DESIGN HISTORY LEAPS OFF THE STAGE

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From "Sage on the Stage" to "Guide on the Side"

Synopsis:
How to connect a historical survey course with today's digitally-savvy, textbook-averse, over-entertained undergrads? This paper details the specific changes made to create a "flipped" classroom for teaching design history.

Photomontage of Professor Lemon, in costume, in the Alexander Rodchenko 1922 "Books!" poster.

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In the flipped model, heavy content areas are moved online, and the large lecture hall is rearranged into a creative space for undergraduate research, feedback, and in-depth discussion. Class meetings become in-class activities including building, making, question-answer, student project design, research guidance, project drafts and writing assistance. Memorization is replaced with "higher level" learning such as analysis, inquiry, synthesis and creative idea generation, and design objects are placed into historical and social context.

INTRODUCTION: WHY FLIP?
My lecture hall was so 1817.

Students sitting in rows. Watching (or not watching) slides of artwork. Taking notes (or not taking notes). Listening (or not) to a VERY entertaining lecture about the Bauhaus. Light snoring in the background.

Sound familiar? That's how Art History was when I was in college, in 1984, and when I started teaching Graphic Design History in 2012, that's how it basically remained. In the era before MTV, this might have held my attention. In the era of YouTube and MOOCs, not so much. If every major work of art in the textbook can also be attributed, defined, dated and explained with one click, do they still need to memorize artists, dates and movements?

"Students need their teachers present to answer questions or to provide help if they get stuck on an assignment; they don't need their teachers present to listen to a lecture or review content." (Bergman)

> "The "flipped classroom" is gaining currency as an appropriate class structure for the digital age, to successfully integrate in-class learning with online tools. The flipped classroom model enables students to train with leading edge video tutorial software, conventional or e-textbooks, and/or online classroom tools such as Desire 2 Learn, Blackboard, and the like, out of class… Classroom time can then be devoted to hands-on learning, assessments, additional reinforcement of the [material], and one-on-one troubleshooting as students complete assignments. " (Lemon)

"Flipping" the classroom lets students absorb the material asynchronously. Lectures are recorded and presented in various formats for different learners: videos, slides/ text, textbook readings, and essays. Feature films, podcasts, websites and other primary sources are assigned. Online content is reviewed with surveys and assessed by quizzes. The works of design are prioritized and put in context by narrowing down major important works into a list of 120 "works every designer must know" and reiterating their importance with additional sources beyond the survey book.

With lectures delivered online, the classroom can be transformed from an I-talk-you-listen podium-style lecture, to a let's-all-work laboratory. Classroom activities can include individual meetings with professors, group project work time, hands-on activities, small discussion groups, short research problems, pair-and-share study sessions, and other organized and structured activities that have students thinking, talking, writing, analyzing and creating. By interacting with material rather than just passively receiving it, retention and understanding is increased.

HOW IT WORKS:
**Part 1: the online component**
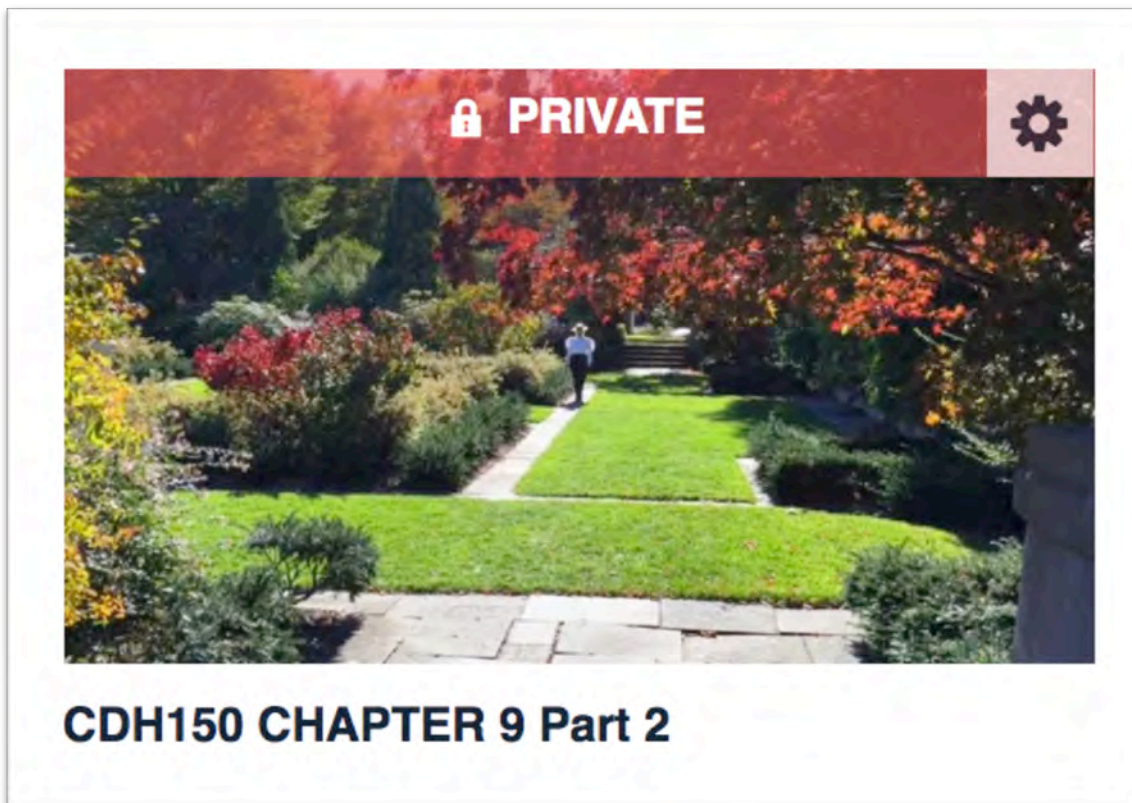
Fig. 1: password protected Chapter video posted to Vimeo.com

I created one to two videos for each chapter (per semester). These simple videos (nothing fancy yet) were made by combining a Keynote presentation, recording a narrated voiceover, and mixing it with appropriate music, blending in existing video content (such as short biography segments from "Biography" or existing videos of artist's work) where applicable.

