited on mobiles. Although stock image still has its place in web design, using high quality custom photography takes the design steps a bit further.

Web page background
Background is likely to be dominated by HTML5 videos. Use of animation, instead of static images in the background, is also gaining a lot of popularity among the experts.

TEACHING METHODOLOGY

Why use Scaffolding learning?
Although those who teach web design may be experts in the field, structuring learning experiences for students may not be easy. When students are from a variety of academic backgrounds, it is essential to structure learning experiences for succeeding in class. Scaffolding in education refers to a multitude of instructional techniques used to move students sequentially toward stronger understanding and, ultimately, greater independence in the learning process (HoganKathleen & PressleyMichael, 1997). One of the major benefits of scaffolding in education is that it provides students with useful learning environment. Figure 2 shows that Vygotsky's zone of proximal development (Vygotsky, 1978) that it's critical to determine the area (zone) between what a student can accomplish unaided and what that same student can accomplish with assistance. Students receive assistance to complete task and later the support is gradually removed as their proficiency increases.

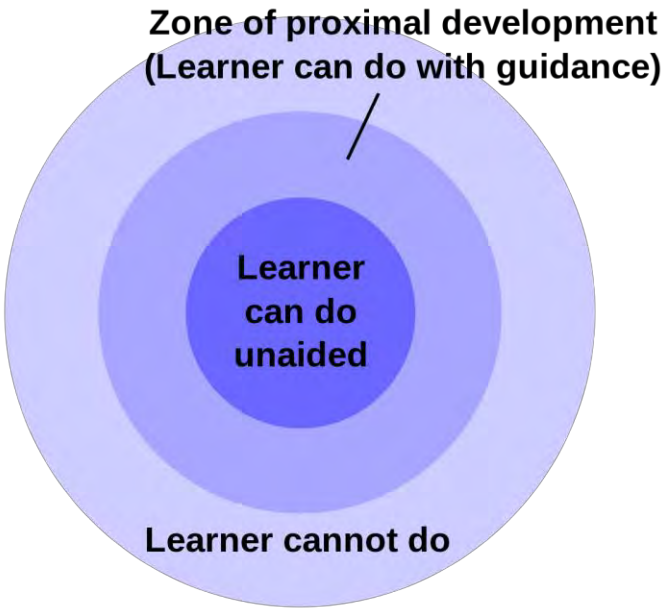

FIGURE 2: ZONE OF PROXIMAL DEVELOPMENT (VYGOTSKY, 1978)
SOURCE AT HTTP://WWW.INNOVATIVELEARNING.COM

Instructional Scaffolding to improve learning

In the basic web design class, each of students does not have a pre-determined baseline of knowledge or capability. Students can be overwhelmed by unfamiliar material and coding html in the class. It is important for an instructor to identify an appropriate student's level and what skills and concepts will be developed next. Providing step-by-step instruction is necessary to help students understand what they need to accomplish to meet the requirements of the task. Instructional scaffolding help students become comfortable coding in HTML, CSS and JavaScript and build self-confidence for their own learning.

Exercises

At the beginning of the semester, students are introduced the concepts and a big picture of the web design. Later, a simplified version of a lesson or reading are given to students and then the complexity, difficulty, or sophistication are increased gradually over time. In the entire semester, students do 10exercises and then students get comfortable with coding through the exercises. In addition, those exercises are useful resources and important elements for their projects. As shown on Figure 3, every exercise is done in the class and Google doc is used when sharing code. Every student is able to drag and copy the code if it is necessary. At the beginning of the semester, students create folders on Google Drive and share their assignments, exercises and projects (Figure 4). It helps students to understand what assignments/exercises are missed and update their future assignments.

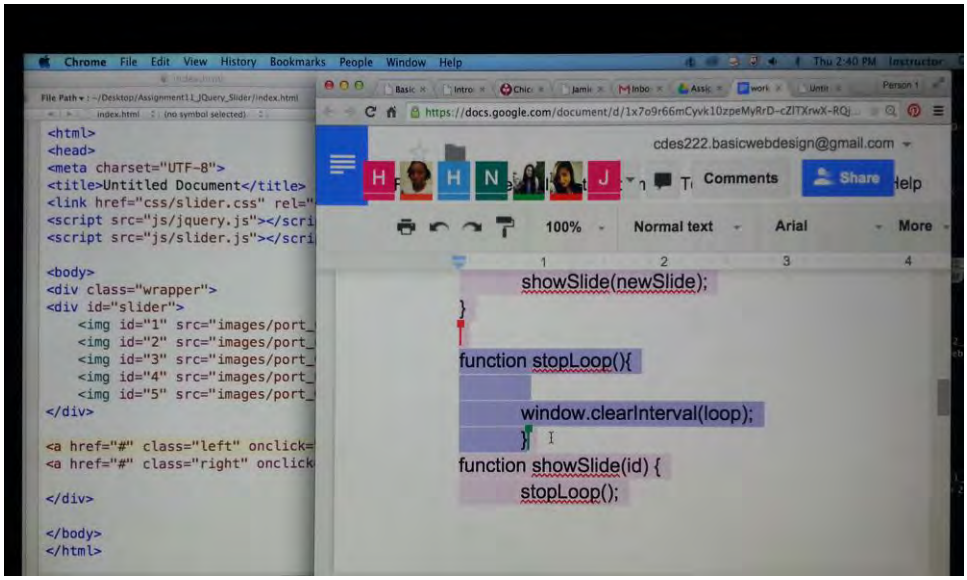

FIGURE 3. GOOGLE DOC

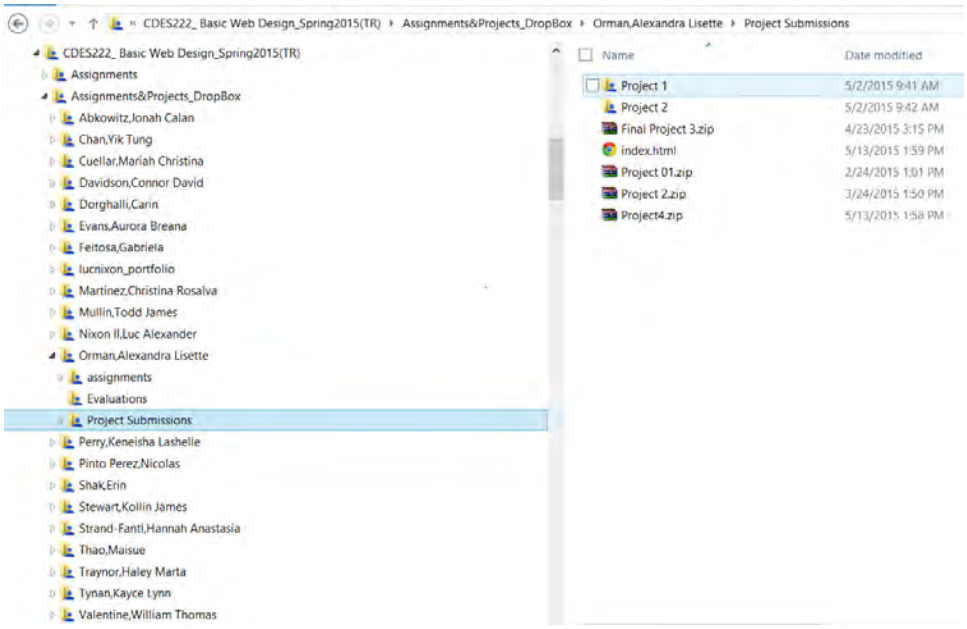

FIGURE 4. GOOGLE DRIVE

Projects

Even when students have developed new skills and competencies sufficient to perform a task, it may not mean that they are ready to perform the task independently without any assistance. Most students are transitioned from assisted to independent learning and it is a gradual process that inquires moving from using a number of assistance to slowly taking over until they do not need any assistance. To facilitate this transition, exercises not only play an important role in learning code, but also become useful resources to build

projects. Students have 4 projects in the entire semester and Project1, Project2, and Project4 are all relevant to each other. For example, students build a simple bio website using html in the first project and later re-design the first project using Html and CSS in the second project (Figure 5). Finally, students create a portfolio website in their final project and add J-query Image slider into their second project.

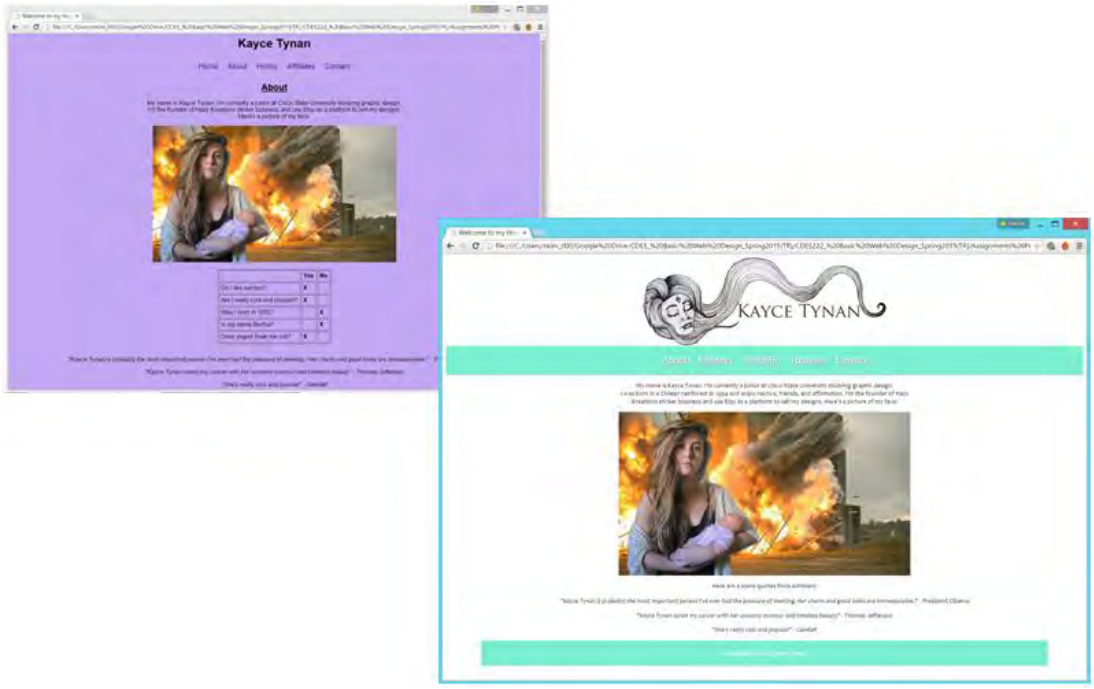

FIGURE 5.
PROJECT1: STUDENT BIO – HTML (TOP LEFT)
PROJECT2: STUDENT BIO, RE-DESIGN – HTML5+CSS3 (BOTTOM RIGHT)
PROJECT4: PORTFOLIO – HTML5+CSS3, J-QUERY, JAVASCRIPT, AND RESPONSIVE DESIGN

In project 3(Figure 6), students create a website that allows a global audience to experience some aspect of Northern California. This project enables students to explore design concepts, usability, user interface, information architecture and so on and discuss how to attract and engage their audience as well. Since most students are from Northern California and students put their story in the website and those stories are effective to create emotional connections with their audience.

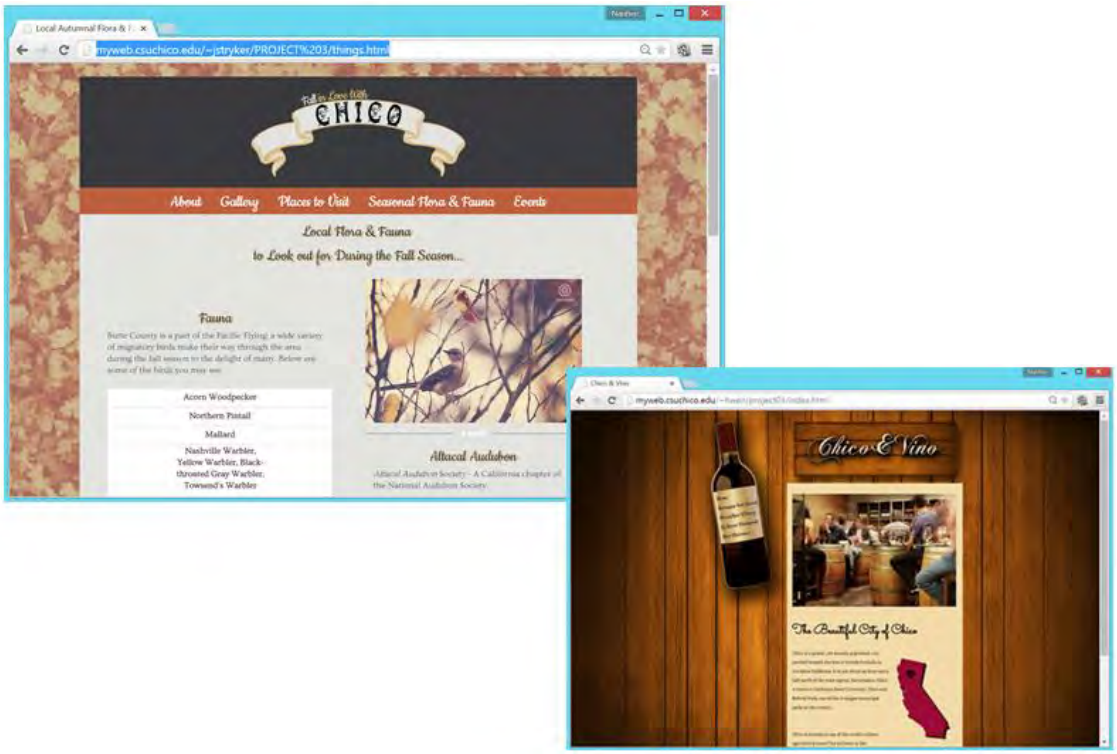

FIGURE 6. PROJECT3: SENSE OF PLACE - HTML5+CSS3, EDGE ANIMATE, AND INTEGRATION BY JAMIE STRYKER (TOP LEFT) AND HEATHER WEIR (BOTTOM RIGHT)

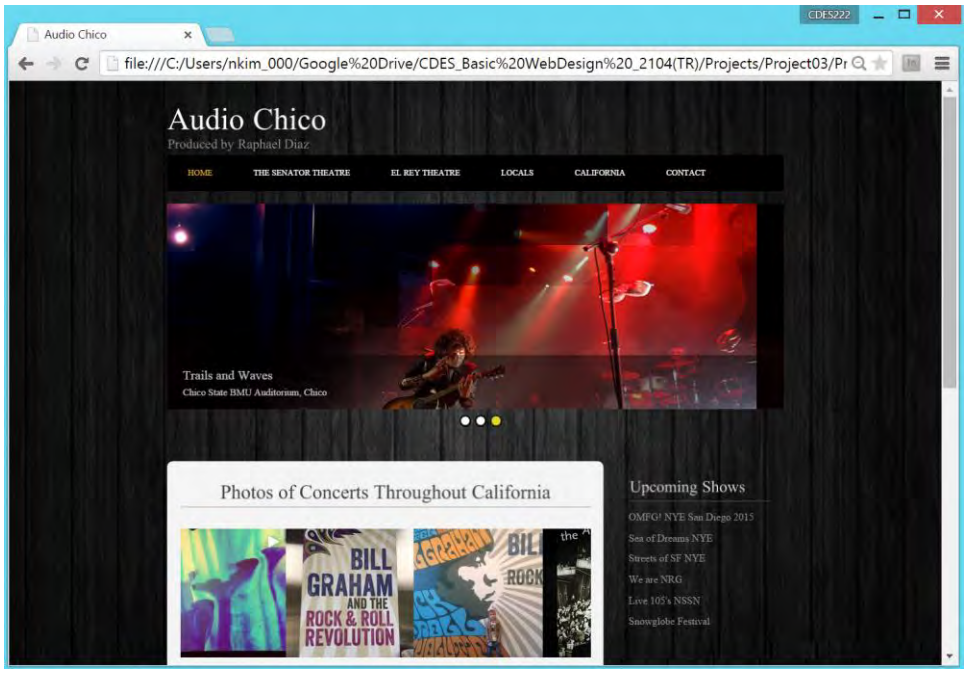

FIGURE 7. PROJECT3: SENSE OF PLACE – J-QUERY IMAGE SLIDE BY RAPHAEL RUIZ

FIGURE 8. INTERACTIVE MAP CREATED BY EDGE ANIMATE BY ANDY RADER

GUIDELINES FOR TEACHING NEW STUDENTS

Web design can be intimidating, overwhelming and time consuming especially to students who are just beginning to learn Web design. It can be even confusing to instructors since new techniques appear every day. There are many approaches to teaching web design but I've come to understand there are certain things instructors can do to make classes more useful and enjoyable. The following guidelines are suggested when creating and teaching Web design course to new students.

Contextualize

Structure your class so that each topic builds on the previous one so that the transitions between topics are comprehensive and progress logically and predictably. Provide an overview and give the big picture. It is important for students to understand the overview before moving on detailed code.

Write code

Writing code in the class is the most important aspect of teaching a class on web designing. Students will not absorb the information from the lectures. It helps students understand code better and provide them with confidence which they can write code. Projecting code helps students engaged in-person teaching environment. Like Google doc, sharing code is important for students who want to go over the

Teach How to Learn Technology

Make sure students understand enough so that they know how to ask right questions, look in the right places when they try to practice the material a week later at home. Teach them how to use online resources, blogs, and social-media resources for finding tips and techniques in order to stay on the cutting edge

Documentation of the planning
It is easy to jump on designing web without documentation. However, the planning state is the most important because crucial elements are determined and mapped. The concept of a document (DOM) helps to understand an abstract structure that has some relationships between elements. This then translates to html for the structure.

Use simple online tutorials
Although you understand a lecture, it is always helpful review the notes from the class. Simple and accessible online tutorials provide students core skills in order to accomplish the projects.

Identify Trends
As we discussed, the web technology is evolving and stay on the cutting edge is critical for standing out in the job market of today.

SUMMARY AND CONCLUSION

Technology moves fast. Although web design has a fairly recent history, it has become a larger part of people's everyday lives. In recognition of this, introductory web design courses have become required courses in higher education. HTML itself is not complicated to learn but it can be quite complicated to those who just started learning code. Taking the time to create an engaging curriculum and a thoughtful structure will be of great benefit to both instructors and students.

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10.1 Collaboration ≠ Less Work :: Redefining Perceptions for Promotion and Tenure

Jenn Stucker
Bowling Green State University

Abstract

As an assistant professor navigating the tenure-track process, there seems to be a pervasive perception that collaborative work is less valuable for Promotion and Tenure than that of independent contributions. Yes, many hands might make light work, but many hands can also help make greater work; work that can be nearly impossible alone. Since 2007 I have been engaging in community-based projects that have made significant contributions to the cultural sense of the City of Toledo. These projects included establishing a local AIGA Chapter, proposing and hosting a national AIGA Design Educator's Conference, producing the Urban Forest Project of Toledo, The Downtown Windows Project, The You Are Here Toledo Project, and SWEAT: Summer Workshop for Experimentation and Thought. In each of these projects I was primarily authoring or co-authoring proposals for conceiving and/or grant writing, or handling significant roles in these highly successful works. The scale of these projects and so many in only seven years, would be daunting to accomplish alone, especially while teaching a full load at an institution.

Another misconception of collaborative work assessment in the Promotion and Tenure process is the listing of authorship. Merit Reports and CV's are full of "first author, etc.," which through the creative process seems many times quite impossible to define. Those in the creative disciplines know how ideas and work flow organically, but by force of promotion and tenure we are to decree a pecking order of collaborative contribution. My close collaborator and I have been required to take turns in claiming authorship and leadership roles on projects which consistently put strain on the collaborative relationship.

The presentation of this paper hopes to open a dialogue between teaching faculty at all levels and how we can all work toward changing perception of the assessment of collaborative work.

10.2 FRESH MEAT :: 10 Lessons From a Novice Design Instructor

Shannon McCarthy
Shepherd University

Abstract

Fresh Meat refers to the newly minted professor, the one "fresh" out of graduate school. I have had the opportunity to experience the role of visiting professor at two very different institutions immediately upon completion of my graduate degree. I believe the personal and teaching skills I have learned may assist other novice college or university faculty adjust more easily to the role of teacher and colleague. My experiences with both fellow novice professors and those more senior inspired me to write Fresh Meat in order connect with other new faculty who may be experiencing similar tribulations, anxieties and concerns and provide a communication path to encourage discussion and collaboration. I discovered that all good teachers (no matter how long their service) share an interest in developing resources, enhancing their teaching styles and in developing curriculum to meet the needs of the student, the department and the community. I hope to open a path of communication and exchange to assist other "Fresh Meaters" in discovering and sharing the variety of sources available to them, especially those still in their graduate degree. Through this collaboration, professors across the nation can supply ideas, resources and discussions on various topics to help invoke change in personal, professional, teaching and cross- cultural development between colleges and universities to help cultivate and continue a strong teaching community.

FRESH *meat*

Ten Lessons From A Novice Design Instructor

SHANNON RYAN MCCARTHY

DO NOT
compare

LESSON ONE

One of the easiest things to do when you are a freshly-minted professor is to compare yourself to your colleagues, both in your area of concentration and in the department in general. Don't. Remember that many of your colleagues have been teaching for years and just as the case will be with you, developed and learned over time. It is important to recall that your colleagues have come from different educational and social backgrounds, and may well have different focuses. A colleague might be more in tune with interactive design or more understanding of how to manage a lab, and that is a good thing, for it adds diversity to the department. If you would like to know more about certain subjects, use your resources and become a sponge.

BE A
sponge

LESSON TWO

In being new, you will have a lot of questions and you shouldn't be afraid to ask them; even if you feel you should know the answer, it's better to be right then simply hypothesizing. Both design and art senior faculty can be a wealth of knowledge, as well as other professors throughout the campus. Overall, design and art are taught differently than other fields of study, but that doesn't not mean other professors do not have suggestions on how to communicate with students or help with teaching issues. Go to faculty functions, find lunch groups, or start your own - introduce yourself and make a contact. Remember, everyone has a different background; went to different schools, were educated differently and will teach differently. The important thing is to find your own groove but always welcome suggestions and improve yourself upon reflection. Ask your colleagues about their teaching styles, grading procedures, how they conduct quizzes and tests, and how to communicate to students about their work. You should never feel as though your way is the best way, for education, curriculum, and students change, and you have to be able to expand and grow with the changes. Through observation and asking questions, I have already learned so much these past two years from the senior faculty and colleagues who were once in my shoes.

EVALUATE
yourself

LESSON THREE

I firmly believe that all new faculty should continually evaluate their projects and themselves by collecting data from students and fellow colleagues. At the end of each project, I hand out a project evaluation sheet. In this sheet, I ask the student about their personal development, and also what they thought about the project, always allowing them to write more comments. I was asked once why I did this- did I not have confidence in my project and my teaching ability? I simply answered that this is a non-invasive way for student feedback. Many of the projects I try are new to the students and myself, and I want to make sure that what I present, in both a lecture

and written format, is clear and understandable. A good percentage of students take this seriously and answer truthfully, so that where I otherwise might have thought everything went just fine and moved on, I can now tweak the projects based on the student feedback. I do not let the students control the project, but I find it very helpful to discover what they feel like they learned most from the project, and if that was my main objective. Every school has class evaluations, but I also make up my own for the students, as well as give them the institutions. My questions to the students are more focused to my teaching style and how the classroom is run overall. This helps me refocus the class and to make sure the students and I communicate with each other.

LESSON FOUR

COMMUNICATE WITH students

Communication with your students is a key aspect to a successful class relationship. When coming into a new position and working with students, you learn quickly that everyone has different personalities. Depending on your teaching style and personality, you may approach and communicate with students differently, though I find that each individual needs to be communicated with on different levels, depending on their personalities. As a result of their varying personalities, students will react differently to your tone of voice, comments, and even facial expressions. The way you communicate with students can either help or stunt them in their own personal and design growth. Do not let the students overpower how you really want to communicate to them, but be considerate of their emotions. When I am introduced to a new student, I look to see who else in the class they speak to, if they sit alone, do they speak during critique, do they arrive to class early or late, do they have their work done on time, do they talk softly, or do they make eye contact with a person they are speaking to? I personally always watch out for these actions because it gives me a good idea of their personality without knowing them for very long. With some students, I had to work to break down their protective barriers they built around themselves. One way I do this is by seeking out a certain type of graphic on a shirt or maybe a band pin on their book bag, these actions help me to relate to the students better. We can then start to communicate in a more relaxed way that will lead into a more trusted relationship between student and teacher. For me, it is easier to conduct myself differently around individual students, then to have an overall personality for all students. First and foremost, I want to be a teacher and a mentor, but other times I fill the role of a listener or a disciplinarian. I have also found that, due to my age, students feel more capable of being open and honest with me, though difficulties arise when my age hinders me; some view me not so much as a mentor, but as an older sister to whom they can speak however they want. To not form those habits in students, I make sure they understand that they can speak honestly with me about the class, but that both teacher and student must show a level of respect for each other in order for the class and their learning to succeed.

STAY fresh

LESSON FIVE

Stay fresh and up-to-date on technology and design thinking, as well as your own work. During the year, it can be harder to stay active in the non- teaching realm, at least when you are teaching four classes per semester; you may read an article here, look at a website there, and try to do a few pieces of work, whether client-based or independent. Every situation is different. What we must remember is that there are others out there like us, and we can come together to speak about these issues, teaching-related or not. Summer, for most of us, is our time to research, explore and create new work, as well as travel and visit family and friends, which can just be as revitalizing. The main thing to remember is that we must say current and fresh on the diverse paths of design in order to inform our students and keep them aware of the current modes and methods of design.

STRIVE FOR failure

LESSON SIX

An objective in my teaching is to have my students fail at least once in each class– and by "fail," I do not mean failing the course or anything remotely as severe, but simply for the students to take risks and experiment, even if the outcome is not what they–or we– desired. With design, there are several ways to solve a problem or complete a puzzle. Students must explore options and be pushed in different directions- sometimes in directions they want to pursue themselves, and other times, in ones that are suggested to them. Let the students discover and understand if the direction they are pursuing is indeed the best option, or how they should reanalyze their path upon discovering that it is not.

MORE THEN JUST teaching

LESSON SEVEN

There is more to do than just "teach" at higher education establishment. One must become part of the bigger picture for both the department and university. There are faculty and university meetings, as well as different department tasks and university groups. Due to my visiting positions, I have not yet taken on the full load as tenure track professor, but this does not stop me from helping when I am needed, or from introducing myself to the campus. At my current location, it is mandatory that I go to faculty and university meetings, along with attending first year teaching faculty meetings, but I also volunteer my time by working with the department and throughout the university to help with any design work. Because of this, I have gained new acquaintances in the biology, geology and sociology departments, along with working with student organizations and a local Girl Scout Troop.

DON'T TEACH JUST design

LESSON EIGHT

We are all design educators, but that does not mean that design is all we have to teach. In my lesson plans, I always try to have at least one project that deals with current, real world situations. I do this not only to expose students to these issues, but also to show how design might be able to help the situation. Yes, students need to understand the programs and how to work with type, but they should also know that, through design, they themselves can make a difference to bring attention to a situation and invoke change in viewers. I believe a powerful design can change the world; by changing one person's opinion on a subject or event by simply informing them of things they might not have known, you may change their world- that world can even be one of your students'.

PUT YOURSELF IN THEIR shoes

LESSON NINE

I always try and put myself in my students' position and even think back to when I was a student. This helps me to figure out timelines, interesting projects, presentations and more. At my current university, students mainly live off campus and have a part time job, so I try always to keep this mind when forming schedules and projects. It is the student's responsibility to prioritize between classes, work and a social life, but that doesn't mean I have to overwhelm them with a massive amount of work within a two–day span, I realize they have other obligations and that my class is a stepping stone for improvement and not their entire focus. Give the students work throughout the week, but make sure that is enough to help them learn, and not to make them feel so overwhelmed that they do not even know where to start. Something that seems easy to recognize but is often ignored is the student's developmental stages. Some students you teach might have that "rock star" potential from the get go, while others may grow in their sense of design over the years, then we have students who just stay with design because they are not sure what else to do with themselves. With all of these situations, we have to encourage our students; from the get go, rock stars need to be pushed into different directions and more advanced design thinking, while the slow–yet–determined designers need help to evolve their design skills and vocabulary; for the unsure they will need assistance to help them grow; perhaps even having a real down–to–earth conversation about what they really want to do in life will allow them to figure out if it is design.

IDEATION IS key

LESSON TEN

What I gathered from the professionals in the field, professional adjuncts, and also my own experience, is that students need to know how to think. Professionals want to know how students got from point A to point C with sketches and notes, but above all, possess understanding and research. "Wow, a beautiful logo! And you only did three sketches to get there?"– said not one true professional ever. Design takes

time, effort and research, and students need to know the importance of the process, for without process, there is no true design thinking. I personally always have my students do mood boards, thumbnails, and multiple ideations, and hand in a PDF of their progress to me, so I know they have tried different classmates' and instructors' critique comments. This also shows me the potential they have in being a designer; since we all have to take direction from a creative director or client, it must be driven into students that they cannot hold to their design in a steadfast manner.

Please share lessons you have learned as well as resources to help grow this community of young design educators. Visit Fresh MEAT Design Educators on Facebook for more information and to become a Fresh MEAT member.

10.3 Harvest Time: Generating and Cultivating Ideas in this Millennium

Jerry R. Johnson
Troy University

Abstract

Idea generation and creativity are rapidly expanding as popular subject areas inside academe—and outside of art. What a momentous time for the traditional sector of academia (art and design—long known for cultivating creativity and ideation) to cross pollinate with other disciplines and lead the way. According to Doug Pierce, Internet guru of Blue Fountain Media/NY, "Businesses, too, more than ever, must depend on the creative impulses of their employees to stay on the cutting edge of their industry. From malls to movie theatres, in the struggle for shelf space and screen exposure, companies must stay ahead of the curve by putting forward ever more innovative products or services." If a society is to stay relevant in this millennium, it must kindle the best environment possible to nurture creativity.

This presentation will expand effective (old or new) systems for ideation. This presentation will offer a selection of ways in which ideas are germinated, cultivated and perhaps more importantly—*harvested* in this Millennium.

Jerry R Johnson, *Professor of Design*
Troy University [jjohnson@troy.edu]

UCDA | 2015 Design Education Summit
May 18–19, 2015

Sponsored by the University and College Designers Association and South Dakota State University, Brookings, South Dakota

ABSTRACT

How are current marketplace trends and challenges impacting the pedagogy of current design curricula? Some trends define the designer's role in a much broader, strategic context than simply the making of beautiful and functional things. It has been noted by contemporary design research that designers must be able to draw on experience from a broad range of disciplines in order to solve problems relative to a global, competitive market of products and ideas. The scope of 'design problem solving' has so expanded that its complexity requires consideration by academicians who educate designers for the future. Even 'near future' anticipates strong consideration of new preparation. Some common trends or topics are: co-creation; sustainability; interdisciplinarity; attention economy; global dynamics and others.

This presentation underscores the continuing need for germinating, cultivating and perhaps most importantly—harvesting effective designers for the *near future*. ●

INTRODUCTION

Defining the Creative (designer) of the Near Future

The stimulus for this presentation was a study done by the American Institute of Graphic Arts (AIGA). Teaming up with Adobe® nearly ten years ago, AIGA conducted a variety of interviews, focus groups, workshops and surveys to help define the near future as it relates to the preparation of designers. To gain increased understanding of the emerging and expanding roles of designers, it is imperative that educators and design leaders discover how to best prepare designers for current trends and future changes.

AIGA and Adobe® attempted to characterize future designers. One critical but not so simple task was to create *essential competencies* that will be needed by tomorrow's designers. The results of this research could help design educators in preparing tomorrow's designers as we redress lesson plans, learning outcomes, curricula as well as entire academic programs.

Based upon these findings, we consider ways design education has reshaped to respond to the challenges posed by the projected, evolving design landscape. Let me clarify, no individual designer is likely to contain all the skills expressed, this was simply a range of competencies that any design studio or creative agency or department—among its full range of staff—may need in order to meet the demands of the future.

Designer Competencies for the Near Future

After AIGA surveyed over 2,500 constituents, conducted numerous focus groups and surveys with creative industry and design leaders, gained feedback from workshops, this compilation of competencies resulted. Somehow, this study projected some challenges for educational institutions in developing curricula, as well as for professional studios that are recruiting their teams. The competencies are listed below in order of their ranked importance:

- Ability to create and develop visual response to communication problems, including understanding of hierarchy, typography, aesthetics, composition and construction of meaningful images
- Ability to solve communication problems including identifying the problem, researching, analysis, solution generating, prototyping, user testing and outcome evaluation
- Broad understanding of issues related to the cognitive, social, cultural, technological and economic contexts for design
- Ability to respond to audience contexts recognizing physical, cognitive, cultural and social human factors that shape design decisions
- Understanding of and ability to utilize tools and technology
- Ability to be flexible, nimble and dynamic in practice
- Management and communication skills necessary to function productively in large interdisciplinary teams and "flat" organizational structures
- Understanding of how systems behave and aspects that contribute to sustainable products, strategies and practices
- Ability to construct verbal arguments for solutions that address diverse users/audiences; lifespan issues; and business/organizational operations
- Ability to work in a global environment with understanding of cultural preservation
- Ability to collaborate productively in large interdisciplinary teams
- Understanding of ethics in practice
- Understanding of nested items including cause and effect; ability to develop project evaluation criteria that account for audience and context

SIX MAJOR TRENDS for Designers of the Near Future

From this lengthy and grandiose compilation of skills and knowledge, six (6) major trends, and the challenges they pose for the profession, emerged from the research. These trends defined design's role in a much broader, strategic context than its roots of making things of beauty and function or purpose.

Design strategy. Human/user experiences. Intercultural communication. Co-design or co-creation. Collaboration. Empathy. These trendy, timely and sexy terms generated some enthusiasm among us design educators but concurrently created anxiety about whether or not we could adequately prepare designers for the broader roles that these terms imply.

The six essential trends in the order of importance as identified by the research:

1. **Wide and deep: meta-disciplinary study and practice**

We've heard much in recent years about such *meta* topics as "thinking about thinking" or "histology: the history of history" or the "meaning of meaning". Design as a discipline has become poised to look within itself as a discipline—not only from a design perspective—but by drawing knowledge from a broad array of disciplines including not limited to the expected—social sciences and humanities, but additionally from business and education, in order to address problems in a global, competitive and flux market of products and ideas. If you think long enough about it, to vet any discipline through its own lenses and through its own assessment and measurements, can become quite incestuous and deforming.

The broad term—*visual communication*—is now so ubiquitous and assumed that a broader understanding of the content being communicated is in high demand.

Designers, as well as other creatives, are increasingly expected to understand the content that they are communicating as well as the context that they are communicating in. Add to this, designers are expected to work collaboratively with other disciplines and cultures.

According to the National Governor's Association's publication—*New Engines of Growth*, there are five roles for creatives that have become a framework for many state leaders—consisting of governors, legislators, economic development officials, as well as state art agencies. There is an expanding *intentionality* and *strategy* by state and city governments to include arts, culture and design as a significant catalyst for economic growth. Many if not most states have already begun initiatives that are highly relevant to this agenda.

In the region that I am from, the Southeast United States, SouthArts, an organization based in Atlanta, Georgia is a noteworthy resource regarding this emerging economic mindset of state and local decision makers.

CASE STUDY–

- NGA Report Cover – *New Engines for Growth* (2012)
- SouthArts Creative Economy Report (2011)
- Creative Economy breakdown chart for Alabama (2011)
- url (www.southarts.org)

2. **Expanded scope: scale and complexity of design problems**

The current global landscape is so panoramic and complex that the designers must address grander complexities beyond the traditional, individual components. Problem-seeking (a common architectural and engineering notion) is as important a value as problem-solving is in this current era. There is a growing need for the projection/anticipation of potential problems rather than simply solving a known problem.

Our relatives in the realm of architecture have long dealt with expanding complexities in providing architectural solutions. So much so that the notion of "problem-seeking" is as equally as important as "problem solving". In William Pena's book, *Problem Seeking, An Architectural Planning Primer,* the author states,

"If programming is problem seeking, then design is problem solving. These are two distinct processes, requiring different attitudes, even different capabilities. Problem solving is a valid approach to design when, indeed, the design solution responds to the client's design problem. Only after a thorough search for pertinent information can the client's design problem be started. 'Seek and you shall define!'"

Increasingly complex social, technological and economic systems comprise the landscape. Diversity in cognitive, physical and cultural behaviors defines the marketplace. The role of the designer is to manage this complexity, to construct clear messages regardless of the complex terrain.

Architectural problem-seeking? Complex design problem. NCI/charrette / New Orleans after Katrina

BRIEF CASE STUDY–

- Problem Seeking Architecture Primer Cover – Pena
- Seek and you shall "define" (1994)

3. Targeted messages: a narrow definition of audiences

Messaging is shifting from mass communication with enormous, panoramic audiences towards targeting more narrowly defined audiences. These may be targeted by special interests, ethnicity, culture, belief system, language, and so forth. This shift will require designers to understand both differences and likenesses in audiences. Not only that, there will continue to be a backlash, if you will, between globalization and cultural identity. Targeting messages has become a "game of opposites". By contracting we expand. By dividing we multiply. By narrowing our targets, we might expand our impact.

The most effective means of communicating has shifted from broad messages for large audiences to narrowly targeted messages for specific audiences. This is the result of both media capabilities (in terms of narrow-casting and mass customization of messages) and also global dynamics. This trend demands a better understanding of a variety of cultures, the value of *ethnographic research*, sensitivity toward cultural perspectives, and *empathy*.

BRIEF CASE STUDY–

- Montgomery Biscuits baseball game
- Traditional targeted but "mass" messaging by Coke
- More narrow target to people through personal messaging and social media

After US Coke sales falling each of the past 11 years, there was an almost instant bump in sales by 2% due to the *"Share a Coke"* campaign.

4. Break through: an attention economy

The short-term "grab" for marketplace attention has been effective for a few generations. However, gaining attention is getting increasingly more difficult in the adolescence stage of the information age. Everyone wants it! Everyone cannot have it. The AIGA studies reveal a trend towards an *attention economy*. We are all aware of the tenet that says, "if everything is interesting, nothing is interesting." Media saturation and content distinction is a very real concern for advertisers and marketers. If you wish to get the attention of today's consumers, you not only have to be relevant, but interesting. Attention economy involves communication design, information design, experience design and service design.

We must encourage a discourse about what drives clients' perceptions about form. And, we should engage in a discourse about the attraction of business to design.

BRIEF CASE STUDY–

- Archrival Youth Marketing - State Farm Insurance and Nebraska Bookstores
- Royal Caribbean New Cruise Liners

5. Sharing experiences: a co-creation model

Co-designing and co-creation are more than contemporaneous buzzwords. With the maturing democratization of communication and technology comes an audience that somehow demands to be involved in the developmental process of design. We often discuss our projects in terms of "user centricity" or "customer focus". These are well and good but trends show an even stronger desire by constituents to become "co-creators". After all, they are not "just" clients and customers, they are stakeholders and in a very real sense, have less brand loyalty than their predecessors. Through social networking, blogging, crowd-sourcing, etc., personal and professional lives have become blurred—becoming even more transparent than ever. There is a sort of "mass-customization" that is happening. Designers may necessarily consider their customers or users more accurately as co-creators.

This is supported by the current movement toward ethnographic research rather than a simple focus group. Communication design is becoming much closer akin to product design (who already has the attention of business) and the emerging area of service design.

BRIEF CASE STUDY–

- IKEA Home Tours
- Brad Pitt's "Make it Right" in New Orleans after Katrina
- National Charrette Institute—Charrettes for co-design / collaboration
- Difference between "co-creation" and "co-design"

co-creation: the idea that consumers help produce as well as add value to products by consistent engagement and interaction with designers

co-design: the idea that many if not all stakeholders are involved in the given solution or design process

6. Responsible outcomes: focusing on sustainability

For good reason, a growing number of political and business forces are recognizing the stakes involved in a world of increasingly limited resources. There has to be ways to either carefully conserve resources or generate new ones or both. Who better than designers to assume leadership roles in proposing responsible uses of resources.

Global conditions call for creatives to engage in proactive ways to help sustain what matters most and to invent or discover new and viable resources and processes for the future—and for the future's sake.

Either way, there needs to be careful and necessary use of current resources, inventiveness in seeking and discovering new resources, and a hyper-sensitivity to human conditions throughout the globe. Globalization is eminent! How then do we harmonize not homogenize? It's basic design, isn't it? Unity not uniformity. Repetition with variation. Balance without regimen or symmetry. The near future designer is hopefully the precursor to a healthy, long-range global citizen. Using their voice, their craft and their aesthetic to create a beautiful, organic tapestry rather than a canvas of similitude.

The pursuit of ethics and excellence need not conflict. We speak much of human-centered design and sustainability. If one exploits the naturally iterative and evolving nature of the *design process* and *design thinking,* responsible

humans have the best opportunity to move forward and progress as stewards of this space and future spaces that we share.

BRIEF CASE STUDY–

- Design Management Institute url (www.dmi.org)
- ICIS—International Centre for Creativity, Innovation and Sustainability - Karen Blincoe
- ICOGRADA—International Council of Communication Design

CONCLUSION

This presentation is not intended to encourage the disposal of all traditional components of design practice and design education, but rather to inch the discourse a bit further along as we explore the evolution of design education. Are these resultant six trends or competencies being addressed in our current design pedagogies? What are ways in which these competencies can be taught or caught?

Below is just one example of a graphic design program embedding aforementioned competencies into their curricular programming.

. . . . . .

SAMPLE LEARNING OBJECTIVES:

Oregon State University
Program Outcomes/Learning Objectives for Graphic Design

Undergraduate students seeking a professional degree in Graphic Design will demonstrate proficiency in design principles, design process, theory, history and contemporary design practice. Students will develop an understanding of design process and problem solving methods and explore the effect graphic design has upon the human environment from social responsibility, sustainability and interdisciplinary perspectives. Students will demonstrate proficiency in identified technical skills, understand and apply basic principles in the process of creating, analyzing, and evaluating graphic design solutions in relation to specific end uses and consumer needs. Students will demonstrate proficiency in research, writing, communication and presentation skills.

