How Do We Teach and Learn Visual Communication Design?
Toward the Development of an Interdisciplinary Research Community
Our Study and Its Motivation:
Visual communication skills are important in many professional and personal contexts.

Technology enables non-designers to communicate their ideas and information to audiences in visual forms. Examples include powerpoint presentations, personal and professional websites, diagrams, and posters.

The popularity of visual tools and their ease of use is causing people to be inundated by an increasing amount of visual communication, some of which is poorly designed. iTube and myspace.com are two prominent sites that show the impact of this trend.
Educators are incorporating these skills into their assignments, regardless of their knowledge of the subject or ability to instruct students.

The technical/professional writing and engineering fields recognized the need to incorporate visual design into their education during the early 1980s, which preceded other disciplines. In fact, Carnegie Mellon’s Master of Professional Writing program requires students to take two semesters of visual design courses.
23% of English composition teachers ask their students to produce visual artifacts.


The National Council for Teachers of English (NCTE) recognizes the importance of visuals to communication. Given the changes in technology and the ways that people communicate, the Council advocates visual artifacts as integral components of an English education. Examples of these artifacts include powerpoint presentations, poster sessions, multi-media presentations, diagrams, and concept maps.

[http://www.ncte.org/about/over/positions/category/comp/114919.htm](http://www.ncte.org/about/over/positions/category/comp/114919.htm)
50% of English composition teachers ask their students to write about visual artifacts.

The Portraits of Composition Research Study: How College and University Writing Gets Taught in the Early 21st Century
M. Greshan, and T. Fishman, presented at Computers and Writing 2005

Educators are asking students to write about visual artifacts as a means of teaching them to “read” visual artifacts — like advertisements — critically.

English composition teachers have written books that aim to help students respond to visuals through writing. These efforts describe processes that are used to dissect visuals but they seldom explain the meaning of visual terms or how to use a visual vocabulary to communicate ideas.

English composition teachers have also written books that describe methods for responding to students’ writing. Documenting the methods that design educators use to critique visual artifacts may be equally beneficial to educators who integrate visual communication into their classrooms.
focus.

1. Notice the typeface and font in which the title of May I Take Your Order? is written. What kind of restaurant does it suggest? What else does the cover design lead you to expect in this book? Why do you think these particular colors were selected?

2. Read the disclaimers at the bottom of the Table of Contents. What would their function be on a real menu? What is their function on this mock menu?

1. Collect menus from several restaurants, either in print or from the Web. Study the design of each one. What is the basic look—traditional? elegant? hip? exotic? something else? How do the typography, the graphics, the layout, and the use of color create each look? Consider also the words, including the name of the restaurant. What do they tell you about its style? What argument do they make for eating at the restaurant?

Think of yourself as a hungry consumer. If you had to choose one of these establishments based on its menu alone, which factors would contribute to your decision? Write an essay that analyzes and then compares the rhetorical strategies of two menus.
A Sourcebook for Responding to Student Writing

Richard Straub
Teachers are integrating visual communication into their courses with or without the help of design educators. Without our help, theoretical foundations rooted in the teaching of other disciplines may be inappropriately applied.

Many general education teachers are able to provide their students with high level comments on the visual artifacts they create. For example, they might state that poster titles should be large. However, these educators often lack the experience and knowledge to provide students with form-oriented feedback that proposes alternative ideas using a visual vocabulary, and justifications that support their comments.

English composition teachers have written books that dissect existing design artifacts as a means of informing the making of visuals. Unfortunately, artifacts are often discussed out of context and aren’t examined as whole design solutions, which makes it difficult for readers to apply the concepts that they extract. We believe it would be beneficial for design and education researchers to work collaboratively to develop appropriate methods for teaching visual communication and assessing students’ work.
There’s a clear need for systematic understanding of visual communication pedagogy.

When we think about design education and its implementation in general education, there are several issues we need to consider.
There are areas of design that would benefit from research:
the study of individual student development
the study of design teachers and educational environments
the study of the social/cultural impact of design

In studying individual student development design educators need to consider the content of the courses that students need and the methods employed when teaching them. Design educators also need to develop a systematic way to measure the proficiency and fluency of students.

Based on the premise that all students would benefit from some form of visual communication education, it’s clear that general education teachers would need to attain the knowledge and skill necessary to teach visual communication effectively. Therefore, design educators need to study and propose methods for teacher development and student assessment as well as determine the grade level(s) at which students are taught visual communication.

We believe that integrating visual communication education into a general curriculum will impact society and culture. Design educators need to study its effects on work places, public communication, etc. and understand how the public’s perception of visual communication as literacy may change.
As design educators, we can begin by documenting our methods effectively.