There are several ways to do this technically.

1) CAMTASIA makes software specifically for creating course videos.
2) KEYNOTE lets you build a slideshow, then simply Save As > a QuickTime movie.

3) IMOVIE is a basic film editing tool. I chose to import my Keynote or PowerPoint slides into iMovie, then use the editing software to add music, record a Voiceover as slides were shown, and insert other media such as short videos form other sources.
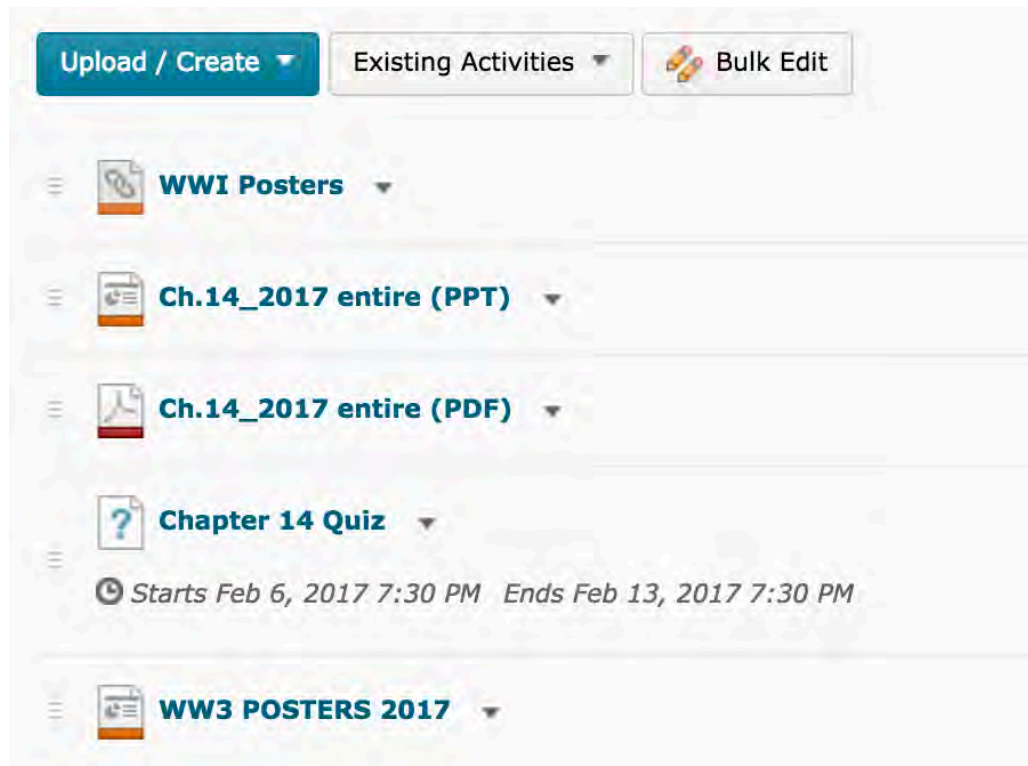4) More advanced editing tools are available with the Adobe Creative Suite, including Adobe Premiere and AfterEffects.
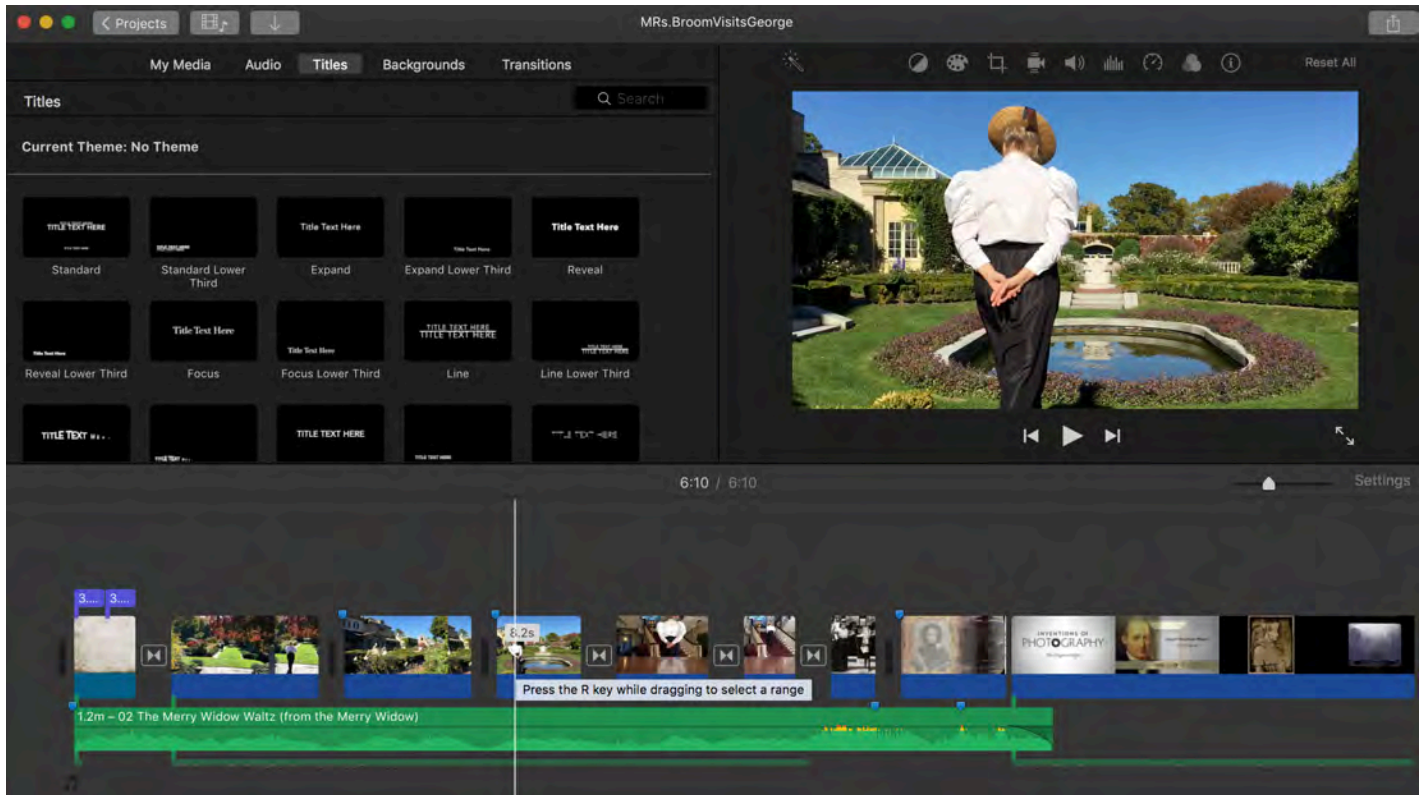
Fig. 2: iMovie project in progress. Music and voiceover track at bottom