I. Graphic Design:
Specific knowledge and skills

A. Acquire, articulate, and apply specialized terminology and knowledge relevant to graphic design including relationships to other disciplines and to contemporary global issues.
B. Assess, predict, and articulate the influence and importance of graphic design issues within the human environment from social responsibility, sustainability and interdisciplinary perspectives.
C. Acquire and demonstrate competency in technical skills applicable to graphic design.
D. Demonstrate the ability to use design thinking strategies in an iterative design process.
E. Demonstrate the ability to analyze, synthesize, and develop probable solutions.

II. General knowledge and skills

A. Communicate concepts, design solutions, and arguments clearly and concisely through visual, verbal and written means.
B. Access information through traditional and new technologies, and synthesize this information for problem solving activities.
C. Critically analyze and evaluate information from multiple sources and diverse perspectives.

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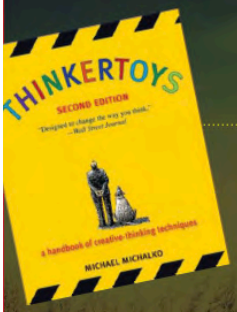
HARVEST TIME

PRESENTER:
JERRY R JOHNSON
TROY UNIVERSITY
iC3 Center for Collaboration and Creativity

HARVEST TIME

SOWING + CULTIVATING DESIGNERS *for the* Near Future

Sow?



Fields of Opportunity.

What does it take to be a "good" hand in this field?

according to Adobe/AIGA

SURVEY SAYS...

• Ability to create and develop visual response to communication problems, including understanding of hierarchy, typography, aesthetics, composition and construction of meaningful images • Ability to solve communication problems including identifying the problem, researching, analysis, solution generating, prototyping, user testing and outcome evaluation • Broad understanding of issues related to the cognitive, social, cultural, technological and economic contexts for design • Ability to respond to audience contexts recognizing physical, cognitive, cultural and social human factors that shape design decisions • Understanding of and ability to utilize tools and technology • Ability to be flexible, nimble and dynamic in practice • Management and communication skills necessary to function productively in large interdisciplinary teams and "flat" organizational structures • Understanding of how systems behave and aspects that contribute to sustainable products, strategies and practices • Ability to construct verbal arguments for solutions that address diverse users/audiences; lifespan issues; and business/organizational operations • Ability to work in a global environment with understanding of cultural preservation • Ability to collaborate productively in large interdisciplinary teams • Understanding of ethics in practice • Understanding of nested items including cause and effect; ability to develop project evaluation criteria that account for audience and context

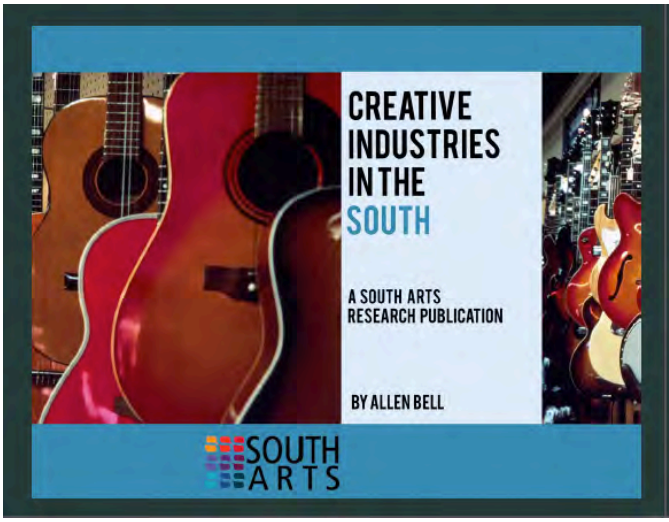
SURVEY SAYS...

Dag nabbit!
That's a whole heep a sh*#t.

SIX Trends

Swath wide. Plow deep.

1. WIDE+DEEP: META-DISCIPLINARY STUDY+PRACTICE


CREATIVE INDUSTRIES IN THE SOUTH
A SOUTH ARTS RESEARCH PUBLICATION
BY ALLEN BELL
SOUTH ARTS

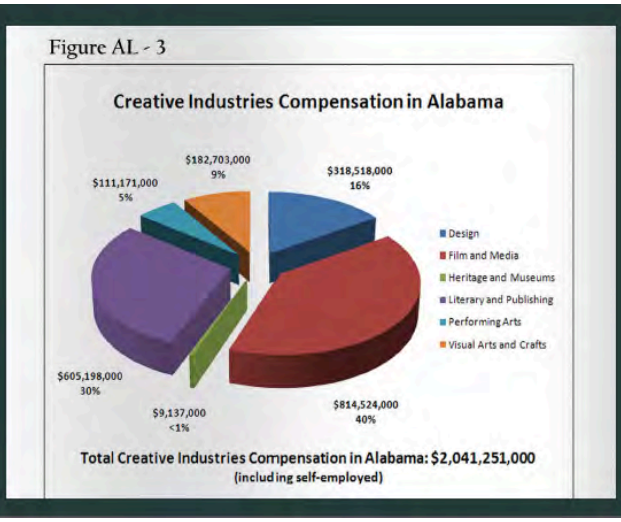
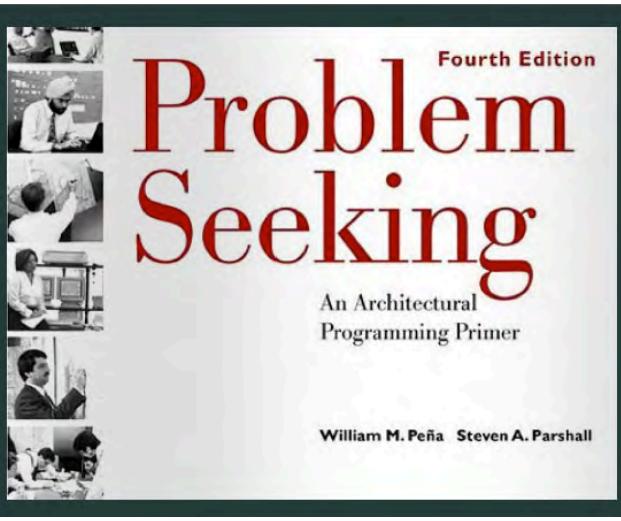
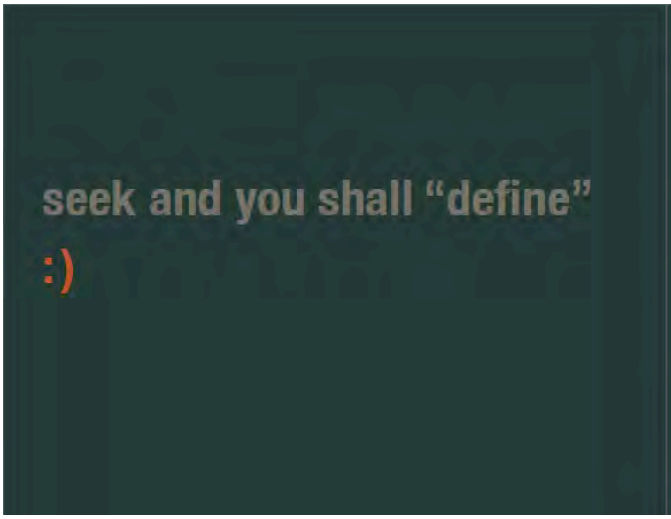
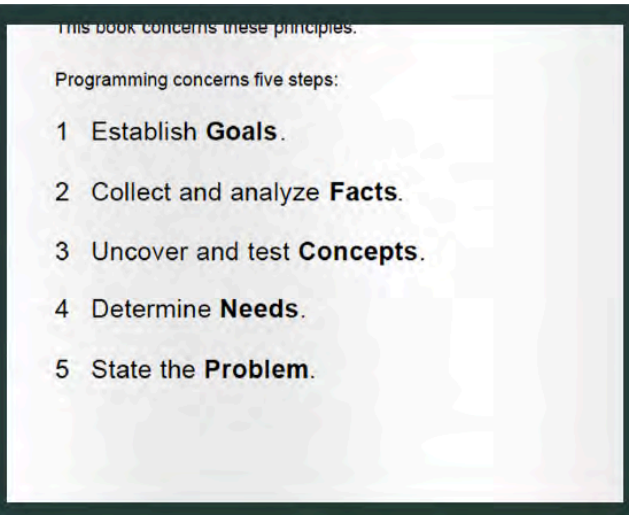


Figure AL - 3
Creative Industries Compensation in Alabama
$182,703,000 9%
$318,518,000 16%
$111,171,000 5%
Design
Film and Media
Heritage and Museums
Literary and Publishing
Performing Arts
Visual Arts and Crafts
$605,198,000 30%
$9,137,000 <1%
$814,524,000 40%
Total Creative Industries Compensation in Alabama: $2,041,251,000
(including self-employed)


Survey the land.
2. EXPANDED SCOPE: SCALE+COMPLEXITY OF DESIGN PROBLEMS


Fourth Edition
Problem Seeking
An Architectural Programming Primer
William M. Peña Steven A. Parshall


seek and you shall "define"
:)


This book concerns these principles.
Programming concerns five steps:
1 Establish Goals.
2 Collect and analyze Facts.
3 Uncover and test Concepts.
4 Determine Needs.
5 State the Problem.

This book concerns these principles:

Programming concerns five steps:

1 Establish **Goals**.

2 Collect and analyze **Facts**.

3 Uncover and test **Concepts**.

4 Determine **Needs**.

5 State the **Problem**.

Sounds like a "situation analysis" leading to a "problem defined".

This book concerns the

Programming concerns

1 Establish Goa

2 Collect and a

3 Uncover and

4 Determine Ne

5 State the Pro

Sounds like

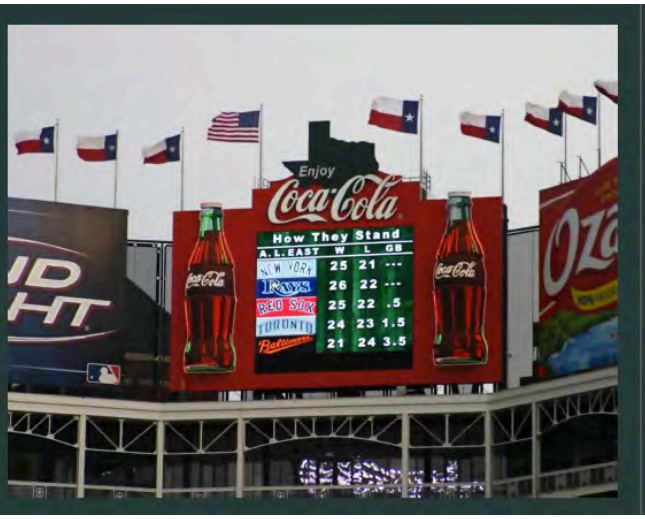
"problem de

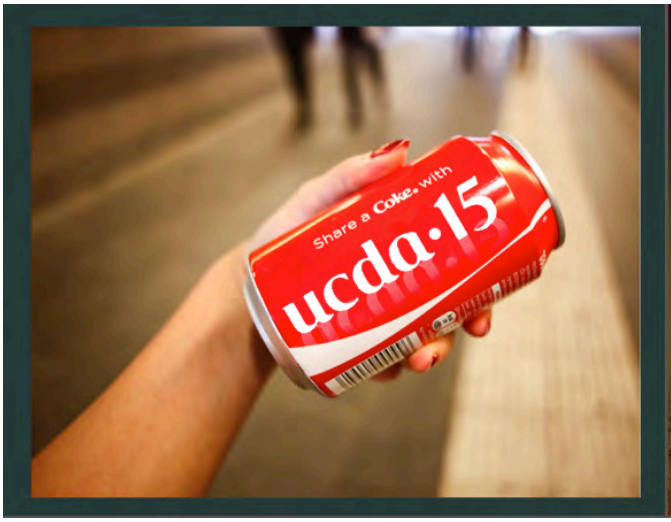
oading to a

One bottom plow.

3. TARGETED MESSAGES: A NARROW DEFINITION OF AUDIENCES

MONTGOMERY Biscuits™





A pig's eye.

4. BREAK THROUGH: AN ATTENTION ECONOMY

THE NATIONAL COLLEGIATE
ROCK PAPER SCISSORS
TOURNAMENT

Raise the barn.

5. SHARING EXPERIENCES: A CO-CREATION MODEL

IKEA Goes On An Extreme Home Makeover Tour

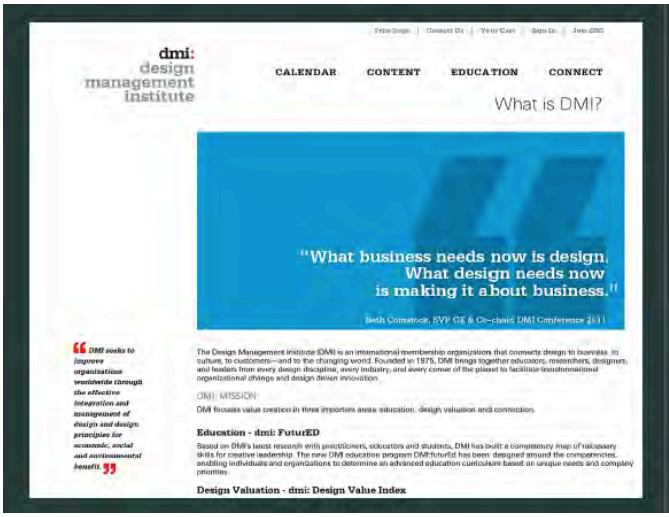
DIFFERENCE?

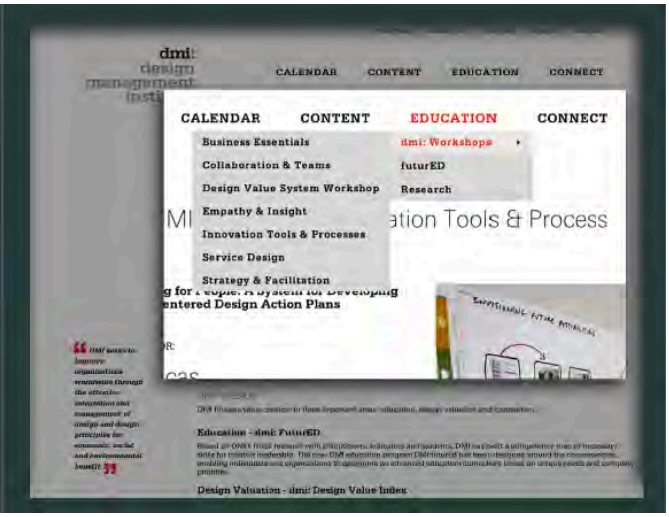
co-creation:

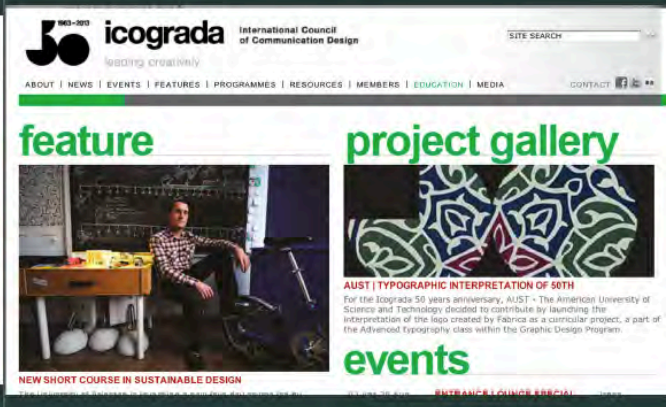
co-design:

Greener Pastures.

6. RESPONSIBLE OUTCOMES: FOCUSING ON SUSTAINABILITY








Thank ya, and
farm out.

11.1 The Worlds of Gods and Goddesses: An Augmented Reality Project

John Francis
Boise State University

Abstract
This project blends the disciplines of the arts and humanities with those from math and the sciences. In addition it is a hybrid of print and pixel technologies, brought together in the form of augmented reality (AR). Students investigated how in this project the perceived opposites of science and religion could be brought together. An advanced typography class created primarily text based posters for each of the planets of our solar system (Pluto counted as a planet). The planets get their names primarily from Greek and Roman gods, and this brought the opposing dualities of science and religion together. The concept of conflating science and religion in a single project was predicated on the premise that humans use both to explain the unexplainable and make sense of existence.

Students conducted research in both the sciences and humanities for the project. They researched planetary science, including planetary geology, atmospheric science, oceanography and hydrology. For the arts and humanities they researched Greek and Roman mythology (including both Classical and popular culture references) behind a planet's name and those of its moon or moons if applicable.

The dualities of science and religion were kept separate through the media used to create the AR. The scientific information, statistics and data related to each planet were used as text and image on the printed poster designs. While the mythology related to the gods and goddesses was only visible through the AR application. With a smartphone or tablet, the AR was made accessible. It was possible with AR to add layers of digital information including video, still images, and sounds—directly on the posters that related to the mythology behind each planet. The project culminated with an end of semester exhibition that was part of the undergraduate research conference at our university.

11.2 Teaching Typography Online

Joe Hostetler
Ivy Tech Community College-Southwest

Abstract
With over 5 years (19 course sections) of teaching typography online, there is much to share about how the approach to instruction has changed for this course. The focus will be on current methods to improve this course and the unique methods used to encourage interaction and streamline communication.

Since the instructor has had the unique opportunity to teach online and traditional sections simultaneously for many years, a concerted effort has been made to bring as much of the traditional classroom experience to the online environment as possible. The latest approach to this course involves a modular approach to this course. The intent of this method is to simplify and provide a clearer structure for the requirements of this course which allows the students to focus on their work. The handout, which takes the place of a textbook, is mailed to the students at the start of each semester with a welcome letter and the class syllabus. This creates a more personal approach and makes an initial impact on the student. The handout provides an overview of the specific typographic information related to this module and lists the required assignments. Blackboard is used to augment the handout with additional information (videos, websites, demonstrations, overviews of assignments, etc.).

This presentation will share the handouts developed in this modular process, rubrics for assignments, approaches for sharing the rich history of typography through the use of focus papers, using discussion areas for comments on work in progress/critiques and the use of screen capture technologies to provide demonstrations and evaluation of student work.

Joe Hostetler

Professor | Program Chair
Visual Communications
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Evansville, Indiana 47710
jhostetl@ivytech.edu
812.429.9888

Teaching Typography Online

UCDA Design Education Summit
South Dakota State University
Brookings, South Dakota
May 18-19, 2015

There is only one Typography course in our 2-year Associate's degree. As a statewide system, all regions offering Visual Communications must adhere to Ivy Tech Community College's common curriculum. Standards for all courses are established through a Course Outline of Record (http://www.ivytech.edu/academics/courses-curriculum.html) that includes the course description, major course learning objectives, and topical areas of study. A statewide curriculum committee convenes annually to update/modify the course outlines of record. Additionally, we are limited on textbooks available for adoption for our courses. The last academic year five textbooks were available which will be reduced to three for the upcoming academic year.

With this being the only typography specific course we offer, my approach is practical and project-based. The following pages share my pursuit of excellence with this course. While excellence is an ongoing process, this document presents my process and progress toward this goal.

Textbook Creation

About a year ago, I had the revelation to create my own textbook. I collaborated with a student, Jason Sheeley, who had recently taken the typography course, which added a student perspective to the development of this book.

Since the focus of this typography course is on students working with type on various assignments, this textbook allowed me to engage the students on the critical typographic information in a succinct way. The intent of this method was to familiarize the students quickly with the factual information about typography that would later be practically applied in exams, exercises, and projects.

The books were produced by me before the start of the semester using college equipment. For internet based courses, the book was mailed with a welcome letter and syllabus right before the class started which provided a unique interaction to start the semester. For traditional courses the book was provided at the first class session.


TYPE
TYPOGRAPHY, QUICKLY
JOE HOSTETLER & JASON SHEELEY

A Modular Approach to Instruction

Based on informal feedback from students and my own feelings about structuring the content better, I felt that all the content packed into so few pages of the book still seemed intimidating. Additionally, I also wanted the content to relate more directly to the concepts that were covered at the time. This lead to a modular approach to the course.

The handout on the following pages combines the elements related to Module 1: Letter of the original book to the assignments in the first of four modules for the class. Each module in the class is worth 250 points (x 4 modules) which results in 1000 total points for the course.

While only one module is included here, this modular approach is designed to start students with the simplest element of typography (letters) and progress through more complex concepts relating to its creative use. Here is a complete list of the modules (sections included from the syllabus further illustrate this approach):

MODULE 1: Letter
MODULE 2: Word
MODULE 3: Layout
MODULE 4: Creative

Each module has the same type of assignments that are worth the same point values. The intent of this approach is to simplify what is required so the students will know what assignments to expect with each module. The intent is to focus them on doing great work!

This handout takes the form of an 8 page booklet that is 2 11" x 17" pages printed on both sides, folded in half, and saddle stitched. I collaborated with a student, Aly Kissel, who had recently taken this course, to provide a unique perspective and to design the handouts. Like the book, the handout was mailed to my internet course students with a welcome letter and syllabus right before the class started. For traditional courses the handout was provided at the first class session.

How is my grade calculated? There will be a Focus Paper-50 points (writing assignment), exam-30 points, exercise-50 points, project-100 points, and critique (20 points) for each of the following modules. A detailed handout that explains the requirements of each module will be provided every 4 weeks. Blackboard will be used to provide additional materials in support of this handout. Grades in this course are determined by the following criteria:

Module 1 - Letter	250 pts	25%
Module 2 – Words & Images	250 pts	25%
Module 3 – Layout & the Grid	250 pts	25%
Module 4 – Process & Creativity	250 pts	25%
	1000 points total	

Grading Scale	900-1000 points	90% - 100%	A
	800-899 points	80% - 89%	B
	700-799 points	70% - 79%	C
	600-699 points	60% - 69%	D
	599 or less points	Below 60%	F

The Focus Paper is the only assignment for points the first week. This approach eases the students into the semester and allows them to review the typography concepts and assignments in the handout. The Focus Paper exposes them to the key concepts of appreciating professionally created typefaces, choosing typefaces, and learning about the history of our alphabet and typefaces. No design software is required for this first assignment, so it gives additional time for students to purchase it.

VISC 113 Typography
CALENDAR OF ACTIVITIES
Spring 2015 Semester *CRN Number: 40220*

CLASS DAY(S):	Components of the Modules will be introduced weekly at Noon-EST every Monday. New module every 4 weeks (4 total modules)	**INSTRUCTOR:**	Joe Hostetler
TIME:		**OFFICE HOURS:** (EST-Eastern Standard Time)	Tuesday 2:00-7:00PM Thursday: 10:00AM-1PM
ROOM:	325b	**PHONE NUMBER:**	1-812-429-9888
E-MAIL:	JHOSTETL@ivytech.edu	**OFFICE LOCATION:**	Evansville Campus

**The instructor reserves the right to modify this syllabus as necessary. Students will be informed promptly of any and all changes.*

CLASS SESSION	Reading/Lectures	Objectives	**Assignments** *All assignments due at Noon-EST on date listed*
MODULE 1 LETTER			
Monday, JAN 12	*READ: Handout (mailed paper copy and digital version emailed & in Blackboard) and Focus Paper information*	1, 2, 5, 6	**Discussion:** Introduce yourself! Familiarize yourself with the Blackboard **MODULE 1 FOCUS PAPER:** DUE Tuesday, January 20, 2015
NO CLASSES Monday, January 19, 2015 for Martin Luther King, Jr. Holiday			
Tuesday, JAN 20	*Review all information within Blackboard > Class Sessions > Module 1*	1, 2, 3, 5, 6, 7, 8, 9	**EXAM:** DUE Monday, January 26, 2015 **EXERCISE**: LETTER LOGO DUE Monday, January 26, 2015
Monday, JAN 26	*Lectures may be added throughout the course and will be included in the Module folders*	2, 3, 4, 5, 6, 7, 8, 9	**PROJECT:** TEXTING SYMBOL DUE Monday, February 2, 2015
Monday, FEB 2	*READ: Module 2 Handout (mailed paper copy and digital version emailed & in Blackboard) and Focus Paper information*	1, 2, 5, 6, 9	**CRITIQUE:** Post your project, then critique student work. DUE February 2nd to 9th **MODULE 2 FOCUS PAPER:** DUE Monday, February 9, 2015

Note how the types of projects are repeated in each module to provide structure and clarity to the course.

Focus Paper, Exam, Exercise, Project, and Critique

MODULE 2 WORD			
Monday, *FEB 9*		1, 2, 3, 4, 5, 6, 7, 8, 9	**EXAM:** DUE Monday, February 16, 2015 **EXERCISE**: BOOKCOVERS DUE Monday, February 16, 2015
Monday, FEB16		1, 2, 3, 5, 6, 7, 8, 9	**PROJECT:** INTRO MAGAZINE SPREAD DUE Monday, March 2, 2015
Monday, FEB 23		1, 2, 3, 5, 6, 7, 8, 9	*Work on INTRO MAGAZINE SPREAD*
Monday, MAR 2	*READ: Module 3 Handout (mailed paper copy and digital version emailed & in Blackboard) and Focus Paper information*	1, 2, 5, 6, 9	**CRITIQUE:** Post your project, then critique student work. DUE March 2nd to 16th **MODULE 3 FOCUS PAPER:** DUE Monday, March 16, 2015
March 8-14, 2014 NO CLASSES – SPRING BREAK			
MODULE 3 LAYOUT			
Monday, MAR 16		1, 2, 3, 4, 5, 6, 7, 8, 9	**EXAM:** DUE Monday, March 23, 2015 **EXERCISE**: BROCHURE DUE Monday, March 23, 2015
Monday, MAR 23		1, 3, 5, 6, 7, 8, 9	**PROJECT:** BOOKLET DUE Monday, April 6, 2015
Monday, MAR 30		1, 3, 5, 6, 7, 8, 9	*Work on BOOKLET*
Monday, APR 6	*READ: Module 4 Handout (mailed paper copy and digital version emailed & in Blackboard) and Focus Paper information*	1, 2, 5, 6, 9	**CRITIQUE:** Post your project, then critique student work. DUE April 6th to 13th **MODULE 4 FOCUS PAPER:** DUE Monday, April 13, 2015
Saturday, April 11, 2015 (Saturday) is the last day to withdraw without academic penalty.			
MODULE 4 CREATIVE			
Monday, APR 13		1, 2, 3, 4, 5, 6, 7, 8, 9	**EXAM:** DUE Monday, April 20, 2015 **EXERCISE**: PACKAGING DUE Monday, April 20, 2015
Monday, APR 20		1, 3, 4, 5, 6, 7, 8, 9	**PROJECT:** BEVERAGE LABEL DUE Monday, May 4, 2015
Monday, APR 27		1, 3, 4, 5, 6, 7, 8, 9	*Work on BEVERAGE LABEL*
Monday, MAY 4		2, 5, 6, 9	**CRITIQUE:** Post your project, then critique student work. DUE May 4nd to 8th

HANDOUT - FRONT COVER: Assignments are listed with due dates and Blackboard availability.

VISC 113 TYPOGRAPHY

Module 1: **Letter**

READ the entire handout so you understand the expectations of this module. The first portion of each handout will be a primer on typography. The concepts in these primers should be thoroughly reviewed in order to gain a mastery of these concepts. You will be tested over these concepts with the exams and will put them to practical use in the excercises and projects.

A 250 - 225 points
B 224 - 200 points
C 199 - 175 points
D 174 - 150 points
F 149 - 0 points

THERE ARE 4 MODULES IN THIS COURSE (Each module is worth 250 points total)

Your grade will be based on the following assignments:

NOTE: It is recommended that the assignments be completed in this order.

1

MODULE 1 FOCUS PAPER
DUE: Noon-EST, Tuesday, January 20, 2015
(50 points):

2

MODULE 1 EXAM
Available in Blackboard at Noon-EST, Monday, January 19, 2015
DUE Noon-EST, Monday, January 26, 2015
(30 points)

3

MODULE 1 EXERCISE: LETTER LOGO
Available in Blackboard at Noon-EST, Monday, January 19, 2015
DUE Noon - EST Monday, January 26 2015
(50 points)

4

MODULE 1 PROJECT: TEXTING SYMBOL
Available in Blackboard at Noon-EST, Monday, January 26, 2015
DUE Noon - EST Monday, February 2, 2015
(100 points)

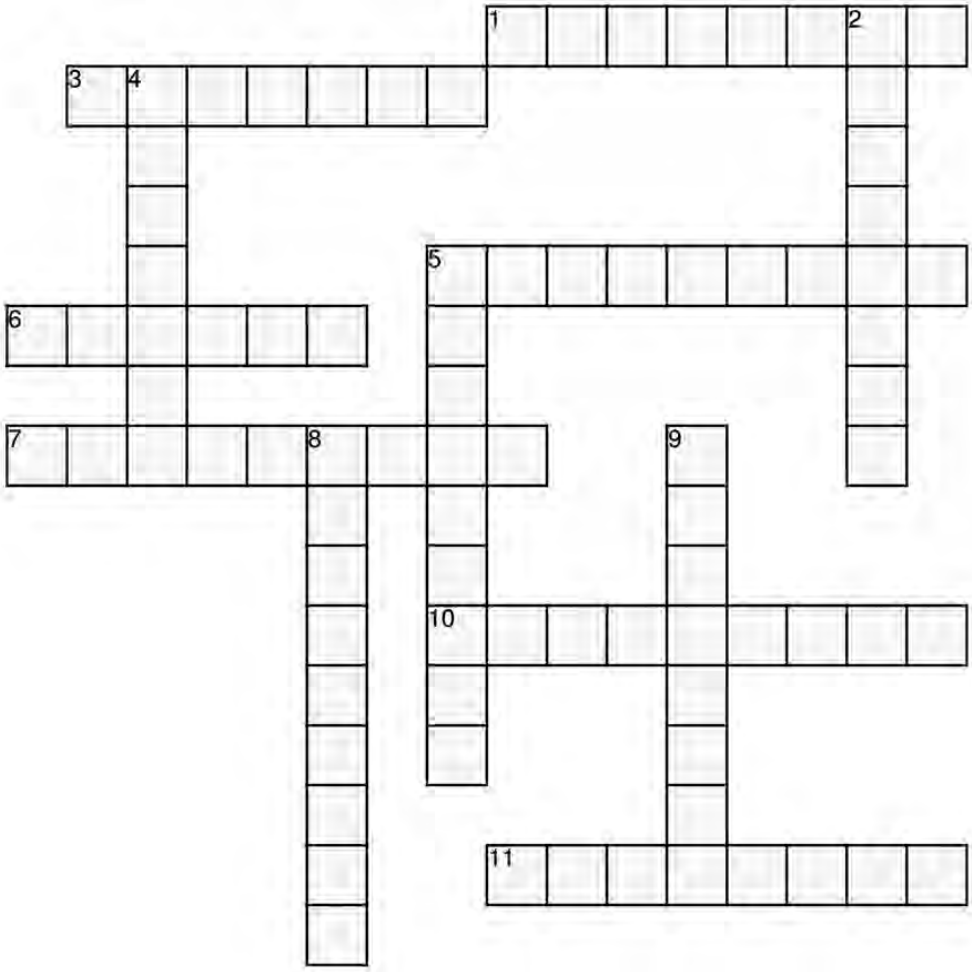
5

CRITIQUE MODULE 1 PROJECT: TEXTING SYMBOL VIA DISCUSSIONS
Available in Blackboard at Noon-EST, Monday, February 2, 2015
DUE Noon - EST Monday, February 9, 2015
(20 points)

BACK COVER: While this isn't graded and used to avoid a blank page, this activity may help some students grasp some of the typography terms.

Typography Terms Crossword

Just for fun, complete the crossword below of terms used in the Module 1 handout.



Across

1. __ around letters are distracting
3. a typeface to avoid using
5. never use this feature from type menu
6. not just slanted type
7. portion of letter below baseline
10. smooth edges on screen
11. imaginary line letters rest on

Down

2. not just stretched type
4. never use __ __ with script typefaces
5. capital letter
8. lowercase numbers
9. 2 turned into 1

Created on TheTeachersCorner.net Crossword Maker

THE FIRST 3 PAGES COVER THE TYPOGRAPHY CONTENT.

The first portion of each handout will be a primer on typography. The concepts in these primers should be thoroughly reviewed in order to gain a mastery of these concepts. You will be tested over these concepts with the exams and will put them to practical use in the excercises and projects.

Typefaces to Avoid

Many designers have typefaces they have grown to dislike. Some are historically ridiculed (Comic Sans) in spite of a valid reason for their creation. Overuse or familiarity are common causes for biases against certain typefaces. Internet searches for "hated fonts or typefaces" will yield many lists. Typeface selection can be very subjective and depends on the subject matter. Additionally, never, ever use ALL CAPS with a script typeface. ALL CAPS.

Hobo Std Medium

Brush Script MT Italic

Comic Sans

ROSEWOOD

Papyrus

Curlz MT

More distinctive typefaces should be used for display type, i.e. headlines. More traditional typefaces should be used for body text. **Explore losttype.com or dafont.com for better choices.**

Professional Fonts

A professionally created font can have thousands of characters (or glyphs) which justifies its significant expense. Take a moment and appreciate the effort that goes into creating changes in weight (bold, light, regular, italic), small caps, ligatures, accented letters, numbers, extended/condensed versions, etc. Each of these are drawn or created to look and work well together.

Ligatures

These are specially created characters (two turned into one) to fix odd relationships between certain letter pairs.

60 PT. ADOBE GARAMOND PRO 2-LETTER COMBINATIONS WITH CORRESPONDING LIGATURE

Small Caps (CAPITALS)

While these look like shrunken versions of a full-sized capital letter, they are drawn to look correct at this size. Note that the small caps look a bit heavier isolated, but work well when paired with the capital.

55 PT. ADOBE GARAMOND PRO CAPS

55 PT. ADOBE GARAMOND PRO CAPS

Old Style or Non-Lining Numerals

Simply don't look like capital letters. They are useful when using numbers in paragraphs so their non-rectangular form makes them look like lowercase type.

24 PT. ADOBE GARAMOND PRO LINING NUMERALS

24 PT. ADOBE GARAMOND PRO NON-LINING NUMERALS

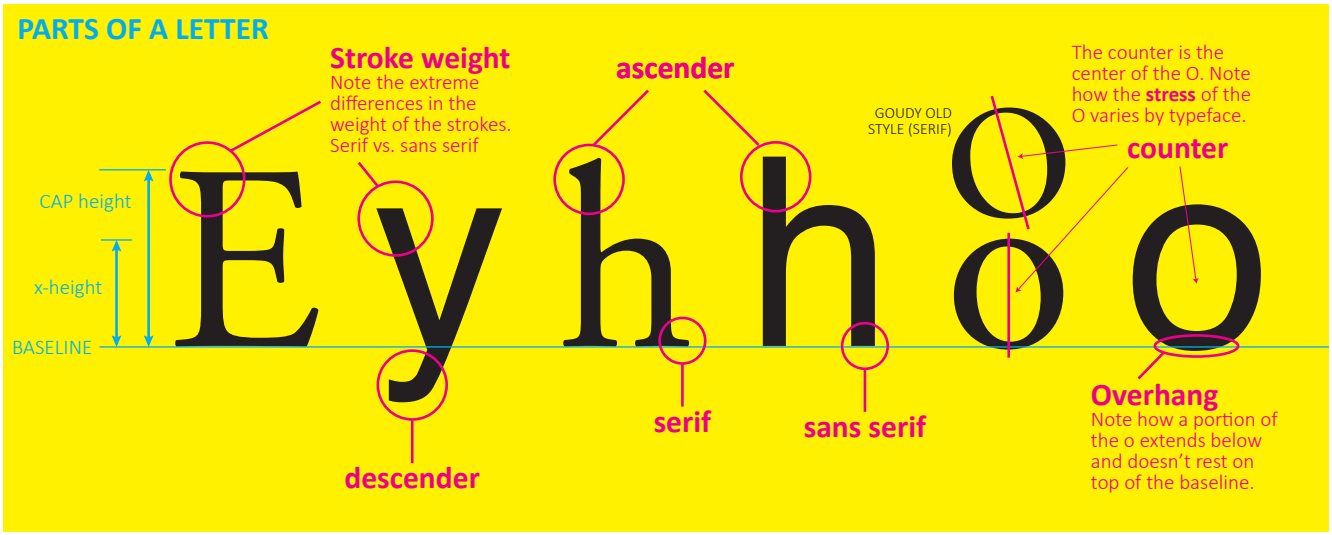
CAP height is measured from the baseline to the top of a uppercase/capital letter.

Notice the differences in the CAP height of these typefaces (shown using the same point size).

x-height is measured from the baseline to the top of a lowercase letter (lowercase x).

Notice the extreme differences in the x-height of these typefaces (shown using the same point size).

PARTS OF A LETTER



EXCEPT WHERE NOTED ADOBE GARAMOND PRO (SERIF) & HELVETICA (SANS SERIF) ARE SHOWN IN THE VARIOUS ILLUSTRATIONS ON THESE PAGES.

UPPERCASE/CAPITAL LETTERS

18 PT. ADOBE GARAMOND PRO (SERIF)

ABCDEFGHIJKLMNOPQRSTUVWXYZ

18 PT. HELVETICA (SANS SERIF)

ABCDEFGHIJKLMNOPQRSTUVWXYZ

lowercase letters

18 PT. ADOBE GARAMOND PRO (SERIF)

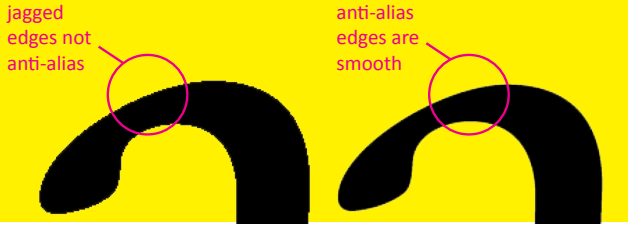
abcdefghijklmnopqrstuvwxyz

18 PT. HELVETICA (SANS SERIF)

abcdefghijklmnopqrstuvwxyz

ANTI-ALIAS YOUR FONTS FOR SCREEN USE

Anti-alias is applied to type to make it look better on screen. It essentially softens (slightly blurs) the edges of the letter so the edges don't appear jagged. The detail to the right shows the edge of anti-alias letter.



DO NOT Distort Your Letters

As mentioned previously, professionally created fonts can have thousands of characters that include changes in weight (bold, light, regular, italic), small caps, ligatures, accented letters, numbers, extended/condensed versions, etc. These varieties of typefaces are sometimes called **Type Families**. One type family can provide visual variety to create emphasis and interest in your layout. Using type families will also help you avoid distorting letters (truly something to avoid) and using too many typefaces.

BOLD Don't just put an outline around a letter to make it bold. Also, **avoid** putting color outlines around the letters, because it creates visual complexity and is distracting.

b b b

ADOBE GARAMOND PRO (SERIF)
REGULAR | BOLD | OUTLINED

distract

ITALIC Don't just slant the typeface, italics are unique to a font.

TRUE ITALIC

Garamond

SLANTED USING SOFTWARE

Garamond

CONDENSED & EXTENDED Don't just stretch the typeface to fit, use a font with condensed or extended versions.

HELVETICA NEUE REGULAR | CONDENSED

Helvetica | Helvetica

HELVETICA NEUE DISTORED USING SOFTWARE

Helvetica | Helvetica

NEVER USE THE UNDERLINE FEATURE IN THE FONT MENU Generally, all these features should be avoided. Go to the type menu to select the version of the type you want.

UNDERLINE FEATURE CUTS THROUGH DESCENDERS

Exaggerate

EXAGGERATE

Draw the line and separate it from the type!

ASSIGNMENTS: This page provides key information about the assignments. In this example, the first reference is a video which is provided to the students via Blackboard. Additional material is also included in Blackboard.

1

MODULE 1 FOCUS PAPER
DUE: Noon-EST, Tuesday, January 20, 2015
(50 points):

Review the REQUIRED REFERENCES (this is testable material) below of each of the following (this will help you determine which topic you will explore further for your FOCUS PAPER).

The intent of this paper is for you to familiarize yourself with the many aspects of typography. I am not interested in your summary of this information—I want you to carefully consider this information before writing your commentary. Your paper should be an insightful and interesting read (30 points) and should be free of grammatical and spelling errors (20 points).

Write your FOCUS PAPER (50 points) using the following criteria. This assignment will establish your attendance in this course. (see MODULE 1 Class Session in Blackboard for more information & submission link)

- One-page, 1-inch margins
- 12 point Times or Times New Roman
- Complete/submit your paper and save as .DOC, .DOCX, or .RTF file.

Appreciating Professionally Created Typefaces

http://www.aiga.org/video-medalists-jonathan-hoefler-tobias-frere-jones/

Choosing Typefaces: Strategies for Selecting the "Right" Typeface

http://www.smashingmagazine.com/2010/12/14/what-font-should-i-use-five-principles-for-choosing-and-using-typefaces/

Alphabet & Typeface History

http://ilovetypography.com/2010/08/07/where-does-the-alphabet-come-from/

http://ilovetypography.com/2007/11/06/type-terminology-humanist-2/ *This is the first of 5 parts that cover the type classifications of Humanist; Old Style; Transitional, Modern; Slab Serif; Sans Serif. All 5 are required reading.*

2

MODULE 1 EXAM
Available in Blackboard at Noon-EST, Monday, January 19, 2015
DUE Noon-EST, Monday, January 26, 2015
(30 points)

The first exam will be over the REQUIRED REFERENCES from the Focus Paper topics (above) and the information on typography provided in this handout and on Blackboard.

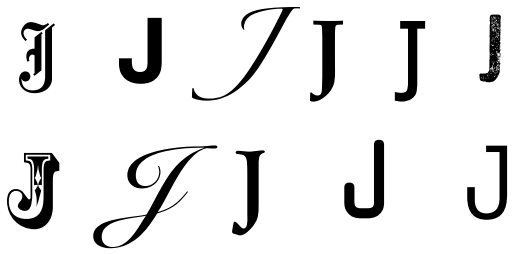
It is comprised of a mix of True/False, multiple choice, and short answer questions. This exam will not be timed and is open book, open notes.

EXERCISE: This exercise familiarizes students with the unique qualities of letters from different typefaces. By using basic techniques, the students are trying to make logos that look interesting and unique.

