**Physical Typography:**
**Engaging students through tactile making regulated by systematic limitation.**

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Teaching the basics of typographic anatomy to young students can sometimes be a difficult task. One of the challenges we face as educators is how to create deeply engaging activities through which students can acquire the required knowledge for the course. The issue of engagement is critical, and it is where lectures and auditory learning can sometimes fall short when it comes to skill and practice based disciplines such as design. The challenge is to effectively utilize existing models and explore new mechanisms in order to create learning activities related to typographic anatomy and letterform construction, which will allow students to interface with their learning not only mentally, but also physically.

In response to this issue I developed a 4 week project for our Sophomore level Typography 1 course given in the fall semester of 2012, based on a similar project I had given previously. The project was built around the same learning objectives as the lecture material we had used in previous versions of the course but utilizing a different mode of learning (physical vs. auditory / visual). The goal was to create a situation where students would engage physically and tactilely with learning outcomes related to typographic anatomy, vocabulary, and usability/legibility. The project activities involved creating 2 limited typefaces (1 latin lowercase, 1 arabic freestanding forms) using low resolution grids found in the surrounding environment.

The project utilized limitation as a mechanism for focusing the students on specific learning outcomes. Specifically, by limiting students to design low resolution typefaces their design activities focused on the basics of letter construction and the relationship of individual letter elements to the overall system of the font, without being distracted by other more complex factors present in vector-based, and hand-drawn type design. The second limitation was the requirement that students work in physical space, making with their hands. My aim was for this physical activity to lower the barriers to rapid prototyping and iteration, allowing the students to have a sense that their designs were easily malleable, changeable, open to constant experimentation and improvement.

After beginning the project in class, my colleague Diane Mikhael and I observed that students were able to engage immediately with the task. They had little trouble finding existing grids in their environment and experimenting with the creation of low resolution typefaces. As students worked through their initial explorations we noticed that many of the students had hit obstacles in their process where they desperately needed specific concepts of typographic anatomy and vocabulary in order to move forward. This 'need' for specific tools and concepts seemed to make the students much more receptive to the knowledge we delivered through classroom discussions, short lectures, and critiques. In addition to the 'need' for new knowledge, the students also had a directly related outlet (the typeface project) through which they could immediately apply the new concepts, techniques, and vocabulary.

As a result of this experience we observed that the creation of physically engaging projects utilizing aggressive and systematic limitations can create situations through which students can better engage with course material. Additionally we found that confronting students with problems in which they are compelled to make progress without the proper tools, concepts, or vocabulary can result in better reception toward new information related to their current activities.
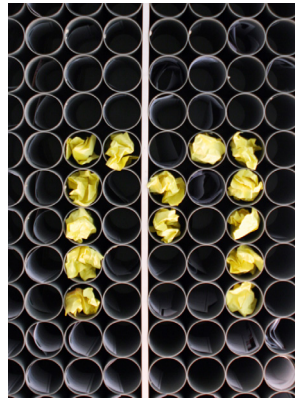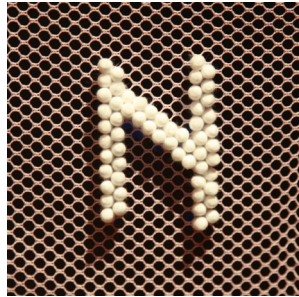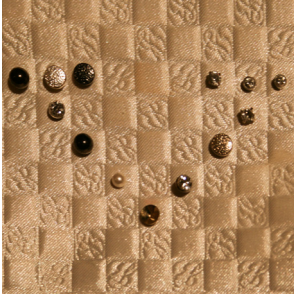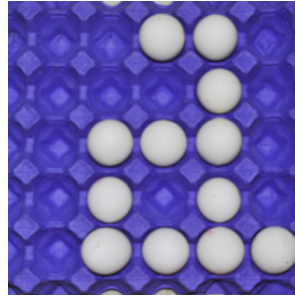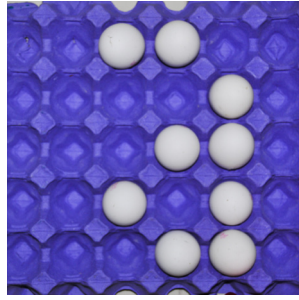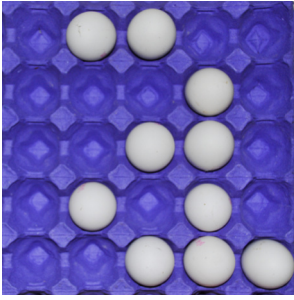
**Early experiments**.
These letters where the first experiments caried out by the students. As of writing this abstract the students are finalizing their designs and will turn in 2 typefaces:
1 Latin & 1 Arabic.

**Previous Project**.
This typeface was made in a previous class where I gave the same project.