Note: this content is posted on a Vimeo channel and accessed by password only, to protect me from charges of copyright infringement. The images on slides are (mostly) from the Meggs' textbook, and are cited, but permission was not obtained to use the historical art pieces in public release, even though it is educational. Many educators and students play fast-and-loose with art permissions, creating all sorts of videos and slideshows, remixing and even altering works of art, and until now, museums do not seem very litigious when it comes to educational material. Musicians are quite a bit more likely to prosecute for non-licensed use. So, moviemaker beware.

In addition to these videos, I post the original Keynotes or PowerPoint presentations. Some students enjoy watching the videos, where others would rather read silently at their own pace, or skip to a specific piece. The PowerPoints are also good study guides. Lastly, I post documents such as original primary source essays by artists, links to auxiliary teaching materials such as websites and online activities.

Fig. 3: Materials are posted on the campus content management system, Desire 2 Learn (D2L), for each chapter, including PowerPoints or movies, links to external materials, and a Chapter Quiz.

Part 2: Reverse design - what do you want them to know?

"Reverse design" course design means designing all class material towards a specific end assessment, or outcome. What is it that you want students to "know" at the end of the course? Your objective may be to have them be able to locate specific facts or events in history accurately. Perhaps they need to be able to identify an artist by looking at a work. Or perhaps you want them to be able to write a coherent thesis statement, or to analyze a work of art based on its form. Objectives should be specific and measurable.

The first step in my overhaul was to decide: do I care if student have memorized specific works, artists, dates and movements? The answer to that was a reluctant "yes." I want this, because when I think about how history informs a working designer, I know that I have my own internal reference bank. I never need to face a blank page because I have a mental catalogue of the styles and techniques designers have used in the past. When an Italian restaurant wants me to design a logo, I have a mental file of "Italian-ey" design that is derived from primary sources including the books of Aldus Manutius and the engravings of the "Master of the Playing Cards", and also includes postmodern "retro" reference to those

primary sources (Louise Fili's restaurant logo designs) as well as non-obvious references like early Giovanni Pintori's Olivetti brochures and Armando Testa's Pirelli ads.

Fig. 4: Olivetti brochure cover by Giovanni Pintori, 1956. (Meggs)
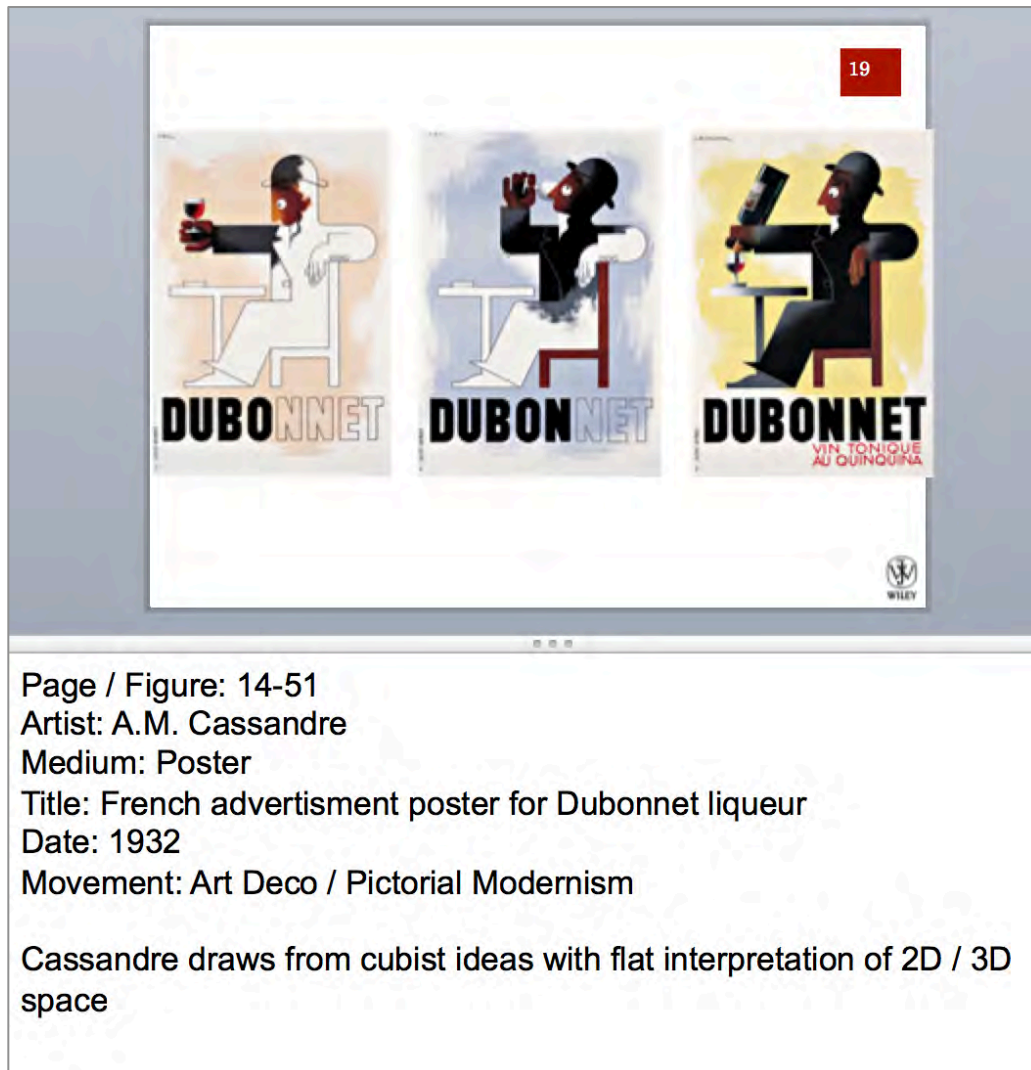

Fig. 5 Pirelli poster by Armando Testa, 1954 (Meggs)

Whereas classroom lectures in person for this class were an hour and twenty minutes, common sense, as well as most experts, suggest that breaking this content into shorter chunks makes it more digestible for the short-attention-span online generation. This in turn made me analyze the content itself. In an hour and ten minutes, a rapid-fire sequence of similar slides from one era – even if only 40 or 50 – becomes a blur. What is most important? And why?