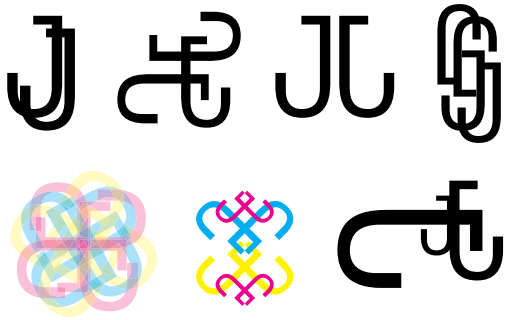
MODULE 1 EXERCISE: LETTER LOGO
Available in Blackboard at Noon-EST, Monday, January 19, 2015
DUE Noon - EST Monday, January 26 2015
(50 points)

The intent of this exercise is for you to familiarize yourself with the unique qualities of different typefaces and to create several interesting logos with a focus creating a unique and interesting look (the FORM of the logo). While your handout mentions typefaces that you should generally avoid, all typefaces may be used in this assignment (some of the most awful typefaces sometimes create interesting logos). The graphic below demonstrates the intent of this exercise and several examples. (see the MODULE 1 Class Session in Blackboard for more information, software demonstrations, & submission link).

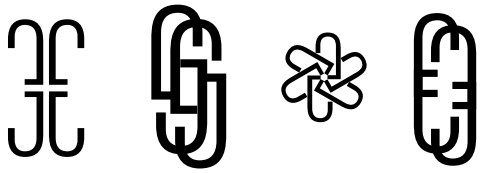
CHOOSE A LETTER, OR 2, OR 3 ... any letter, your initals, or a 3 letter word. Choose a typeface that fits your personality (feminine, masculine, geometric, organic, etc.) Compare and consider the unique qualities of the letters!



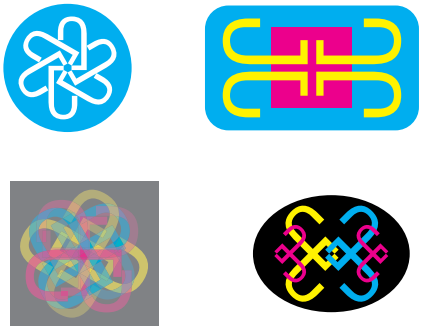
Duplicate-Rotate-Reflect-Arrange-Overlap-Opacity-Color-Scale-Contrast - **BUT DO NOT DISTORT!**



As your logo developes - consider the negative space! Is it dynamic/interesting?



Consider putting your logos in a shape + Consider the orientation (Horizontal-Vertical-Angled)



Create at least 9 different options and present them on a page:

PROJECT: By using progressively more challenging approaches, the project pushes them to not only create an aesthetically interesting solution, but to add meaning, context, and function to their solution.

4

MODULE 1 PROJECT: TEXTING SYMBOL
Available in Blackboard at Noon-EST, Monday, January 26, 2015
DUE Noon - EST Monday, February 2, 2015
(100 points)

Texting abbreviations have brought a new language of communication to our society. Building on your familiarization with letters and form from the exercise, we now bring CONTEXT *(further simplifying a phase or text to a symbol which conveys its meaning – for example: Best Friends Forever = BFF = the symbol you create)* into the mix.

While it may take years for a typographic symbol like @, #, & to have a socially accepted meaning [you might also find this podcast/website *(http://99percentinvisible.org/episode/octothorpe/)* interesting on how the # symbol, i.e., hashtag, pound symbol, octothorpe evolved], it still offers a unique challenge to imagine what the next symbol might be. Your challenge in this project is to develop and explain your concept for a typographic based letter/symbol/character that signifies a common texting abbreviation (LOL, BTW, BFF, etc.) for a particular typeface (you can choose from Helvetica, Arial, Garamond, or Times/Times New Roman). You might choose to start working with the letters in the abbreviation (see EXERCISE) or work with the letters to illustrate the meaning of the abbreviation. Like the exercise, the intent is to find the BEST solution by exploring a variety of solutions/approaches. This exploration of solutions should be included in your project submission.

This website has definitions for commonly used texting abbreviations (you might find it interesting): *http://netforbeginners.about.com/od/internetglossary/tp/The-Top-Text-Message-Acronyms-of-2011.htm*

Your symbol must be created from one of the following texting abbreviations:

BRB be right back
BFF best friends forever
BTW by the way
GTG got to go
LOL laughing out loud
SMH shaking my head
JMO just my opinion
FYI for your information
ROFL rolling on the floor laughing
TTYL talk to you later
KYFC keep your fingers crossed
F2F face to face
CYE check your email
NMU not much, you
UBTBK you've got to be kidding
JFF just for fun
OOTO out of the office
SLAP sounds like a plan
GB goodbye
GL good luck
PPL people
PLS please
W? why
M8 mate
IDK I don't know

An internet example of the intent of this project:
http://leksifer.blogspot.com/2010/11/typography-project-3.html

INSTRUCTOR EVALUATION: Students will also submit their files via the Blackboard assignments feature for instructor evaluation. A rubric and video comments, using screen capture, are provided by the instructor.

5

CRITIQUE MODULE 1 PROJECT: TEXTING SYMBOL VIA DISCUSSIONS
Available in Blackboard at Noon-EST, Monday, February 2, 2015
DUE Noon - EST Monday, February 9, 2015
(20 points)

This and all modules will end with you posting your project and participating in a critique. Go to MODULE 1 Class Sessions Folder and DISCUSSIONS (click on Module 1 Project: TEXTING SYMBOL Critique) for more information on this assignment.

CRITIQUE: Once completed, students will post their solutions to Blackboard Discussions for critique with the class. Students are required to comment on the designs of at least 4 students. Traditional courses will utilize in-class critiques along with the online component.

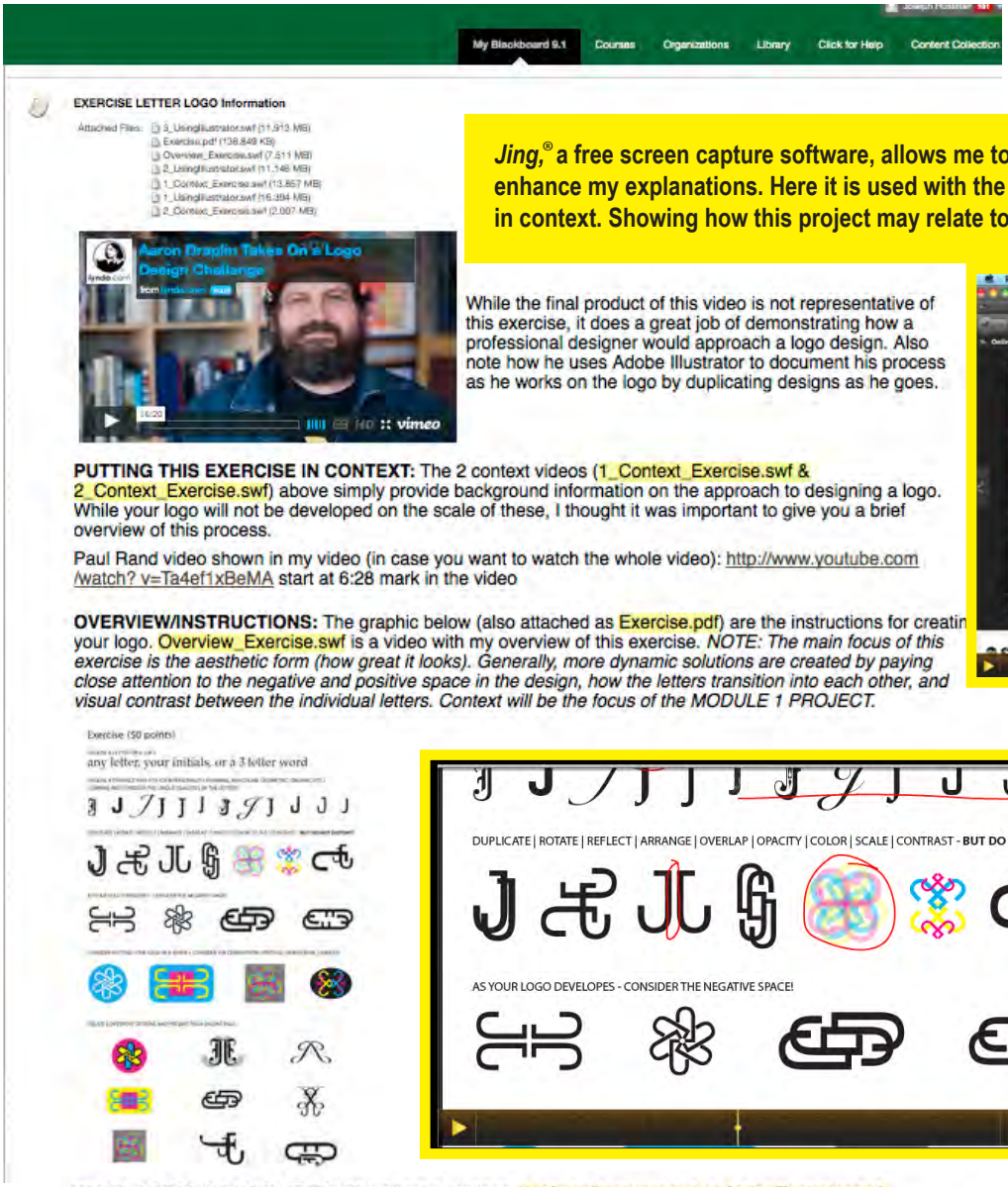
Introducing Assignments

This Typography course requires the students to demonstrate what they have learned through project work and exercises. While aesthetic considerations, problem solving, and critical thinking are always paramount in our field, students are also challenged by the technical approach to this practical application. Use of software and an understanding of how a design might be printed or used electronically further compound these challenges.

To address these challenges, I attempt to make my assignments as visual as possible and provide examples when applicable to set expectations. I realize I tend to get wordy with written descriptions of the projects, so I try as much as possible to provide visual explanations where applicable.

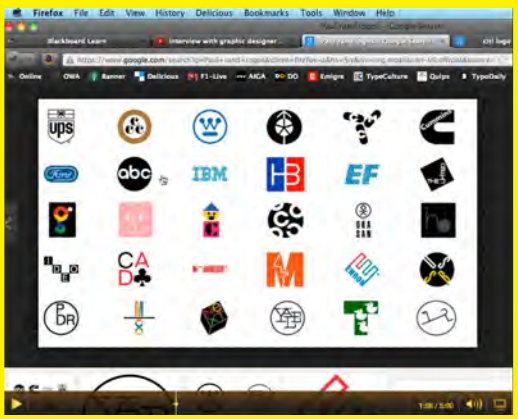
Included on the following page is one example of my approach to an exercise. Note that screen captured videos are included to help students with overviews of the assignment with demonstrations of how to use the software. The introductory video shows how a professional designer approached a logo design project which helps put into context how this exercise might be applied to professional design work.

As the semester progresses and in more advanced courses, my assignments tend to become more open ended and complex to challenge the students' conceptual skills. This shift simulates a more "real world" approach and allows the students creative freedom.



Jing,® a free screen capture software, allows me to create video screen captures to enhance my explanations. Here it is used with the video to the left to help put the project in context. Showing how this project may relate to professional design projects.

While the final product of this video is not representative of this exercise, it does a great job of demonstrating how a professional designer would approach a logo design. Also note how he uses Adobe Illustrator to document his process as he works on the logo by duplicating designs as he goes.



PUTTING THIS EXERCISE IN CONTEXT: The 2 context videos (1_Context_Exercise.swf & 2_Context_Exercise.swf) above simply provide background information on the approach to designing a logo. While your logo will not be developed on the scale of these, I thought it was important to give you a brief overview of this process.

Paul Rand video shown in my video (in case you want to watch the whole video): http://www.youtube.com /watch? v=Ta4ef1xBeMA start at 6:28 mark in the video

OVERVIEW/INSTRUCTIONS: The graphic below (also attached as Exercise.pdf) are the instructions for creatin your logo. Overview_Exercise.swf is a video with my overview of this exercise. *NOTE: The main focus of this exercise is the aesthetic form (how great it looks). Generally, more dynamic solutions are created by paying close attention to the negative and positive space in the design, how the letters transition into each other, and visual contrast between the individual letters. Context will be the focus of the MODULE 1 PROJECT.*

Additional videos are created to provide an overview of the project and explain the examples and set expectations.

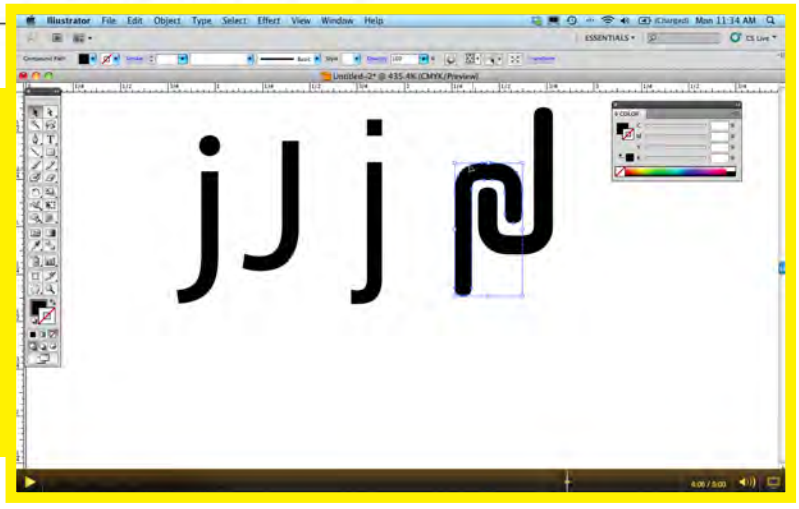
USING ADOBE ILLUSTRATOR: The attached videos (1_UsingIllustrator.swf, 2_UsingIllustrator.swf, 3_UsingIllustrator.swf) will demonstrate the specific functions within Adobe Illustrator to complete this exercise. *NOTE: These videos were made using Adobe CS5. This shouldn't be a problem since the tools we are using haven't really changed with the latest version (Adobe Creative Cloud). If you have a question, please don't hesitate to ask me.*

If you have never used Adobe Illustrator, you can check out the link below to videos that cover Illustrator basics. Videos are provided on Adobe's website for CS6 and Creative Cloud versions of Illustrator.

http://tv.adobe.com/channels/

Then go to HOW TO > CC Tutorials or CS6 Tutorials

Go to http://tv.adobe.com/channel/how-to/creative-cloud-tutorials/ for additional tutorials on the Adobe Creative Cloud version of the software.



Finally, demonstrations are provided on how to use the software, in this case Adobe Illustrator, to complete the assignment. Since this is a 1st or 2nd semester class, these are done for students who might not have used the software. *Jing*® is also used extensively to provide video comments to the students about their work.

Writing Across the Curriculum

I have always tried to reinforce the verbal and written communication of students in all my courses to augment what they have already learned in English Composition and other general education courses. My approaches to this topic have varied over the years and have traditionally utilized Discussions in *Blackboard®* as the delivery mechanism.

Recently, through my interaction with Biology Instructor Vanessa Fritz, I was introduced to her Focus Projects. I found this to be a very unique approach. She provides a variety of resources and types of projects, but allows students to select the one that piques their interest.

This innovative method caused me to revisit my approach. Ten Discussions were used weekly in my typography course. While this was generally quite effective, I found that as the semester wore on the quality of the posts tended to degrade, and my evaluation of their posts waned. Additionally, at only 10 points per discussion, I feel it wasn't taken seriously by all students.

The following pages demonstrate this shift in approach. This methodology is also tied to my modular method (see A Modular Approach to Instruction). I provide required references that each student must read, but additional content is provided for them to dig more deeply into a subject for their paper. The intent of this paper is for the students to share their thoughts, opinions, and reactions to this content. It is not a simple summary of the information which is what many of them what to provide. It is really a reflection on how they feel about the information. Since this project is worth 50 points, their approach is more intentional, and the students produce more insightful and interesting papers.

A TYPICAL EXAMPLE OF ONE COMPLETE DISCUSSIONS REQUIREMENT + ADDITIONAL TOPICS: All of these weekly discussion requirements had significant information to review which tended to overwhelm both the students and the instructor. Some students tended to ignore this assignment due to the 10 point value.

DISCUSSION #2 - Choosing Typefaces (worth 10 points)

Instructions:

1. Review "What Font Should I Use?": Five Principles for Choosing and Using Typefaces by Dan Mayer http://www.smashingmagazine.com/2010/12/14/what-font-should-i-use-five-principles-for-choosing-and-using-typefaces/
2. You can also choose to include this article in your comments. http://www.fontshop.com/education/ The Right Font for the Job | Type Selection: Beyond the Look of the Letter
3. Post your thoughts on this/these article(s), for example What did you find most interesting?, How will this help you choose a typeface?, etc. (5 points).
4. Comment on at least one other student's post (5 points).

Your post should be a well-written paragraph (about 50 words) in length and must use correct grammar and punctuation. Keep in mind, I am looking for professionally written and considered posts--I am not an English professor. If your posts are insightful, coherent, and spelled correctly, you will likely receive the full 10 points. You are welcome to insert images and links that are relevant to your post. Your comments should relate to the content provided above.

Post your comments to this discussion by Noon, September 9, 2014.

How this assignment will be graded *(The following will apply to your original discussion post and to your comments on another student's post):*

10 points: Blog posts (your comments & response to another post) was completed by due date; contained none or 1 grammar/spelling error; comments were insightful/interesting, relate to content, and were the appropriate length.

5 points: Blog posts was not completed by due date, contained several grammar/spelling errors, comments were not insightful, relative or too brief.

0 points: Blog post was not completed.

Discussion #6: Modernism *(worth 10 points)*

Summary: This discussion starts our thinking on the next exercise (Exercise #5 Art Catalog/Booklet). While most most educators and designers would find it humorous that I am attempting to summarize over 65 years design methodology in a few paragraphs, I feel modernism comes down to a few simple concepts. As with any period of art/design there are diverse examples that showcase many approaches and techniques, but again I think the majority can be connected with the concepts I will mention in the following paragraphs. To set the tone for this discussion, it is important to realize that this is the time period that defined Graphic Design as a practice and establishes the legends of our field (several will be listed later for you to review). One can rarely discuss modernism without mentioning

Discussion #1 - Hoefler & Frere-Jones Typefaces (worth 10 points)
While it is easy to find FREE fonts on the internet simply by searching for "free fonts," the quality of these fonts is usually suspect. You certainly "get what you pay for." Free or low cost fonts are usually display fonts--meaning the are only used for headlines or subheads--certainly not for body/paragraphs of text where easy reading is the goal. It is relatively simple for someone to create a handwriting or other specialized font (see www.dafont.com for the range of options available). Most of these free fonts have very few characters compared to a professionally created font. Review the video below to learn about the amount of effort that goes into a professionally created font/typeface. This discussion also expands on the first page of the Typography, Quickly textbook which mentions professional

---

Discussion #3: Font Licensing *(worth 10 points)*

Instructions:

1. Like stock photography licensing, font licensing can also be a challenging part of field. Most designers think that if they purchase a font they can use it as they wish. This article gives a brief overview: http://www.designcontest.com/blog/understanding-font-licensing-usage-rights/.
2. Another aspect of font licensing involves distributing the font in a PDF. With most font sellers, this involves another license for distribution. Follow this link to Emigre.com's policy on this issue. http://www.emigre.com/EULOptions.php
3. Post your thoughts on this article, for example What did you find most interesting?, Were you aware of the licensing issues?, etc. (5 points).
4. Comment on at least one other student's post (5 points).

Your post should be a well-written paragraph (about 50 words) in length and must use correct grammar and punctuation. Keep in mind, I am looking for professionally written and considered

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Discussion #4: Alphabet & Typeface History *(worth 10 points)*

Instructions:

1. The documents for this discussion are from the *thinkingwithtype.com* website and are included in CLASS SESSION 4. Also attached are my comments on these documents. While you only need to comment on ONE, BOTH ARE TESTABLE MATERIAL. Audio comments are embedded within the *InstructorComments*...PDFs.
2. Post your thoughts on at least one of these documents (5 points).
3. Comment on at least one other student's post (5 points).

Your post should be a well-written paragraph (about 50 words) in length and must use correct grammar and punctuation. Keep in mind, I am looking for professionally written and considered

---

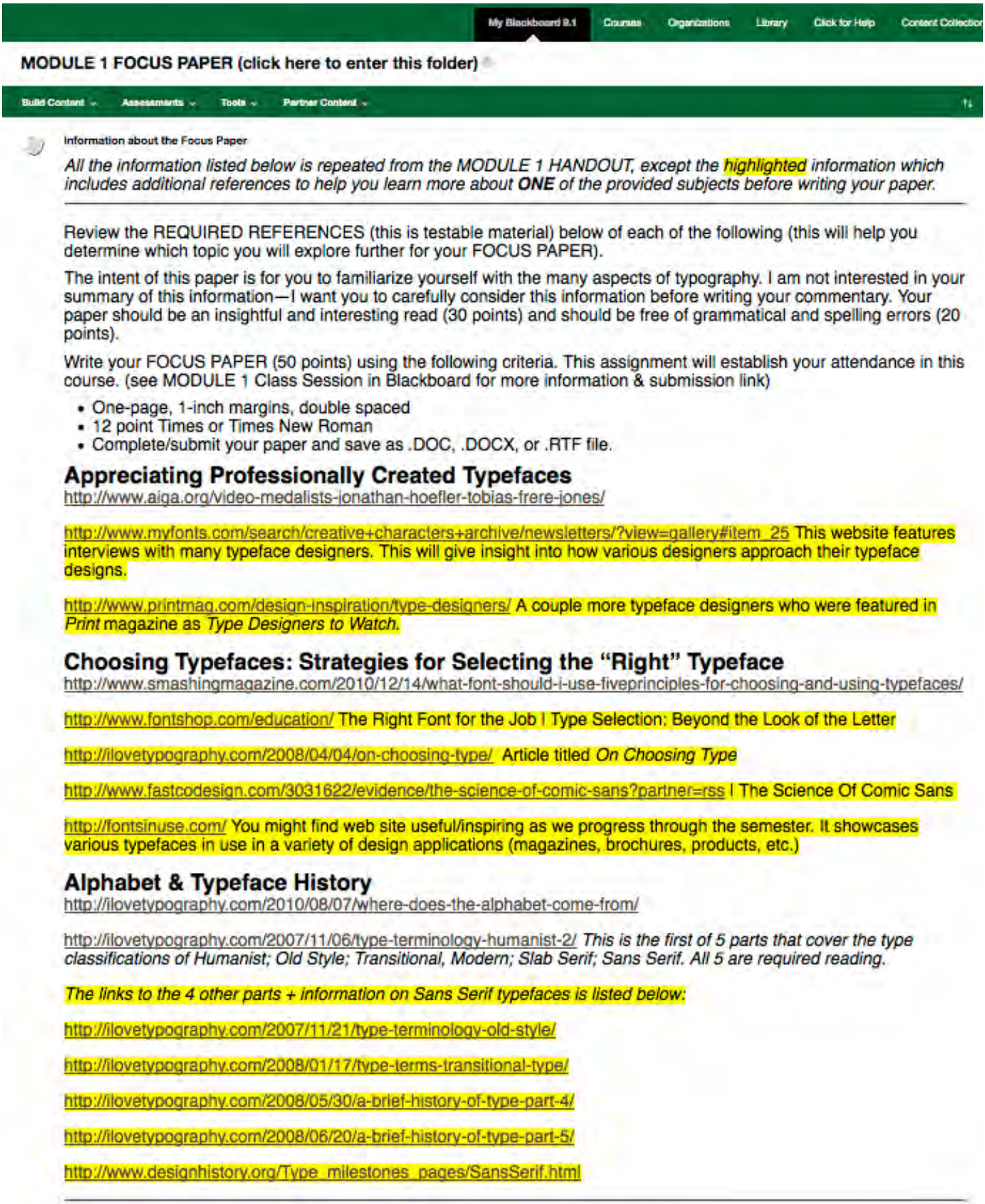
DISCUSSION #7: Postmoderism *(worth 10 points)*

Summary: This discussion starts our thinking on the last exercise (Exercise #6: Band Flyer/Poster). While most designers today see postmodernism (also closely related to deconstruction) as a self-indulgent application of a style, it started as a reaction to the moderism's structure that was seen as limiting. As you will find in the information below, the beginning of postmodernism was a very academic pursuit which justified the visual approach and paved the way for new thinking in design and other creative fields. The debate in this area revolves around graphic design, but I hope you will find the concepts presented as a way to think about your own work differently.

Please review ***some*** of the following to familiarize yourself with postmodernism so you can make informed comments.

I think this article is a fine starting point which raises many

IN CONTRAST: The Focus Paper allows the student to choose to write on about a topic of their choosing. These papers are due during weeks with no other assignments due or in conjunction with the project critique. This allows for more focused approach to the content. The 50 point value is also less likely to be ignored.



My Blackboard 9.1 | Courses | Organizations | Library | Click for Help | Content Collection

MODULE 1 FOCUS PAPER (click here to enter this folder)

Build Content | Assessments | Tools | Partner Content

Information about the Focus Paper

*All the information listed below is repeated from the MODULE 1 HANDOUT, except the highlighted information which includes additional references to help you learn more about **ONE** of the provided subjects before writing your paper.*

Review the REQUIRED REFERENCES (this is testable material) below of each of the following (this will help you determine which topic you will explore further for your FOCUS PAPER).

The intent of this paper is for you to familiarize yourself with the many aspects of typography. I am not interested in your summary of this information—I want you to carefully consider this information before writing your commentary. Your paper should be an insightful and interesting read (30 points) and should be free of grammatical and spelling errors (20 points).

Write your FOCUS PAPER (50 points) using the following criteria. This assignment will establish your attendance in this course. (see MODULE 1 Class Session in Blackboard for more information & submission link)

- One-page, 1-inch margins, double spaced
- 12 point Times or Times New Roman
- Complete/submit your paper and save as .DOC, .DOCX, or .RTF file.

Appreciating Professionally Created Typefaces

http://www.aiga.org/video-medalists-jonathan-hoefler-tobias-frere-jones/

http://www.myfonts.com/search/creative+characters+archive/newsletters/?view=gallery#item_25 This website features interviews with many typeface designers. This will give insight into how various designers approach their typeface designs.

http://www.printmag.com/design-inspiration/type-designers/ A couple more typeface designers who were featured in *Print* magazine as *Type Designers to Watch.*

Choosing Typefaces: Strategies for Selecting the "Right" Typeface

http://www.smashingmagazine.com/2010/12/14/what-font-should-i-use-fiveprinciples-for-choosing-and-using-typefaces/

http://www.fontshop.com/education/ The Right Font for the Job | Type Selection: Beyond the Look of the Letter

http://ilovetypography.com/2008/04/04/on-choosing-type/ Article titled *On Choosing Type*

http://www.fastcodesign.com/3031622/evidence/the-science-of-comic-sans?partner=rss | The Science Of Comic Sans

http://fontsinuse.com/ You might find web site useful/inspiring as we progress through the semester. It showcases various typefaces in use in a variety of design applications (magazines, brochures, products, etc.)

Alphabet & Typeface History

http://ilovetypography.com/2010/08/07/where-does-the-alphabet-come-from/

http://ilovetypography.com/2007/11/06/type-terminology-humanist-2/ *This is the first of 5 parts that cover the type classifications of Humanist; Old Style; Transitional, Modern; Slab Serif; Sans Serif. All 5 are required reading.*

The links to the 4 other parts + information on Sans Serif typefaces is listed below:

http://ilovetypography.com/2007/11/21/type-terminology-old-style/

http://ilovetypography.com/2008/01/17/type-terms-transitional-type/

http://ilovetypography.com/2008/05/30/a-brief-history-of-type-part-4/

http://ilovetypography.com/2008/06/20/a-brief-history-of-type-part-5/

http://www.designhistory.org/Type_milestones_pages/SansSerif.html

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Grading, Rubrics, and Evaluation

Midway through my academic career, I became fascinated with grading project based assignments. This topic is easier visualized than described (see the following pages).

A variety of rubrics/evaluation criteria methods where developed and are included to show the effort put into finding the best approach. The most current one is included at the end with additional information on how student projects are graded.

As mentioned earlier in this packet, I use the screen capture technology, *Jing*,® extensively in both my traditional and online courses for demonstration and grading work. To augment the use of rubrics, I provide a video overview for students on all projects and most exercises. I have also used this technique to provided feedback on papers, resumes, and cover letters. This method has had a revolutionary impact on how I interact and communicate with students. By combining this software with Adobe Acrobat, I have audio, video, and drawing tools to provide practical advice on how students can improve their work.

While this can be a very time consuming process, I find it much quicker and more effective than providing written comments.

EVOLUTION OF RUBRICS

Assignment Grading Criteria		POINTS
Solves the Problem		
• Overall solution appropriate to audience/client • Functionality for specific piece (brochure, folder, b-card, website, etc.) • Solution accounts for stated criteria in assignment (List)	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Craftsmanship		
• 2 or less errors for professional standard • Greater than 2 errors needs improvement • Errors are cropping, mounting, irregular cuts, torn paper, etc.	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Design		
• Controlled layout, quality typograpy (kerning, word spacing, etc.) • Effective use of design fundamentals (list) • Overall design not compromised layout, type, etc. abnormalities	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Creativity		
• Unique techniques employed, strong concept, image selection/creation, paper selection, experimentation, etc.	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Development		
• Evidence of thought or process of working toward concept • Diagrams; sketches, revisions &/or iterations; storyboards; etc. • 10+ sketches…; 1 diagram/storyboard indicate professional standard	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Technical		
• 2 or less problems with color accuracy, print quality, resolution, scanning, moire patterns should not be present, etc. • Student can explain how project would be produced	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Presentation		
• Given on the due date to meet professional standard • Student can prepare/conduct a persuasive presentation of their work	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		
Critique		
• Students actively participate in critique of fellow students • Recognizes and provides feedback to others and own work	Needs Improvement to meet professional standards (5 Points)	Meets Professional Standards (10 Points)
FEEDBACK:		

Work that excells in any of the categories	CATEGORY	POINTS
• Most will be awarded 5 extra points per category • Can be awarded a maximum of 10 points per category EXAMPLE: Craftsmanship = Zero (0) errors may be 10 points		

ART 115 TYPOGRAPHY - PROJECT ONE

Visual Communications Project Evaluation Criteria **FINAL SCORE ?/125**

Project Submissions		
	YES or NO	AUGUST 30, 2005 (10 pts)
	YES or NO	SEPTEMBER 13, 2005 (10 pts)
		ONLINE CRITIQUE (10 pts)

20 Points (YES or NO) - Project meets the professional level craftsmanship standard.

Self-Evaluation	If the students identifies the craftsmanship issues below, partial credit may be given.
INSTRUCTOR	Instructor comments related to students identification of craftsmanship issues

20 Points - Project meets the project deadline including all assignment criteria.

Self-Evaluation	Student grade justification (explanation-Why is was late? Why all criteria were not met?
INSTRUCTOR	Instructor comments related to students justification.

10 Points - DEVELOPMENT shows evidence of thought and/or process (a clear grasp of the problem, reseaching audience or technical issues, developing ideas/concepts, creating more than one composition) of working toward concept or solution; diagrams, sketch

Self-Evaluation	Student comments should support the points awarded & relate to the description above.
INSTRUCTOR	Instructor comments.

35 Points - DESIGN (The 4 areas below must be self-evaluated by the student)

Self-Evaluation	Discuss the 4 areas below and relate them to your self-evaluation.
INSTRUCTOR	Instructor comments related to students self-evaluation.

LAYOUT - Overall quality of the layout, Is a clear hierarchy of information presented? Have you effectively utilized the elements (line, shape, /principles of design?

TYPOGRAPHY - Is the type correct technically (readable, kerning, leading, spaces after a period, hanging punctuation, etc.)?, Is the typography visually interesting/dynamic (placement, contrast, white space, etc.)?

SPELLING & GRAMMAR - Is the type free of spelling and grammatical errors? Is the text clearly understood? Is it compelling?

CREATIVITY - Have you strived to "think outside the box"/develop solutions beyond the norm? What special techniques or approaches have you used? What makes your solution stand out from the rest?

Student Name

Project 1-Personal Logo Grading Criteria (Worth 100 pts)	Points x Weight =		Subtotal
Solving/Addressing the Problem indicates how appropriate the solution is for a given audience/client; how well the solution addresses all aspects of the assignment; function of piece based on its type (i.e., brochure, billboard, business card, website, etc.); student should be able to explain how the project was produced; and how/why they addressed the problem as they did. **4 =** Effectively addresses all aspects of the assignment **3 =** Addresses all aspects of the assignment **2 =** Fails to address some aspects of the assignment **1 =** Fails to address many aspects of the assignment **FEEDBACK:** *You stayed with the basic letter forms for all solutions, Try exploring using alternate characters.*	3	2	6
Development shows evidence of thought or process of working toward concept or solution; diagrams, sketches, revisions, iterations, storyboards, comps, etc. are evidence of development; more is certainly better, but 25–100 would indicate effective development process. **4 =** Significant evidence of a development process **3 =** Evidence of a development process **2 =** Some evidence of a development process **1 =** Little or no evidence of a development process **FEEDBACK:** *Need more effort in this area, your final solution is solid but you didn't explore and look more unique solutions.*	2.5	4	10
Craftsmanship displays the neatness of your work; irregularities in cropping, mounting, cuts, torn edges (unless intended); poor color accuracy, poor print quality, use of low resolution images, excess glue, sloppy hand writing, and moiré patterns should not be present; weakness in this area indicate a lack of attention to detail, last minute/poor planning, or laziness. **4 =** 0 irregularities **3 =** 1 to 2 irregularities **2 =** 3 to 4 irregularities **1 =** More than 4 irregularities **FEEDBACK:** *Be careful with the distortion of the letters, I will take off more points for this in the future.*	3.5	4	14
Design is how well the elements and general layout is achieved; the quality of the typography (kerning, word spacing, leading, placement, etc.); create hierarchy of information; effective use of design fundamentals (unity, balance, dominance, color, space, gestalt, hierarchy); and ensuring the overall design is not compromised by layout, type, image selection, and/or spelling/grammatical errors. **4 =** Advanced layout/design skills displayed **3 =** Average layout/design skills displayed **2 =** Layout/design skills need improvement **1 =** Layout/design skills need significant improvement **FEEDBACK:** *Solid design overall, playful and active arrangement*	4	6	24
Creativity relates to unique approaches to technique employed, strong concept, image selection/creation, paper selection, style, experimentation with less familiar tools, techniques, or methods, taking chances, etc.; this area displays how well you can "think outside the box" or striving to develop solutions beyond the norm. **4 =** Advanced creative techniques, concepts and/or skills displayed **3 =** Average creative techniques, concepts and/or skills displayed **2 =** Creative techniques, concepts and/or skills need improvement **1 =** Creative techniques, concepts and/or skills need significant improvement **FEEDBACK:** *Again an interesting arrangement of letters, but just short of a truly unique, imaginative solution.*	3	4	12
Overall Effectiveness is a summary of the overall feel of the solution based on whether it represents a professional level or near professional level solution to a given problem. Basically, either the solution is acceptable for the problem or it needs improvement to be effective. **20 = Meets professional standards** **10 = Needs improvement to meet professional standards** **0 = Needs significant improvement to meet professional standards** **FEEDBACK:** *MORE DEVELOPMENT AND EXPLORATION, examining the wrong solution (making it unreadable), combine duplicate letters if possible, etc.*			18
		TOTAL POINTS	
		Possible Points 100	84

VIS 102 Fundamentals of Imaging - PROJECT 3-PROMOTIONAL POSTER EVALUATION CRITERIA

Student Name

Student Self-Evaluation (Sections 1, 2, & 3 below) of the DESIGN of the project

SECTION 1 - Assuming this is a project in your portfolio, what would you say about it in an interview?

Student comments here:

SECTION 2 - Briefly explain your process (how you interpreted the problem, audience research, resolving technical issues, developing ideas/concepts, color selection, concept statement, challenges, solutions, what didn't work, what were you thinking/consid

Student comments here:

SECTION 3 - After analyzing your design, select ONE element **OR** ONE principle of design that is dominant in your layout. Then, in the space provided below, explain how it was used effectively.

Element of Design: | LINE | SHAPE (form) | TEXTURE (pattern) | SPACE | SIZE (mass) | VALUE (color & light) |

Principle of Design: | BALANCE | EMPHASIS | RHYTHM | UNITY (gestalt) | CONTRAST | SCALE |

Element or Principle *(type here)*:

Student comments here:

INSTRUCTOR GRADING AND COMMENTS - I am considering the following in this portion of the evaluation: Is layout interesting and dyanmic?; Have you exploited the elements/principles of design?; Did you select the best solution? Did you use the provided image

Instructor comments on the design of the project. Student comments and analysis (from SECTIONS 1, 2, & 3 above) are factored into the evaluation and point total. The other three areas are considered more objective and warrant awarding points based on stud

	Instructor comments on the student's DESIGN of the project (worth 70 points):
0	

0	(10 - 6 pts) **YES** or **NO** (5 - 0 pts)	Project meets professional level craftsmanship standard.
0	(10 - 6 pts) **YES** or **NO** (5 - 0 pts)	Project meets the project deadline including all assignment criteria.
0	(10 - 6 pts) **YES** or **NO** (5 - 0 pts)	Project progress submission show evidence of thought/process development.
0	Final Grade (out of 100 points - assigned by the Instructor)	

CURRENT RUBRIC: This one has seemed to work the best and I have used it for years. Several colleagues have also used it and find it effective. Below are descriptions on why this rubric was determined to be the best.

The grade for the project is consistently 100 points. This form is flexible to allow for additional criteria and requirements (like documenting design process, presenting your work, participation in critiques, etc.). Additional Project Grading sections can be added for projects with multiple components (like brochure, website, and advertisement).

VISC 113 TYPOGRAPHY - Final Project EVALUATION CRITERIA (Worth 150 points)

Student Name

Project Criteria | Requirements		
	25 pts	This grade will be based on the amount of effort and documentation provided to showcase your process as it relates to the completion of this process.
	25 pts	Post your work and Actively Participate in the in-class critique via BlackBoard beginning at Noon-EST, Monday, December 8, 2014. THESE POINTS WILL BE APPLIED SEPARATELY IN THE GRADEBOOK.

***Project Grading** (25 pts each category = 100 pts total)*

CATEGORY SCALE: A 25-23 points | **B** 22-20 | **C** 19-17 | **D** 16-14 | **F** 13-0 *(no fractional points)*

LETTER GRADE	*POINTS*	*CATEGORY*
A	23	**Solving the Problem:** Was it completed on time? How much effort was put toward finding the best solution? Does your design solve the problem and criteria assigned? Ultimately, is your final solution unique/successful? Was it completed on time? Did your design process effectively guide you to the final solution? Did you document this process in some way?
B	20	**Craftsmanship/Technical:** Are you controlling the elements on the page? Are there no distorted letters (unless there is a reason to do so), do items bleed correctly, 1 space after periods, professional punctuation, and other typographic concerns addressed? Are you aware of the margins as it relates to the page and shapes used in the layout?
B	22	**Elements/Principles of Design:** What elements/principles of design is used well in your design? Is the philosophy of the grid used in your design? Is the typography interesting and functional? Does the typeface, color, and the imagery work together? Does the layout/typography overwhelm the content?
A	25	**Creativity/Concept/Design Thinking:** Does the color, typography, and layout enhance the subject matter (artwork/images)? Does it have attitude? Is it your personal/unique vision? What unique approaches did make related to the imagery/type? Are unique traditional or digital techniques used? Does your description describe your approach effectively? Does this part of the project work with the other 2?
PROJECT GRADE		
A	90	*Instructor Comments: See video for additional comments.*

Assigning a letter grade (which seems easiest for educators and design professionals) helps determine the point value. Scale is provided to help assign numerical score within each category. Category grades are totaled to determine overall project grade.

Category titles remain consistent, but descriptions can be tailored to the requirements of a particular project or instructor preferences.

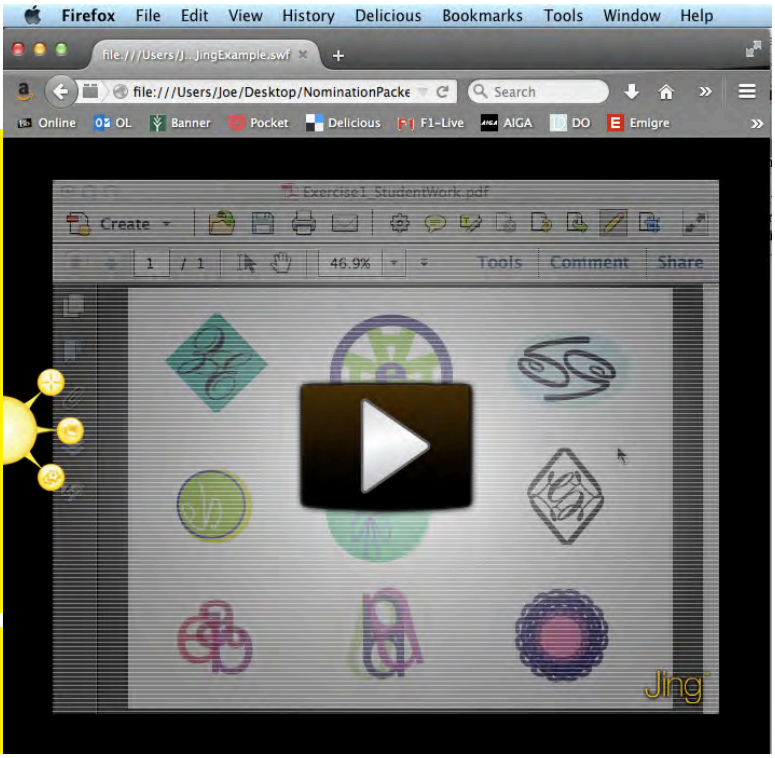
VIDEO FEEDBACK: *Jing*® a free screen capture tool, is also used to provide comments to students on their work. Students submit work through the assignments feature in Blackboard as a PDF file. Markup tools in Adobe Acrobat are used in conjunction with *Jing*® and a microphone to provide visual and verbal commentary to the students so they can improve their work. Occasionally, students miss the intent of a project. I encourage them to review my comments and resubmit their work. A screenshot is included below to show this process.