Our community has a lot of experience in teaching design, but we aren’t documenting our methods as in learning science research because design educators are not usually trained in learning sciences or building cognitive/educational theories.

For example, the collection of syllabi doesn’t describe pedagogical methods or teaching philosophies, which the teaching profession needs. However, comparing syllabi and evaluating them in the context of classrooms is valuable. In addition, as design educators we need to be more self-reflective and critical about what we do, how we measure the effectiveness of our teaching methods, and how we measure students’ success.

It is important for design experts to get involved in the research and documentation of design pedagogy, given the trends in Middle state evaluations. (Middle states evaluates entire universities as opposed to NASAD which accredits art and design. Middle states asks general questions about what the university teaches as opposed to the content of individual courses. In terms of design, Middlestates is interested in our educational requirements, how we articulate learning goals and outcomes, how we assess and evaluate our students’ work, and what we learn from this process.)
We need to be aware of pedagogical resources in other disciplines and consider their application to design.

methods/techniques
learning theories

Other disciplines have developed various pedagogical methods/techniques as well as theories of learning. While design may be unique, design educators need to start understanding what’s out there. (Various “methods” used in writing and architecture, for example, may be applicable to design but we aren’t taking advantage of these existing resources and research.) In studying existing pedagogical resources, we may find that design can/should make contributions to the teaching of other fields.

We’re not suggesting that design should be measured similarly to other disciplines, such as writing or math, but rather that we need to consider evaluative methods, and perhaps create our own system.
The International Conference of the Learning Sciences 2006

7th International Conference of the Learning Sciences

Conference Program

“Making a Difference” • June 27 - July 1 • Indiana University, Bloomington, IN
Our approach:
Our efforts are enabled by the research university environment.
The joint degree offered by English and Design is an outgrowth of collaborative efforts that continues to support each other and the university.

The Communication Planning and Information Design (CPID) program, that started in 1995 at Carnegie Mellon, is a unique joint MDes degree between English and Design. It creates an informal settings for the exchange of ideas through advising, teaching, etc. In the program, English and Design students and teachers work collaboratively.

The joint program enables design educators to learn from writing education, which is more developed. Similarly to the university’s writing programs, the School of Design supports other disciplines on campus. In fact, half of the visual design requirements for the Master of Professional Writing Program degree are taught in the School of Design. In addition, the English department has shown that it recognizes the importance and relevance of design to writing by hiring a design educator.
We’re working on a visual communication pedagogy project.
It supports English composition and design educators; focuses on methods as opposed to course content; and is descriptive as opposed to prescriptive.

Our efforts are culminating in the form of writings on visual design pedagogy. Thus far, we’ve identified a set of important issues/perspectives that inform design teaching practices and we’re in the process of documenting the details of each area.
Through documentation, we hope to develop a framework for describing aspects of design pedagogy that includes:
- constructing an effective project
- preparing appropriate teaching methods
- guiding the design process
- providing feedback
- evaluating and grading
- compiling projects into a semester of work
We’re developing online self-learning modules in collaboration with other researchers on campus.

Carnegie Mellon’s Open Learning Initiative (OLI) began as a collaborative effort among cognitive scientists, human computer interaction experts, and educators with expertise in specific fields. The goal of the project is to make higher education widely accessible via the internet. The design, evaluation, and improvement of courses based on empirical evidence and rooted in cognitive theory are key components of OLI.

The project is comprised of a large level collaboration with other researchers on campus. We are in the beginning stages of the project, working with learning science experts to develop new knowledge around visual design pedagogy. The learning science experts have conceived and implemented a system for assessing students’ learning that we plan to utilize in the modules that we create.
The project provides us the opportunity to:
verify the ideas we are developing and documenting
learn from existing online courses and the theories that surround them
contribute to the OLI effort by raising new research questions
develop new knowledge relative to individual learning and learning environments

We are excited to have the opportunity to work within the framework of learning sciences which is enabled by a university-wide collaboration. Thus, we don’t have to be experts in many fields but rather use their valuable resources to enhance the teaching and learning of visual communication.

The first stage of the project will last approximately one year and is funded by Carnegie Mellon’s Open Learning Initiative, which is part of the Office for Technology Education. Their support indicates that the university sees value in making a visual communication education accessible to all students.
Our challenges and opportunities:
Design educators are best situated to develop new knowledge.
Be proactive and use resources that are readily available.
As design educators, we have lots to do and it will keep us busy for many years.
Questions? Comments? Let us know.
Stacie Rohrbach: stacie@cmu.edu
Suguru Ishizaki: suguru@cmu.edu