After all, what is the purpose of a "survey" course? To LIST every possible work of importance, giving each the same amount of attention? Or does this make the truly major works recede into the forest along with supplemental, lesser-known, or less-important second-tier design? The first step in redesigning the class forced me to ask myself- what do I really want them to KNOW, versus just make available as background? To me, a survey course does more to explain the context and genesis of various styles, set them in relief against history and contemporary culture, tie them to other movements in the arts, architecture and society

One of the exciting parts of teaching this material (material I am passionate about) is watching students respond with their own tastes and opinions to the various styles of design. I have had students become transfixed / transformed after exposure to the "Swiss" style (not one we are particularly known for at our school), reinvent their own photographs after seeing the works of Magritte and Man Ray, or dig deeply into lesser-known delights

like the extraordinary calligraphy of the 16 and 17th century Italian writing masters. Because I never know what might delight them, I don't want to abbreviate the content too much, but I also want to focus on the works that become part of every designer's mental inventory and are likely to come up as shorthand in conversation with senior designers.

My solution (inspired by Laura Franz) was to identify a list of 120 THINGS EVERY GRAPHIC DESIGNER SHOULD KNOW for each semester –narrowing down from the 50-100 images in every chapter of the textbook (x 12), to TEN per chapter that are (subjectively) "most important." For these works, students need to have a mental "thumbnail," so that when someone says "Cassandre's Dubonnet poster" they can instantly envision it.

Page / Figure: 14-51
Artist: A.M. Cassandre
Medium: Poster
Title: French advertisment poster for Dubonnet liqueur
Date: 1932
Movement: Art Deco / Pictorial Modernism

Cassandre draws from cubist ideas with flat interpretation of 2D / 3D space

Fig. 6: Single slide from the "120 Things" list, with accompanying details. Image from Meggs'.

At the beginning of the semester, I post a PowerPoint and PDF of the complete list of 120 THINGS, and throughout the semester we return to this resource and attempt to examine the material from various points of view. By the end of the semester they should have a 3-dimensional understanding of the "thumbnail" images they need to know.

When creating the online material, it's important to remember that as students watch or review it, they are simultaneously using a tool (their computer) that can instantly check the accuracy of the information, confirm dates and spellings of titles, translate titles from other languages, give a more explicit description of a work, introduce related works, etc. They are always within one Google search of an entire bibliography. This is an incredible asset. At the same time, if the material begins to bore them they can easily exit it or abandon it halfway through. Some teachers may want to give points for completion of videos. One technique I use is to create a short survey that collects OPINIONS (rather than facts) about various components of the material – for example:

> Why do you think American audiences reacted negatively to the 1913 armory show?
> Would you like to live in this Gerritt Reitveld-designed house?
> Are there any designers working today that are making strong political or social statements with their work?
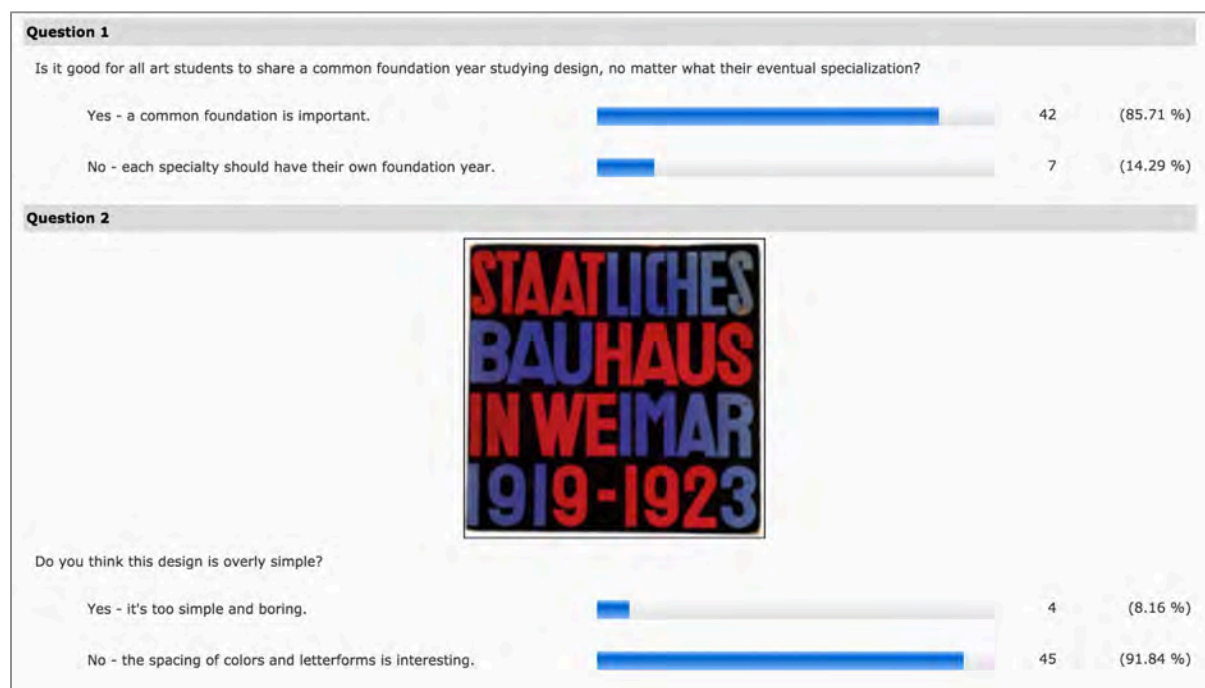
Fig. 7: Survey / opinion questions on Meggs' History of Graphic Design, Chapter 16, "The Bauhaus"

Part 3: OK, so now all my lectures are online. What do I do with all these students in class?