This is how the video would appear to the students in a web browser or the browser would refer them to a plugin to download to play the video. They would simply click play to watch the video. Additionally, *Jing*® only allows a 5 minute recording time so this is very brief and timely feedback. Multiple videos would be used if more comments are necessary.

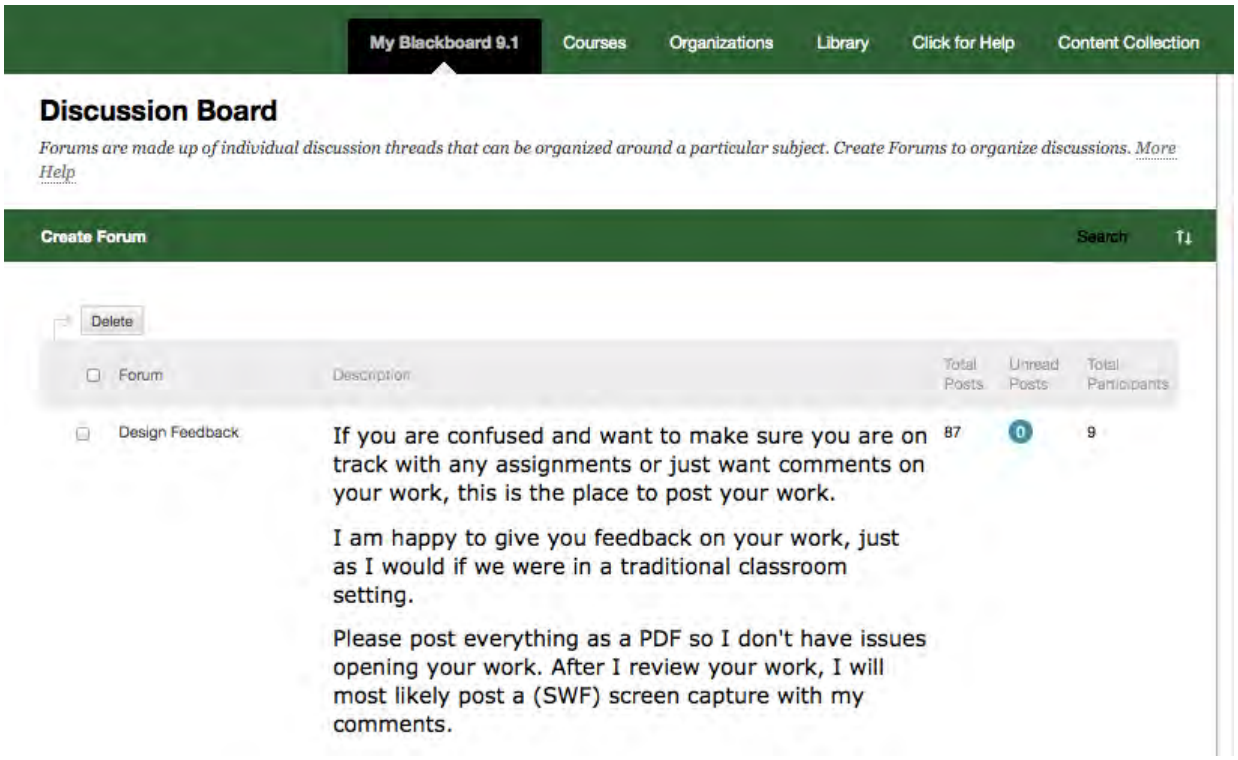
This item is the entire interface for Jing. Very easy to use and records in real-time without delays.

For all projects and most exercises, videos are created to provide feedback for every student on their work.

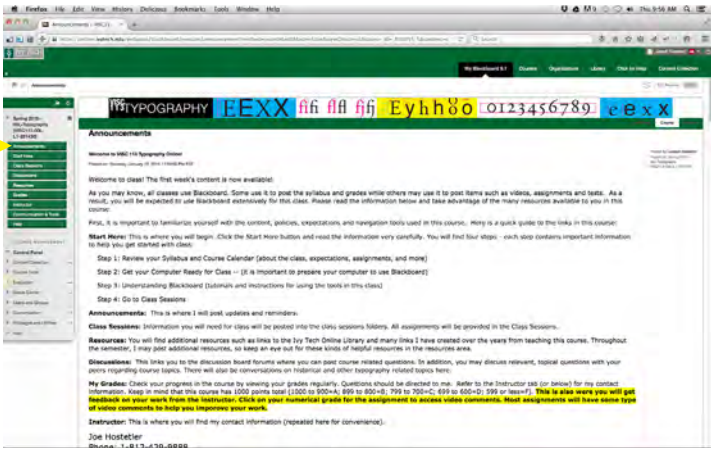
Jing® also has the ability to capture still images and mark them up with basic line, shape, and text tools. These were used to provide comments for a deaf student that took my online course.

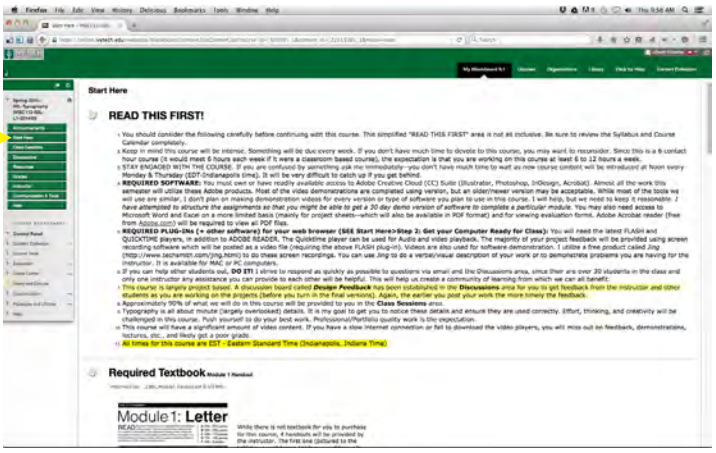


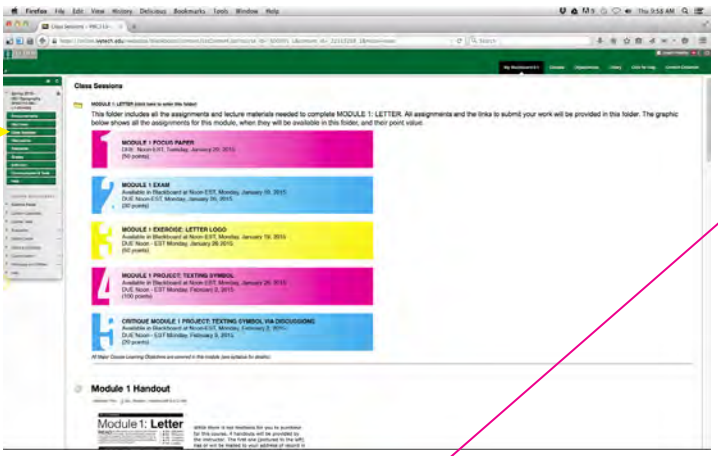
DESIGN FEEDBACK DISCUSSION: I also encourage to students to post work as they work on it for comments and to make sure they are understanding the intent of the assignment. This discussion is mainly used for online courses, but it is also available for my traditional classes for those that miss or want comments between a class.

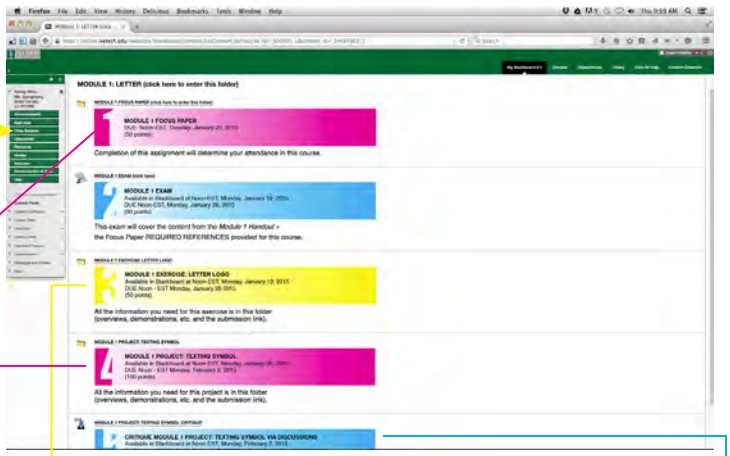


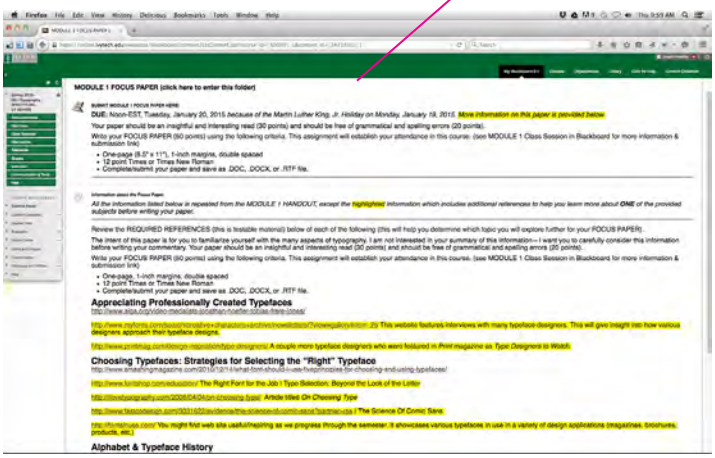
The following show key screen shots from the typography course in Blackboard. (LEFT TO RIGHT)

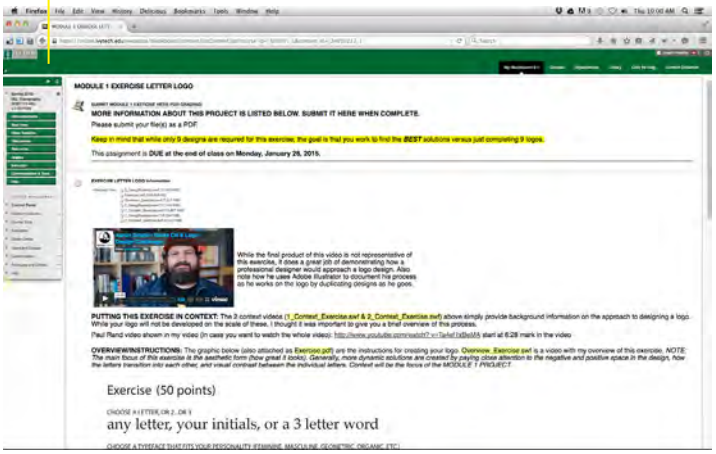


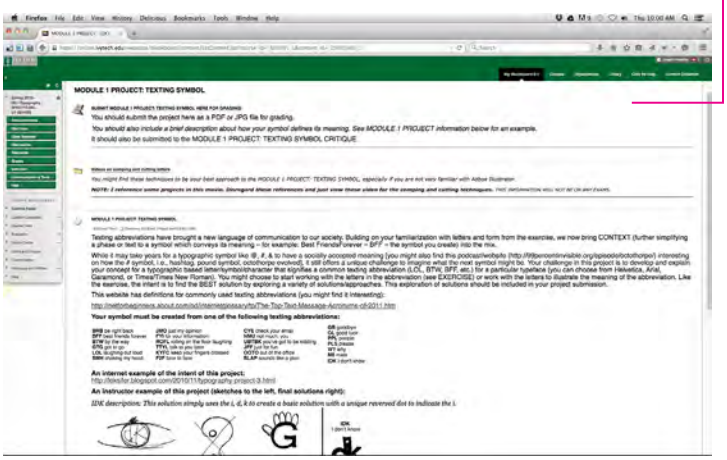


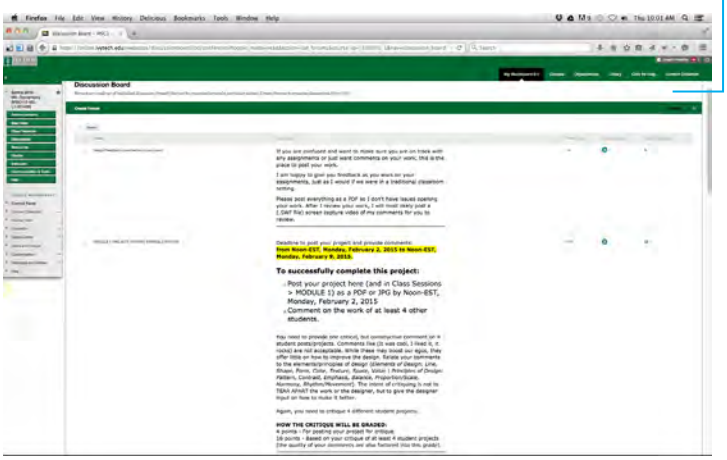












Planned Changes for Future Semesters

With all the module handouts looking the same except for the title change, it can cause confusion especially when used in Blackboard. Each module cover will now be associated with a particular CMYK color (Module 1-cyan, Module 2-magenta, etc.).

Since the intent of the Focus paper is to gather the students thoughts on the content, changing it to Opinion paper should lessen the confusion.

The point values for the module assignments need to be redistributed. While each module is still worth 250 points overall, the values for the focus/opinion paper (from 50 to 30 pts), exam (from 30 to 40 pts), and critique (from 20 to 30 pts), will change as noted.

Based on recent observations, it seems we have strayed from educating students about the printing and production considerations. These will now be incorporated within the appropriate module to ensure students are more educated on these concepts.

Finally, continued refinement of projects and alignment of exercises to more effectively enhance project outcomes with a focus on process and presentation of their work.

11.3 The Book of Tea & Graphic Design

David Herwaldt
Wartburg College

Abstract
In 1906 Kakuzö Okakura, a Japanese scholar of Oriental art, published a slender book entitled *The Book of Tea.* Aiming to increase Western knowledge of what he called *teaism* — 'a religion of aestheticism ...founded on the adoration of the beautiful among the sordid facts of everyday existence' — Okakura wrote in English, and his book was soon translated into multiple languages including German. It has had surprisingly deep (but not often acknowledged) influence on design.

Frank Lloyd Wright credited Okakura's book for an epiphany re-shaping his sense of space (which then when on to influence the spaces of scores of other architects). Paul Renner— in his 1939 book *Die Kunst der Typographie* — noted that 'In the far east symmetry and asymmetry are seen as signs of two opposed world views'; and he recommended Okakura's book for those seeking deeper understanding of the meanings of asymmetry. Emil Ruder read to his students from Okakura's book. As one recalled: 'Within the pages of this book our tutor found many natural points of contact with current typography. To activate an empty space is of equal importance in Zen as it is in typography.' And we know from the bibliography to *From Lascaux to Brooklyn* that Paul Rand read the book and valued it.

I propose to recognize the importance of Okakura's book in spreading Japanese aesthetic notions among designers and thereby inspiring two of the most important tenets of modernist design — asymmetry and the importance of the ground.

12.1 Exploration of a New Design Educational Model: Designer as a Content-Indentifier in a Diverse Cultural and Social Space

Chair
Samantha Barbour
Iowa State University

Panelists
Julian A. Osorio
Iowa State University

Calee A. Himes
Iowa State University

Brittany Thompson
Iowa State University

Panel

Graphic design practice is adjusting to our everchanging world: economic realities are shifting, towns are disappearing, cities are faced with crumbling infrastructures and gross inequalities, and countries are struggling. If cities and countries can crumble, then we cannot predict a reliable source of clientdesigner relationships in the serviceprovider model of graphic design. Graphic design education must adapt to the reality of design practice. Graphic design is no longer about making aesthetically pleasing objects, but rather is about making society work. Designers must be community builders, entrepreneurs, and activists who identify and create content. What happens when we focus design education on content initiation and problem solving?

A design team identified an issue by talking with individuals from socially and physically separated communities. Interviews indicated a marked disconnect between these communities. Initially, the designers used the traditional method of graphic design and focused on delivery vehicles to solve the problem before obtaining substantive community feedback to understand root causes. Designers tested a behavior change mechanism meant to spark dialogue between the communities. This method elicited a deeper conversation within both communities. The feedback obtained was continually served back to the audience to drive participation. After discovering the audience's interest in ongoing social conversation, the outcome became a realtime datacollecting/projecting project in which the public connects via common needs, fears, and wishes.

This study supports the need for design education to change to meet the needs of our changing socioeconomic climate. Design practice and education must work together to engage with real problems and motivate content creators rather than educate designers who only understand the serviceprovider model. This new model proposes that designers are problem initiators and content creators and that design education can engage with disenfranchised groups to change behaviors and perceptions of participants.

13.1 Meta-Themes in Graphic Design History

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Abstract
When studying Graphic Design History many books focus on rock star designers, theories, and movements. This approach leaves little to interconnect different movements or expose the trends in design history. If one were to take the approach of meta-themes in graphic design history, students could identify reoccurring stylistic devices and "read" the waves of design that flow through the past 150 years of design.

A work of graphic design is created utilizing type, image, and form. Meta- themes in Graphic Design History seek to connect threads in history through these three visual resources. Proposed meta-themes include the Humanistic Typographic, Graphic Image, and Geometric Design.

Humanistic Typographic includes those movements in design history that utilize type as their primary visual. The type seen there in is unique of hand and highly expressive. An example would include some works of Polish Poster design or Punk Rock flyers.

The Graphic Image encompasses those works that focus on beautiful illustrative images. Whether it is the flowing tendrils of a Mucha or the angst filled images of Die Brucke, the Graphic Image dominates the page and enraptures the viewer.

Lastly, Geometric Designs rely heavily on the circle, square, and triangle. From De Stijl to Constructivism to Atomic Design shape and form ignite the designers palette and dance across the page.

These three meta-themes reoccur throughout time. By tracing their ebb and flow nascent designers can witness trends expand and coalesce. They can review design annuals with an eye for trends choosing to go where design is currently or where they predict design will be headed. The Meta-themes in Graphic Design History presentation connects various movements through how they look not personalities or theories and charts the ebb and flow of design and its various forms.

Metathemes in Graphic Design History

By Associate Professor Jodi Staniunas Hopper

Philosophy and chronology have driven the retelling of the history of graphic design. While these two aspects are important to understanding the context that the work was created, is it not the product that has always been the most important and memorable item? Upon analyzing the product of the designers of the last one hundred fifty years, one discovers the cyclical nature of design and the overriding methods that occur throughout its history. These meta-themes in design supplant one another to create the ever-spiraling visual history of Western design in the last 150 years.

As a reaction to the dominant visual theme in design, rebel designers or savvy businesspersons utilize methods that are outside of the everyday. This difference causes a shift in the visual vocabulary of the time and creates a pull on the viewers' eye that other designers are compelled to follow. Other times the change is less conscious and more organic. Designers, sick of the latest style, seek to spread their wings and create a fresh statement.

Within design history one will view the cycle of change accelerating and decelerating depending on external influences such as economics, war, and protest. This is where design philosophy enters into the equation. For example, Dada broke away from the average methods of design to protest the senselessness of war through creating nonsensical imagery, text, and performance. The Constructivist visual rebellion sought to capitalize on the illiteracy of the bourgeios and to readily move across dialects while disseminating their message.

But not all movements in design history are burdened by heady manifestos and meaning. Take, for instance, Art Deco. This design movement was the epitome of luxury, no manifesto here, just a celebration of form and design inspired by exploration of culture and materials. The question to ask is "Is the product of a movement or designer that has no manifesto any less important to the visual history of Graphic Design?" Emphatically, I would state, it is not. For it is the product we study and retool, emulate, and remember.

Three meta-themes in design include Humanist Typography, Geometry, and the Graphic Image. When studying the landmark works of Graphic Design one finds the emphasis lies in some aspect of the work. It is either focused on expressive typography, simplified

Author's Note:

This is the extended version of my conference presentation suitable for student consumption. The images have been limited to cut down on page count. An assignment based on the Metatheme research is found at the end of the document before the endnotes and bibliography.

form, or imagery vs. photography. Traditional movements, as taught in graphic design history courses, fit within these meta-themes. However, each theme is present at all times, just not in as a mainstream visual language.

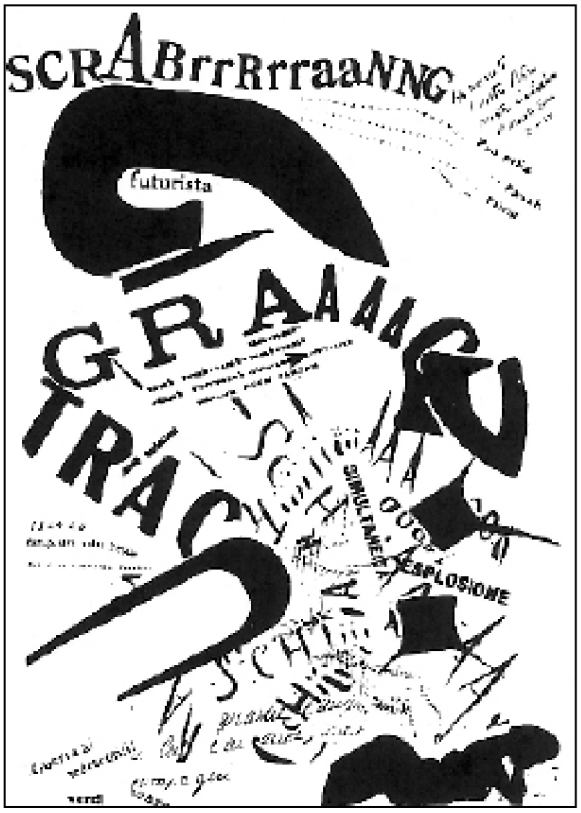
Humanist Typographic movements include Futurism, Dada, German Expressionism, Pattern Poetry, Punk and Vernacular Typographic. These movements used typography for expression beyond mere words. Destroying the horizontal march of standardized body copy, the words of these artists spilled across the page in a colorful cacophony of letters and meaning.

"Simplify, Simplify" is a modern mantra and a longtime method of organization and expression. DeStijl, Neoplasticism, Constructivist, Supremetists, Art Deco, the Atomic Age, Memphis, Deconstructivism, California NewWave, and the Computer Aesthetic utilized the clean forms of the rectangle, circle, and triangle to create dynamic works. Often, the same three forms were bent and slightly altered to create a visual vocabulary unique to each era but cohesive to the unfettered nature of the geometric movement. For example, the DeStijl designer worked solely in rectangles to build meaning through abstraction while, during the Atomic era, the rectangle bulged and bent to create trapezoids and other space age forms. The times were different; the expression was different, but the basic forms were still all that was used to express the mood and meaning of the message.

The ubiquitous nature of the Gibson Girl, the Fade-away Girl, Mucha's serpentine coifed women, and Nagel's geisha-faced girls speaks to the long time love affair with the Graphic Image. Captivating and idealized for their age, these images reduced the human form to its visual essence, creating signature styles for the movements encompassed in the Graphic Image meta-theme. Arts & Crafts, Art Nouveau, Jungenstijl, Plakastijl, Art Deco, Vortism, the WPA, The Pushpin group, Neo-Deco and Vector Graphics all fall under the genre of Graphic Image.

1: : HUMANIST TYPOGRAPHY

Humanist Typographic work comes from the belly of the designer bursting forth in an expressive flurry. Consideration of technology, new or old, is thrown aside or simply unavailable but the need to express is genuine and overpowering—a necessity. Humanist Typographic is more than just the word or type chosen; it is, in fact, the expressive arrangement of words and imagery. Ranging from the verbicovisual poetic eruptions of the Futurists and Dada to the crude flyers of the underground punk scene, the Humanist typographists scrawl out their messages with anarchy and irreverence toward establishment rules and attitudes. More recently, through Vernacular Typography, the rebellion is focused on destroying the crisp, clean product of the computer and commercial culture.

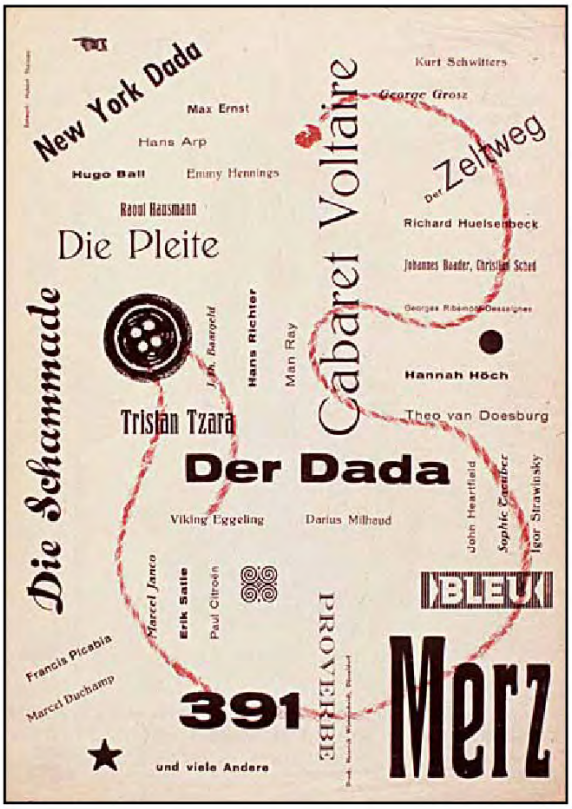


1.1 Marinetti, Fillippo, Poem from *Les Mots en Liberté*, 1910.

The roots of Humanist Typography are firmly planted in the Futurist visual and sound poetry. The founder of this activist movement was Fillipo Marinetti. Marinetti's goal "was to affirm individual liberty against social hierarchies and to celebrate intuition as the key to creative expression."[1] The period from Marinetti's penning of the Futurist Manifesto in 1908 until the Fascists neutered the movement was a time when typography not only housed the language of revolution; it visually depicted the forces that drove it (fig. 1.1). Futurists declared,

> "Destroy the cult of the past....Totally invalidate all kinds of imitation....Elevate all attempts at originality.... Regard Art Critics as useless and dangerous... Sweep the whole field of art clean of all themes and subjects which have been used in the past..."[2]

The voice of revolution and nihilism broke the confines of the type box and scattered across the page. Angled text and exploded letters overlapped and tumbled about the paper in a poetic painting of words. Many of the works were mechanically drawn, mocking the tradition of type. "The original Futurist parolé in libertá purposefully used existing roman typefaces in unconventional ways to underscore the Futurists' fervent repudiation of tradition."[3] It was the subtle variations of the artist's hand that made these works vibrate with frenetic energy. Other designs appeared as ransom notes—a technique later enhanced by the Punk movement. Every technique—hand-drawn or sampled—marked the opening of the floodgates, allowing future designers to express their



1.2 Front of Dada Ausstellung–Hand, 1958.

individuality and "to rethink the very nature of the typographic word and its meaning."[4]

Dada picked up on the spirit of individual expression and ran—in the other political direction from Futurism. Sharing a visually similar style, the rejection of cultural and societal "norms" and the nihilist philosophy with Futurism did not mean Dada shared the Futurists' love of war. Dada's rejection of "bourgeois art (and conventional typography) was an attack on both abhorrent social and cultural values and the artistic styles and mannerisms that symbolized those values."[5] Their personal and seemingly nonsensical sound poetry visually mirrored the practitioner's disgust for the horrors of war. "Dadaist graphic style evolved from combining the random methods of Cubist collés and Futurist *parole a libertá* with the efficiency and economy of mechanical-reproduction techniques."[6] In Dada publications, such as figure 1.2, letters danced across the page in an aesthetically disconcerting way. Seemingly tame by contemporary standards, Dada type arrangements were greasing the presses for the endeavors of future design rebels.

1.3 Heckel, Erich, Cover for *Die Ballade vom Zuchthaus zu Reading*, 1907.

The search for individual expression was nowhere more personal and introspective than during the German Expressionist movement of 1905-22. During this time "A personal calligraphy, based on an inner search for symbolism, replaced tired artistic convention and emerged as a potent graphic art in Germany and abroad."[9] Disaffected young artists excluded from the "Academy" united to rebel against conformity and faced the brutal world of the early 1900s. Their distinctive works were woven from the Fauvist Colors, Jungenstijl's Black and White works, and Russian Mysticism but they were of a whole new cloth. "Expressionists found a graphic means to communicate their raw emotions."[10]

Expressionist artists eschewed objectivity for the original. Creating instead deeply personal works based in the tradition of painting versus engineering, Expressionist typography cut a rough swath across the printed surface (fig. 1.3) catapulting the viewer through the dark expressive terrain of the print. The Artists of Die Brücke, especially Ernst Ludwig Kirchner, sought to carve the type simultaneous to the image to create a unified whole. Die Brücke, and the Expressionist in general, did not produce any commercial typefaces but were a great influence on other typographic designers.

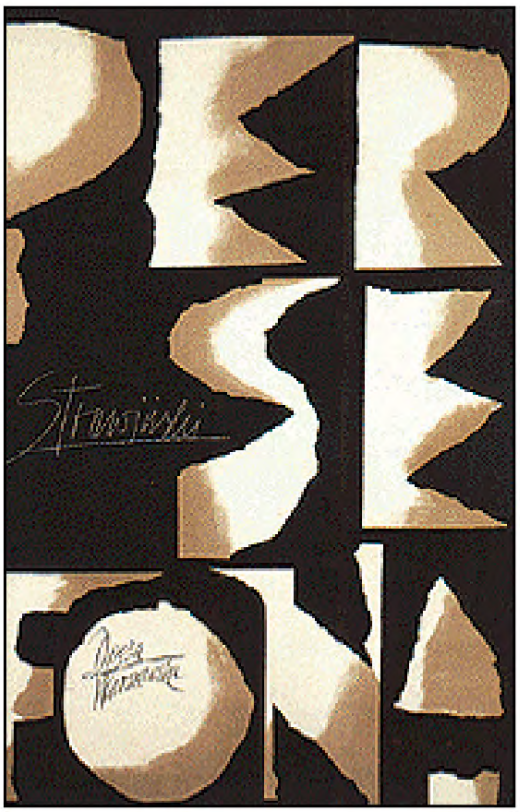
On the other side of World War II stood another expressive individualistic approach to Graphic Design: that of the Polish Poster artists. At the outset, the design was tied to realism and Polish posters were nothing remarkable. However, after the death of Stalin in 1953 until about 1964, the poster gained new life announcing a national sense of liberation. Lenica coined the term "Polish Poster School" during this time period to define this unique body of work that was unlike any other in the world.

During this time, Poles were downtrodden but not swayed from their creativity. Post 1955, poster designers created surreal imagery and used hand painted typography to promote Film and the Arts in their war torn land. Much like the Punk Humanist Typographic movement, Polish Poster designers did not have the resources. In addition, the Poles lacked outside influences to create works following traditional methods.

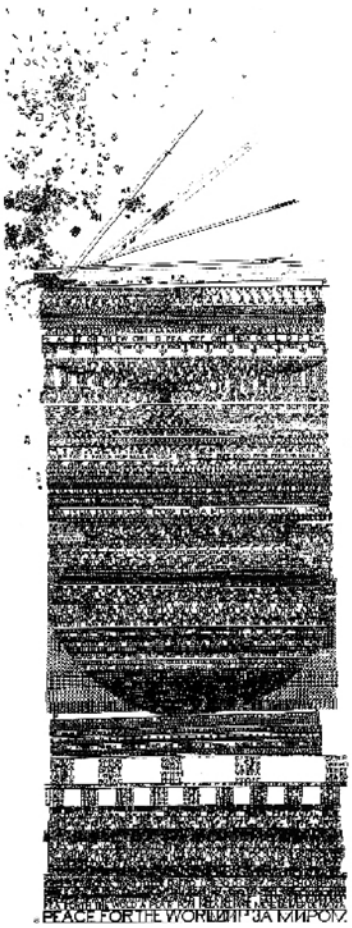
> "Cut off from contemporary Western trends and forbidden to draw upon the language of pre-war advertising posters, they returned, out of necessity, to brushwork, the technique they knew best, filling the poster with rich texture and bold colors. Because of this new array of artistic means, the poster gained authenticity in expressing emotional subtleties. Its language enriched by multi-layered metaphors, acquired the ability to convey the tragic, the lyrical, and the grotesque, and to augment the message with the author's personal comment."[12]

These hand-worked editions (fig.1.4) ultimately came to an end as the influences of main-stream society flooded into Poland and issues of political importance took center stage.

Verbicovisual poetry, the likes of Futurism and Dada, was resurrected in the fifties only to be working again against the establishment. Throughout the sixties and seventies, underground 'zines and mail art disseminated the new typographic works, known as Concrete poetry, throughout the world. Eventually, there were few expositions in Europe. Like the Futurists and Dada before them, the new Pattern Poets rebelled against war and were ignored by the Art establishment. Their works were created from found text to the exhaustively hand drawn text seen in figure 1.5, John Furnival's "The Fall of the Tower of Babel", 1964.



1.4 Cieslewicz, Roman, Persefona, Opera Poster, 1961



1.5 Furnival, John, *The Fall of the Tower of Babel*, 1964.

> "Concrete poems have ingredients from signs, letter(s), number(s), picture(s), and colours ....The range of media used by concrete poetry includes typewriter, rubberstamps, stencils, hand-lettering, informal lettering, rub-down lettering, collage, décollage, painting, drawing, photomontage, frottage, assemblage, and other painterly and sculptural modes."[8]

Concrete poetry was more than typographic confetti. It came before Post-Modernism but likewise sought to create multiple interpretations. It is complex and dense, literary and visual, yet it predates Katherine McCoy's *Typography as Discourse* by decades, yet tying into the Po-Mo theory brilliantly.

1.6 Reid, Jamie, *God Save The Queen*, Sex Pistols, Record Cover, 1977.

The anarchical technique of collage was exploited by the Punks in more recent times. The Underground Punk scene carried the torch of rebellion and anarchy. Disaffected youths of the late seventies rebelled against the establishment whether it was the government in England or the Disco scene in New York. The first identifiable Punk design was an album cover torn from the newspaper and carved by the knife of Jamie Reid (fig 1.6).

> "He gave punk its identifiable and aggressive graphic vocabulary: mixed typefaces and cut-out letters (ransom lettering), bright soapbox colours, crude photo-reproduction, cut-out or torn shapes, and spontaneous layout."[14]

Reid's blasphemy of the royal image served to put Britain's government on notice. The unemployed, marginalized youth were sick of the status quo. This generation was going to point out the hypocrisy of the leadership and create unrest until something changed.

Not having access to the sophisticated typesetters, these designers combined ransom note and scrawled typography with sampled or original art to create eye-catching flyers that were surreptitiously hung about their communities. "DIY, do-it-yourself, was in the air...mass-produced objects d'art were being made by people with very little capital."[15] According to Long-time Punk Jello Biafra:

> "Computers were out of each, rub-on letters were a luxury, so we improvised. Aping Jamie Reid's situationist-inspired cut-out art (Sex-Pistols) was step one. Our

> own dark retakes on the plastic Amerika that spawned us came next. Without knowing it, we learned that putting any picture or collage on a punk flyer could make that image more ridiculous-or sinister-than ever."[16]

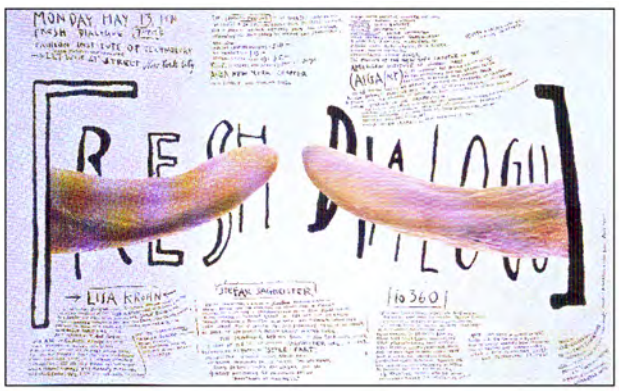
After about a decade of bombardment, the establishment recognized the creations of the young punks and appropriated the look in shopping malls and professional design. From Time-Warner's collaged 1986 annual report (fig. 1.7) to Art Chantry's work, by the mid-eighties the young punk scavengers had themselves been sampled.

1.7 Pentagram: Sue Huntley, Donna Muir, Susan Hochbaum, and Peter Harrison; Annual Report for Warner Communications, 1986.

In response to the Art Establishment's raid on rebellion, the next decade (1985-1996) became increasingly consumer-based. Anything, from music to fashion to art, which appeared to influence youth, was assimilated into the mass market. Tibor Kalman summed it up in his 1998 essay "Fuck Committees":

> "It's about the struggle between individuals with jagged passion in their work and today's faceless corporate committees, which claim to understand the needs of the mass audience, and are removing the idiosyncrasies, polishing the jags, creating a thought-free, passion-free, cultural mush that will not be hated nor loved by anyone. By now, virtually all media, architecture, product and graphic design have been freed from ideas, individual passion, and have been relegated to a role of corporate servitude….Corporations have become the sole arbiters of cultural ideas and taste in America."[18]

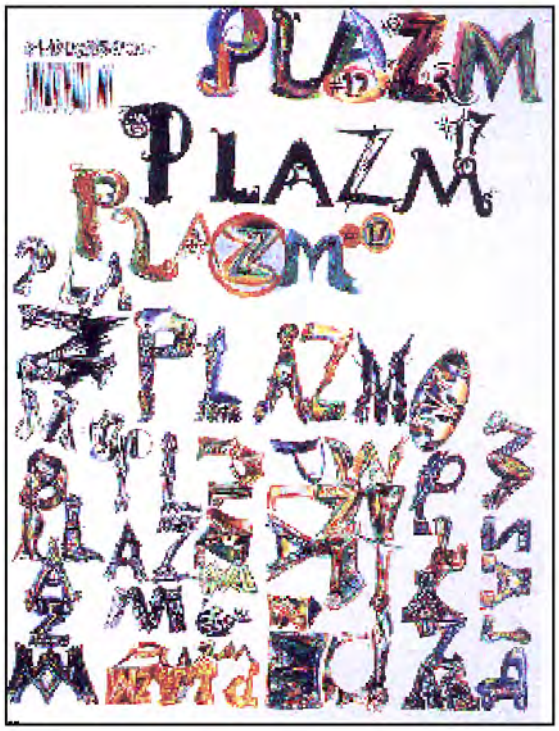
It isn't a wonder that the next rebellion came from within. Like the old adage "Pop will eat itself," designers turned cannibal. Having "consumed" all they can handle, the late 90's Vernacular Typographic designers spit back at the public samples of their commercial selves. From Las Vegas typography to the "handwriting on the wall", these designers sift through the garbage bin of excess in search of the real, providing the public with authentic handwriting and deteriorated computer forms. They sample the symbols of success peeling back the veneer of a perfect and shiny consumer-based society. Viewers are then confronted with the artifice of cereal boxes, script type and jackpot signs and implored to search for true meaning. Capitalizing on the Post-Modern methodology of symbolism and personal history, Vernacular Typographic places signs of life in the viewer's sight and begs him/her to really look.



1.8 Sagmiester, Stefan, *Fresh Dialogue* poster, 1995.

Quintessential to the reintroduction of real handwriting were the works of Stefan Sagmiester, from his notable 1996 "Fresh Dialogue" (fig. 1.8) poster to the infamous poster design for a lecture he gave where his intern notabley carved the details into Sagmeisters torso. With all the quirk and non-repetitive idiosyncrasies, these particular Sagmiester works capture the real, a quality rarely exhibited in the layered, morphed, and blended world of Photoshop. When the viewer engages the Sagmiester lecture poster, he/she is at once repelled and then curious. "How'd he do that?" ask designers and viewers alike. It is not until one realizes the authenticity of the carving that the "reality" of the work becomes clear. After a decade of computer manipulated imagery, the shock of authenticity breaks through the plastic coating covering the world and captures attention. Many contemporary works attempt to mimic the genius of this work but, in the search for the authentic, copies miss the boat.

On the other hand, contemporary and crude hand-drawn imagery is a rare thing indeed, unless one views the work of designer Elliot Peter Earls whose odd creatures and awkward type recall the hand-scrawled billets of the punk era. Channeling an influence from graffiti, his typography bends and twists in an awkward three-dimensional dance. Surrounded by doodle-like outlines, Earl's images of pointy-headed, other worldly beings return to the sophomoric charm of youth, bringing with it the symbolic baggage of angst, rebellion, and grotesque humor.



1.9 Fella, Edward, *Plazm*, Periodical Cover, 1998

Hand-created imagery can also be found in the application of Tramp style art reflected in the poster works of Yee-Haw studios and Funny Garbage. Looking to the outsider for artistic inspiration, these studios reflect a tradition of naive art with their jaunty typography and wood-cut images. The irregularity and crude cuttings also reflect a texture not unlike that of the German Expressionists. Coupling primitive images with vernacular type, Yee-Haw combines vintage type with rickshaw imagery.

Distortion and distress are also hallmarks of the current wave of Vernacular Typographists. "'Against the backdrop of defaults and pre-packaged templates," wrote type designer Tobias Frere-Jones (Zed 1994) "grunge (distorted and distressed forms) stands out as a rebellion against the defaults of the computer.'"[19] Brought into the general public eye in 1997, "grungy" or "kinetic" design appeared on the big screen in the movie titles of "Se7en" created by Kyle Cooper, (fig. 1.10). Its wobbly, fre-

netic type scratched across the screen with a substituted numeric replacing the "v". This work engaged viewers, set the mood and portended the action to come both on the screen and offscreen in the world of Graphic Design. This Tipping Point of design bent designers to cut through PhotoShop layers and recalls earlier works in "impermanence."

Erosion and entropy of typography can also be seen in the works of David Carson, Jeffery Keedy, Garage Fonts and Plazm Fonts (fig. 1.9).

> "Before digital media these works were cut and pasted as one-of-a-kind ransom-letter style specimens, but the computer opened the floodgates of production and is a platform for distribution. Hundreds of fonts have been created, and most conceivable approaches have been tried, from ones programmed to erode during typing to others that look like eighteenth century handwriting."[20]

These designs have altered vectors mutating the letterform. The odd breakage of words, mistranslation of scanned text, and dense typographic tangles of the mid-to-late-nineties clog the surface and reek havoc with legibility while toying with readability.

In the past, Humanistic Typographers vary—from actual hand-drawn type and image to vernacular type to computer distorted typography. While Dada and Futurism turned type on its head by removing human expression from the confines of the type box, the Expressionists and Polish Poster School cut their type across the page. Punk naives later threw all these elements together in a hodge-podge of scrawl and paper clippings. In the 2000's Vernacular artists flirted with off-computer antics or sought to break the codified shackles of computer art and text boxes. A rebellious spirit of design separates the Humanist Typographist from the commercial arena of design.