Lucky me, I teach ART history, so my first instinct was – the best way to understand these (sometimes ancient) techniques is to have students TRY them.

In 2nd or 3rd grade, I learned that PAPER was made from WOOD. This seemed IMPOSSIBLE to me. I read all about it in my Encyclopedia Britannica (!) and saw pictures of a giant paper mill thing grinding up the wood pulp. "Aha!" I thought. "This looks JUST LIKE the pencil shavings in our pencil sharpener! Ground up wood!"

So, I dumped out all the pencil shavings (plus probably a lot of graphite – probably much on the kitchen floor), added water and, I think, Elmer's Glue, and mixed it all up. I tried to press it flat (they said something about rollers so I used a rolling pin.) It did NOT work. I was completely disheartened. But along the way, I must have learned a few things. For sure, when I got into college, I learned that if you whirred all that up, plus some cotton rags and old newspaper scraps, with a LOT of water, in a BLENDER, you could make AMAZING handmade paper pulp that was actually workable; AND, you burned up a blender pretty fast.

So, I try to have as many creative "historical making" activities as possible.

CDE 151 Graphic Design Historical Survey B   Course calendar p.1   Professor Lemon

Week	Topic	Monday	Wednesday
#1	**Course Intro** **Chapter 13:** **The Influence of** **Modern Art**	**January 23** Course Intro *IN CLASS ACTIVITY #1 - 20TH* *CENTURY*	**January 25** **LECTURE POSTED ONLINE** Lecture Ch. 13 *Cubists, Futurists & Dadaists* *Surrealists, Expressionists &* *Photographers*
#2	**Chapter 13:** **The Influence of** **Modern Art** **Chapter 14:** **Pictorial Modernism**	**January 30** *IN CLASS ACTIVITY #2 -* *ABSTRACTION* **Quiz on Chapter 13 opens**	**February 1** **LECTURE POSTED ONLINE** Lecture Ch. 14 *Pictorial Modernism, Plakatstil,* *Switzerland & the Sach Plakat*
#3	**Chapter 14:** **Pictorial Modernism** **Chapter 15:** **A new Language of** **Form**	**February 6** Lecture Ch. 14 *The Poster Goes to War* *The Maverick from Munich,* Spanish *Civil War posters, Postcubist* Pictorial *Modernism* *IN CLASS ACTIVITY #3:* *PROPAGANDA* Quiz on Chapter 13 closes **Quiz on Chapter 14 opens**	**February 8** **LECTURE POSTED ONLINE** Lecture Ch. 15 *Russian Suprematism &* *constructivism*
#4	**Chapter 15:** **A new Language of** **Form** **Chapter 16:** **The Bauhaus and the** **New Typography**	**February 13** Lecture Ch. 15 *De Stijl, The spread of* *constructivism –* *(Czechoslovakia, Hungary,* *Poland)* *IN CLASS ACTIVITY #4:* *DESTIJL* Quiz on Chapter 14 closes **Quiz on Chapter 15 opens**	**February 15** **FIELD TRIP** DAY **LECTURE POSTED ONLINE** Lecture Ch. 16 *The Bauhaus at Weimar* *Lazlo Moholy-Nagy* *The Bauhaus at Dessau* *The final years of the Bauhaus*

Fig 8: Partial schedule of classroom activities, lectures, and quizzes.

I admit that most of my projects are based on my own curiosity. I am the kind of person who looks at a cuneiform object and thinks "Were the reeds triangular, or did the person "draw" that triangular mark? Did they roll the clay into a ball first before they smashed it flat? Were the reeds wet, or dry?" So, 50 pounds of clay, one day cutting reeds in the swamp, a week of drying them in the sun, couple hours generating a handout with a Cuneiform alphabet on it and - we made cuneiform in class. It's not as easy as it looks - AND some people are much better at it than others.

Fig 9-12: A local wetland path where triangular reeds were found; reeds drying; student reading directions; student Cuneiform and Hieroglyphic scripts example.

When choosing activities I also tried to think in terms of reverse (outcome-centered) design. I asked myself these questions about each activity:

      a) Does it help students to understand vocabulary terms?

      b) Does it help them to connect ancient methods to today's design processes?

      c) Does it help them to locate individual works within a larger movement or period?

      d) Does it let them practice activities of art critics or historians, such as analyzing or decoding works, arguing a point of view, or organizing their own ideas?

      e) Does it let them practice explaining or defending ideas about design?

Fig13-15: Students work in groups of four to organize works form the "120 things" by "L.A.T.C.H." (Location, Alphabetical, Time, Category, or Hierarchy). Early in the semester, this lets them examine all the works at once and look for similarities and differences.
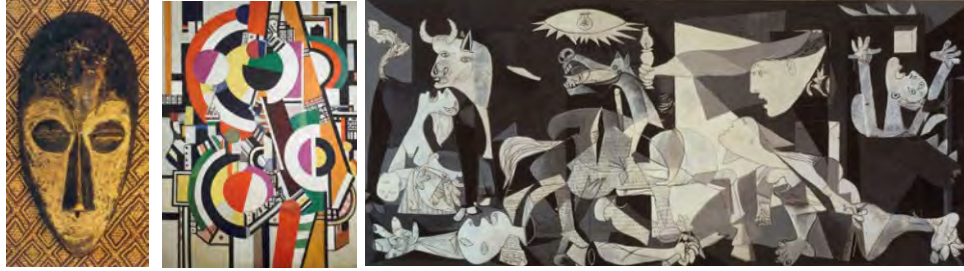
IN CLASS ASSIGNMENT #2: ABSTRACTION

YOUR NAME: _____

PROCESS:

Using the techniques of Collage Cubism, create an abstract image that

communicates something about a social issue in an emotional way.

Materials:

5 to 7 magazine images relevant to social issue of choice,

Pencils, Paint, Pen, Charcoal Decorative Papers, Charcoal, Glue, 18" x 24" White Drawing Paper..