1.10 Imaginary Forces: Kyle Cooper and Jenny Shainin, *Se7en*, Movie Titling, 1995.

THE GRAPHIC IMAGE

The Graphic Image evolved as an alternative to Realism and elaborate ornament in design. In fine art, students are typically introduced to the Italian masters DaVinci, Mossacio, and Michelangelo. The art of creating a realistic image has been prized throughout the history of art. However, equally present when one reviews a more complete history are those movements that stylize the human form and its surroundings such as Egyptian Hieroglyphics, Greek Religious Icons and Japanese Woodcut. During the 19th century, also known as the Victorian Era, realism in advertising was still dominant. Highly decorated imagery with a wide variety of typestyles was the norm. As artisans tired of elaborate images and the technology of the Industrial Revolution dictating design, the Arts & Crafts movement came into being. Craftsmanship was emphasized and imagery was reductive when compared to its Victorian era predecessors.

The rigid lines and floral motifs of the Arts and Crafts gave way to the undulating forms of Art Nouveau where floral and flowing line meet Japanese woodblock prints. This ushers in the style of flat graphic representation. Works during this time period eschew rendering and realism for a more graphic form—eliminating unnecessary details. Many other movements are lumped under the title of Art Nouveau—a few of which were more graphically oriented than others are. It is said that "Art Nouveau is the first stylistic upheaval in which antiquity was no longer the dominant influence; it became both a popular fashion and a bridge to the 20th century."[1]

2.1 Moser, Kolomon, Cover *Ver Sacrum*, 1899

Under the auspices of Art Nouveau were the Glasgow Style, Jungendstijl, Vienna Seccession, Stile Liberte, Gilded Era, and American Poster. Nouveau artists hailed from Scotland, England, Belgium, France, Italy, Germany, Austria, and America. While each of these movements reacted to the realism and clutter of the Victorian Era, it also responded to it in its own unique way. The early works of Scotsman Charles Renee Macintosh relate heavily to the floral motifs of the Art Nouveau style. Perhaps that is why the Glasgow Style remained connected with Art Nouveau even after it developed a more geometric affinity. The graphic work remained very simplified in form, using a variety of line widths to create a stainglass effect as seen in figure 2.2.

"We desire an art not enslaved to Foreigners…The art from abroad should act upon us as an incentive to reflect upon ourselves."[2] stated the Viennese artist at the turn of the last century. "Viennese art for the Viennese people." Although they, too, are often lumped with the Art Nouveau, the Vienna Secession quickly evolved their own look, ultimately evolving into geometric forms versus the floral and the mystic versus the mundane as exemplified in the work of Kolomon Moser, shown in figure 2.1.

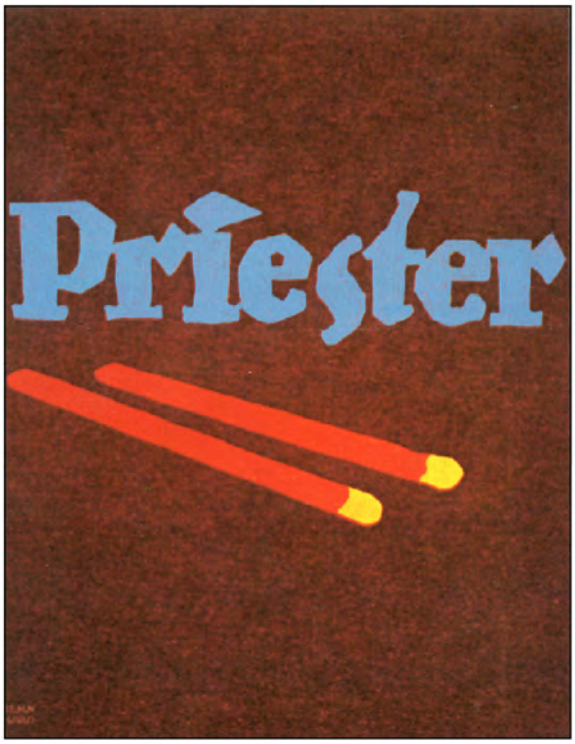
Munich had Secession, too. It is better known as the "young style" or Jungendstijl. Deriving its name from the Moniker of a trendsetting Magazine *Jungend*, the German version of Art Nouveau drew upon the Bavarian history of printmaking and craftsman guilds for its distinctive take on the undulating, natural lines of the day as seen in figure 2.1. Fonts were an integral part of the German movement. Expanding on the Germanic history of Blackletter, freer calligraphic forms were created to integrate typography and image.

The French and the Belgium Nouveau artists were the heart of the movement. Their works undulate with a sensuality not seen in the Victorian era. *L'Art Moderne*—the original name for the work being created in the last two decades of the 1800s—combined Japanese elegance with Post-impressionist fervor and Mysticism. Due to the prolific and signature nature of Mucha's designs (fig. 2.2), Art Nouveau found its most comprehensive statement in his work.[3] Other Parisian practitioners included Toulousse-Lautrec, Arthur H. Mackmurdo, Eugene Grasset, and Jules Cheret. A quick brushwork style can be seen in Cheret, Toulousse-Lautrec, and Bonnard's work while the more graphic linear style is predominant in Mackmurdo, Grasset and Mucha's work.

2.2 Mucha, Alphonse, Cycles Perfecta, 1902.

In America, Art Nouveau elements were being used by publishers. Designers creating advertising and magazines borrowed Art Nouveau motifs and applied them to American realist works as seen in the cover of *Harper's Bazar*. One notable American designer working with the Nouveau style was William Bradley whose works for *The Chapbook* exemplify the undulating yet flat nature of the movement. Slowly, American illustrators evolved from their realist leaning to create Nouveau-inspired imagery best seen in the work of Coles Phillips. Phillips was responsible for the "Fade-Away" girl where elements of the figure flatten and blend with the background.

Art Nouveau was viewed as a fresh vision of the future but its peak was from only 1890 until about 1910. Despite its brevity, Art Nouveau provided segue for the early modernists.



2.3 Bernhard, Ludwig, Priester Matches Poster, 1905.

Surrounded by the ornament of Arts & Crafts and Art Nouveau, German artist Lucien Bernhard's brush obscured the unnecessary details, unwittingly codifying Plakastil (fig. 2.3). Some have debated attributing the reductive style found in the "Object Poster" to Bernhard rather than the Beggarstaff Brothers. Prior to Bernhard, the Beggarstaffs had been working in England creating advertisements for various companies using a reductive method (fig. 2.4). Brothers-in-law James Pryde and William Nicholson opened a studio under the Beggarstaff name and dedicated themselves to reviving the advertising poster. Creating fake posters and using a Japanese influenced paper cut technique, the Brothers pitched their designs to various businessmen. Although sales were not all they could have been—in fact the Beggarstaffs abandoned the advertising studio in favor of returning to painting—their influence on the "Object" poster was notable.

Refreshing in its sense of simplicity, Plakastil's reductive treatment of imagery has remained part of the illustrative lexicon well beyond its years. So popular were these large, bold images that printers reduced them into stamps for use on company mailings. Trendsetting in its handling of corporate image, Plakastil can be viewed as the first concerted efforts in clear brand communication. In fact, during this era, Corporate Identity became a codified business practice with AEG's hiring of German Designer, Peter Berhens.

2.4 Beggarstaffs, *Don Quixote* Poster, 1896.

Other notable creators of bold, graphic posters of Plakastil were Ludwig Holwein, Hellmut Emcke, Ludwig Bernhard, and Hans Rudi Erdt. Bernhard also continued to create the posters until the advent of the first World War when the Object poster had "run its course" and other avenues were explored.

From a purely formal perspective, Plakastil connects with Art Deco in its reductive graphic imagery. Art Deco differs from Plakastil through the influence of Cubism and "Modern Art". Recognized originally as the style Moderne, Art Deco exemplified modernity through surface treatments versus the European "Bauhaus" Modern that embraced a deeper design philosophy. Art Deco was a populous movement, receiving the moniker in the 1960s from the title of a 1925 Paris event: "Exposition

Des Arts Décoratifs et Industriels Modernes." The title Art Deco was meant to encapsulate the whole of design from the twenties to the thirties. However, typically, the focus is on the later years' more dramatic work. Late Art Deco or Moderne contrasted with the Art Nouveau embracing a more Cubist influence.

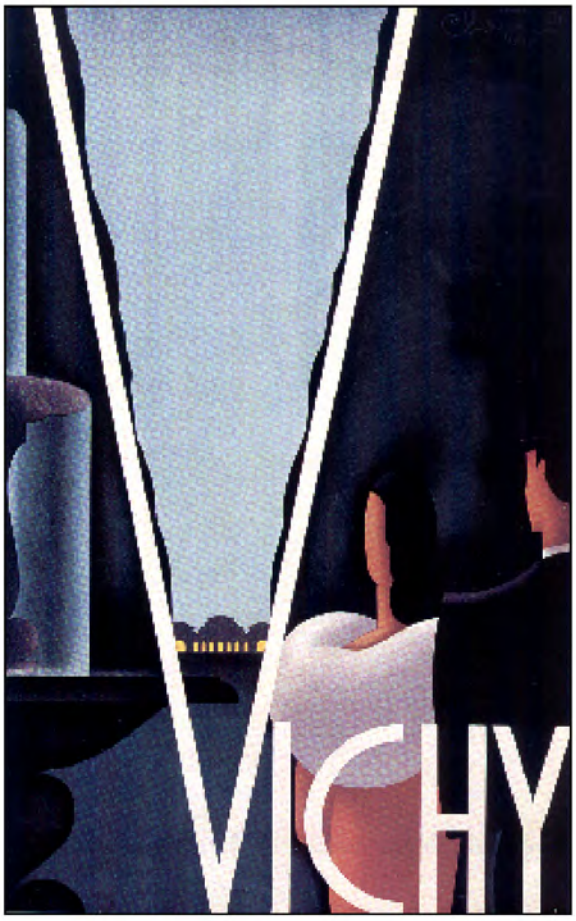
Designers interested in creating the illusion of modernity and luxury, embellished everything from perfume bottles to posters with the patterns of the Deco period. Symbols of this time included nymphs, greyhounds, obelisks, sunbursts, chevrons, exotic animals, stylized rendering of people, minimal details to portray a sleek appearance (fig. 2.5), use of expensive, exotic materials and Japanese, Mayan or Egyptian styling. The Moderne style was prominent in France, Belgium, Switzerland, and England. It was also one of the movements present in Italy and Germany at the time. It also was used on American goods. Unlike the European surface design approach, American manufacturers eventually redesigned objects to fully epitomize the Moderne style. This outgrowth of Art Deco was known as Streamline.

When reviewing the work of the Art Deco designers there are several qualities that come forward as quintessential to a good Moderne work. The Moderne designers were recognized as vital and talented as the painters of the day. The work they produced was a marriage of Fine Art and Commerce. Moderne was a celebration of Fine Art meets Industry.

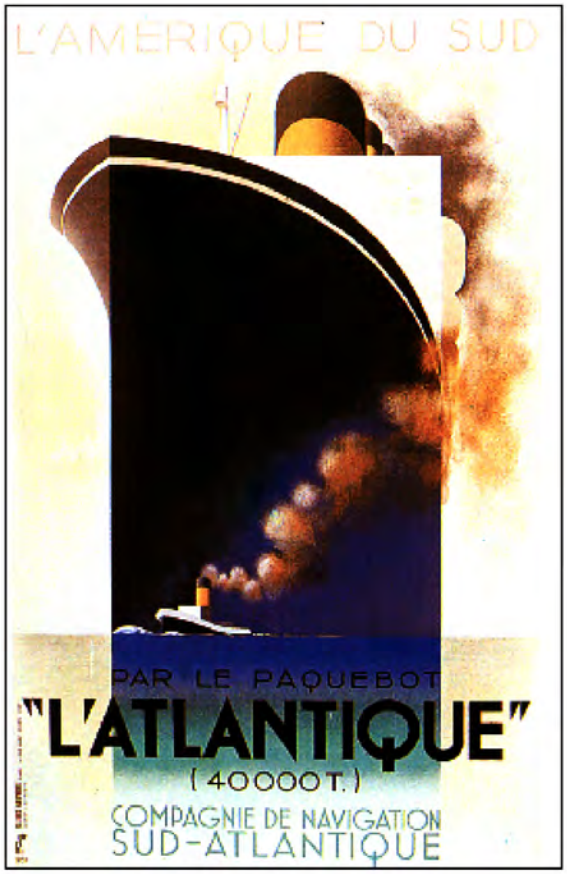
> " Advertising pundits called the mnemonic image that prompted a kind of Pavlovian recognition 'the fatal dart.' The most memorable campaigns were the reductive ones that used a formidable design scheme to frame an unmistakable icon."[5]

These unmistakable icons were to be dramatically simplified and recognizable luxury items. Gone was the floriated madness, enter the airbrush.

A.M. Cassandre, A.K.A. Adolphe Jean-Marie Mouron, likened the application of geometry when creating a poster as a "precise architectural method."[6] Focusing on images of the machine age, utilizing san serif, geometric typestyles, reducing the image to it sleekest geometric forms and creating a vision of motion or verticality, Cassandre's posters embodied the simplified elegance of the time as seen in two of his landmark posters *L'Antique*,



2.5 Chauffaud, Vichy, 1930.



2.6 Cassandre, AM, *L'Atlantique* Poster, 1931.

VORTICISM

2.7 Halliwell, Poster, 1931.

fig. 2.30, and *L'Intransigant*. The works had a different approach to detail. Airbrush planes, cubist space, and unique color arrangement replaced curvilinear lines. People even became a series of geometric lines. Long and lean, sleek and elegant, a woman's neck appeared in Modigliani proportions as seen in the work of Fashion Illustrator and Designer, Erté. Ships and trains had the grandeur of the technical marvels they were (fig. 2.6). Buildings first appeared tall and later in America became the opulent Skyscrapers of fantasy. Other noted purveyors of the French Moderne included Jean Carlu and Paul Colin. As with all design movements, there were many other unknown or little known artists.

In Britain the way of modernity was slower to catch on. Seen as "foreign design", especially that of their former enemy Germany, the British advertising community stuck with their tradition of Realism. One patron of Modernity stood out: Frank Pick, Publicity director for the London Underground from 1908 to 1940. The designs created under his watch led the British move toward Modernity. Grudgingly, advertisers recognized that England's goods appeared quite dowdy and stuffy compared to French and German Exports. After a miserable presentation at the 1925 Exposition, the British advertising community rallied, creating a "monument" to modernity at the 1927 Exposition. Leading designers of British Modernity, A. K. A. Art Deco, were Tom Purvis, ex-patriot Edward McKnight Kauffer, Ashley Haviden, and Austin Cooper.

British Modernity was influenced by Vortism, a unique blend of modernism and Cubism-cum-Futurism as seen in figure 2.7. The bold, flat color fields and transparencies in British work are decidedly different than those of the French, using far less airbrush, and harken back to the English influence of the Beggarstaff Brothers' silhouetted figures.

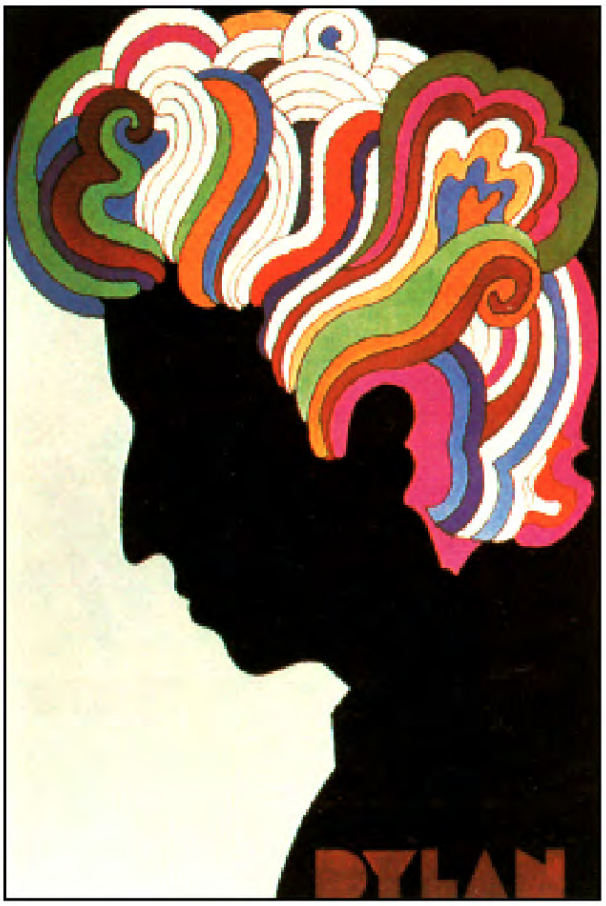
Art Deco was also known as Jazz Modern, the ZigZag style, Depression Modern or Manhattan Modern in America. Fueled by the fever created by the Exposition, modern ornamentation was applied —and decried—by many. Interior Designer Donald Deskey, in 1933, declared the Modern style distinctly American in nature. Rising out of the hysteria of the Expo, "Self styled designers blindly apply ornament to the surface of form—in itself badly planned. Their ornamental syntax consisting almost entirely of …the zigzag, the triangle, fawn-like curves."[7] wrote Deskey. It was not until the late 1930s that Deco became more intrinsic to form in American goods. American Streamline, as it became known, shared the Art Deco method of Styling and ultimately evolved

into Aerodynamic Product Designs. As other nations applied design to the surface of existing goods to provide the appearance of Modernity, American product designers combined art, industry and science to create new forms for a new epoch. Ultimately, a fashionable, new material—plastic—was also used to express the forward movement of the American dream. Streamline goods were made popular through Streamline, Art Deco advertisements.

Also, during the Depression, the American Government supported the work of artists as part of the Works Progress Act. These artists and designers created posters to promote the common good, inform, and advertise for various government initiatives. There were health and safety topics (fig. 2.8), travel and tourism, and War propaganda toward the end of the project. Due to the use of Silk-screen as their major technology, artwork had to be created in an appropriately flat method. While that could narrow an artist's options for poster creation, there was a surprising diversity to the artwork. A selection of the work related to the reductive style of the Graphic Image and influenced future work by other designers. Notable campaigns included the "See America" posters, Lester Beall's Rural Electrification Administration series, and the Foreign Trade Zone poster by Jack Rivolta. These works exhibit a progression from the Sachplakat and Art Deco styling found in the thirty years prior.

2.8 Herzog, Harry, NY,NY, 1935-43.

Flat Moderne graphics faded away with the war effort and not until the mid-sixties were graphic images dominant in design again. An as-yet-unknown group of recent graduates from Cooper Union banded together to market their skills. The Pushpin group broke onto the New York design scene with their unique sense of humor and design. An eclectic band of designers and illustrators, their work was decidedly not "Bauhaus" Modern in appearance. Using cartoon-like characters and bright colors, the members of Pushpin forged their own path amidst the Moderns and Psychedelics of the sixties and seventies. The PushPin Group's body of work saturates the annals of modern design history. Milton Glaser (fig. 2.9), Seymour Chwast, Barry Zaid and David Lance Goines created eclectic designs that turn historical forms into then contemporary art. Each applied what came to be his trademark style to prevent works from appearing to be Victorian, Art Deco or Art Nouveau. Instead, the works referenced and reinterpreted the lexicon of society's common past precursing the Post-Modern Historicism to come. Glaser and Chwast's flat stylized graphics cannot be ignored and,



2.9 Glaser, Milton, *Dylan* Poster, 1967.

in some ways, can be
connected to the colorful Psychedelic Images of San Francisco's Filmore Auditorium as alternative style to the corporate, photographic dominance of the time.

2.10 Nagel, Patrick, *The Paper Mill* Promotion, LA, 1980.

A resurgence of interest in the Deco style was seen in popular culture of the eighties. Not often written about in favor of far more theoretical Post-Modern movements, Neo-deco design included many variants. The stylized portraits of porcelain models by Patrick Nagel (fig. 2.10) were mimiced repeatedly. Other notable designers of the time included Daniel Pelavin and his flat graphic forms, inspiring textile and surface designs by Nathalie Du Pasquier of Memphis, McRay Magelby's Posters, and Charles Spencer Anderson's penaché for recontextualizing early 19th century imagery. While the history books focus on the work of April Grieman, Dan Friedman, Wolfgang Weingart, and the Cranbrook Academy of Art, a survey of Design Journals from that time reveals that the rest of the design world was creating non-theoretical investigations of geometry, color, frivolity and vintage—also known as Historicism. What came out of the pastiche of past and present were hypercolors, angular geometric design and Neo-deco illustration.

Neo-deco had porcelain women and *Miami Vice* luxury. Sachplakat, as well as WPA, had a silk screen feel to the images while Deco utilized both fields of color accented by airbrushed gradients or cubist fractures. Neo-deco used bold outlines and drop shadows to create a false depth to its flat, papery images. Color palettes during the eighties were ludicrously hot fluorescent or saccharine sweet pastels. Fluorescent colors were introduced in fashion and large offset lithography presses and budgets allowed for the additional inks. While the twenties were the age of luxury, the nineteen eighties were the age of excess. Hence, brighter, hotter, sweeter—just plain MORE—exemplified the milieu of the eighties. Through Memphis to the streets of Miami, the influence of the decadent Italian interior movement was seen in logos, night clubs, and record labels. Neo-deco Graphic Images were the bubble gum of design and the American populous chewed it up.

After the crash of Junk bonds signaled the end of the excesses of the eighties, the high ride from the decadent decade was over. The early nineties took its design seriously. There were Post-structuralism theory, Deconstruction and Post-modernism, and a new toy had come of age—the Apple Macintosh. Designers pushed technology, readability,

and structure to its limits and, just when it was getting to be too much, design did an about-face. The underexposed area of Vector Graphics started to cut through the grungy detritus of the digital image.

As early as the mid-nineties, flat graphics were ubiquitously present in many ad campaigns and magazines. Michael Schwab was creating bold flat graphics for Goodby, Silverstein & Partners' client: the Golden Gate National Recreation Area. The images were seen as an homage to the work of the WPA and, as Schwab himself explains, "I want someone to be able to read my posters from a block away. I find paring away information is more dramatic."[9] Schwab's style is but one of the ways that Vector Graphic Images manifested themselves in the late nineties, early twenty-first century.

2.11 Frazier, Craig, Advertisment, 2000.

Unique to the late nineties were the jaunty yet uncomplicated paper cut style of Craig Frazier's large bodied figures, the thready line work of Brian Cronin's style, and Luba Lukova's edgy forms. Frazier's pieces, while minimal, have a warmth and whimsy achieved through their earthen palettes as seen in figure 2.11. Cronin's work has an Deco feel with a decidedly modern twist. Lukova's work references Polish Poster without the frenetic brushwork found in the Vernacular Type of the movement. The figures intertwine encapsulated by thin lines.

Additional figurative styles include the flat languid forms of fashion illustrations of the time and the paper cut style of the Orbitz Ad Campaign. These images minimalize detail, becoming referential to the 1980s with their slick form and simplified facial features. Silhouetting, as first seen in the work of the Beggarstaffs, returns for a reprise in the work of Richard Boyton and Anja Kroencke (fig. 2.12). Elongated human forms sway with willowy grace across the flat landscape. Cutting through the busy urban background, the Object Poster also makes a return in several campaigns. Posters and advertisements for Guinness and Monx Beer are fine examples. When interviewed regarding the trend of simplification, Scott Mires of San Diego's Mires Design notes the trend "back to basics, solid thinking, and clear communication …not overly intricate or layered, not as decorative, but more substantial."[10]

2.12 Kroencke, Anja, Bar Harbor Shops, 2000.

Adding to the success of the Vector Style was a new software development. While designers were playing on their Macs the internet came of age. Programs grew to decorate it and, in 1997, Macromedia released Flash—a website animation software package that animated

2.13 McFeteridge, Jeffery, Jager DiPaola Kemp Design, Burton "Snow Monkey" Animated Advertisement, 2001.

Vector Graphics with ease. Designers started with geometric images, overlaying or encapsulating the multi-layered PhotoShop imagery. Then, the PhotoShop clutter gave way to the pure Vector Graphic Experience Design as seen in the Burton "Snow Monkey" animation, fig. 2.13.

The minimalism in print and on the web even affected television. TNN's branding campaign of 2002 involved interpreting video into retro, silkscreen-style flat images. They weren't the only ones to go retro. TV-Land, known for its vintage serial programming capitalized on the look of the seventies with a new twist. AT&T used a vector graphic style to create its Olympic skating commercial in 2000. The culmination of the trend toward Vector Graphics was the introduction of "Rotoshop" software that interpolated moving video into screenprint-style animation. The first feature film to utilize the proprietary software was "Waking Life" released in 2002. Flattened imagery was nothing new to the field of animation but the choice to change a film into animation via vector technology was. Many cartoons for the period reflect a Vector Style such as Parrappa, the Rappa and the Power Puff girls. Even more attentive to the flat graphics trend are paper cut animations such as South Park and Blues Clues.

Utilizing Graphic Imagery opens doors for many designers to play illustrator or vice-versa. As design work simplifies more and more, the use of icons and geometry becomes more prevalent segueing the design field into the Geometric meta-theme.

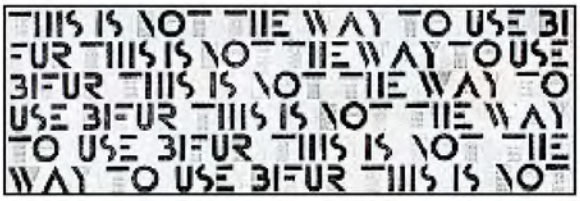
GEOMETRIC FORM

As Pyramids and Ziggurats were to Art Deco; Triangles and stair steps were to New Wave. These are but two examples of geometric forms and the movements that were utilized by design throughout the 20th century. The basis of all art and design may be the geometric forms of the cube, the sphere, and the cone but nowhere else in design is geometry more dominant than in these Modern movements: Art Deco Moderne, Constructivism, De Stijl, Swiss International Typographic, Atomic Design, Memphis, California New Wave, Deconstructivism, and 21st century Geometric Design. Each of these movements chose geometry as a response to prior design motifs and/or philosophies. For example, Constuctivists strove to create a new language free from historicism for all Soviets to understand. In a different kind of revolution, Memphis rebelled against the manifesto of "Form and Function". Thumbing its nose at the art establishment, these designers celebrated design, combining architecture with electric, geometric patterns, clearing the way for other designers to explore design with renewed abandon.

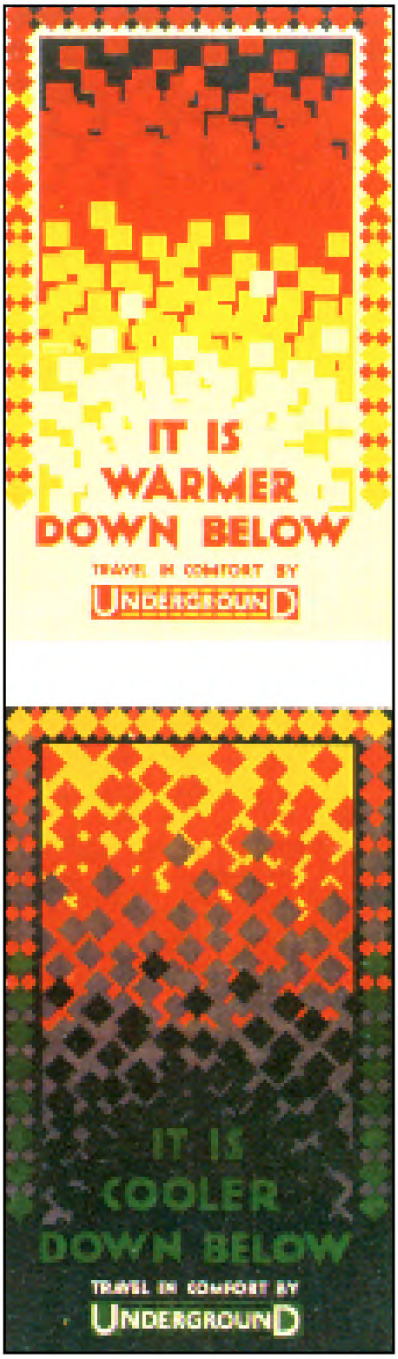
In the early twentieth century, Avante Garde movements in painting ushered in a new, modern view of beauty. First, Cubism destroyed the traditional notion of space and form on a 2-dimensional surface. Facetted forms from different planes turned into one continuous form. Cubists broke the bonds of conventional reality and forged the way for new concepts in Aesthetics. Neoplasticism scooped up the machine aethetic and strove to create a new beauty through universality and simplicity, expressing the modern aesthetics of beauty through pure, man-made form. It is from this wellspring that Graphic Designers of the 20th century draw to create Modern designs under a new sense of aestheticism.

The advent of Cubist reduction of form coupled with the exploration of exotic lands and cultures such as Egypt, Japan, and the Aztecs, invited a new visual language for those seeking to create a modern future. Between the two Wars, Art Deco rose from these influences to create an image of luxury and sophistication. Natural forms became stylized recalling tomb paintings of Egypt. Realistic space was abandoned in favor of the suggestion of space ala Cubism. The conjunction of reduction in nature and application of geometric forms as the design itself visually hearkened a change toward a new vision of Modernism. Elements such as the chevron, lightning bolt, the sphere, obelisk, radial

3.1 Schulz-Neudamm, *Metropolis* Movie Poster, 1926.



3.2 Cassandre, A.M., Bifer Type Specimen, 1929.



3.3 Cooper, Austin, London Electric Railway Posters, 1924.

rays and geometric patterning formed a back drop of pattern or were the sole decoration for posters, products and architecture of the time. "Streamlining, zigzag, moderne and decorative geometry-these attributes express the simultaneous desires to express the modern era of the machine while satisfying the passion for decoration."[1]

The purveyors of this new decorative art were many as manufacturers strove to modernize their products through the application of geometric form—many times to the chagrin of serious Art Deco Modernist designers. Often, the overall form of the piece was not addressed, creating a cheap imitation of modernist design rather than authentically re-addressing the form. Authentic and landmark designers in the Modern form included Edward McKnight Kauffer, A.M. Cassandre, Colin, and Jean Carlu. The works of the Art Deco Modernist reflected either a graphic image approach or a purely decorative geometric approach.

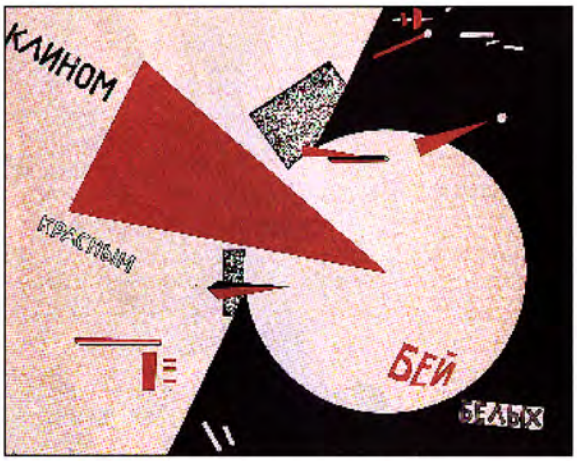
A.M. Cassandre typography employed the simplified Geometric nature to flatter his Graphic Image artwork. Acier Noir and Bifur (fig. 3.2) are two of his famous fonts that reduced the details of the fonts to basic rectangles, triangles and circles.

In 1926, the trends in Deco architecture made it to the printed poster in Schulz Neudamm's poster for Metropolis seen in figure 3.4. Again, there are elements of the Graphic Image combined with a purely geometric representation of the city of the future. In this background the cube rises to new heights of drama, emphasizing the grandeur of the Deco architectural endeavors while the trademark rays shine out from the central figure. In reality, the Skyscraper was born and fully realized as an Art Deco triumph in the Chrysler Building in New York City. Adorned with triangles and half-rounds, the multi-tiered, streamlined building stands as a monument to Art Deco excess and Modernist decoration.

Between the two World Wars the posters for the London Underground were revamped, utilizing the principles of Modern Art and Cubism. The result was a series of designs utilizing simplified geometry to expressively suggest the product as seen in in Austin Cooper's series, figure 3.3.

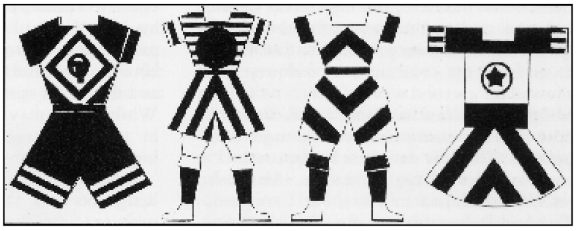
At the same time, in Europe, Constructivists were revolutionizing more than just design. In the midst of the Russian Revolution of 1917, Constuctivists sought to shake off the Czarist shackles and gave voice

to the Bolesheviks, unifying the disparate masses through a new visual language. "Anatoly Lunacharsky wrote, 'If the revolution can give art its soul, then art can endow the revolution with speech.'"[2] Reaching for the simplest forms for ready understanding, Lazar "El" Lissitzky overreached all the Russian Avante Garde movements before him and created the Constructivist masterpiece "Beat the Whites with the Red Wedge" (fig. 3.4). Continuing to utilize basic geometric forms to proselytize the coming of the new order, El Lissitsky designed "Of Two Squares", a children's book about the Russian revolution.



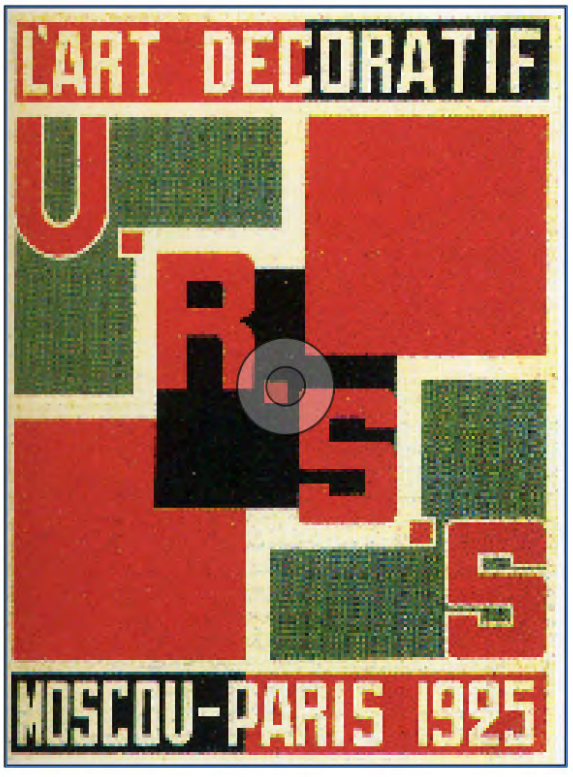
3.4 EL Lissitzky, *Beat the Whites with the Red Wedge*, 1920.

A precursor to Constructivism, Kasmir Malevich, experimented with the juxtaposition of squares, rectangles and negative space in his one-man movement Supremetism. Influenced by Malevich's work, the young Constructivists formed a signature look, additionally influenced by the circumstances of their society and the glorification of the product of the machine. Constuctivist work utilized a limited palette of red and black, simplified imagery, and kinetic yet geometric, typography in many of the works. Some of the primary purveyors were Varvara Stepnova, Aleksandr Rodchenko, Lazar "El" Lissitzky, and Solomon Telingater.



3.5 Stepnova, Varvara, Sports Clothes, 1921-5.

Stepnova's work rested primarily in the world of textiles and fashion; because of this specialization her work was often omitted from graphic design books. However, when viewing geometry as the basis for design and Constructivism, it would be remiss not to include the work. Stepnova believed that the same constrictions of fashion trends, antiquated technology, and old fashioned aesthetics kept fashion from rising above the quagmire of the past. Using the geometric building blocks of Constructivism, Stepnova created bold textiles and, in turn, bold fashion and stage costumes as seen in figure 3.5. Married to Rodchenko, Stepnova and her husband were a primary force of the movement.



3.6 Rodchenko, Alexander, L'Art Decoratif Catalog Cover, 1925.

Aleksandr Rodchenko believed that "the subconsciousness of inspiration (a chance phenomenon) gives way to organized action. The intellect is now our point of departure; it replaces the 'soul' of idealism. From this it follows that Constructivism, too, is in fact intellectual production..."[3] Working in the Constructivist mode, Rodchenko created Graphic Design as well as sculpture. He did not abandon 'art for art's sake' which many early Constructivists called. He wrote and searched for a way to resolve the conflict between aesthetics and the product of the intellect. As evidenced by his catalogue covers and Spatial Constructs, Rodchenko employed the square and rectangle to create new intellectual

works of art free from the ornament of the past. Rodchenko's graphic designs embodied the Russian type sensibility with large sans serif fonts, large geometric areas of pure color, and a sense of construction.

3.7 El Lissitzky, Cover of the "Theatre Unbound", 1927.

El Lissitzky was perhaps the most prolific of the Constructivists. He taught and traveled to meet with other Modernists throughout Europe, encountering de Stijl, Bauhaus, and Dada. His training as an architect was a profound influence on his work from his use of grid paper upon which he designed to his treatment of 2-dimensional space. His PROUNS, an acronym for his works, were an intersection of painting and architecture. Working with geometric form, Lissitzky added a sense of space to his work as seen in figure 3.7. Objects appeared to recede and advance through overlap and use of color. His contemporary, Jan Tschichold, said of Lissitsky, " A generation that has never heard of him stands on his shoulders."[4]

Simultaneous to Constructivism, the elements of De Stijl were convening to share their credo through a literary journal of the same name. In the second edition of De Stijl, Theo van Doesberg explained the credo of Neoplasticism that lay at the heart of a De Stijl artwork,

> "The Modern artist does not deny nature...but he does not imitate it. He does not portray it. He creates a different image of it. He uses it and reduces it to its elemental forms, colors and proportions in order to achieve a new image. The new image is the work of art." [5]

3.8 Rietveld, Gerritt, Sideboard, 1919.

"Soul mates" with the Constructivists, De Stijl came to being in the Netherlands at roughly the same time, 1917. Holding geometry in the highest esteem as the pinnacle of purity and harmony, Theo van Doesburg, Piet Mondrian, Vilmos Huszar, Bart Van Der Leck, Gerritt Rietveld, J.J.P. Oud, and Hendrikus Theodorous Wijdeveld sought to create work that fused art and life to affect a better society. Taking their cue from Neoplasticism and the writings of philosopher M.H. J. Shoenmakers, the members of De Stijl designed using only squares, rectangles, horizontal and vertical lines. Beyond those constrictions the group also limited their palette to the purest of pigments-red, blue, yellow, black, and white. As with other movements of this time, De Stijl artists were searching for the perfect fusion of art and life as a resolution to the horrors of the war and collapse of ideologies that surrounded them. "With their prescribed visual vocabulary, de Stijl artists sought

expression of the mathematical structure of the universe and the universal harmony of nature." [6]

Piet Mondrian's paintings are perhaps the most recognizable body of de Stijl work. Staunch advocate of the theories of Neoplasticism, his works maintained the principles even after other de Stijl artists began to experiment with diagonals.

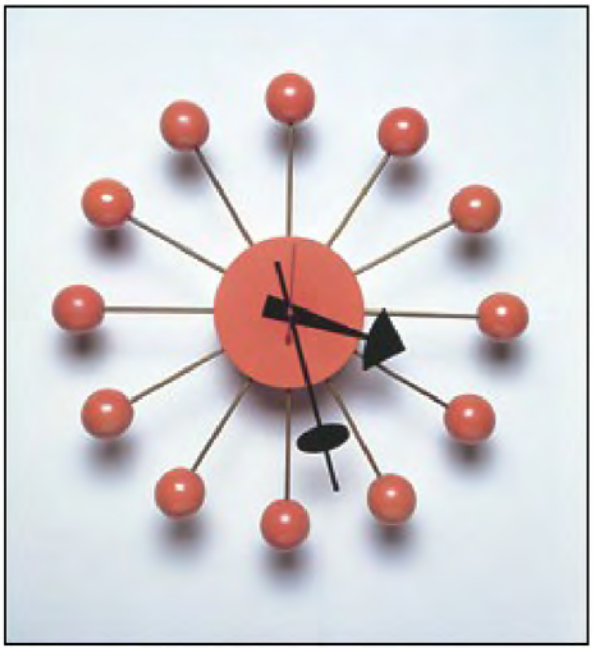
Although Mondrian may be the most recognized, Theo van Doesberg was the driving force of the graphic arm of the movement. Publisher of *De Stijl* magazine, van Doesberg collaborated with Constuctivists and Dadaists to spread the gospel of "shoon", a Dutch word meaning both pure and beautiful. Van Doesberg's theories in de Stijl architecture were ultimately realized in the work of another, Gerrit Rietveld. Reitveld's most notorious work was the Red and Blue chair. Flat planes of blue and red intercept one another while bands of black created a grid-like support structure.

Other Graphic Designers of the de Stijl—Vilmos Huszar, Bart Van Der Leck, and Hendrikus Theodorous Wijdeveld—created landmark works in the De Stijl body. Their works danced with rectangles, utilized Sans Serif fonts minimalized of detail, and contained a rhythm of line and a balance of values. Remarkable to such a narrow palette, their works were many and varied, a testament to the versatility of the geometric palette. (fig. 3.9)

3.9 Wijdeveld, Hendrikus Theodorous, Exhibit Announcement, 1929.

De Stijl fizzled away after the death of van Doesberg in 1931, although Mondrian remained true to original tenets throughout his body of work.

It was the fifties when abstract geometric work would resonate in the graphic field again. It was the flirtatious form known sometimes as Modern and other times as the Atomic style. Space age ovoids, amoebas, and warped rectangles created a jazzy riff of pattern that ranged from the sophisticated works of George Nelson (fig. 3.10) to the boomerang patterned formica of the average homeowner of the time. It was with this stylish expression that geometric design was truly introduced to everyman's life. No "high-falutin'" manifestos here, just pure decoration akin to the nature of the Modern Art Deco period but with the visual sense of whimsy and impermanence, later embraced by the creators of Memphis.