Vocabulary

Abstraction – begins in reality. Seeks the essence of an object. May be expressed through simplification, stylization, fragmentation, re-assembly, and/or distortion.

Analytical Cubism - densely patterned surfaces of incomplete directional lines play against one another; no colo. The planes of a subject are studied from different viewpoints, then fractured; visually pulled planes forward towards the canvas surface

Collage Cubism – Picasso and Braque invented in 1912. *Deconstruction* and *reconstruction* are evident in these collages. Used multiple materials including cloth, rope, newspaper, rubbings, wood, packaging, and other materials. Generally applied to canvas as flat surfaces.

Synthetic Cubism – the artist drew invented forms based on past observations (not from life); observations were symbols, not representations of reality.

Non-objective abstraction –Abstraction which does not refer to an object.

Preliminary

1. Read the short essay on Guernica.

2. Choose a social justice issue that is currently in the news. (Some clippings are available for reference). The more emotional, the better.

   Suggestions: the global refugee crisis, the bombing of civilians in Aleppo, the Black Lives Matter movement, recent Trump executive orders,

   Pro-Life or Pro-Choice movements, Standing Rock protest, etc.   ALL VIEWPOINTS ARE WELCOME.

3. Identify various textures by taking texture rubbings around campus. (Putting newsprint or thin paper against a textured object and rubbing on the paper with the side of the pencil or graphite.)

4. Isolate positive shapes in magazine images by cutting them out of the photograph context. Enlarge positive shapes in copier or by hand and cut out with scissors or X-acto Knives..

Final Composition

5. Study the shapes you have chosen. Redraw them on 18x24 white paper by simplifying them, distorting them, fragmenting them. Study Guernica, see how Picasso drew the woman, the horse, look at the jumble of shapes in the middle.

You may make multiple images of particular shapes – see the repetition of the woman, you may overlap shapes.

6. Create a collage of positive shapes on mural paper that expresses your idea the way Picasso expressed his feelings about the Spanish Civil War in Guernica.

OBJECTIVES
ESSENTIAL:
•Gaining a broader understanding and appreciation of intellectual/cultural activity.
IMPORTANT:
•Gaining factual knowledge (terminology, classifications, methods, trends).
•Learning fundamental principles, generalizations, or theories.

Fig 16: Example of in-class assignment handout.

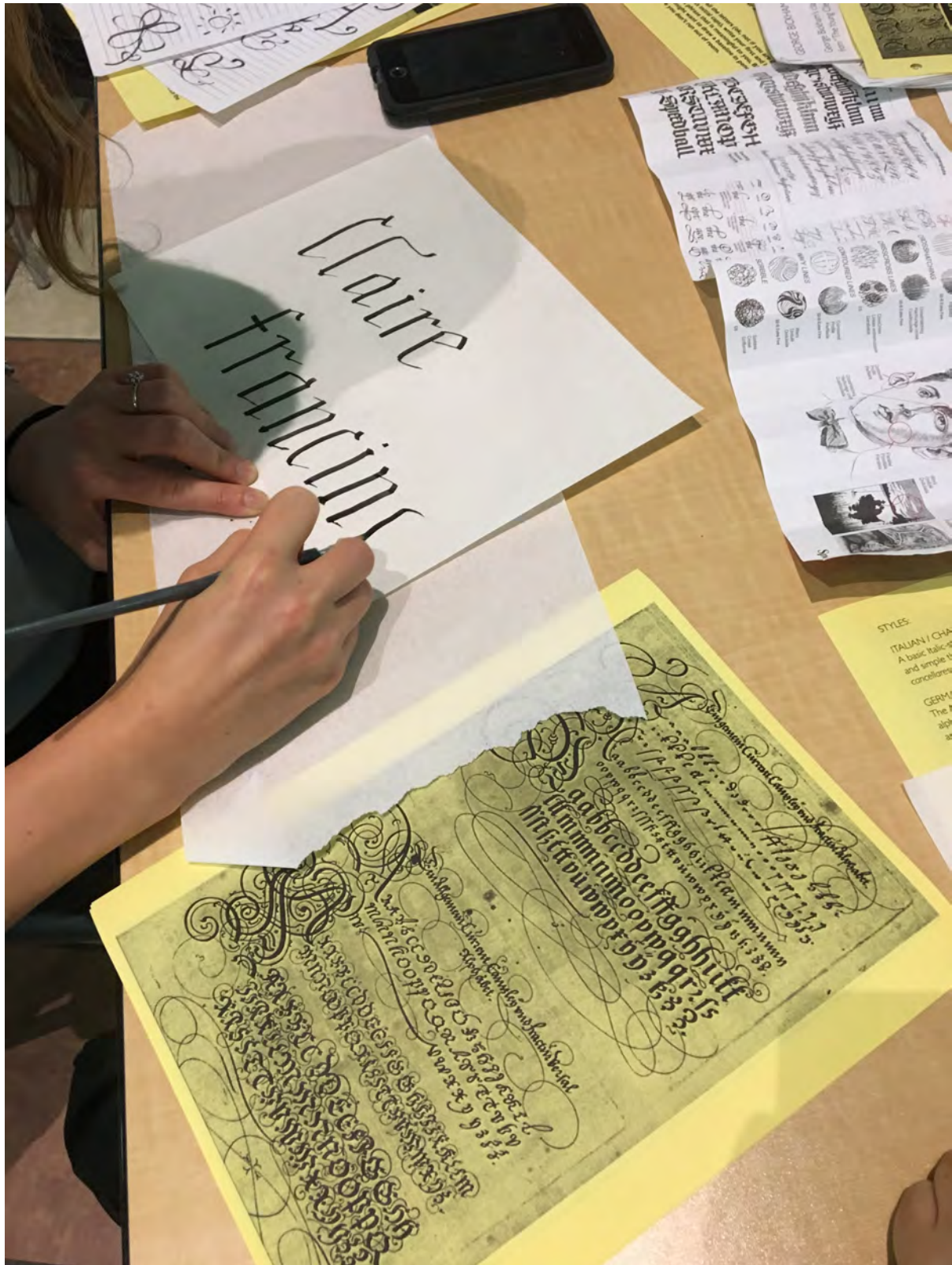*Fig. 17-19: Student examples from the Cubism project (Fig. 16)*

Fig 20: Copying hand calligraphy from primary sources with pen and ink.

ASSESSMENT
The ugly topic of grading

When I redesigned the course, I had to redesign my grading system as well.

As shown in the charts below, the quizzes (formerly taken as multiple choice, on paper, in class) were originally a large portion of the grade – testing memorization. In the flipped model, projects and activities total 65% of the grade, and quizzes (I consider online quizzes to be homework, after talking to students. I can't fight their temptation to have "open book" quizzes, so I consider quizzes simply another way to review the material) and one in-class final exam is the remainder – so, assessment is flipped, too.

Grading system – "old style"	
Five quizzes	500 points. (62.5%)
Project / paper	200 points. (25%)
Final exam	100 points. (12.5%)

Grading system – "flipped"	
12 Quizzes	25%
Class activities	15%
Midterm Project	25%
Final Project	25%
Final Exam	10%

The good news is that since the online Quizzes are graded automatically, the overall grading time is reduced. The class activities are easy to grade and are only worth 5-10 points; I usually grade them the next day and hand back at the following class. The midterm project and final project are graded by rubric, which is also a quick method.

Personally, I enjoy looking at projects and reading papers. I do not enjoy running Scantrons through a machine.

Papers and Projects that model real-world activities.

When attending academic conferences, I learned a new definition of the word "poster". Again inspired by Laura Franz, I assigned the creation of a Research Poster on one of the "120 Things" as a midterm project. The results were impressive. Students were guided very specifically about how to write a thesis question, illustrate their points with images and data, correctly use academic research, design an attractive poster, and correctly cite works.

In order to give students step-by-step support in the process, which was new to them, I broke the 100-student class into four sections. Each section rotated through four work stations over four class periods, discovering some of the often underutilized resources of the University. One session was conducted by our research librarian devoted to the arts, who introduced students to the archival art collection, to ArtStor, to the periodical collection, and how to correctly cite works of art.

Another class session was one-on-one conferences with me to approve their topic, thesis, and ideas for sources, illustrations, and structure of each student's poster. The third session was a "free" work period to work on their poster. The fourth session was devoted to a lecture and demonstration of the University letterpress facility (we were in the middle of studying the Incunabula period in class). For assessment, students hung their posters in the University Library, where they remained for two weeks. While I graded, students completed another In-Class Activity by walking around the poster "exhibit" and evaluating other students' work.

For art majors, who often struggle with writing, the activity taught them the basic points of academic research (thesis, support, conclusion, next steps) using a more visual format than a major essay. For non-art majors, the concept of a research poster was less intimidating than creating a full-blown "work of art". And as a professor, I really enjoyed the one-on-one meetings, which helped me to connect with students on a personal level as co-collaborator.

Fig. 21-22: Research poster by Jackie Foran (top) and Ariana Alexandropolous, 2016.

Fig. 23: Exhibition of research posters on view in the library.

Since the midterm project was academic-focused, I decided to assign a wide-open creative project where students had to create something that either combined, contrasted or compared the works of two different artists.
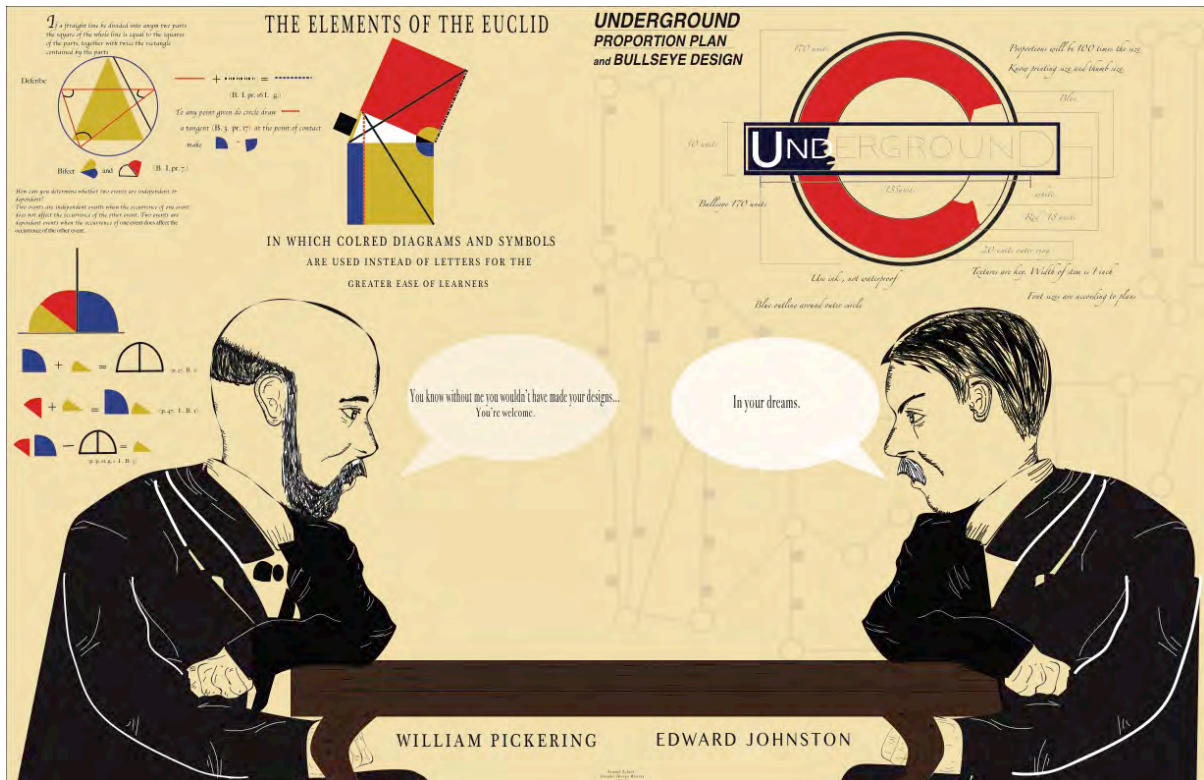
Fig. 24: A quirky conversation between two typographers by student Samuel Schieb.