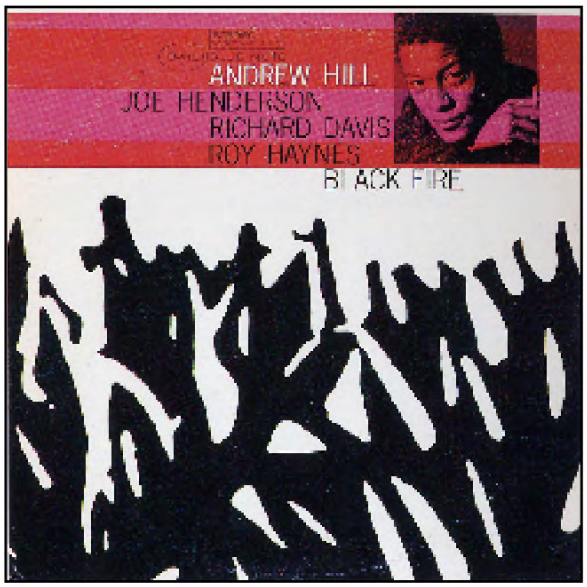
3.10 Nelson, George, Ball Clock Model Number 4755, 1947.

Reacting to the aesthetics of the Machine Age and post-war anxiety, the Atomic Style returned to nature for its inspiration.

> "Innovative artists and designers in the the 1940s and 50s used vital forms to evoke living entities, from amoebas and plant life to the human figure. They sought to replace the hard-edged, machine-like imagery of the 20s and 30s, creating paintings with curvilinear forms, buildings with fluid contours that defied the rigidity of the International Style." [7]

Atomic Design was common and notable; it was also memorable for its connection of the world of fine and applied art and design including textiles, furniture, wallpaper, china, architecture, painting, sculpture, and graphic design. Notable for boomarang end tables, asterisk-accented plates, biomorphic chairs, geometric textiles and wall coverings, this was cool jazz and the modern chic of its time. The palette of geometric forms included: the asterisk with ball shaped finials, the amoeba, the boomarang, the convex or concave rectangle, and ovals of any kind.

Related to the Atomic style was the true cool of Blue Note records. Combining photos of the performer with geometric structure and overlays as well as san serif type, the Blue Note style was best captured in the work of Reid Miles. Not exclusive to using a geometric style, Blue Note shared the Modern attitude of the times as seen in the figure 3.11.



3.11 Miles, Ried, Andrew Hill Album Cover, 1963.

While American design was helping Americans escape the serious burden of two World Wars, the Depression and the Atomic Bomb, Switzerland was harboring serious designers. Obeying the rules of "gute form" and "Die Neue Typographie", the work of these designers codified into what was to be known as the "Swiss International Style".

Grids, sans serif fonts, and universal aesthetic were the order of the day, and no designer was better at creating within that aesthetic than Josef Müller-Brockmann. His compatriates in Swiss International included Herbert Bayer and Herbert Matter. Designs were structured to be architectonic in nature. The use of photo for many of the works was strictly controlled through an underlying grid that rigorously ordered both text and images, becoming conspicuous even in its absence. Typefaces were chosen for their legibility and clarity of expression. It is during this period that the Univers typeface family was created, a

fine example in itself of Swiss International structure. The Type Family boasted 21 variations carefully weighted and balanced to work with one another based on the numeric assignment of the particular font.

The order and structure created by this movement was picked up by many corporate designers in America. Rigorous systems of Corporate Identity, such as the International Paper Corporate Identity, created by Lester Bealls, were created during the sixties and seventies. Simplified, universal forms were enlisted and imbued with the corporate zeitgeist. The grid was employed to unify communications and publications. The Unigrid program established by Massimo Vignelli for the American Park Service in 1974 was the pinnacle of better living and communication through order in design.

It was at this sense of serious industry and permanence that the members of Memphis "thumbed their nose". Rebelling against centuries of dogma that iterated the timelessness of "good" art and design, these Italian designers put the fun back into "Form and Function". Originally known as Studio Alchemeia, Ettore Sottsass, Nathalie Du Pasquier, Michele Di Lucchi, Gaetano Pesce and others ignored "-isms" and design tradition to create a spontaneous visual language of their own—Memphis.

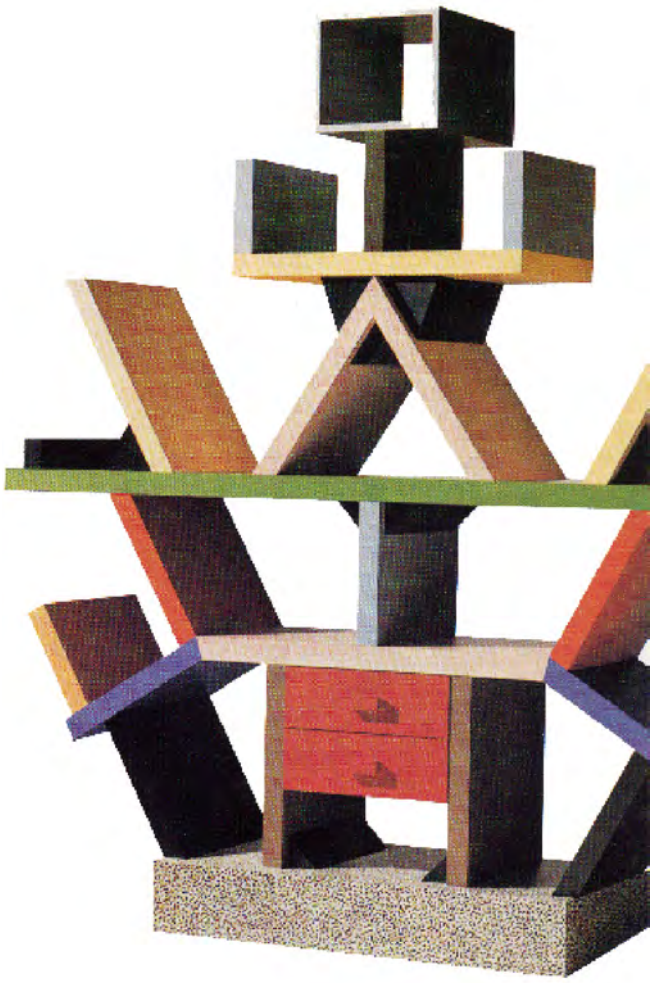
Under the oppression of industrial culture of the seventies, Sottsass called all designers to arms and begged them to

> "oppose the primitive barbarism of industrial culture, putting in its place something more dignified, something more conscious of the value of existence; we must create a radiant vision of people's desires for serenity, for happiness, for play, for pleasure." [8]

It was under this guiding vision that the willfully extreme Memphis design movement seemed to operate. "Luxury was no longer proscribed but was back in vogue, demanding a new Art Deco."[9]

Memphis was architectonic in nature. Furnishings to posters took on structures familiar to the three dimensional realm of construction. Columns were used as table legs, stair steps as armrests or random forms on paper as seen in figure 3.13. Sphere, cones, and cubes flew through 2-dimensional imaginary space or shored-up seating

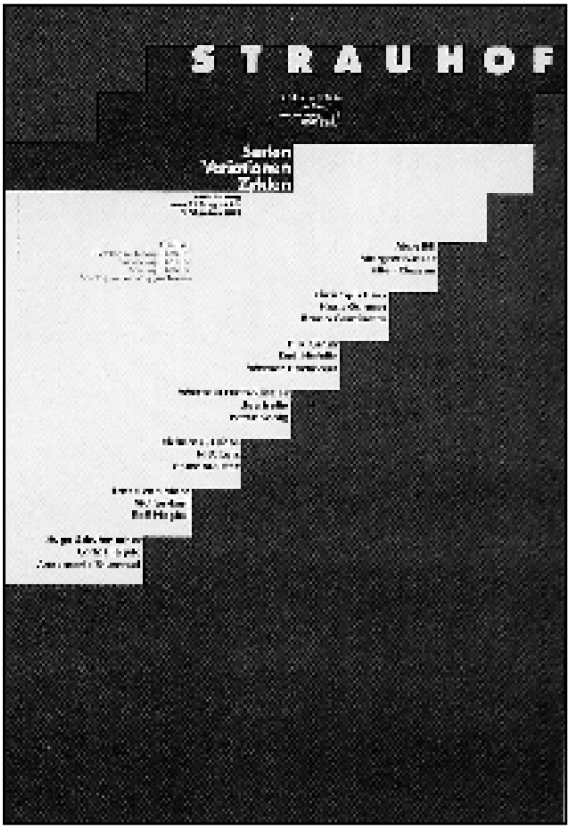
3.12 Matter, Herbert, Advertisement for Knoll, 1948.



3.13 Sottsass, Ettore, *Carlton* Room Divider, 1981.

arrangements. As for pattern, the Mezzotint, seen on the base of the *Carlton* room divider, was enlarged and reproduced in a menagerie of colors, often garish and overbright. The architectural grid was employed as design. Teal, red, royal blue, and gold, as well as black and white were prominent to the palette of the time. Memphis was the design of excess and excess in design, turning "Less is More" on its ear only to replace it with a new mantra of "More is Better."

Meanwhile, in Basel, Switzerland, Wolfgang Wiengart at the Basel School was exposing the "act of creating design". His work was about the activity and resources with which a designer worked. Weingart began to break down the expected forms of the design realm. His typographic experiments, built on the intuitive arrangements explored by Odermatt and Tissi, stretched the concepts of the "Swiss Typography" of the International Style, and challenged readability and composition. As he pushed typography on end, Weingart deconstructed forms, revealing benday dots, screens, and forms of the typical graphic image, creating a geometric language for other designers to expand. It was here that postmodern graphic design theory was codified.



3.14 Odermatt & Tissi, Strauhof Poster, 1981.

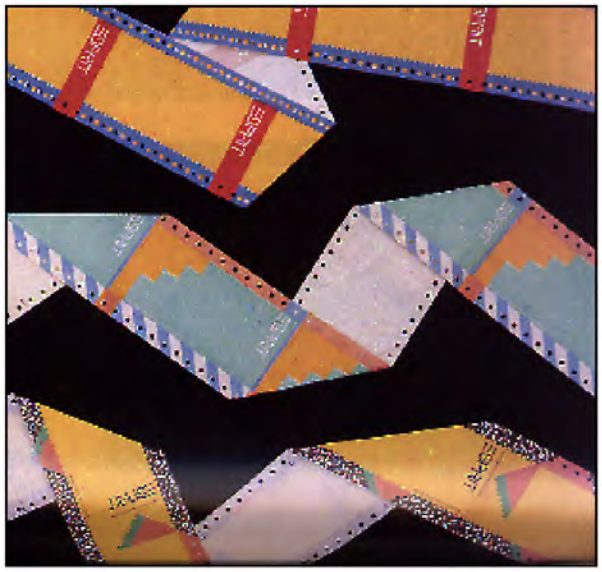
Design that used pattern and geometry to create intersecting planes of 3-dimensional visual space in a 2-dimensional environment through overlapping and intersection was not embraced by the old guard entrenched in the media capital of America, New York. Consequently, the geometric influence of Memphis and Basel in America occurred outside the mainstream in a movement known as California New Wave. Springing forth from the work of Basel-trained artist April Greiman, the activities of Deconstructivism intersected with Memphis to create a uniquely American style utilizing geometric forms, Post-modern process and the color palette of the Memphis. California New Wave:

> "was deeply enamored with texture, pattern, surface, color and playful geometry. It almost seemed that the rational ethic of the modern design movement was being flaunted and mocked by designers willing to introduce whimsy and exaggerated form and proportions into their work." [10]

Hallmarks of the products of the New Wave design included architectural grids, benday dots, stairstep forms (fig. 3.14), lines of various weights, triangles, cones, and spheres in a parade of colors ranging from Miami pastels to primary palettes. Realistic three-dimensional space was toyed with

in the assemblage of these elements. Greiman's notable contemporaries included Dan Freidman, William Longhauser, Michael Manwaring and Michael Vanderbyl. Although these designers created works in the New Wave style, at the time, Post modernism was so eclectic that not all designs created by them would be considered New Wave. Other movements bearing influence at the time were Feminism, Deconstructivism, and Historicism.

Seminal works of the geometric New Wave movement include the 1984 LA Olympic Pavillion designs by Deborah Sussman, Esprit products, showrooms and advertisements(fig. 3.15), Longhauser's Graves Poster, Vanderbyl's Architectural Posters and Manwarings' Hanna Wine Bottle. When these works are viewed collectively, one becomes acutely aware of the visual vocabulary of the mid-eighties Geometric movement. The barber poll of the Olympics reappears in the Esprit show room. The Esprit ads utilize the stair step form for cropping images—the same stair step found in Wiengart's experiments and Manwaring's Hanna Wine Bottle. The stair step reputed to have come from the personal vocabulary of Wolfgang Wiengart's experience at an architectural site.[11] The flat grid that appeared in the Graves poster reappears in Vanderbyl's Architectural Series. This grid would be given dimension in the future Geometric movement of the early 21st century.



3.15 Esprit Register Tape, 1984-6.

The introduction of the Apple computer during this time period led to increased complexity in design as artists could digitally construct images. In the early days of computer images, pixelization entered the geometric vocabulary with the work of Zuzana Licko and Rudy Vanderlans of Émigré. The rectilinear nature of the newly found tool gave itself over to creating pixel or rectangular based forms—a Computer Aesthetic. Licko capitalized on this, creating landmark letterforms such as Empire (fig. 3.65) that have joined the typeface Helvetica as a modern classic of typography. These follow fonts built on the initial work of Apple's first type and Icon designer, Susan Kare.

3.16 Zuzana Licko, Typeface Design for the MacIntosh Computer, 1985.

Design work on the Apple Macintosh was soon being created exploiting the nature of the pixel (fig. 3.16) rather than ignoring it in favor of reproducing the traditional aesthetics of type and design. As software expanded so did the designer's palette. Type on the circle was introduced to the Computer Aesthetic with Aldus Freehand, more recently known as Macromedia Freehand. Along with headlines on a curve, body text and corporate signatures were arched and curved to display a

3.17 Doyle Partners, *Martha Stewart Everyday* Branding, 1997.

designer's virtuosity with this new tool or a corporations "cutting edge" attitude. With writing and design occurring on one platform the designer, as author, begins to emerge. Early experiments with intuitive, deconstructed type entered cyberspace and creates the world of post-modern cacaphony that followed up the early digital geometric explorations.

As the computer, software, and the designers using the tools matured, the pendulum swung away from the simplified forms of the Computer Aesthetic to the lush multi-layered forms of Post-modernism where the intersections of images created new meaning and juxtaposition was king. It wasn't until the late nineties that geometric forms crept back into the design vocabulary as artists sought a return to simplicity in a neo-modern world. Designers had found the edge of complexity and created visual cacaphony. In order to be heard above the din of Vernacular Typography, sampling, and collage, the quiet grace of the simplified form returned.

As the Millennium rolled around, the techno future arrived, suddenly design became futuristically sleek. The technology of the web came of age with Flash and broadband. All the frenetic visual energy leading up to Y2K fizzled out like the so-called computer bug, leading mankind into a brave new world of persistent wired-ness. Here, entered the world of tech images. Ubiquitously, the forms appeared in design gradually taking over—the spirograph image, the dimensional wire grid, the return of the pixel. Other forms of reduction included an exploration of tribal calligraphic forms with a focus of the "Chinese flame" (fig. 3.18), flat patterns over top of real photographs and simplified bars of color (fig. 3.17). The color palette ranged from universal 216 color palette enforced by the cross-platform needs of world wide web, to MacIntosh-introduced aquas and oranges to the muted tones of Martha Stewart products (fig. 3.17).

Some early 21st century imagery stripped images to their skeletal structures while still flirting with reality. In another form of deconstruction, the product of three-dimensional rendering programs created the visual as in the "Not Yet the Periphery" poster. Artists created pseudo-architectural, linear forms that responded to the photo being referenced. The viewer was made to feel that he/she had entered cyber space. Designers brought to life a future that involves the fantasy of the world wide web. Variations of this technique included linear designs to exemplify items converging, as the technology was supposed to, or the

use of pixelations to reveal the process of creating a digital image. The pixel present in "touch, tap, write" returns one to the technology of the mid-eigthies while simplifying the art to rectilinear forms much as pictures were formerly reduced to benday dots.

In the overly, technologically complex world of 2001, "Simplify, Simplify" became the new mantra. Hence, designers reduced photos through the application of flat pattern as in the Brand New School's *Fashionably Loud* Promotional Designs for MTV. Corporate Identity, or branding, also simplified. To reinforce the essence of simplicity to their over-taxed clients, corporations turned to the basic geometric forms. The circle made a return to symbolize more than one corporation signalling the supposed newly holistic, complete and centered nature of the American corporation. From Target to Mynd, the circle radiated and morphed to elicit an all-encompassing brand essence. The square was imbued with meaning in the HR Block Logotype.

Not to be left out, the rectangle also returned as well as various other odd forms ala the Atomic Age. Many common vector forms began to appear behind images and brand signatures like the boomerangs of yore. The concave explosion form was seen behind Nickelodeon and VH1 *Divas*. Amoeba forms were reiterated and modernized to revive the modern chic. Tribal forms also had their effect on graphic design products. All the tattoo artistry of the later nineties crept into millennium design. Tribal flames became as ubiquitous as fawns in the Art Deco period and Eighties New Wave stair step devices.

3.18 Chase, Margo. *Dare Devil* Game Identity, 2002.

HELPING STUDENTS MAKE HISTORY

With the foundation of the Metatheme historical approach, students are invited to review the past five to ten years of design and engage in parsing the visual information into 3 (with a proposed 4) distinct approaches.

See the assignment on the right and the rubric below for modeling.

Contemporary Design Scavenger Hunt **GD HISTORY**

Associate Professor Jodi Staniunas Hopper

Grade:	100 93	92 84	83 75	75 or less
Research: 50%	5 year represented; thorough notes on designer and firm; Thoughtful incite and description of your new movement	4-5 year represented; notes on the designer and firm; title of your newly found movement	Not all year represented or theme muddled; and/or research about designer and firm is weak; and/or Title and name of your style missing	Didn't stay to one Metatheme; Research poor; Summation missing
Citation 20%	All work Cited properly	Most work Cited Properly	Some work Cited Properly	No work Cited Properly
Group Work: 15%	Your research is reflected and included into the overall view of America; some of your language is present		Little of your research is found in the final powerpoint.	None of your research is present in the final powerpoint due to poor resources or poor research
Handing it in: 15%	Cover page summary includes: Your name and assigned region/ periodical and MetaTheme; New Style(s) Name: 3 hallmarks of your new style(s); Next: Individual pages for each of the 15 designs photos and their information. Lastly: Attached pages from the powerpoint of your work reflected in the final presentation.	Missing one or two of the qualities in column one. Be it quantity of evidence or structural mannerisms	Missing half of the qualities listed in column one. Be it quantity of evidence or structural mannerisms	A ball of research confusion. Ill structured and non-cohesive.

Contemporary Design Scavenger Hunt

GD HISTORY

Associate Professor Jodi Staniunas Hopper

You will be assigned a region or periodical.
You will need to research what is occurring in the last 5 years in that region in one of the three Metathemes: Geometric Work, Graphic Image, or Typography.

- Some Recommended Resources:
  - Regionalprintannual.Printmag.com
  - Print Magazine Design Annual
  - Commarts.com
  - Comm Arts Design and Advertising Annual
  - HOW International Design Competition
  - New Visual Artists; Print
  - Individual websites of winning designers from these annuals

- Requirements:
  - Start with your geographical team
  - Visit the Library: Periodicals: Print Annuals, CommArts Annuals, How International
  - Surf the Web
  - Google the names of winners
  - Research the Judges
  - Collect pictures and details on the design
  - Look at the past 5 years
  - Look for reoccurring themes within the Metatheme and geographic area you are assigned
  - Create slides of 15ish works that represent design in this 5-year period
    - Identify
      - Designer: Little Bio found in your research
      - Company/Firm: Little Bio found in your research
      - Location
      - Cite resource (Periodical, Article, Date, Edition, page)
    - Name the Style: List 3 hallmarks of the style
    - Note any Switches in style
- Regroup:
  - Now with your Metatheme Group
  - Share your findings
  - Do the looks match-up or diverge?
  - Create a master presentation of the look or looks found in that Metatheme
  - Agree on a name and descriptor for each sub movement (no more than 3)
- Powerpoint Presentation
- Turning it in:
  - Your Report documenting the 15 works you found important
  - What you named the movement and why
  - Your area's input to the final Powerpoint. Attach a print of the page(s)
  - Other notable results from your research.

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13.2 The Design(er) METAgame: from molecules to bytes, an iterative process.

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Abstract
Using a gaming mindset, the authors have developed a serious game using ques5oning to address the aspects of: concept genera5on, visual composi5on and technical use of materials in the design process. Previously, assignments used "compare + contrast" essays to access mastery. While documents generated by the students were well craBed, the authors found that when students moved to genera5ng their own ideas and solving their own problems, no bridging of the earlier inquiry was evident in the conceptual or the visual genera5on of ar5facts. The students were good at the process of analysis, however no real transference was evident in their own work. Using inspira5on generated in the "MetaGame as Teaching Game" (Macklin, Daer, Duncan, and Nealen, 2012) workshop, the authors have developed and tested a game to encourage individual discovery and improve transference. The use of this game has fostered research and discussion in an introductory course exploring the process of design. This paper will document the game's development process including in-class development, on line synchronous play, possible app implementa5on and student feedback.

Keywords
Serious games, game based learning, blended learning, design educa5on, design history

From molecules to bytes, an iterative process

Teaching concept generation, compositional issues, and material exploration through an online course/gaming environment

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ABSTRACT

Starting with a paper prototype and on the ground classes, the authors have retooled the Design(er) METAgame for use in an online teaching environment. To address the aspects of concept generation, visual composition and technical use of materials in the design process, the authors have developed a serious game using questioning to encourage students to actively explore course material. Previously, assignments used "compare + contrast" essays to assess mastery. While documents generated by students were well crafted, the authors found that when students moved to generating their own ideas and solving their own problems, no bridging of the earlier inquiry was evident in the conceptual or the visual generation of artifacts. The students were good at the process of analysis, however no real transference was evident in their own work. Using inspiration generated in the "MetaGame as Teaching Game" (Macklin, Daer, Duncan, and Nealen 2012) workshop, the authors have developed and tested a game to encourage individual discovery and improve transference. The use of this game has fostered research and discussion in a course exploring the process of design. This paper will document the game's development process including in-class development, on line synchronous play, possible app implementation and student feedback.

Keywords
Serious games, game based learning, blended learning, design education, design history

INTRODUCTION

"How many points of view do we need?" "Are different sizes considered different points of view?" "Why do I have to use materials other than the computer?" "Can I just find images I like on the computer?" "Why do I have to make them, I can find them on line?" "You have 16 squares on a page, what do we do with the other squares when we get to 50?" "Are colored pencils considered a different material from colored pens?" "When we get to 50 we will have the right answer, right?"

It is 9:00 in the morning; I have just finished a 40-minute lecture/slide show illustrating how designers combine materials to create new meaning. Does a welcome mat made out of barbed wire really say "welcome"? I have just assigned a project titled "50 ways of seeing." It is intended to be a visual exploration of an object to allow the students to discover different and unique meanings based on presentation. This is the fun part of design. This is why I have enjoyed my profession for so many years. This is the "game."

And the students do not want to play.

Play.

They are badgering me with questions because they want to know the right answer. They want to know what I WANT. I WANT them to have fun. I WANT them to make mistakes. I WANT them to find their own path to exploration. I WANT them to feel their ideas have value. But they do not want to PLAY.

Then it hits me. At 9:00 in the front of that lecture hall where we are all unhappy, *this should be fun.* But it is not fun for them because they do not know the rules. (Rand, 1985: 189) How do I make this a game?

Desperate to find a common context from which to expand, I ask "How many of you play video games?". All of the hands go up. O.K. This is good. Common ground. Can I help them to see my point of view? My frustration? "What do you do when you are learning a game and someone stands behind you and tells you what to do?"
In unison, "we tell them to SHUT UP."
Exactly. SHUT UP and PLAY.

I need to design a game.

The problem we were trying to solve

How can we design a learning experience that will foster curiosity? How can we encourage students to bring their gamers' curiosity into the course material? In the past, readings were

accompanied with "compare + contrast" essays to access mastery of the assigned material. While the documents generated were well crafted, when the students moved to generating their own ideas and solving their own problems, no bridging of the exploration was evident in 1) the conceptual discussion with the students, or 2) the visual generation of artifacts created by the students. The students were good at the process of analysis, however no real transference or integration of the readings was occurring.

The process of designing the game experienced several false starts. First "clicker technology" was explored as we thought this would provide a gaming feel to the class. The problem arose when the instructors discovered that the material did not lend itself to asking finite or closed questions with a "correct" or "right" answer. The process needed to encourage open-ended exploration and reflection.

The subject matter was also shifted from an interpretive exploration of suggesting meaning for various visualizations, to the historical analysis section of the class. While attending the Games + Learning + Society, GLS 8.0 in Madison WI. Staples attended a workshop titled, "MetaGame as Teaching Game" (Macklin, Daer, Duncan, and Nealen 2012). The initial play testing of the game mechanics was explored at the workshop. Students would generate questions addressing various aspects of concept generation, visual composition and technical use of materials through the lens of historical decades. Students would explore work generated in each decade and select examples to represent their views and finally compete in discussions to see who could mount the most compelling argument based on the questions generated by the readings. The iterative process of development of the game will model the iterative design process that students are researching. (Salen, Zimmerman 2004)

Give them the answers and let them write the test. Using "decade readings" that documented graphic design from the 1940's - 1980's, students are asked to read and analyze the material with the understanding that they should specifically consider the questions that address the facets of concept, composition and materials or use of technology.

Students would then document their analysis of these readings in their process books. In addition to verbal analysis, students' identify visuals, from each of the readings, as well as contemporary outside sources, that support their observations. Students generate a minimum of five cards per reading. They are instructed to select examples that might be appropriate to address multiple questions (**Table 1**). Making the cards is an important step in that it requires students to reflect further on their choices. Using questions on the Q. cards as a guide, students identify visuals from each of the readings to use in the game. Students may use contemporary as well as historical examples to support their observations. This process encourages divergent thinking about the material, as opposed to reinforcing a "one question – one right answer" mindset.

	Concept	*Composition*	*Materials/ technology*
Reflection / Learning outcome	*What was the idea behind the piece?* *What was the problem that the designer was attempting to solve?*	*What are the elements of composition that the designer is using to communicate his/her message?* *How is composition used to enhance the intended message?*	*What are the materials/ typefaces being used to visually convey the message?* *Which materials would you like to experiment with?*
Q cards	*"Which designer was not afraid to fail?"* *"Which is the best use of a cliché?"* *"Which is the most negative?"* *"Which designer is more inspiring to you?"* *"Which makes the best use of humor?"*	*"Which makes the most effective use of symmetry?"* *"Which makes the most successful use of negative space?"* *"Which is the best use of color?"* *"Which makes the best use of repetition?" geometry?" the grid system?"*	*"Which makes the most affective use of color?"* *"Which has the most innovative typography?"* *"Which uses materials to convey emotion?"*

Table 1: Examples of directed questions generated before the assigned readings and expanded upon through game play.

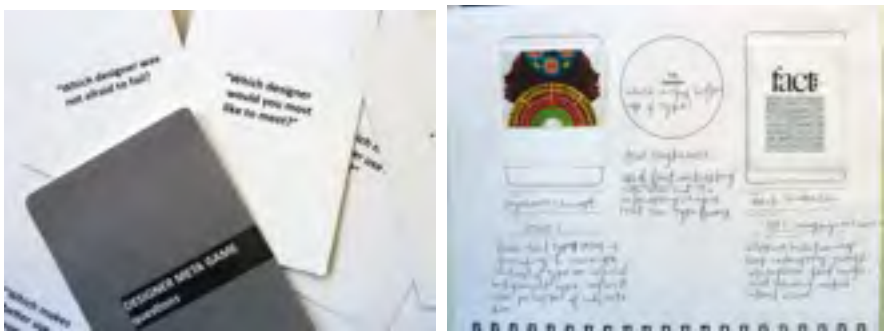

Figure 1: Qcards and Game Mat.

Initial questions are presented to students before the readings are assigned. Game Mats are presented during the first round of play.

Students bring their cards to class and participate in several bouts. Teams of three students participate in a series of three bouts, rotating roles. This allows each student to experience the stress of being the judge. As students do not know which questions they will receive before the game, students might have to "expand" their analysis of their cards in order to participate.

Figure 2: Preliminary and Final Bouts.

After the preliminary bouts, new questions are added to the deck. Final bouts are preformed in front of the entire class. Students not directly involved in the bout choose the questions and officiate as judges.

After each bout, students are asked to document cards they wish they had made or questions they wish had been posed from the perspective of having played the game. After the first round the question arises as to whether, when they judge, they are voting for the best card or the best argument. At this point in time, this is determined by the individual student and recorded on the game mat. In the future, this might be a way to apply a new perspective to the game.

Experience the material on a deeper level

To get past the, "lets get this done so we can get out of here" attitude, all participants must document the bouts in their process books to receive credit. Arguments, along with the rational for the judges' decision must also be recorded on game mats. Students are encouraged to expand upon thoughts they find interesting or notate if they do not agree with a specific decision made by the judge. Students are also encouraged to document bouts that they found interesting, even if they were not a direct participant or a judge. The quality and quantity of these observations are reflected in the final grade. The grade currently appears to be the best motivator.

From the course syllabus:

In this class we will explore the process and the product that we call "design." We will investigate the history of the field in an effort to predict where it might lead us in the future. We will analyze its practitioners in an effort to understand design as a practice. We will explore technology in an attempt to discover the relationship of design to society.

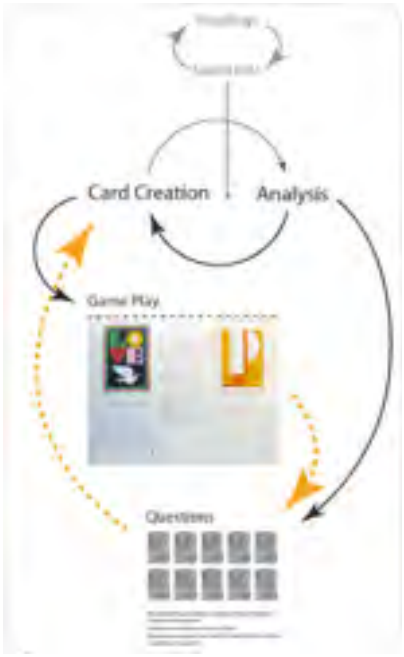

Figure 3: The iterative process of the game. Students receive questions before they are assigned the readings. After analyzing the readings they generate 5 cards to illustrate the most memorable aspects of the decade. Using their cards, they battle in class using the preassigned questions. Battles are recorded in a process book for later reflection and evaluation. Based on play analysis, students may generate new cards or submit new questions to the game deck.

BATTLE

The very first round is a very powerful moment. It is not until the first question card is played and students realize the weakness or brilliance of their analysis of the readings in relationship to the questions. It is not until this moment that students understand the scope or importance of the questions.

In the original META game, when a loser is declared, the losing card is given to the winner. As the students are so invested in the design and production of their cards, surrendering them is too painful/upsetting/traumatic. The Design(er) METAgame rules were modified to allow students to keep their individual cards, but new cards could be made and added to individual decks at any time.

> "Dr. Woodie Flowers, FIRST National Advisor and Pappalardo Professor Emeritus of Mechanical Engineering, Massachusetts Institute of Technology, coined the term "Gracious Professionalism®." It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.
>
> With Gracious Professionalism, fierce competition and mutual gain are not separate notions. Gracious professionals learn and compete like crazy, but treat one another with respect and kindness in the process. They avoid treating anyone like losers. No chest thumping tough talk, but no sticky-sweet platitudes either. Knowledge, competition, and empathy are comfortably blended.
>
> In the long run, Gracious Professionalism is part of pursuing a meaningful life. One can add to society and enjoy the satisfaction of knowing one has acted with integrity and sensitivity." (Flowers 2013)

To encourage "Gracious Professionalism" and to create an environment where cards would not need to be surrendered, the final rounds of the game are played as a tournament bracket. However after each battle, the losing player is not eliminated. Each bracket is a team and as the winner moves forward, the other members may be consulted and even supply cards for use by their "champion".

Evaluation and suggestions for refinement of the game and the gaming process has been a component of course assessment. Of 57 students who started the class, 42 completed evaluations, 40 of which were similar to the following:

> *"It has trained me to think my problems through more like a designer. This isn't homework, it's training + molding, shaping really."*
>
> *"I gained a lot of knowledge about many designers. It helped me look for influences among designers. It helped all of us to be able to discuss designs formally, which is important for all future art classes."*
>
> *"It is really a creative game. The game not only helped to have fun and interact with classmates, the game actually motivates you to learn about the past decades. It is a great resource to get*

your inspiration from. The game also helped to build your communication skills. It is challenging both as visually and conceptually. It is quick which helps to make the argument better and holds interest because you don't know what kind of question they are going to ask. It is a fun & very intellectual game. I had fun!!"

"The designer research has exposed me to so many new designers and projects that I wouldn't have learned about otherwise. The game has also taught me to really critically examine every design that I encounter. I ask a lot more questions now about concept, layout, and from that I did not ask before. I feel like going forward the game will teach me to better defend and talk about my own work and design in the future."

"The process of this game has really made me look into all the aspects of a design & know that every choice of layout color, text, etc. in a design has a specific impact on the meaning & message of that design. I have become more critical of designs now & feel that I have a better grasp on what makes those designs successful."

"The META Card game was both very fun and challenging. It was fun collecting cards with great variety in order to have a good design for the tough questions. It was very much more competitive that I originally planned, and I enjoyed every battle. While playing the game, I learned new ways of viewing designs based on the array of question cards as well."

"This game is a really good way to learn how to analyze a piece of work and to develop an eye for certain aspects of a work. It also makes the player really look at the designer and his/her work. It really made me realize how many ways there are to look at a piece, but also how influential designers can be to the world as well as each other."

When asked to evaluate the cards, students felt the process of choosing and designing their own cards was an important part of the discovery or research phase. As an original artifact that the student has generated, the cards were very precious. The original META game rules require that the winner of a bout get to keep both cards. It was apparent when we played the first hand that students would not participate if they had to surrender their own work. The numerical collection of cards to determine winning or mastery evolved into an in-class tournament system. The first problem with using numbers to equate to proficiency was that when students were interviewed, they were not addressing all of the facets of the design process equally. They tended to focus on the facets of the design process (Figure 4) that interested them before they started the class and were not using the opportunity to explore other perspectives. To encourage the students to explore the information more deeply and to truly reflect on the questions and their answers the "game mat" requirement evolved (Figure 1).

Student reflection will continue to be factored into game evolution. When students come back as "Guest Judges" they comment on how the game has changed. By allowing the required course content to become part of a student designed delivery system, students appear to take responsibility for the material as a matter of professionalism.

Assessment and Leveling up

The next level of the "game" is synthesis. Students are asked to review their bouts and analyze ways that they might have expanded their argument based on a better understanding of the piece within the context of history or in relationship with other work being done at the time. They are encouraged to identify other designers they may have learned about from their classmates. The goal is to reward curiosity.

When ever the game is explained, the question of how to describe who won is always paramount. The interesting point is that when the players begin a bout, the judging ends up being collaborative. There is always a situation where one player will have the perfect example to illustrate a question. They will smugly play the card. The other player will have to stretch and make an argument for a less obvious solution. But they will present a very compelling narrative. Ultimately, the judge chooses, but all players can document their own point of view on the game mats. The instructors will frequently witness players agreeing on the winner together. Since they are playing for the opportunity to hear alternative points of view and to learn to understand the material in a broader context, they are gracious with each other.

MOLECULES TO BYTES

We sought to expand on the analog medium of the Design(er) Metagame by incorporating students into the design of the game and speaking to them in their digital language. (Arling-Giorgi, 2015) Each time the game is played, the format changes depending on the size and format of the class.

Smaller classes get bored after a few bouts because they had already battled each other numerous times. Instead of a final bout, they were asked to take the rubric for assessment: ability to correctly place piece in context of the evolution of the field, ability to identify use of the language

Figure 4: Student sketches and user flow charts for the app version on the Design(er) Metagame.

of vision, ability to identify the use the analysis of materials, symbols, strategies in lab explorations. and design an iPad app for the game (**Figure 4**). Through the process of prototyping the game and testing it within this environment, they learned as much about the material as if they had played the game. (They actually played the game but through the lens of improving their app, not as part of an assignment.) This method was inspired by the Quest to Learn curriculum designed by the Institute of Play in New York.

For larger classes developing The Idea of Design into an online course opened the door to a virtual Design(er) Metagame through Blackboard collaborate. Game screens are pre-programmed with questions along with text fields to record the arguments (**Figure 5**). Games are played in real-time, with the same rules as the analog version. An addition to the virtual game is the ability to include up to four judges for each bout. Doing this took the pressure off of one student judge to make the final decision.

Reflection is reinforced for all participants by returning to the battles where a student was a judge. The judge then evaluates the question and chooses a card to play from their own deck. Part of the final documentation is to explain why they would have played their card if they had been a player.

Figure 5: Screen shots of the Blackboard Collaborate Design(er) Metagame.

The idea of giving the students the answers and asking them to design an experience that will teach this information to peers is very motivational. The students do not view this as classroom assignment, but as a real design problem and approach the endeavor with enthusiasm and curiosity. Now, instead of being bombarded with questions at the beginning of the assignment, the students happily begin based on their personal frame of reference and gradually expand their view through the exposure to their peers.

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13.3 An Ecology of Practices in Design Education

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Abstract
Situated in the bioregion called Cascadia, Sea>le's Cornish College of the Arts Design department is founded in an ecology of pracCces. Ecology is a term borrowed from biology, in which it is defined as the study of the relaConship of living things to each other and to their surroundings. Today's designers need to be adaptable to changing digital ecosystems and by integraCng humaniCes and sciences as well as criCcal and contextual studies with studio pracCce, research is foregrounded in our new curriculum. This new research led program resonates with the environmentally aware culture of the Pacific Northwest, the start up spirit of Sea>le's tech industry and the integrated performing and visual arts of cornish. Our innovaCve new program tackles the wicked problems of our complex digital society through human centered design as well as maintaining the tradiCon of the handmade design object. We will be rolling out a new module based curriculum in the Fall of 2015. This student centered approach to educaCon is widely pracCced in Europe and is being adopted by art insCtuCons here in the U.S. as a way to be>er facilitate student agency while compeCng in a compeCCve educaConal environment. An ecology of pracCces recognizes the need for sustainability in both our environment as well as our creaCve pracCces.

An Ecology of Practices in Design Education
UCDA Design Education Summit
May 2015
Jeff Brice
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Seattle, WA

Introduction
Design schools across the country are feeling the need to offer an educational model that reflects the complex interrelations defining today's media ecosystems. This paper lays out the rationale and implementation for an innovative educational model in design at Cornish College of the Arts. I will show how Cornish has adopted a new educational paradigm towards the education for the artist and designer which I call an ecology of practices. Design education as an ecology of practices recognizes the integrated and holistic environment of design. The new curriculum seeks an integration of learning through research-led practice. This iterative process and the structures of transformation we have adopted are responsive to user feedback allowing for community involvement. Utilizing an agile approach to institutional transformation ensures relevancy in these turbulent times of rapid social and economic changes.

Cornish's rich historical context as an institution dedicated to artistic innovation provides the backdrop for this radical transformation. The school's location in the Pacific Northwest gives it an environmentally sensitive and technologically involved ethos that informs it's design pedagogy. I will present the inspirations that inform this new paradigm of design education. One that I call an ecology of practices. Processes for gathering user feedback in defining a most viable transformation is demonstrated. Finally, the structure of the new curriculum is outlined.

Cornish Then and Now
Cornish College of the Arts is located in the heart of the tech boom in Seattle, WA. The college was founded in 1914 by Nellie Cornish as a small music school and we have just now celebrated our centennial year. Over the years Cornish has been home to innovative thinkers such as Martha Graham, Merce Cunningham and John Cage. : the very first national radio transmission from coast to coast was broadcast from Cornish in the 1930s. We are still building and innovating, both in physical structures, like our new residence hall, as well as in our curriculum structure. We continue to be dedicated to the idea of innovative thinking through the integration of art practices.

In the last ten years, an explosion of technological change has affected many industries and most ways of working. Here in Seattle, we're at the center of this innovative energy, and constant advances in technologies, media and online networking create a stream of design questions that beg solutions. The experience of the user of these tools has become crucial to our service economy, requiring designers to find new ways of solving problems. While still recognizing craft and hand-skills still have a place in design and in the mental and physical development of designers.

Seattle's temperate weather supports a vibrant array of enterprises that spotlight designed and hand-crafted wares – micro-breweries, cafes serving locally roasted coffees, vintners, glass-blowers and musicians all find a lively clientele here. The rugged individualism of the Pacific Northwest can be seen in the proliferation of high tech startup companies. Some of the most famous are now common knowledge for everyone: Boeing, Microsoft, Valve, and Amazon to name a few.

The complexity of the networked markets and communications of the digital economy requires flexible approaches to design solutions. An ecology of practices encompasses both the designers' conceptual and technical toolkits and the larger social ecosystems in which they exist. In other words, our students need to "speak digital," they need to have technical skills, hand-skills and craft, and they also need to have a clear understanding of the social contexts within which designers work. ical framework

Constant re-visioning of the design process has moved into experiences, and then onto more complex community issues (both local and global) that are addressed through human-centered design investigation and research. This approach recognizes that complexity may demand many kinds of solutions, from viral information campaigns, technologically driven apps, to more hand-crafted approaches. The design department's expansion of an object-based practice to include a relations-based practice reflects the convergent, integrated and holistic nature of design's current ecosystems.

Unlike most other design programs, Cornish Design is part of a visual and performing arts college, one of the few in the country. Design students mingle with actors, musicians, dancers, performance production majors, and fine artists, and this integration sparks creative collaboration. Our new, integrated arts program, The Creative Corridor, fosters design-and-arts collaborations. When the plastic and performing arts come together, this dynamic collision results in student agency through experimentation.

Most students entering the design program have backgrounds in drawing and painting. Some have experience in animation, video or web development. Many students gravitate to our courses that develop hand skills and craft, like screen printing and book arts, illustration, comics and animation. Others prefer to expand their skills in UX, UI, web and programming. During their time at Cornish, many expand into publishing, interactivity, gaming and animation. We encourage our students to experiment. Our integrated-arts approach gives students the resources to experiment in hybrid forms of expression, an opportunity that may be lacking in other design-only programs.

Many of our alumni work in larger design firms, and have found their education has taught them to be adaptive and comfortable in the varied digital environments they encounter in their studios. But we also nurture the start-up spirit, and are building a strong entrepreneurial component into upcoming curricula. Cornish design values adaptability and creative vision. They both have central roles in our students' ecology of practice.

Global capitalism creates consistency in design practice through the standardization of tools and media. Designers around the world today use the same software and hardware tools. They design for the same media channels of distribution: the internet, television,

radio, tablets, print, products, and experiences. But design culture also takes on the unique qualities and opportunities of the local place where designers personally interact with their communities and environment. The proximal opportunities and challenges of the local businesses, communities and environments of Seattle create unique design aesthetics and a Pacific Northwest identity.

Two years ago Cornish made the brave decision to reorganize the departments to better facilitate an integrated arts education. An ecology of practices speaks simultaneously to the different programs that share in the ecosystem of the institution, the environmental ethos of the Pacific Northwest, and the many different practices that today fall under the category of design practice. The design discipline has expanded through the digital convergence of different media, as well as through the recognition that design thinking is a valuable approach for businesses to adapt to the ever quickening pace of innovation and changing social ecology in which they are embedded.

INSPIRATIONS

A common definition of ecology can be found in Wikipedia:

Ecology "from Greek: οἶκος, "house"; -λογία, "study of") is the scientific analysis and study of interactions among organisms and their environment, such as the interactions organisms have with each other…"

The Greeks emphasized Nature as home and the importance of relationships to the larger whole. These same relationships are just as foregrounded in today's world. In the new curriculum, all design students are given a "home" studio space in which to work and facilitate interactions through collaboration. Studio practice is done in a flexible space that offers work tables, counters as well as lounge-type collaborative areas.

The notion of a media ecology has been around since media theorist Marshall Mcluhan first proposed it in 1964. But it was Neil Postman who formulized it in 1968. Neil Postman argues that "Technological change is not additive; it is ecological." This schema of our media environment emphasizes its convergent nature requiring new constellations of required skills for designers. It is not enough to just keep adding more courses to accommodate new technologies. As Mcluhan explained, the old media become the content for new media. Embedded technologies and content require new workflows and new conceptual models for designers to navigate by.

Another, wider interpretation of ecology is given by semiotician, anthropologist and cyberneticist Gregory Bateson in his seminal book *Steps to an Ecology of Mind* (1972).

"Ecology, in the widest sense, turns out to be the study of the interaction and survival of ideas and programs (i.e., differences, complexes of differences, etc.) in circuits."

- Gregory Bateson, *Steps to an Ecology of Mind* (1972)
-

The idea of an ecology of practices, borrowed from complexity science, was put forward by Isabelle Stengers in 2003. Her concern for the relationship of practices to each other puts a focus on the boundaries and diplomacy of practices as they seek equilibrium within

an ecosystem. New practices emerge by establishing relationships and new innovative ways of reimagining identity to better fit ever changing environments.

"An ecology of practices does not have any ambition to describe practices 'as they are', it resists the master word of a progress that would justify their destruction. It aims at the construction of new 'practical identities' for practices, that is, new possibilities for them to be present, or in other words to connect. It thus does not approach practices as they are, but as they may become."

- Isabelle Stengers, *An Ecology of Practices* (2003)

During this time of radical innovative change, the need to negotiate between groups within the institution is paramount and the spirit of "yes, and" must prevail. The challenges of widespread organizational change are very stressful for those involved. Diplomacy, empathy and openness to new ideas is extremely important. Limited resources, institutional memory and conflicting pedagogies are always negotiated. When an equilibrium is achieved it is with the knowledge that new iterations will demand new solutions.

Philosopher Felix Guattari proposed three ecologies of mind, society and environment as the important territories of reference as a foundation to his "Ecosophy". He does not see these as hierarchical, rather he insists on transversal relationships. He sees these territories as operating on the same ontological level. These different registers blend into a common field of attention due to the pervasive equivalence of value within capitalist society. The many levels of complexity addressed by design today is a matter of framing the problem. Larger problems are entangled in the non-linear complexity of global relations, while smaller and simpler projects reflect locally based linear problems.

Minimum Viable Transformation

In order to accommodate the non-linear nature of complex media environments, the software industry has moved toward a development methodology of rapid development with frequent iterations in order to meet ever quickening innovation cycles. This is called Agile development, and the minimum viable product (MVP) is developed through minimizing the time spent on iterations until there is a viable product/market fit. Like design thinking, agile workflows are being introduced into businesses and organizations that need innovative strategies to compete. The Agile development approach recognizes that user feedback will alter the outcomes of the next iteration.

Borrowed from Agile development workflows, the minimum viable transformation is a strategy and process-oriented-transformation that seeks to produce innovation through rapid development in order to adapt to changing environment pressures. MVT evolves through continual iterations. It also recognizes the importance of user feedback and the advantages in making limited organizational transformations in order to pursue innovation over time through many iterations.

Process of Change

Communication is key when institutional change is happening. Communication between administration and faculty, faculty and students and administration and students all need to offer transparency. Department-to-department communication is paramount as

resources are limited and ideologies regarding curriculum need to be understood and negotiated.

In order to create transparency, a workshop for faculty was co-developed with consultant Fisher Qua from Backloop using design thinking methodologies. Called 'Liberating Structures', these methods are used to facilitate innovative changes within institutions. This workshop provided input as to how the existing faculty view the department. This workshop kept the faculty informed about the changes in a constructive environment. Though the new curriculum was explained in broad terms, it was enough for the faculty to get a grasp of the structure and how it might effect them.

A similarly structured student workshop was organized the following Fall. Giving students a voice in the process allowed us to gather student experience, concerns, and ideas about the current design program. We used this information when we considered the new program. A main result of this workshop is the development of regularly scheduled meetings with students where we discuss issues as they come up.
These meetings are important for the students to help understand and shape the program.

The new curriculum provides an environment for experimentation and exploration for the students. Student agency is the result of having the technical skills and the invitation to explore opportunities both in the institution and with partners outside the institution. Students today are living and working in mental, social and environmental ecologies that converge into a common experience through social media. The flow of information and messages pop in and out of our experiential fields. Design education realizes the many ways students communicate in large and small ways.

In our transformation of the curriculum, we are moving quickly (in institutional terms) to change the structure of the learning process as well as changing the facilities to support the new curriculum. We started with the art department last year and we are now integrating the design and film + media departments. These partial delivery dates allow us to respond to the way in which the users (students, faculty, staff and administration) interact with the program. The feedback and analysis informs the next iteration of transformation. The data is collected from the users through design thinking workshops and meetings with student reps. An advisory board of industry professionals provides insights as to how external partnerships and the larger community of practice relate to the new curriculum strategies.

Elements of the Curriculum
The new curriculum transforms the learning environment of the students. The students are now given a "home" to inhabit. Their studio is an ecosystem for them to work independently as well as collaborate together. Teaching happens in a variety of spaces and approaches. Students in the junior and senior years are taught as a cohort.
The learning is a holistic approach through the integration of Humanities and Sciences (H&S), Critical and Contextual Studies and Studio Practice within theme-based projects. A semester of three 5-week modules provides synchronization across the department and between other departments.

Because the H&S content is integrated into the projects, research is foregrounded even at the foundation program. This is continued through the 2nd year, a year of directed study. The junior and senior years are self-directed. The semester is divided into three 5-week modules (projects) that are theme-based. The themes are developed by three core faculty members representing the department's three ecosystems of practice; Type and Image, Narrative Systems and User Experience Design.

Students are encouraged to collaborate with other disciplines through the structures of the Practica (specific skill-based electives) and the Creative Corridor, which offers interdisciplinary projects. In addition, all labs – including photography, printmaking, book arts, 3D fabrication, drawing and painting studios, and computer labs – are open to all students. Technicians manage the labs and provide technical demos.

Curriculum Structure

There are currently six departments at Cornish between the visual and performing art practices; Theater, Dance, Music, Performance Production, Art, and Design. We have two programs that are emerging into departments, Interior Architecture and Film + Media. The six different departments are connected through the Creative Corridor. The Creative Corridor are courses that are interdisciplinary in nature. The visual arts are connected through the Practica, which are specific skill-based electives. Students are able to experience a practicum in breadth (individual 5-week modules) or in depth (scaffolding 15-week learning). The 5-week modules allow students to explore other disciplines in partial semester experiences.

All visual arts students take foundation year together. The foundation and sophomore years are directed studies. In the sophomore year, the design students are structured into 3 groups which rotate through 5-week modules of the department's 3 pathways; User Experience Design, Type and Image and Narrative Systems. The modules are theme-based projects. They are integrated with H&S modules of science, social science and humanities.

The junior and senior years are self directed and are co-taught by three core faculty representing User Experience Design, Type and Image and Narrative Systems.

The juniors' modules are theme-based. The senior year is mentored by the same core faculty who help facilitate the senior BFA exhibition project. This project is a year-long, self-authored project culminating in a BFA exhibition. Professional practices and curation are also explored.

Because students are working in a cohort environment, they learn from each other in solving problems for each module. The studio spaces that are home to the students support a collaborative environment where relationships between different approaches to design become evident. se

Assessment is both formative and summative. Students record progress through process books that document their design workflows. These are assessed at the end of the semester. Formative reviews happen during the semester by the core faculty.

Conclusion

Design principles are recognized as valuable methods for tapping into the creative spirit necessary for innovative action. That is why designers are in such high demand by

businesses, organizations and institutions of all sizes and kinds. The new curriculum at based on an ecology of practices which I outline in this paper, reflects the nature of today's creative workplaces. It strives to provide the skills, knowledge and abstract thinking to allow students to develop agency and prosper in this intensely interconnected world, and to allow the institution to grow and flourish well into its next 100 years.

14.1 Systems Thinkers: A Critical Competency for Graphic Design

Peter Lusch
Penn State

Abstract

A system is a set of tangible or intangible elements, held together by interconnections, with an operational purpose that produces its own pattern of behavior. A design process is a problem solving methodology framework implemented by practitioners of design disciplines involving the application of empathy, critical thought, research and making. Looking at the methods a designer undergoes to complete their work is simultaneously looking at a designer operating within a system. Sustainability outcomes, furthermore, are the result of a systems approach interconnecting people, environment, culture and economy. Inherently this has implications for graphic design pedagogy in higher education, where these become contentious topics. One contention is the complexity of systems thinking and sustainability and how best to develop practice based learning that includes fully authentic tasks and multi-disciplinary collaboration. This approach is preferred to notional assignments found within problems based learning under a uni- disciplinary work model. Recent discourse in graphic design has identified systems thinking, sustainability issues, and multi-disciplinary collaboration as critical competencies for designers of today and future practitioners. In what way are these complex design topics best taught within the current university studio setting? One of the answers is to work under a multi-disciplinary partnership model. This presentation shares the experience of leading twenty undergraduate graphic design students through a practical systems thinking approach for implementing a sustainable humanitarian entrepreneur venture building greenhouses in Xai-Xai, Mozambique.

The Systems Thinkers:
New Critical Competencies in Graphic Design

Peter Lusch
Assistant Professor of Graphic Design
Penn State

Abstract

We design within a discipline whose boundaries continue to expand, and new critical competencies are being identified for current and future practitioners. These include but are not limited to systems thinking, sustainable frameworks, and multi-disciplinary work models. "Addressing the need for sustainable human existence, design practice has the potential to be among the change agents to counteract humanity's 'de-futuring' of our planet," contests author Tony Fry. For educators, the complexity of these topics challenges us to develop adequate coursework for our students. We instructors are questioning the best means to accommodate this material for studio-based undergraduate programs. We are, after all, in the 'futuring' business; our curriculum and instruction decisions serve our student's careers and contribute to defining the future of our field. This presentation shares my experience leading graphic design students at Penn State through a practical systems thinking project. It utilizes a multi-disciplinary partnership model between graphic design and engineering design students in developing a sustainable entrepreneur venture in Xai-Xai, Mozambique.

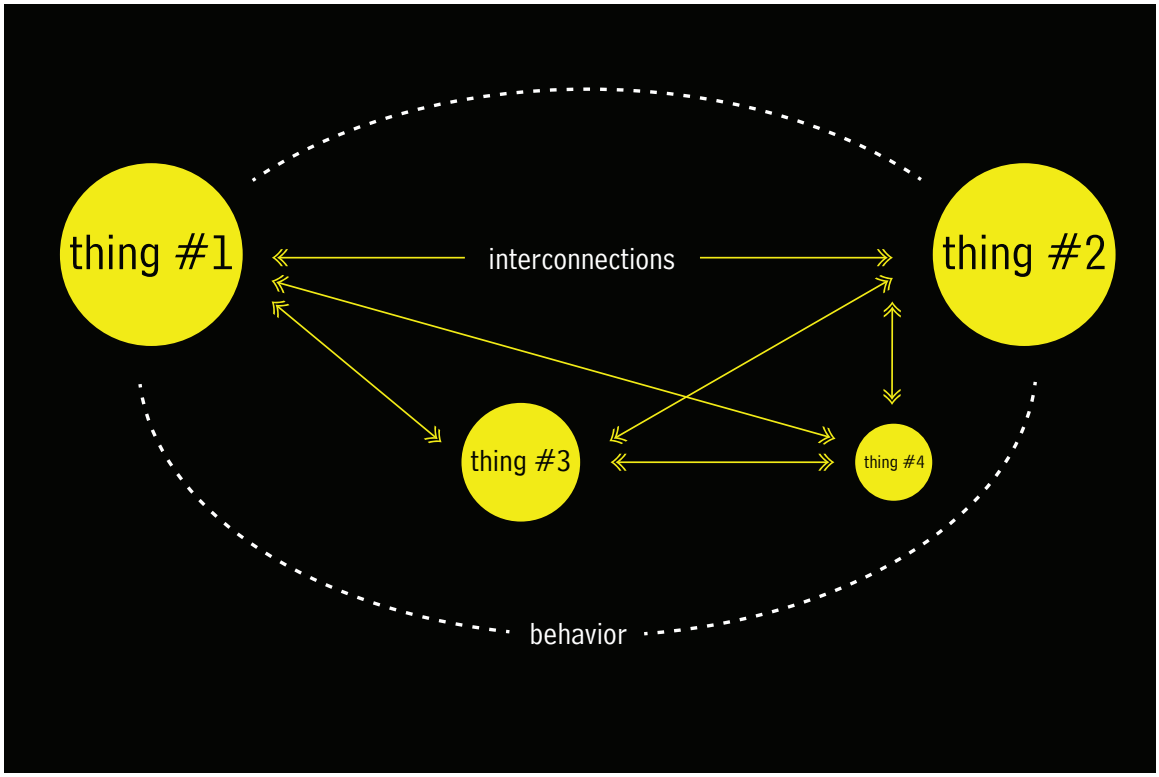

Figure 1

Systems Thinking: Origins + Attributes

"Graphic designers tend to define systems as something they make: a graphic identity system; a packaging system for a family of related products; or a typographic system for the layout of magazines," writes design educator Meredith Davis in her book, *Graphic Design Theory*. "In these cases, the designer determines rules for how visual/spatial components relate to each other in a variety of applications. Such systems are efficient because they reduce the number of decisions that have to be made for each individual application; the rules tell designers how to deal with recurring conditions" (Davis, 2011, p. 216). A system is a set of things interconnected such that they produce their own pattern of behavior (fig. 1). It consists of tangible or intangible elements, held together by interconnections with an operational purpose (Meadows, 2008 p. 2). Systems thinking is the process by which we understand these interconnections that may or may not demonstrate favorable behaviors, and whose behaviors are likely to change over time. The origin of systems theory has multiple contributors particularly before the Second World War. Research by Austrian biologist Ludwig von Bertalanffy during the 1940s receives credit for founding and advancing general systems theory–the idea of self-regulating systems. His 1969 book, *General System Theory: Foundations, Development,*

Applications, observes a shift in scientific attitude and conceptions of the day and champions a trans-disciplinary approach to synthesize modern computational technology, cybernetics (the study of regulatory systems), and biology. Under a trans-disciplinary work model each team member becomes sufficiently familiar with the concepts and approaches of his and her colleagues as to blur the disciplinary bounds and enable the team to focus on the problem as part of broader phenomena. Early in the text Bertalanffy demonstrates an acute awareness of complexities brought on by technological development and accepts the reality of managing these complexities by suggesting a re-orientation of scientific thinking. "Its necessity resulted from the fact that the mechanistic scheme of isolable [capable of being isolated] causal trains and meristic [segmented] treatment had proved insufficient to deal with theoretical problems, especially in the biosocial sciences, and with the practical problems posed by modern technology" (Bertalanffy, 1969, p. 11).

At that time, Gestalt psychology was making inroads in changing – what he called – the 'mechanistic scheme' of the sciences towards the systemic model. Gestalt, a German term for shape or form, and Gestalt psychology is the early Twentieth Century theory of the human mind relating to how the brain organizes stimuli that the eye perceives. This has implications for how to introduce the concept of systems to undergraduate students. Because systems are comprised of interconnections between elements; effectively they are an organized whole made out of many parts. *Holistic* is an equivalent term used by design researcher Nigel Cross. In his text, *Design Thinking*, he writes about designers taking a broad 'systems approach' to the problem – in many senses going beyond the basic problem - rather than accepting narrow problem criteria.

Sustainability: Frameworks + Practices

Our definition of sustainability adhered to author and business consultant Adam Werbach's three word definition: "thriving in perpetuity." Werbach's framework became a key resource for the *Systems Thinking Project* because it underpins The Living Principles for Design, which was discussed during our class project brief session. The Living Principles, originally conceived by AIGA, is an organization that guides purposeful action towards applications of design thinking to create positive social change. It was distributed to the Penn State graphic design students to introduce core concepts and key terms of both sustainability and systems thinking. Werbach's

framework of true sustainability has four coequal components of:

1. *Social* – Actions and conditions that affect all members of society.
2. *Economy* – Actions that affect how people and businesses meet their economic needs for years to come.
3. *Environmental* – Actions and conditions that affect the earth's ecology.
4. *Cultural* – Actions through which communities manifest their identity and cultivate traditions from generation to generation (Werbach, 9-10).

Khanjan Mehta, Assistant Professor of Engineering Design, and Director of the Humanitarian Engineering and Social Entrepreneurship Program at Penn State expanded upon Werbach's quadrant of sustainability during his lecture to the graphic design students. It includes these ten inquiries: 1) Will it scale, 2) Will it reach the people, 3) Is it socially acceptable, 4) Will it hurt the environment, 5) Who will manufacture it, 6) Is it pretty, 7) Does it meet every need, 8) Is it desirable, 9) Is there a business model, and 10) Is it affordable (Mehta, 2014, lecture)?

The Systems Thinking Project – Overview

This was a rigorous *heuristic* learning experience for my students, completed in fall 2014. It introduced three critical design competencies: systems thinking, sustainable frameworks, and multi-disciplinary work models. The project was developed as a concerted effort to teach them what current design education discourse has informed about evolving expectations and competencies for the graphic design profession. Specifically, I instructed how to visually map a system, how to build front-end mobile applications, and introduced the user interface and user experience (UI-UX) methodology. The project's technology component exposed the students to a broader application for their design, and generally, it would be the first experience these students had with problem solving beyond printed artifacts. Additionally, the *Systems Thinking Project* was an example of engaged scholarship at Penn State, where graphic design and engineering design students worked as full contributors to a real-world humanitarian venture. They were tasked with developing a construction manual on a mobile touchscreen device to train carpenters in assembly and repair of agricultural greenhouses in Xai-Xai, Mozambique. The pedagogical approach was decisively project

based learning to involve a fully authentic task and setting, requiring multi-disciplinary collaboration, and execution of various steps to completion.

The Gro Greenhouses venture was developed and piloted at Penn State in partnership with World Hope International, "a relief and development organization working with vulnerable and exploited communities to alleviate poverty, suffering and injustice," (www.worldhope.org). GRO represents the sustainable convergence of technologic appropriateness, cultural acceptance, being environmentally benign and economically stable for areas in coastal Africa in the countries of Kenya, Rwanda, Tanzania, Cameroon and Mozambique (figure 2). A single greenhouse is low in cost, can be modified to the respective location, and is easily assembled. They require construction by two people over two days at a cost of approximately two hundred dollars, compared to those sold by multi-national companies at a cost of twelve hundred dollars. Culturally, GRO greenhouses are accepted into the agricultural traditions of the community where they are to be used. They enable crop cultivation in regions with challenging terrain using limited irrigation technology at 'one drop per crop' efficiency. The venture is socially desirable in its ability to meet the needs of individual farmers in betterment of their nutritional and financial health in a country where half of the citizen's income is spent on food costs (Kagbo, 2014).

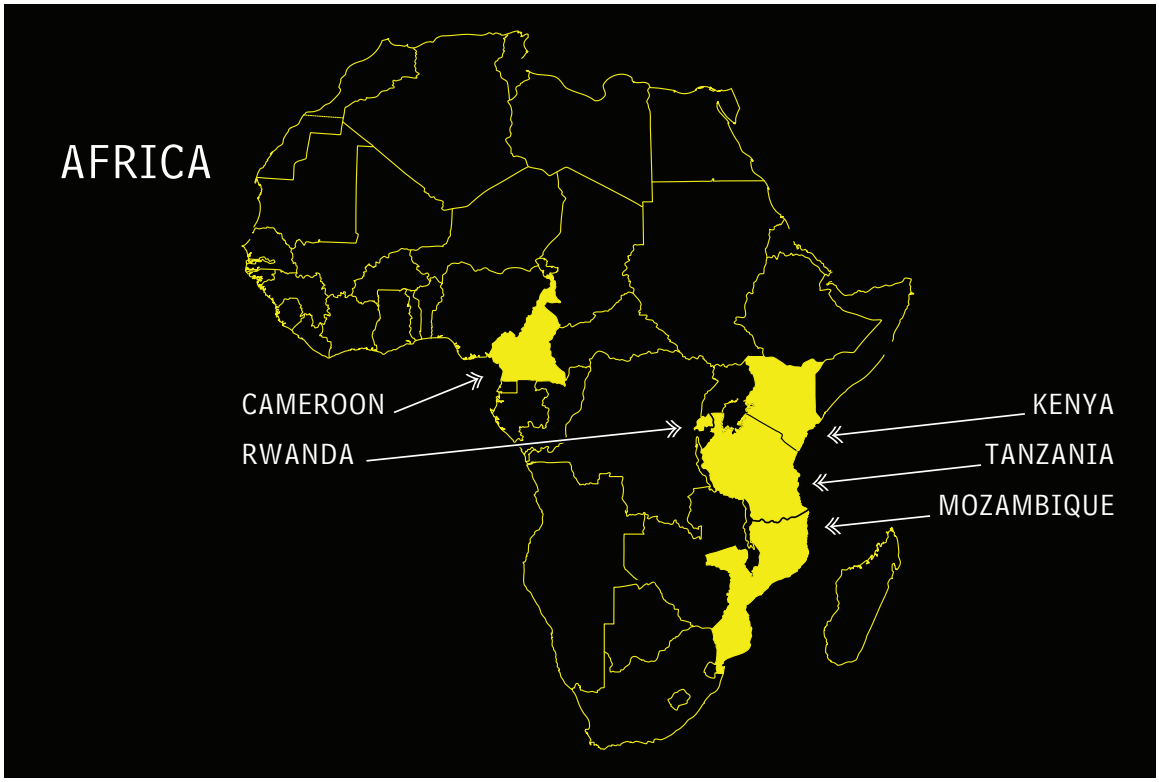

Figure 2

Systems Map

Prior to mobile application development, the graphic design student's first task was to create a visual systems map of the GRO venture as a means to best understand interconnections of people, actions, information, and 'touch points'. The term "touch point" is a deliberate language change to replace 'artifact' in our classroom, which reinforced the student's comprehension of these interconnections between two or more elements in the venture map (rather than singular consumers with a product). A course enrollment of twenty students provided me with an opportunity to subdivide the graphic designers into smaller collaborative groups and better manage the system mapping process. Four groups were assembled; each assigned one phase from the GRO venture. They were supplied large sheets of paper, markers, and adhesive notepads to encourage information mobility while planning their map. After a weekend of development, one leader from each group gathered to form the auxiliary team that combines the system map quadrants and digitized a whole map with design software. Phase one in the GRO venture is 'awareness and explanation,' where a smallholder farmer learns of the affordable greenhouses through trusted sources. This flows to phase two, 'decision and commission,' where the farmer actively engages with agents from non-government organizations (NGOs) to acquire funding, make the purchase, and commission a carpenter to begin construction of the greenhouse. Phase three, 'post-commission,' is where additional NGO agents interface with the farmer throughout their first crop cycle, manage the flow of grown produce to public market, provide nutrition education to the farmer, and prepare feedback outcomes for GRO. At the fourth and final 'post-grow and feedback' phase, the NGOs outcome report, sends feedback about consequences of decision making directly and quickly and compellingly to decision makers. This betters the GRO operation, enhances troubleshooting consultations, and advances marketing efforts of the venture (figure 3).

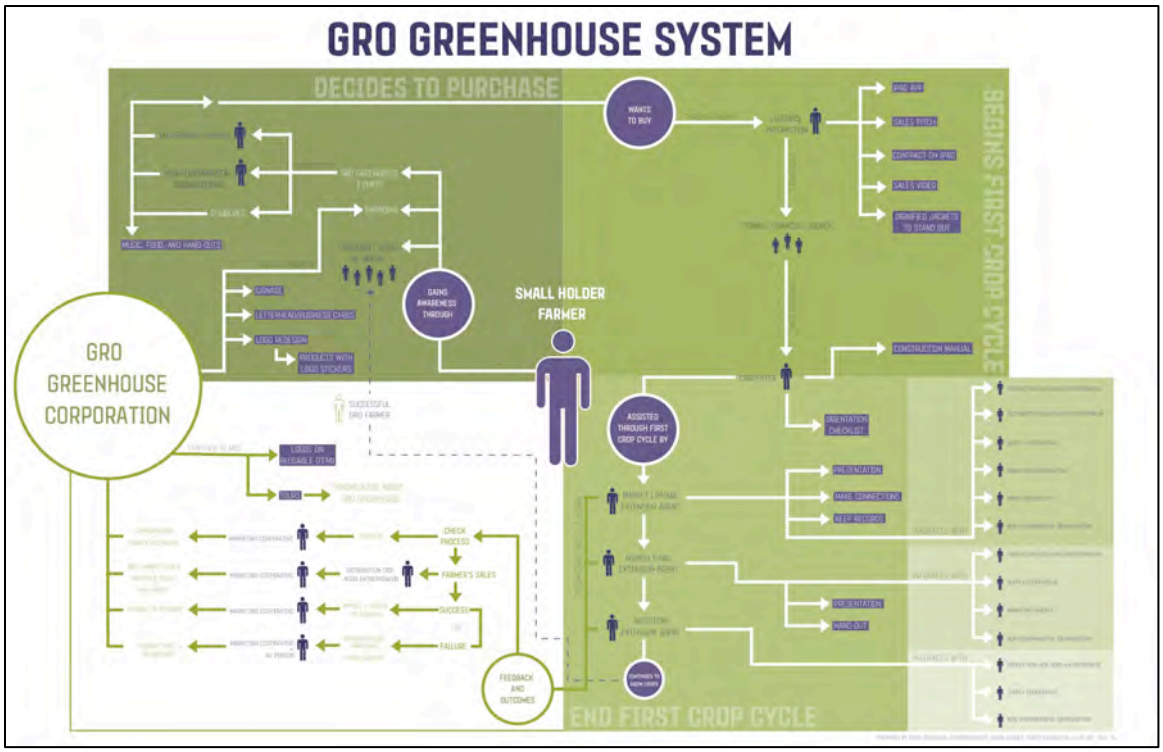

Figure 3

UI-UX Navigation

The second task for the design students was developing the construction manual for a mobile touchscreen device that trains carpenters in the assembly and repair of agricultural greenhouses. GRO is currently using a fourty-three-page manual composed in Microsoft Word that is predominantly text-based, written in English, with technical diagrams, and amateur photographs. The student's first identified problems in complex technical language, inaccuracies, typos and unclear diagrams. Considering GRO's multi-national presence, language translation and literacy factors would be addressed through a concise series of diagrams with minimal text (figure 4). The students also identified two unique users of the interactive manual: first is the carpenter who consumes the content. Second is the NGO agent, who is responsible for the device, and navigates the manual - a task simplified through a touchscreen interface with linear and non-linear navigation. This allows the agents simultaneous access to indices of tools and materials alongside numbered steps of the construction.

Over the course of three weeks the designers developed wireframes, a simple arrangement of outlined shapes supported by annotations to indicate content and functionality of the interface (figure 5). The UI-UX process anticipates behavior of the

users, and wireframes offer a low-risk prototype that may be used to conduct user testing - and based upon test outcomes - the interface design is modified to suit a user's response. Wireframes were later presented to Professor Mehta and PSU-HESE liaisons, complete with recommendations for development of the interactive manual.

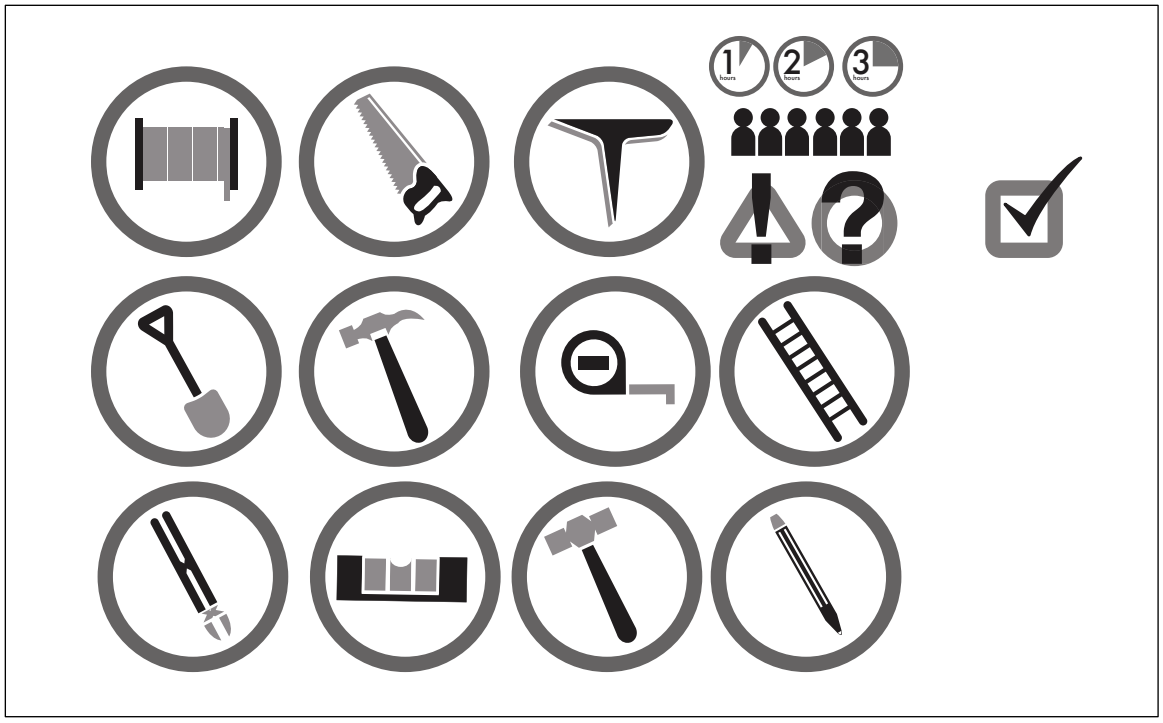

Figure 4

Reflections on Sustainability

In the *Systems Thinking Project* graphic design students are faced with cultural barriers. Citizens in Mozambique have limited access to electricity in their homes and yet are avid cellular phone users for calls (texting is not culturally adopted). Limited electricity requires travel to a nearby vendor where they pay to have their devices recharged. This means the student's were designing an application that would not be publicly available on iTunes or the Google Play web sites. And subsidized mobile tablets (iPad) are suitable for use by NGO agents who are training carpenters; otherwise they may suffer the fate of being resold for a profit (Mehta, 2013, p. 100-101). In this way, students had to think on a grassroots scale – efforts were to be targeted towards a smaller group of users in a culture built on trust, with intent the message will grow to reach a much larger group of users.

Caroline Fenlin, a junior in the Penn State Graphic Design Program, reflects on this stage of the project: "There was so much involved in this project that I knew nothing about, such as the construction process of the greenhouses, and the cultural and social differences of Mozambique where GRO greenhouses were being constructed. When prompted to offer ideas for artifacts that would suit GRO's business model, as a class we found our solutions were impractical. Pamphlets, paper manuals, giveaways, and branded merchandise are useful for businesses in the United States, but Khanjan explained to us that they were utterly useless in developing countries, especially considering differences in literacy rates."

Reflection on the System Mapping Component

Initially, the systems map assignment was met with skepticism from my students. For one, they did not understand the professional viability or portfolio potential of system maps. This application of the graphic designer's skill as a communication specialist provided a valuable macroscopic view of the GRO venture, which assisted in advancing the work of Professor Mehta's team. My students were equally skeptical about group work models. They were reminded of their involvement in the project as co-contributors, meaning they were not reserved to the position of neutral mediators, rather as strategic thinkers they too claim a stake in outcomes from the work. Developing solutions to complex problems, they came to realize, requires a multi-disciplinary approach, which also shifts the notion of ownership in a project.

Reflection on the UI-UX Component

Unlike the system map component of the *Systems Thinking Project,* the interactive construction manual was widely accepted by my students. This can be attributed twofold. First, the students had a preconceived identification of the UI-UX process as a critical competency for their future careers. Second, through mapping of the GRO venture they became exposed to systemic thinking, which contributed to their heightened analysis and strategic abilities applied to this complex design problem. Emma Schneider, a junior in the Penn State Graphic Design Program, reflects on her project experience: "Through this experience I was able to determine areas of similarity between systems and UI+UX design, including complexity and scope. They are similar in how they involve the design of a multi-layered approach. UI + UX design requires the designer to layout numerous

levels of information in a simple and easily navigable manner, while taking a complex set of information and presenting it in a basic and clear way."

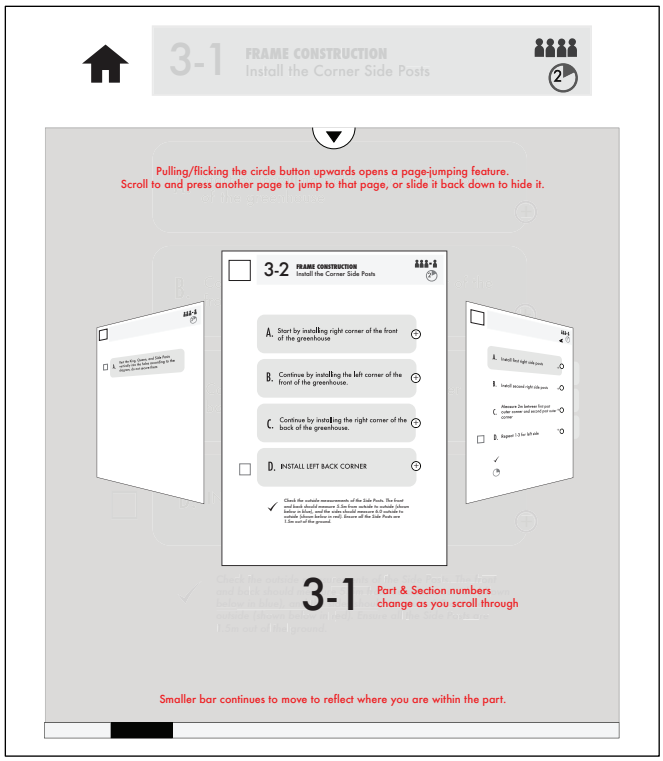

Figure 5

Futuring

Students in the Graphic Design Program with interest to advance their knowledge taken from the *Systems Thinking Project* are encouraged to enroll in Professor Mehta's engineering design course. My mission is to expose a graphic design student to the array of applications for design methodology. Upon completion of that course, the student would be eligible to study abroad with PSU-HESE and implement their ventures. Enrolled students receive elective credit for the course, and students in the Graphic Design Program can receive internship credit for the study abroad component, if they so choose. They would be the first students from Graphic Design to do so. Finally, implementation of their solutions outside the United States would be a life-changing opportunity that expands their global perspective as future citizens and practitioners.

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14.2 Advancing Design Curriculum: *The Nationwide Advent of Digital Learning Centers and the Inevitability of Online Course Content for Onsite Classes*

David W.McGill
Azusa Pacific University

Abstract
With the widespread proliferation of e-Learning, it is not surprising that established four-year colleges and universities have also discovered the profitable and are actively competing for the same demographics as online schools. Hybrid and Blended Learning course development now are offering the benefits of online course to traditional classroom learning, providing 24/7 curriculum opportunities of course materials.

My interest in exploring e-Learning for classroom curriculum provoked an interest in researching the *worldwide emergence* of Digital Design Teaching and Learning Centers. This new academic support center is rapidly becoming integral to the academic landscape for both faculty and students, thus providing visual design as an essential component for advancing communication skills.

Sited in an article entitled, Digital Natives, Digital Immigrants, 2001, Mark Prensky ascertains the cause and effect of computer-based media on children's learning behaviors. He poses that today's students fundamentally have had their propensity for learning altered toward visual interactivity via the digital interface. Acceptance of this reality has prompted universities and colleges to move forward and develop as well as fund Digital Learning Centers along side Writing Centers and Math Learning Centers on campus.

Drawing from research and experience, the intention of this paper will be to examine evidence and promote awareness of these new academic centers. I also want to provide a forum for discussion of the role Graphic Design programs; faculty and students should be taking in support for informed visual communication at these emerging Digital Learning Centers. Perspectives gained through shared experiences may provide valuable insights for the purpose of facilitating appropriate approaches to the expanding need for design education in all academic majors.

UCDA Design Education Summit | May 2015
David W. McGill | Professor of Digital Media
Depart. of Art and Design | Azusa Pacific University

Advancing Design Curriculum:

The Nationwide Advent of Digital Teaching & Learning Centers and the Inevitability of Online Curriculum Integrated into Onsite Courses

Digital technologies, in conjunction with the various modes of electronic publishing, have generated a significant "paradigm shift" in both the education of design, as well as the students we teach. Cheryl Heller, National Director of the AIGA Social Innovation, Leadership & Entrepreneurship for Designers Program, wrote in *Where Design is Going, and How to Be There,* published in the November issue of HOW magazine, 2012;

> "Design, like almost every industry, has been changed forever by technology, global access and social innovation. It's time to interpret the evidence around us–there are lessons to be learned, and new types of talent required to thrive."

The evidence creates clear picture revealing that the 'Tools of the Trade' for media designers, which embody 21st century communication skills, are vital tools for everyone in higher education. But, in the absence of a proven understanding in the foundations of graphic design, of type and image, the demand for digital competency, combined with the ease of access to media design computer applications alone, will not provide what is needed to promote effective online curriculum development or interactive digital communications.

University and College campuses have commonly provided students access to learning centers specializing in Writing, Math, Language, Research, and Athletics for the enhancement of educational skills and academic success. Emerging at top higher education institutions, Digital Teaching & Learning Centers (DTLC), along side other campus learning resources, provide important resources for promoting digital competencies. Considered essential for faculty, students, and staff navigating responsibilities on today's modern world, these centers support developing the proficiency required in the use computer-based tools for the digital composition, image enhancement, interactive media, presentation, and publication skills.

DTLCs call for a collaborative team of experts in the areas of curriculum development, graphic design, interactive media software, art direction, and learning management systems working to assist faculty in converting teaching materials into digitally accessible formats for online distribution. In line with University Marketing or Graphic and Duplication Centers, the production staff for the DTLC can provide multiple opportunities for student professional development. The well-conceived center should provide training and application of technology, along with the continuing updates in both software and systems. Effective digitally distributed content must grow out of the course curriculum already proven by faculty through time and experience in the classroom. However, the skills and strategies required to translate proven classroom curriculum for online delivery can present a steep learning curve those unfamiliar with 21st century digital tools.

Examples of Digital Teaching & Learning Centers I have reviewed include:

- Abiliene Christian University, *Walters H. Adams Center for Teaching and Learning*
- Georgetown University, *Center for News Designs and Learning (CNDLS)*
- Hillsborough Community College, *Center for Innovative Teaching and Technology (ITT)*
- Purdue University, *Center for Instructional Excellence (CIE)*
- University of California, Davis, *Center for Excellence in Teaching & Learning (CETL)*

Websites for the above institutions provide excellent information, outlining the important capabilities for a teaching & learning facilities. Worth reviewing is UC Davis' pro-active approach to provide faculty

incentives for undertaking the enormous task of hybrid or blended learning course development. It is estimated to develop a hybrid course successfully requires approximately 1000 hours to produce and implement. UC Davis is committed to the realization that faculty cooperation, participation and support as paramount. Their 2014 *Provost Hybrid Course Award* offered a grant of $12,500 for design or redesign of courses to be offered in a hybrid format, consulting support from CETL and ATS (*Academic Teaching Services*), and a spot in the workshop series '*Designing Courses for Hybrid Delivery*' (http://cetl.ucdavis.edu/grants/index.html).

Blended learning or hybrid courses, are taught 50% online and 50% face-to-face. Online distribution usually focuses on lecture materials, terminology or factual content; face-to-face, classroom meetings are then directed at assessing and applying the working understanding of overall course content to the discipline. Administrators recognize that implementation of Hybrid courses across campus can potentially double the physical classroom space availability. This incentive could require faculty in all disciplines to be expected to produce their own interactive digital curriculum components with the efficient and immediately accessible course content through online delivery outside of the classroom. Individual accountability can place an unfair academic workload burden on digitally uninitiated faculty. Therefore, professors, not eager to master digital curriculum development tools, should be allowed to assist in direction of translating their conventional teaching materials into the accessible interactive formats for online distribution, without the requirement to master the tools, overseeing and approving outcomes that being produced by qualified faculty and staff.

Considering the time and faculty commitment required for the development of Hybrid or online curriculum, not to minimize the amount of funding required in providing the available space and personnel for a Digital Teaching & Learning Center, an important question must be addressed. Is there evidence supporting online distribution of course content as improving student performance?