In the spring semester, student teams collaborated to create a "review Game" for one chapter. There were 24 groups of 4, so each chapter was covered by two teams. The projects culminated in a Game Night and were used at the end of the semester to help students study for the final.

BENEFITS FOR TEACHERS AND STUDENTS

Although, of course, comparing cohorts of students is not always statistically significant, and I only have one year of the flipped classroom to compare, so far, end-of-term grades are significantly higher in the flipped model. Animating / posting the lecture lets students watch them again if needed. Step-by-step support in the research process is yielding more interesting and credible pieces. Attendance is higher. Students are more animated, ask more questions, and interact with each other after the team projects and one-on-one conferences with the professor.

Aside from being able to perform better on an end-of-semester exam, how else can we compare the two models. Do students retain the information better after creating a game, versus taking a quiz? Will they be able to produce the name of an obscure 19th-century poster artist when the moment comes? Will investigating the differences or similarities between two artists of different periods yield more appreciation for historical details? Will attempting pen-and-ink calligraphy by hand make the Pen Tool more accessible, or at least more appreciated?

For the teacher, flipping is labor intensive at first, but saves labor in the long run. Benefits include creating a more "perfected" lecture one time, rather than "performing" it multiple times. Doing more hands-on work, and having more personal one-on-one one interaction with students is more satisfying than wondering how many were paying attention during a lecture. Surprising them with interesting activities lends an atmosphere of celebration to about every other class.

Those who teach "non-art" history are also lucky – you could, for instance, stage battles! Print newspapers! Do tai-chi! Make corn-pone! Have protest marches! Alas, my topic is limited to making art-like objects.

In short, automating part of your classroom leaves the most important part – the face to face connection with students – alive.

EXTRA CREDIT
Warning: this approach is only applicable to professors who have determined that maintaining dignity is no longer critical in their teaching philosophy.

When I was assigned to teaching this class, I woke up in the middle of the night with an image of one of my favorite creative works: a shoe-shaped hat that was a collaboration between Salvador Dali and the fashion designer Else Schiaperelli. Instantly I knew I had to dress in period costume to illustrate the changes in culture through the decades of the 20th century. When I began teaching the pre-modern era course as well, I had boxed myself in, so had to design and fabricate a Gutenberg costume, a Nefertiti costume, and more.

Crafting the costumes was fun. Wearing them was terrifying at first, but seeing the reaction on the students face is worth it. Sometimes I fall into character and give a short performance before the lecture. Sometimes I just give the whole lecture wearing a Mad Scientist costume.

Student evaluations are full of comments like "The best class I have ever taken," "Made history easy to remember," "Brought history to life with the costumes and projects." I met with an alumnae a few years after graduation – she works for one of the best design studios in Philadelphia. I asked her if I should continue wearing the costumes in class. "You have to," she said, "It helped me remember the design periods so much better." Done.

In conclusion, I offer this vision for you. Change up your classroom . Experiment. Take a few risks and make some messes. Give your students a chance to make, to think, and to argue with you. You will all enjoy Monday and Wednesday nights (or whenever you teach) more.

Fig. 25: The Shoe-Hat.

10 ways to start flipping your lecture hall:

1. Make full use of your university's existing online course materials – D2L, blackboard, etc.
2. Utilize existing videos / movies and find ways to ensure student viewing – the theatricality and professional production level is probably better than most of us can generate. Allow a month to craft each video, especially at the beginning.
3. Create authentic assessments inside the classroom so you can observe students working
4. Post your text online or use digital version.
5. Animate your PowerPoint presentations.
6. Create movies or audio recordings of yourself talking, if you are a good storyteller.
7. Videotape yourself teaching.
8. Post videos on YouTube or Vimeo or create a standalone site for your class
9. Use Prezi.
10. Have students create as much content as possible themselves, and curate it!

Fig 26: scene from video about the history of photography

"Design students are used to an active learning environment: they make, they crit, they refine, they share. As a design instructor, I'm used to the active learning environment, too. My students learn as much from their trials and errors—and from each other—as they do from me." (Franz)

Works Cited

Bergmann, Jon and Aaron Sams. *Flip Your Classroom: Reach Every Student in Every Class Every Day*, Hawker Bronlow. 2012.

Franz, Laura (University of Massachusetts Dartmouth). "Flipping the Graphic Design History Classroom: What my students and I learned from turning off the projector and actively exploring the history of graphic design." Paper presentation, UCDA Design Education Summit, May 2016.

Lemon, Ann. *"*Teaching Digital Design in the Flipped Classroom*."* Paper presentation, UCDA Design Education Summit, May 2014.

Meggs, Philip B. and Alston Purvis. *Meggs' History of Graphic Design*, 6th Edition. Wiley, 2016.

Resources

http://tv.adobe.com/show/adobe-for-academics/

http://tv.adobe.com/watch/new-in-presenter-9/learner-intervention-and-collaboration/

https://www.techsmith.com/
(Camtasia software)

https://www.apple.com/imovie/
(iMovie software and support)

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Fig. 3: Screenshot from Desire 2 Learn CMS, Kutztown University. 2017.

Fig 4: Olivetti brochure by Giovanni Pintori, *Meggs' History of Graphic Design*. Fig 20-2, p. 413.

Fig. 5: Pirelli poster by Armando Testa, Meggs'. *Meggs' History of Graphic Design*. Fig 21-1, p. 436

Fig. 6: Single slide from the "120 Things" list, with accompanying details. Image from *Meggs' History of Graphic Design*. Fig 14-55, p. 293.

Fig. 7: Survey / opinion questions on *Meggs' History of Graphic Design, Chapter 16*, "The Bauhaus" 2016.

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Fig 20: Copying hand calligraphy from primary sources with pen and ink. Photo by author. 2016.
Fig. 21-22: Research poster by Jackie Foran, 2016
Fig. 22 Research poster by Ariana Alexandropolous, 2016.
Fig. 23: Exhibition of research posters on view in the library. Photo by author. 2016.
Fig. 24: A quirky conversation between two typographers by student Samuel Schieb, 2016.
Fig. 25: The Shoe-Hat. Photo by author. 2015.
Fig 26: Scene from video about the history of photography. Photo by author. 2015.