Steve Wheeler, a British academic, author, speaker and learning technologist, on his blogspot.com entry addressed, *Theories for the digital age: The digital natives discourse*, posting:

> "Is learning in the 21st Century significantly different to learning in previous years? One of the more controversial theories of the digital age is the claim that technology is changing (or rewiring) student's brains."

Wheeler goes an to infer:

> "It could be argued that these theories stem back to the seminal claim of Marshall McLuhan that: *'we shape our tools and thereafter, our tools shape us.'"* (http://steve-wheeler.blogspot.com/2012/10/theories-for-digital-age-digital.html)

Referring back to Marshal McLuhan's 1964 book, The Medium is the Message, McLuhan postulates:

- Modern media extends *human senses*.
- The medium in which the message is conveyed expands our perception of the world.
- Our worldview is influenced directly by the pervasive medium in which information is presented to us.
- Our ability to learn becomes a bi-product of the medium.

The term "Digital Natives" initially appeared in Marc Prensky's 2001 essay, *Digital Natives Digital Immigrants*. Prensky's research implied:

- Our students have changed radically.
- Today's students are no longer the people our educational system was designed to teach.
- Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language.

Supporting this assertion of student learning being altered or influenced by early exposure to digital media, a 2012 study by Mike Schramm, a writer and editor for the *Joystiq Network* and co-host of the

Incredible Podcast of Amazing Awesomeness, in his post on engadget.com presented an article, *iPads improve Kindergarten literacy scores,* stating:

> "A research study, conducted in Auburn, Maine showed that Kindergartner students using iPads scored much higher on literacy tests than students that didn't use the device and training in teaching skills."
> *http://www.engadget.com/2012/02/20/study-ipads-improve-kindergarten-literacy-scores*

Director of the Center for Cognitive Technology at USC's Rossier School of Education, Richard E. Clark published in the Journal of Open, Distance and elearning, an excerpt form book entitled, *Learning from Media: Arguments, Analysis, and Evidence*. His approach the alterations in student learning summarized

Technology is not the problem.

- Education technologies can serve only as *delivery vehicles*.
- Learning time, materials, and collaborations, these are the Big 3 proven effective for learning success.

Clark continues:

> Due to the demand for *active*, rather than passive interaction of a classroom settings, student's participation in well crafted online learning; 1) spent more time, 2) have access to more materials, and 3) collaborate differently than in traditionally taught comparison students. In conclusion, *students in online learning conditions perform better."*

Whether students have had their learning styles modified by early exposure to digital interfaces, or given a choice for accessing information and entertainment, or that they simply prefer the dynamic nature of digital screen, it is evident that include digital access to various aspects of course curriculum is a good bet. Providing for the student preferences, in the screen-distributed communication of information, will allow access to an additional route for learning, available due to the technological advances prevalent in the 21st century.

The Silent Transformation: Evolution and Impact of Digital Communications Skills in Post-Secondary Education; a white paper posted online by Adobe Education Solutions discusses the evolution of literacy in education. Formerly, Literacy, one goal or outcome for education inferred competency in Reading/writing – linear language skills and thinking; with Computer Literacy – word processing, spreadsheets, slide presentations. *New Literacy* proficiency requires students to be Visually literate, Information literate, Media literate, Digitally literate, as well as Computer literate. (www.adobe.com/education)

Similar studies by the International Society of Technology in Education (ISTE) define outcome standards for Students to include:

1. Creativity & Innovation
2. Communications & Collaboration
3. Research & Information Fluency
4. Critical Thinking, Problem Solving, & Decision Making
5. Digital Citizenship (ethics)
6. Technology Operations & Concepts

The first four standards on the list easily resonate with most teaching standard. Added to the list in this digital age are the last two; Digital Citizenship, Technology Operations & Concepts. These need to be an designated outcome for higher education.

Specifically, Technology Operations & Concepts. ISTE Standard for Students requires that students

- Demonstrate a sound understanding of technology concepts, systems, and operations.
- Understand and use technology applications, effectively and productively.
- Be able to transfer current knowledge to learning of new technologies.

The ISTE standards for Teachers include:

1. Facilitate and inspire student learning and creativity
2. Design and develop digital age learning experiences and assessments
3. Model digital age work and learning
4. Promote and model digital citizenship and responsibility
5. Engage in professional growth and leadership

Faculty commitment to these international standards will require:

- 1000 Hours to redesign one course for hybrid learning
    - Includes:
        - Technological Training
        - Teaching Goals/Digital Pedagogy Research
- Evaluation Outcomes:
    - Assessment of Success or Failure?

Dr. Fahd Nasr, Dean-Professor of Faculty of Tourism and Hospitality Management, Lebanese University, Beirut, Jnah, stated in his Linked-In post on Aug 19, 2014, entitled *Digital literacies for global and wall-less classrooms: how to meet the challenges?* "We prefer to use the term "Paradigm shift" when we describe the change in the education systems around the world!"

He continues,

> "Usually people resist what they ignore and resist more if they are requested to self-develop and change most if not all the current basic elements! Having a vision or accepting and embracing one may prove very difficult. For this reason, deep reform, without a shared vision of a new education model, has been very slow! Time has come to attract students/educators away from traditional settings and bring new perspectives to the discussion! (https://www.linkedin.com/profile/view?id=115830477&authType=NAME_SEARCH&authToken=H4bt&locale=en_US&trk=tyah&trkInfo=clickedVertical%3Amynetwork%2Cidx%3A1-1-1%2CtarId%3A1433116216623%2Ctas%3Adr.%20Nasr)

Campus Technology's Faculty Development Feature article, *3 Ways to Get Faculty to Speed Up with Technology,* by Dian Schaffhauser published June 20, 2014 offers some excellent ideas for bringing faculty up to date with teaching technological advances. Her list includes;

1. Create a Self-Service Resource Library.
2. Provide Training in Course Redesign.
3. Build a Community of Practice

(http://campustechnology.com/articles/2014/06/04/3-ways-to-get-faculty-up-to-speed-with-technology.aspx)

Having worked in a Job Shop producing graphic products for presentations brochures and catalogs for clients who have the training or education to do it for themselves, I would add to Schaffhauser's list; *Provides Facility with Client Job Input Option, those with no desire to master new technologies*.

Foundational theories still stand strong in the teaching of conceptual development for graphic compositions. But the digital technologies are now requiring new tactics for advancing higher education in visual communication. The digital model in layout design for publications has shifted, from the linear presentation of the printed page, to nonlinear delivery devices. The paradigm shift to digital publication is provoking opportunities for revising the way we think about design education. The immediate access, of digital delivery systems, whether eBook, or web, providing students with both informational and instructional content is changing their learning styles and content preferences. Effective digitally distributed content must grow out of the course curriculum already proven by faculty through time and experience in the classroom. The task for translating former curriculum to meet the needs of the Digital Age is before us.

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14.3 Creating Online and Hybrid Graphic Design Courses

Abby Guido
Temple University

Abstract

Within this presentation I will share how we have crafted new, online courses with the graphic design department, as well as how we have converted existing courses into hybrid courses. The hybrid courses combine meeting in person with meeting online. The exclusively online course I will present, The Art of Infographics, was created to attract students from programs outside of graphic design. It utilizes various technologies such as Webex, Blackboard, Ensemble Video and Camtasia Relay to deliver content to students. Within our online meetings we use the flip classroom model to engage students, this is done through in class group activities using breakout sessions. The presentation will include the steps of developing the curriculum, the recording of video lectures, examples of in class exercises and examples of student work from these courses.

15.1 Design Education Arcehtype

Santanu Majumdar
Georgia Southern University

Abstract
In todays design education the perceptions of design seem to be functionally efficient and experientially adequate in terms of organizing the process towards a pre-determined outcome. The design education should be transformative in terms of both perceptions of the problem and definition in search of reasonable and sustainable solutions rather than structurally efficient to a given problem. This kind of design education demands for a better emphasis on planning, preparing and disseminating design education as a holistic entity through applied knowledge and skills with the intellectual aspects of science, technology, engineering and math along with social and anthropological entities.

This particular methodology requires openness between various disciplines with an innovative academic approach that is capable of self-accessing. As part of multidisciplinary approach ergonomics has been introduced in the current course curricula in both Mechanical Engineering and Graphic Design. The ergonomics module has been introduced in Vibration and Preventive Maintenance in Mechanical Engineering as well as Signage System, Exhibition Design and Packaging in Graphic Design. The primary focus of the curricula is to integrate the functionality of ergonomics and design in consideration of human safety factors.

This project is a Collaborative Model of teaching and learning between Mechanical Engineering and Graphic Design that helps students not only to understand the importance of ergonomics as a subject, but also share the finer details of design and engineering from various perspectives. This project helps students to collaborate and work in a group and learn from each other.

The real world problems are based not only on business insights, but also from the practical challenges that we face in a day-to-day basis. In the present situation, it is important to imply design thinking across departments by using existing departmental structures, but also reorganizing them in new collaborative structures for design education.

15.2 Opening Windows in the Silos: Design Education Across the Curriculum

Christine Ingersoll
Marshall University

Abstract
It is a well established practice in academia to infuse writing across the curriculum as a method of learning. Using a writing assignment in a design class that requires a solid thesis statement can help students understand how to developed concept from which to make sound design decisions, or create the "big idea" in an advertising campaign. Can the understanding and application of design and design thinking be as valuable to all college students as writing? To what degree' will all college students need visual literacy, or the skills to funnel vast amounts of information into digestible components and simplified visual forms?

Design thinking is a process that improves problem solving skills and identifies that human needs need to align with economics and technology. We should not reserve this thinking as a contemporary condition, for evidence arises throughout the history of design that is ripe for teaching all students problem solving through design. There is something in solving the problem in your head and then testing it with your hands that infuses new breath, and a bit of fear, into students who traditionally express themselves primarily through the written word. In turn, students who are most comfortable with expressing themselves with their hands, often fear, or dislike, the assembling of words.

This paper will offer cross-disciplinary ideas by exploring the results from a design course making use of writing across the curriculum, an interdisciplinary first year seminar where education majors apply design thinking to solve problems, and an interdisciplinary Honors College seminar that finds medical students discovering the arts through hands- on practice as they refine their undergraduate research skills.

15.3 Evaluating and Redesigning a Relevant Design Curriculum: Analysis Through Visual Mapping

Aaron Huffman
Cedarville University

Abstract

In seeking to address the appropriateness and relevance of an established graphic design degree, the research process provided methodologies to evaluate, envision, and implement changes to more effectively train the contemporary designer. The first task involved identifying and defining the core skillsets needed by successful designers in the industry today. *Research tasks: Immersion & Data Collection:* Create a group of educators, industry professionals, and program alumni to discuss needed skillsets, culminating in an annual advisory panel; review national design organization expectations (AIGA and NASAD); and find consensus as faculty on our values and chosen emphases for our particular students, resources, and mission. Once the core skillsets were identified and agreed upon, the second task involved mapping those core skills to each existing course. *Design Research task: Analysis through Visual Mapping:* This provided valuable insights, allowing the faculty to visually see where each core skillset was introduced, reinforced, applied, or failed to appear. The third task involved imagining the ideal curriculum. *Research task: Imagining solutions:* Missing core skillsets were assigned to existing courses through discussion of potential projects/assignments for implementation; existing courses were re-focused to better address valued skills; and new courses were imagined that would shore up gaps in skillset development. This process culminated in an overhaul of the existing coursework, a re-naming of the major, and the development of specialized tracks within the major—all with a powerful underlying rationale that: generated faculty excitement, buy-in, and agreement; communicated program needs and curricular adjustments compellingly to administrators and decision-makers; and, ultimately, better prepares our students to pursue their passions with excellence, to engage their discipline relevantly, and to continue to shape the future of our rapidly changing field.

EVALUATING AND REDESIGNING A RELEVANT DESIGN CURRICULUM: ANALYSIS THROUGH VISUAL MAPPING

Abstract
by
Aaron Huffman, MFA
Program Director & Tenure Track Faculty
Cedarville University, 2015

In seeking to address the appropriateness and relevance of an established graphic design degree, the research process provided methodologies to evaluate, envision, and implement changes to more effectively train the contemporary designer. The first task involved identifying and defining the core skillsets needed by successful designers in the industry today. *Research tasks: Immersion & Data Collection:* Create a group of educators, industry professionals, and program alumni to discuss needed skillsets, culminating in an annual advisory panel; review national design organization expectations (AIGA and NASAD); and find consensus as faculty on our values and chosen emphases for our particular students, resources, and mission. Once the core skillsets were identified and agreed upon, the second task involved mapping those core skills to each existing course. *Design Research task: Analysis through Visual Mapping:* This provided valuable insights, allowing the faculty to visually see where each core skillset was introduced, reinforced, applied, or failed to appear. The third task involved imagining the ideal curriculum. *Research task: Imagining solutions*: Missing core skillsets were assigned to existing courses through discussion of potential projects/assignments for implementation; existing courses were re-focused to better address valued skills; and new courses were imagined that would shore up gaps in skillset development. This process culminated in an overhaul of the existing coursework, a re-naming of the major, and the development of specialized tracks within the major—all with a powerful underlying rationale that: generated faculty excitement, buy-in, and agreement; communicated program needs and curricular adjustments compellingly to administrators and decision-makers; and, ultimately, better prepares our students to pursue their passions with excellence, to engage their discipline relevantly, and to continue to shape the future of our rapidly changing field.

Introduction: Impetus, challenges, & changing values

Cedarville University's Graphic Design major hosts approximately seventy majors on a campus of approximately three-thousand traditional undergraduate students. It is served by three full-time faculty members in design—one of which is a new Interactive Web Design faculty member—with foundations courses taught by Studio Art faculty.

The Graphic Design program conducted a self-study Program Review, providing the faculty the opportunity to step back and critically evaluate the major. Among relevant metrics—such as course breadth and depth, student contact hours, interactive design offerings, etc.—we found that we ranked toward the top in most categories among our direct competitors, but not first in any, even in the areas we felt we were strong. This prompted a discussion regarding where we intended to position ourselves within this market. As we continued this evaluation of our curriculum, we noted that it had been largely unchanged since its inception in 2003. While we had been eliciting feedback regularly from alumni, our annual advisory board members, and current students, as well as conversations together as faculty, the result was minor tweaks in individual courses over the years rather than any significant shift in values or focus for the program. Instead of continuing this pattern of playing catch-up, we needed to work proactively: namely, we needed a process and structure to (1) review our curriculum, (2) to formalize our planned changes, and (3) to build consensus among faculty and with university administrators.

Task 1: Identifying and defining core skillsets needed by contemporary designers

Our first task involved identifying and defining the core skillsets needed by successful designers today. To accomplish this, our research task involved *Immersion & Data Collection* from two primary sources: (1) an industry advisory board, and (2) national design organization expectations (AIGA and NASAD).

The industry advisory board is a group comprised of educators, industry professionals, and program alumni (as well as current design faculty) who meet once, annually, to discuss needed industry skillsets. Our process for the day involved the following: a Curriculum Presentation, a Discussion of Contemporary Trends, a Student Portfolio Review, and a Follow-up discussion. This allowed the board to understand our intended goals and coursework, while also giving them a chance to evaluate its success through student portfolios. Additionally, this gave students the opportunity to practice presenting their work. However, we did not stop at simply evaluating the current curricular landscape, but also looked toward upcoming needs and potential new opportunities. As we reviewed the board's comments—over the last three years—we looked for themes coming from a variety of sources, which provided some key insights. For us, we learned that some of strengths involved our approach to Interactive Web Design was somewhat unique and that

our students had consistently strong technical and visual skills; weaknesses we noted involved the critical-thinking and depth of design research skills.

In addition to our Advisory Board, we also reviewed national design organization expectations for student outcomes, specifically from AIGA and NASAD. Our process began with a summary of expectations from both organizations. NASAD provided recommended ratios of coursework that we were able to compare to our current curricular offerings. We next identified relevant categories within the NASAD/AIGA expectations (Common expectations, Design Program expectations, Graphic Design major, Web Design major). From there we compiled a list of competencies/skills/outcomes and began grouping similar skills into categories. Once completed, these groupings were distributed among the design faculty for preliminary thoughts, discussion, additions, and/or subtractions. Our initial groupings included the following categories: skills in Visual Communication (VC), Technical skills (T), skills in Professionalism (P), and Research skills (R).

This prompted initial discussion and a foundation for consensus as faculty on our values and chosen emphases for our particular students, resources, and mission. This developed a revised set of categories, each of which received a color assignment, which for us included the following: History, Theory, & Criticism (Red); Technical Skills (Blue); Context & Complexity (Teal); Research (Orange); Creative & Critical Thinking (Green); and Professionalism (Black). Based on the combination of these identified competencies, informal discussions, and advisory board feedback, we considered the introduction of an Interactive Web Design track within the major, as well as the addition of a few more courses, particularly in the interactive area.

Task 2: Mapping competencies to each existing course

Once our primary competencies were identified and agreed upon, we needed to analyze how successful we were in each area as well as to identify where any holes might lie. Our design research task involved *Analysis through Visual Mapping.* The process we used was fairly simple, starting with a whiteboard and post-it notes. On the whiteboard, we created a column for each of the four years (1000-level, 2000-level, etc.). The rows categorized the coursework into three categories: design core, graphic design track, and interactive design track. Then we wrote each existing (and potential new course with *) on a sticky note and categorized it in its current level. By putting the course on a sticky note, it allowed us to easily move them around as we discussed the ideal. Then, we discussed each course, assigning core competency categories (the ones we defined earlier and assigned a color) to each course. This took a considerable amount of time because we discovered that we were not always all aware of what was going on in each others' courses and also had to discuss how we understood and defined the core competency groups as well.

Once mapped, we could visually see where competency sets were occurring (or not) on a "global" scale. Discussion ensued regarding the appropriateness of each, resulting in the following: confirmation of hoped for/planned curricular changes (including a freshmen-level design research course and additional coursework in Interactive Web Design); a need to integrate new/revised skill-sets into existing/planned courses; the development of a strong rationale/purpose for curriculum updates; a re-sequencing of courses; two parallel tracks to include new interactive design coursework; and positive/negative faculty tendencies, preferences, as well as philosophical differences. We noted that technical skill development occurred throughout all four years, that there was minimal attention to Research & Context at the Freshmen level, some existing courses could be modified slightly, and that two parallel tracks within the major was not only possible, but could successfully accomplish our desired student outcomes.

Application: Our decisions & outcomes

For us, this process created the rationale and impetus to update existing coursework, to re-name the major as "Visual Communication Design," to develop two parallel tracks—Graphic Design and Interactive Web Design—within that new major, and a better, more intentional attention to our niche: Our historically-strong emphasis on technical skills; our move to improve critical-thinking, problem-solving, research-focused skills; and our continued emphasis on pairing breadth (liberal arts, minors, design generalists) with depth (deep concentrations within the design major).

As we begin to implement these new curricular changes this upcoming year, we have yet to determine the success of this process to student outcomes, but will begin to measure and analyze its impact. In retrospect, there are a number of changes we would make to improve this process, such as moving discussion and decisions to different days (to allow for more incubation time) as well as analyzing Advisory Board content visually as well. Though we will always have needs for further improvement and continued re-evaluation, this has created an initial foundation that we can build upon as we continue to use this process to improve and discuss our curriculum. We will continue our Annual Advisory Board, we will be tracking the effectiveness of our changes; we will continue to evaluate whether or not our outcomes reflect our plans/intent. Despite the effectiveness or ineffectiveness of our specific curricular changes, this process (1) empowered the faculty to discuss, define, and collaboratively agree on vision for our program and our positioning within the market; (2) Revealed program successes and opportunities; (3) Provided constructive & natural opportunities for discussion and feedback between faculty members on their courses (moving critique culture to the curriculum as well). In the end we were pleased that this process culminated in an overhaul of the existing coursework, a re-naming of the major, and the development of specialized tracks within the major—all with a powerful underlying rationale that: generated faculty excitement, buy-in, and agreement; communicated program needs and curricular adjustments compellingly to administrators and

decision-makers; and, ultimately, better prepares our students to pursue their passions with excellence, to engage their discipline relevantly, and to continue to shape the future of our rapidly changing field.

16.1 From Ummm? To Yum!, In Just 8 Weeks: Developing an Extensive, Complex and Versatile Branding System In a Half-Semester Senior Workshop

Vicki L. Meloney
Kutztown University

Abstract
At my university, we have divided the students' senior year into a series of intensive half-semester workshops and seminars. Students modularly build their schedules choosing between highly specialized areas such as package design, motion graphics, typeface design and restaurant graphics, to name a few. This allows students to immerse themselves into several different facets of the design world that interest them before graduation.

I would like to propose a presentation that discusses the benefits of our 2 credit half-semester workshops and seminars. I will also illustrate the steps and processes that students will take in an intensive eight-week workshop to produce highly conceptual, portfolio-ready work.

Today's young professional designers need to balance complex yet versatile branding strategies with swift and concise execution yielding professional results. Designing extensive restaurant graphics in a short amount of time is the perfect project to test the skills of the senior graphic design student.

In the 8 week restaurant graphics workshop, students will:

- Research, create and name their own unique restaurant
- Design an appropriate logo and stationary packet
- Create at least two detailed menus, focusing on typographic hierarchy
- Design an elaborate 3 dimensional, press kit that brings the dining experience to the future customer
- Conceptualize the exterior and interior of the restaurant
- Compile a photo-ready multi-piece place setting reflecting the essence of the dining experience
- Develop any number of additional elements such as, advertising, invitations, packaging or interactive components
- Have all work portfolio ready

My discussion will include a detailed explanation of our department workshops and seminars, sample schedules, project handouts and excellent examples of student work.

16.2 Senior Illustration Seminar: Visual Essay

Elaine Cunfer
Kutztown University

Abstract

Many of our primarily suburban illustration/design students spend upwards of 8 semesters hunkered down studying their craft in our University's rural locale. Very few are motivated to experience the quirky flavor of the local community outside of grocery stores, and bars. Like many campuses, this area has a rich and diverse mixture of people, industry and cultural experience that is often overlooked by students. Typical of many college towns, this perceived disinterest often exasperates the local populace. I have often contemplated what would be an effective project to compel students to start to bridge this divide.

As an illustrator and information graphics specialist who transitioned to teaching, my passion continues to be where art-making, experience, information and design intersect. When assigned to teach Visual Essay two years ago, I was excited to further develop this course into a more structured, experiential and researched based "people" adventure for my students. I propose to present my experience of introducing illustration and design students to the rich history of visual journalism. I will discuss how they brought this experience to their own work as reportage illustrators, creating noteworthy relationships within our local community.

In this course students are expected to research and develop a comprehensive knowledge and cultural awareness of their selected topic. My assignment begins, *"Create a visual essay/ illustration documentary profiling an aspect of historical or cultural significance, a unique life experience, and/or an interesting person in the University's local area but outside of your normal student microcosm."*

Within 8 weeks, students are charged with working with their contact, researching their subject, creating at least 6 illustrations, writing text and designing the illustrations into a poster that our library has been excited about exhibiting, receiving both campus and community exposure.

16.3 Youngstown Design Works: Pop-Up Student-Run Design Shops Drive Business and Economic Development

Robert J. Thompson
Youngstown State University

Abstract

In the late 1970s, disinvestment from the steel industry overwhelmingly crippled the city of Youngstown, its economy, and population. Within a few short years, poverty, crime, and mass population decline further sustained Youngstown's legendary post-industrial collapse. Youngstown, now a city-in-transition, still continues its struggle to evolve...and does so at a slow pace. Many of the businesses and non-profit organizations that YDW serves are organizations hardest hit by the post-industrial economic and population declines.

Youngstown Design Works is a student-run graphic & interactive design agency serving Youngstown-based non-profits, small businesses, community groups, startups, and sole-proprietors with high quality graphic and interactive design services all while providing design students with unique learning experiences exclusively found in professional practice.

Since its inception, Youngstown Design Works has established a reputation in the Youngstown business community as offering an innovative approach to how graphic and interactive design services are offered and practiced. One of these innovative approaches is the "pop-up design shop" event, where Youngstown Design Works partners with local startup business incubators and economic development organizations to provide accessible and affordable quality design to businesses that either have had little access to professional design or an inability to afford high-cost advertising agency rates.

Youngstown Design Works seeks to use design as a catalyst for economic growth within the business community by using it in meaningful, memorable ways that reinvigorate the community within which people live, work, play, and learn. Be it branding or web design, Youngstown Design Works recognizes it has a responsibility to contribute to improving the community and those that live within it – by design.

1 S Lab

Poster
S Lab. A simple metric to gauge a student's under- standing of typographic design.

Jason Dilworth
State University of New York at Fredonia

With this poster I will present the methods and results of a project which introduces students to the practice of typography from the perspective of type design. The rationale for the project comes in response to the narrow way typography is traditionally taught from a modernist perspective.

Through the project students work across various me- dia including type for print, type for screen, and type for video. With the project students learn typographic history, they explore how letterforms are created, and ultimately how to practice type in the 21st century.

The project is on going and seeks others to join in. This poster will be an invitation for discussion and an invita- tion for collaboration.

2 Project Based Learning (PjBL) Cross-Disciplinary App Design Project to Connect Students, Faculty and Curriculum to the Future

Patrick Finley
Oklahoma State University

Poster

Project Based Learning (PjBL) provides an opportunity for students to learn both the content of their discipline and important general workplace skills such as leadership, teamwork, and communication. Today's workplace requires skills beyond mere technical competence in a specific profession. Employers look for employees who have a broad range of skills including leadership, teamwork and cross-disciplinary communication. This is an innovative learning project that adds an additional layer to the PjBL-based courses by giving students in three disciplines (Hotel and Restaurant Administration, Computer Science and Graphic Design) an opportunity to collaborate on an authentic project designing and building a mobile application. Students in a hospitality industry course act as clients in a project to commission a mobile app from a contractor. Students in computer science and graphic design courses serve as contractors hired to build the app. Students are therefore challenged not only to form productive teams within their respective disciplines but also to communicate clearly with those who do not have their discipline-specific knowledge.

In addition, a research component was implored to investigate how students' motivation and perceptions of the value of 21st century workplace skills change as a result of this authentic learning experience. Quantitative and qualitative data was collected to evaluate how the project affects students' motivation, recognition of important workplace skills, and learning. Findings provided insight into how student become aware of the need for these skills and also the process by which they develop the needed skill. This information will help educators design better inquiry based learning activities in the classroom to better prepare students for the communication and self-motivation demands of the 21st century workplace.

3 Using Applications on an iPad and iPhone to Create Sketches to a Final Work

Diane S. Grimes
Immaculata University

Katie Schriver
Immaculata University

Poster
Fashion Merchandising
Education
Aims of the Project:
Each student researched a variety of applications available to sketch, photograph, draw and paint to create their work virtually using an iPad or iPhone. The student's took their research into different contents that will be incorporated into the medium of digital storytelling and a @inal creation.

Danielle Pisa found an application for sketching on her iPhone. She sketched a variety of ideas for dress designs. She investigated painting applications to create surface textures using virtual paint and designed the fabric patterns. From all of her mobile research she applied it to creating her @inal dress.

Students have researched how effective using an iPad or iPhone can be in selecting the best applications to record their experience and research while right on the spot, outside the classroom. Students developed digital stories using the iMovie software program, iTunes, Voice Recording software and iPhoto and computer hardware.

Students developed their multi-literacy skills in applying (iPhoto, iMovie, iTunes, voice recording, virtual drawing tools, writing, note taking and web applications). This experience promotes the integration of global, digital, technology and visual literary into a creative multimedia presentation. In today's culture, education is moving towards universal mobility. They have found this an extremely engaging project that created excitement-doing research while learning.

Student Outcomes/Report
Fashion Merchandising - Student
My research project involved using the Iphone 5 and researching applications for drawing and painting and how effective they are in creating sketches and painting for art. The applications allow me to create art and then being able to print it, or even add photos into the program and draw or paint over them. I found the Art Studio applications has 15 different brush strokes and allow you to increase or decrease size. Also a very big color palette to chose from. You can strengthen or weaken the opacity of each brush stroke. This application provides an easer and a button to delete last stroke of redo last stroke. Depending on what you want to create will depend on how long it will take to make. The outcome of printing is very good. It is a very high quality when printed. This application allows for someone to do either a quick sketch or outline of art work you will be then

transferring to creating on different material. Using the application did push my boundaries and allowed me to try different brush strokes and use any color and then when I do not like what is turning out I can erase. I think the most exciting part of doing this research project is that I could upload any image into the program and warp it into my own.

During the process of becoming familiar with this application I have used it mostly for my fashion based classes. I would sit in class and sketch many designs. This became faster and easier to sketch something quick that came to mind. In my draping class I used this application to create a design and the color scheme from a Monet inspired painting and then use that image for my reference. This has been the main project I have been working on and I am hand painting the dress from my sketches used in this application. This research project was very valuable for me at IU, it was an easier, and more productive way to go about sketching and drawing. I think this research is leading us to what we will see more of in the world as far as technology. This entire research has helped with to add ore dimension to my portfolio and is helping with my internship possibilities. I have something that will be so unique and creative in using art and technology.

4 Rethinking The Foundations

Pouya Jahanshahi
Oklahoma State University

Poster

In the past two decades programs in design education have been undergoing constant and rapid change, reflecting that of the professional design arena. From mobile interface design to 3D printers, technology has continually brought forth new landscapes demanding the attention of design educators and institutions. This poster brings forth an alternative approach to structuring content and curriculum, which focuses on human creativity and sets a course for the 21st Century ahead.

Amongst the courses in a design curriculum 2d and 3d design courses have bared the brunt of such changes, and have been the focus of ongoing debates. In order to satisfy needs of the upper level courses as well as academic, and professional arenas at large 2d / 3d faculty are faced with decisions that tend to arrive at either maintaining the status- quo or a constant addition and subtraction of specific aspects of the foundation design curriculum.

Is there a more "holistic" approach to meeting this ongoing demand in foundation design classes? Can an extended 1-year course reach beyond labels such as "2 dimensional design" or "3D principles" and address core skills needed in the human cognition and creativity process, from a contemporary perspective?

Adapting principles based on Bauhaus and Basel schools of thought and design, this document proposes a synergy of traditional content and contemporary perspectives into a 1-year long *Visual Foundations* course. Such a course shall encompass 2d / 3d, crafts, basic and applied technical and digital skills, as well surveys of contemporary art and design culture amongst others. More importantly this structure will be approached from a "Human Creativity" perspective; hence allowing for a continuously flexible content and structure to adapt to a landscape in a state of constant flux.

Note: This paper is a reflection of the process and ongoing results of the directive to restructure and revise the foundation courses at our academic institution.

5 Re-Materialization of Type

Taekyeom Lee
University of Illinois at Urbana-Champaign

Poster

This project began with the dual questioning of the dematerialization of type and a criticism of computer generated typographic design: "What is the best way to re-materialize type in order to restore the healthy tension between digital and analog?" and "Where does typography belong in this new digital age." Digital culture and technology currently yield a strong influence over many areas of modern society, typography included. Nearly all typographic practices are currently performed with digital computing technology. Humans first created these tools, but now these tools have begun shaping human behavior. With the invention of personal computing, especially with the arrival of Macintosh, the computer became the dominant tool for the design and use of type. Today, many graphic design professionals and type designers are working with computers exclusively to create type. As a result, various typefaces have similar formal characteristics.

My research explores methods of creating hand made letterforms with materials unique to typeface design, as opposed to the more standard Bézier curves. Typefaces were created using a three-step process: modularizing, systematizing, and organizing (manual-pixeling). The new three-dimensional type that was made out of clay was created through the interplay between typographic fundamentals and ceramic techniques. Although using clay or ceramic material has historically been less popular by graphic designers in the creation of letterforms — most likely due to an unfamiliarity with these mediums — clay and ceramic materials provide opportunity for shape, color, and size variance in the systemized module creation process. As a result of these explorations, a unique approach into a new realm between graphic deign and ceramics emerged. Ideally, this creative approach will provide inspiration to graphic design professionals by encouraging them to work more with their hands when designing type.

6 Working Hard vs. Working Smart: How to foster efficiency and professionalism in the classroom.

Poster
"I don't know how I got a B! I worked soooooooooooooooooooo hard on that project!"

Elaine Cunfer
Kutztown University

As educators we often focus on the design work produced and not the work ethic and practices of our student designers. Our students may be producing smart design but do we have a responsibility to produce designers that work smart?

My colleague and I propose to create an information graphic to act as a springboard to a discussion about faculty perceptions and experiences in regards to student work load, the effective work practices of our students and the student's personal, intellectual, technical and professional growth within the classroom as well as over the course of their university experience.

In our experience we often have students who perceive they are working hard, are working hard with marginal results or are working much harder than they need to and are burning themselves out. In a subjective field such as the communication arts there are many factors that contribute to the success of project. How hard you work on the project is not typically on the top of the list. We often tell our students "Working hard is admirable. Working hard and working smart is professional." Helping them understand the importance of a professional reputation which includes work ethic, workplace appropriateness, time management skills and interpersonal communication skills will build a professional designer that can exist in competitive workforce.

By giving them the tools they need to make efficient design decisions and treating the classroom as a professional environment we can foster effective attitudes, personal responsibility and can- do-will-do attitudes.

7 Discover-Action-Voice! Designing with Social Impact

Doris Palmeros
University of the Incarnate Word

Poster
GOAL:
Empowering Design Students Social Activism

PROJECT BRIEF:
This senior course was titled Social Design and focused on design and branding for non-profits. Working with nonprofits, helps give the designer the power to participate with their learned skills. Specific to working with nonprofits, attention is given to developing skills involving collaborative work, problem solving skills, and social responsibility. Students were challenged to perform with a real client and as a team, work cooperatively to achieve a common goal. In the process of self- discovery, group action, they develop a voice to empower their abilities to design with social impact.

PROCESS:
Projects were developed as single and collective activities in consequential order.

DISCOVERY: SOCIAL IMPACT—Understanding the impact your work has on the world can be empowering. Social responsibility is in the choice of clients, products and even in the materials that we use. Familiarizing yourself with the potential and effects of non-profit work is the first step in doing your part.

ACTION: COLLECTIVE DESIGN—Non-profits work collaboratively for a common goal. As designers we use teamwork to create successful designs. With non-profits, this will also include community, client committee, audience and donors to make it fruitful.

VOICE: ADVOCACY DESIGN is defined as "the act or process of advocating or supporting a cause or proposal". Finding and expressing your voice can empower you to think beyond design as a service to market-driven economy. By choosing a nonprofit group you are advocating your voice to help boost awareness for their cause.

EFFECTIVENESS:
EMPOWERMENT: Outcomes and Reflective Summaries reveal that most students felt challenged by working with a real client and in a large project as a team. The realization of the power to use design to help shape ideas and make an impact in society was overwhelming.

8 Teaching the iGeneration: Engaging Students in Graphic Design History

Archana Shekara
Illinois State University

Poster

Students take pride in multitasking and desire to succeed at an instance. They want an "A+" for their assignments and exams, but are threatened by process. Prior to taking the Graphic Design History course, students generally perceive it as "memorization and boring," the poster will present six years of case studies, and pedagogical approaches that were used to transform student perceptions and understandings. It will address learning objectives, interactions and outcomes that truly motivates the new iGeneration so they become active learners and admirers of history.

As a faculty teaching Graphic Design History, I encourage students to understand their own work and that of their contemporaries. I emphasize certain movements, significant designers and artists, interdisciplinary relationship of graphic design with other studio arts, and technological advancements in the field since the 1800's. The course material also promotes development of specific skills and points of view needed by professionals in the design field. Finally, it helps students to truly understand the importance and role of graphic design in today's world.

9 SO•BE Skills (Social Behavioral Skills)

Jeremy Swanston
University of South Dakota

Poster

The focus of this presentation is to demonstrate teaching students in early educa- tion programs certain pro-social behavioral skills by combining evidence-based intervention strategies (Positive Behavioral Intervention Systems and Social Sto- ries) with design and digital media. PBIS is a popular method of reinforcing pos- itive behavioral skills in schools by focusing on three to five target behaviors and aligning them with instruction. Adequately preparing prekindergarten children for their future enrollment into the formal education system is vital in promoting and fostering future academic success. Developing positive behavioral skills in children is crucial to achieving this success.

My project focuses on a digital app, titled SO•BE Skills (Social Behavioral Skills), which is being developed with the purpose of teaching young children pro-social skills and behavioral expectations in the school environment. By incorporating digital social stories that are purely visual without the use of text, this medium has the potential to reach a broad range of students through the interactive expe- rience, especially those that may benefit from early instruction (e.g., children with disabilities, English as a second language learners, etc.). Each social story will focus on a specific behavior that aligns with the themes of the positive behavioral intervention system (PBIS) currently utilized in local elementary schools (be kind, be helpful, be safe). An Ipad demonstration of the SO•BE Skills App will allow the audience to personally interact with the social stories and navigate through the various scenarios. A poster presentation involving the character studies for the SO•BE characters, the design process (animation stills, game structure, and design choices), and pre-test data (interview results from teachers and school mental health professionals) will provide an overview of the theory, research, and development process for the SO•BE Skills App.

10 Study: An Open Source, Socially-Interactive, and Cross-Device Learning Management System for Visual Learners in Hybridized Classrooms

Robert J. Thompson
Youngstown State University

Poster

The rise of online learning has revolutionized education across all disciplines and institutions and changed established paradigms on how people learn, develop skills, and practice their education. The dominant learning management systems available today are universal in approach – a "one-size-fits-all" method of educational delivery. However, this specific approach to learning is not entirely efficient for students who learn differently, particularly visual learners.

Originally built in 2009, STUDY is an open-source, socially-interactive, and cross-device capable learning management system built for visual learners in the art and design fields of study. Created as a reaction to undergraduate students posting design work-in- progress on Facebook and Twitter in an effort to attain feedback, STUDY sought to offer worry-free, contextual critique inside of a secure website.

Since 2009, STUDY has been upgraded six times, with each upgrade bringing a new facet to the learning management system. Now in its sixth incarnation, STUDY offers secure social interactions, access to visually-driven course content, expansive writing capabilities, multimedia uploads, and course work submission at any location and time on desktops, laptops, or mobile devices.

By offering visually-driven course content in an effective and memorable manner, retention, positive learning outcomes, and social experiences from within the site can become better defined and enhanced. STUDY is capable of collecting and measuring data on how students are learning inside of the learning management system and the quality of those learning experiences – and through careful analysis, forecast the forms future course content should visually follow.

11 Youngstown Design Works: Student Designers Rebranding the Neighborhoods of Youngstown, Ohio

Robert J. Thompson
Youngstown State University

Poster

Youngstown, Ohio was once a large, thriving city built on the successes of the steel industry. When the steel industry collapsed in the late 1970s, Youngstown experienced a rapid economic and population decline which nearly disabled the city's ability to revitalize itself after such staggering losses.

Now a city-in-transition, Youngstown is attracting new businesses and people to the area. Youngstown, though, is experiencing an identity crisis. It's stuck between where it once was and where it wants to be. Despite this position, it has not lost its spirit as a city fighting for survival, fighting to renew its once former greatness.

Recently, the students of Youngstown Design Works were tasked with breaking through that crisis to clearly define the identity of the future Youngstown and its neighborhoods. Created in 2014, Youngstown State University launched Youngstown Design Works, a senior-level class and student-run graphic & interactive design agency that provides creative design assets to Youngstown-based non-profit organizations, small businesses, startup companies, and neighborhood associations. The socially-focused, community-driven mission of this program is to best utilize the discipline of design as a tool for economic and cultural progression.

Many of the Youngstown-based neighborhood associations seek out Youngstown Design Works because they recognize that the importance of branding a neighborhood is a deep investment in time, research, exploration, and experience. Having several neighborhood branding successes, the students of Youngstown Design Works are uniquely positioned to define the perception that Youngstown can have now and in the future. This poster will present the creative process of designing the brand identities for Youngstown and its many neighborhoods.

12 Visualizing Group Creativity

Rich Yates
Morningside College

Poster

Graphic design practitioners and students use creative problem solving techniques to develop solutions for visual communication problems (Poggenpohl, 1993). Creative teams including graphic designers, scientists, engineers, writers, marketers, artists, and other professionals, are being assembled to take on complex business, research, and media projects (Sawyer, 2006). However, much research and writing on creativity focuses on the individual (Paulus & Nijstad, 2003). As graphic designers work on more collaborative projects, a better understanding of the processes and techniques they employ in team idea generation is needed.

Information visualization provides an opportunity to gain insights from complex systems (Lima, 2011) like group creativity. In this qualitative study, graphic design students were recruited to engage in team idea generation. Themes from responses to interview questions were analyzed and developed into a coding system, which was applied to the verbal data from video recordings of the groups. Information visualization is used to further explore and find relationships in the data. This approach allows me to explore the processes of group creativity and idea generation, moving beyond individual notions of creativity. A better understanding of team idea generation will help graphic design students and practitioners in the classroom and field.

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13 Should Graphic Design Students Need to Know How to Draw? *The Role of Sketching in a Graphic Design Classroom*

Jong-Yoon Kim
Plymouth State University

Poster

This poster presents why graphic design students need drawing skills in the digital age—to help insure their success.

The role of sketching in graphic design varies depending on if students are creating page layouts, corporate identities, illustrations, product concepts, Websites or other designs.

Categories are established that I have found to be instrumental as the basics for student success. General discussion could evolve around additional areas other instructors would add as necessary for insuring student success in graphic design.

1. Digital tools vs. Sketching Skills
   - Digital tools are approximations, not replacement
   - Sketching is fundamental to getting the best results with the least effort
   - True and false freedom of digital tools
   - Balancing between two different worlds (virtual and real)

2. Benefits of Sketching Skills
- Quick concept development
- Fundamental composition or layout from scratch • More visual explorations
- Refining visual solutions

3. Types of Sketches
- Thumbnail sketches
- Information sketches • Presentation sketches • Technical sketches

4. How to improve sketching skills for graphic design projects • Sketch, sketch, and sketch
   - Use of objects and photos for reference • Practices on silhouette drawings
   - Practices on 3D objects drawings

As a tool or skill, sketching has its role in the graphic design process. That role will vary depending on the end-product being created, the size and scope of the project, the individual student's style, experience, and workflow.

The essence of why students sketch ideas as designers is seeded in effectively communicating those ideas to potential/future clients. ***Sketching is designer's language of communication.***