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Learning To Be an Experimenter — Tangible Prototyping of Letters

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Abstract: This paper contributes with a presentation of a case study introducing students to the use of tangible prototyping as a method of idea generation to create letter forms. Sometimes when we face a design challenge the fear of failure and of making mistakes takes over slowing down or, in a worst case scenario, blocking our creativity.

Especially for young design students, who yearn for the solutions to be found on the Internet, it is of great importance to teach them that ideas can be generated outside a computer. This case study uses innovation methods applied by inventors from other professions which, I believe, can add new or different assignments for our students to discover and work with typography. The paper primarily argues that a playful, tangible approach to making letters is fruitful for the purpose of generating ideas. In the presented cases, we are giving the students methods used in innovation. One of them is the role of being an "Experimenter." The paper also presents how the self-produced letters from the cases were transferred to another assignment, where they were made into posters for different stakeholders.

Key words: Teaching, pedagogical approach, experimenting, exploring typography, tangible prototyping, idea generation methods.

1. Introduction

As educators with many years of experience in graduate and undergraduate teaching, we have witnessed the design world and the demands on designers change. The case studies presented in this paper actually had their starting point some years ago, when we were asked to teach a group of students who were completely new to the field of graphic design and most of them without any digital skills either. Since the students were not experienced with working on the computer or sketching by hand, the assignment was set up at that time asking them to physically sketch in materials. Over the past few years this approach has been a good exercise and experience for the students as an introduction to tangible prototyping as a path into the world of graphic design for inexperienced students; however, it is also another way of doing idea generation.

Rather than focusing on problems such as how to design a logo, a book or layout compositions, the exercise was set up to encourage the students to experiment and investigate their visual language through curiosity and the notion of play – an exercise that might reveal other aspects of their creativity. This paper will give a brief presentation of three workshop examples using the method tangible prototyping, and also illustrate how, in two of the workshops, we used the exercise to turn it into posters.

2. Cleese on creativity and creating an oasis for play

Before introducing the workshops, let us take a look at the concept of creativity. What is creativity and how can we describe it? According to John Cleese, the famous British comedian, it is not a skill or an aptitude; it is a "mood," one Cleese describes as "childlike" in that it aids one in the ability to play. As all artists know, genuine creative insights occur when rational thought ceases — during dream states or moments of absorption so intense that "self-consciousness, anxiety, and the needling cares of the day drop away." Cleese also puts it this way, "if you're racing around all day, ticking things off a list, looking at your watch, making phone calls and generally just keeping all the balls in the air, you are not going to have any creative ideas." Cleese also comments on where ideas come from and, as he stated, "we do not know." "What we do know is we do not get them from our laptop" (Cleese 2009, 5:06). We get our ideas from what Cleese calls "moments of unconsciousness, the part of our mind that goes on working for example when we are asleep."

In Cleese's opinion we become creative when we are in the right mood, by creating oases that allow us to play. Of course, as Cleese and his hard-working co-creators also show us, a great deal of grown-up discipline is required to bring creative ideas to fruition. In order to create these oases, Cleese says, you need two things: *boundaries of space and boundaries of time*. Boundaries of space mean creating boundaries to avoid interruptions. Boundaries of time mean scheduling time to be creative by giving oneself a "starting time and a finish time" in order to set up an oasis that is separate from ordinary life that allows us to play (Cleese 2009, 7:30).

Johan Huizinga summed up his elaborate definition of play as follows: "Play is a free activity standing quite consciously outside 'ordinary' life as being 'not serious', but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner" (Huizinga, 1949, 13).

3. Case study – Tangible prototyping

3.1 Description of workshop methodology

In the workshops we presented to the students they were asked to use tangible prototyping as a method for generating ideas, by setting up John Cleese's previously mentioned boundaries of space and boundaries of time; we also introduced the students to the design methodology based on IDEO's [1] innovation methods of being "an Experimenter."

The Experimenter may be the most classic role an innovator plays. Great inventors come to mind when we think of Experimenters, men like da Vinci, Thomas Edison, the Wright Brothers, etc. But when it comes to innovation, Experimenters don´t need to be geniuses. What Experimenters share is a passion for hard work, a curious mind and an openness to serendipity (Kelly 2005, 42). According to Kelly, Experimenters love to play and try out different ideas and approaches. They put roller skates on a scientific method; they work fast; embrace little failures in the early stages to avoid big mistakes later on; and they push ideas into a more tangible, visual form as quickly as possible. Experimenters recognize that the best time to try something really new (and risky) is when you have nothing to lose (Kelly 2005, 43).

[1] IDEO is a world-renowned international design and consulting firm founded in Palo Alto, California, in 1991.

3.2 Description of tangible prototyping exercise

The students were asked to make a lot of quick prototypes, which in this exercise is a really important step on the road to success. Every student was asked to sketch tangible letters. They could decide themselves if they wanted to use the same letter or different letters or the whole alphabet.

In some workshops we asked the students to do 100 sketches of letters over two full days. In other workshops with fewer hours we asked the students to do 30 to 40 different sketches.

The students documented all their sketches with a digital camera or the camera on their cell phone. The letters had to be physically created by materials the students found in their surroundings or brought from home.

We suggested some directions the students could consider to get their process up and running, for example;

- *suggestions of materials;* liquid, transparent, soft, hard, etc.
- *suggestions of actions;* curl, fold, tear, stack, squeeze, chew, throw, mix, stretch, demolish, etc.
- *suggestions of form;* positive, negative, microscopic, gigantic, delicious, disgusting, etc.
- *suggestions of moods;* humorous, sarcastic, dramatic, eerie, exaggerated, understated etc.

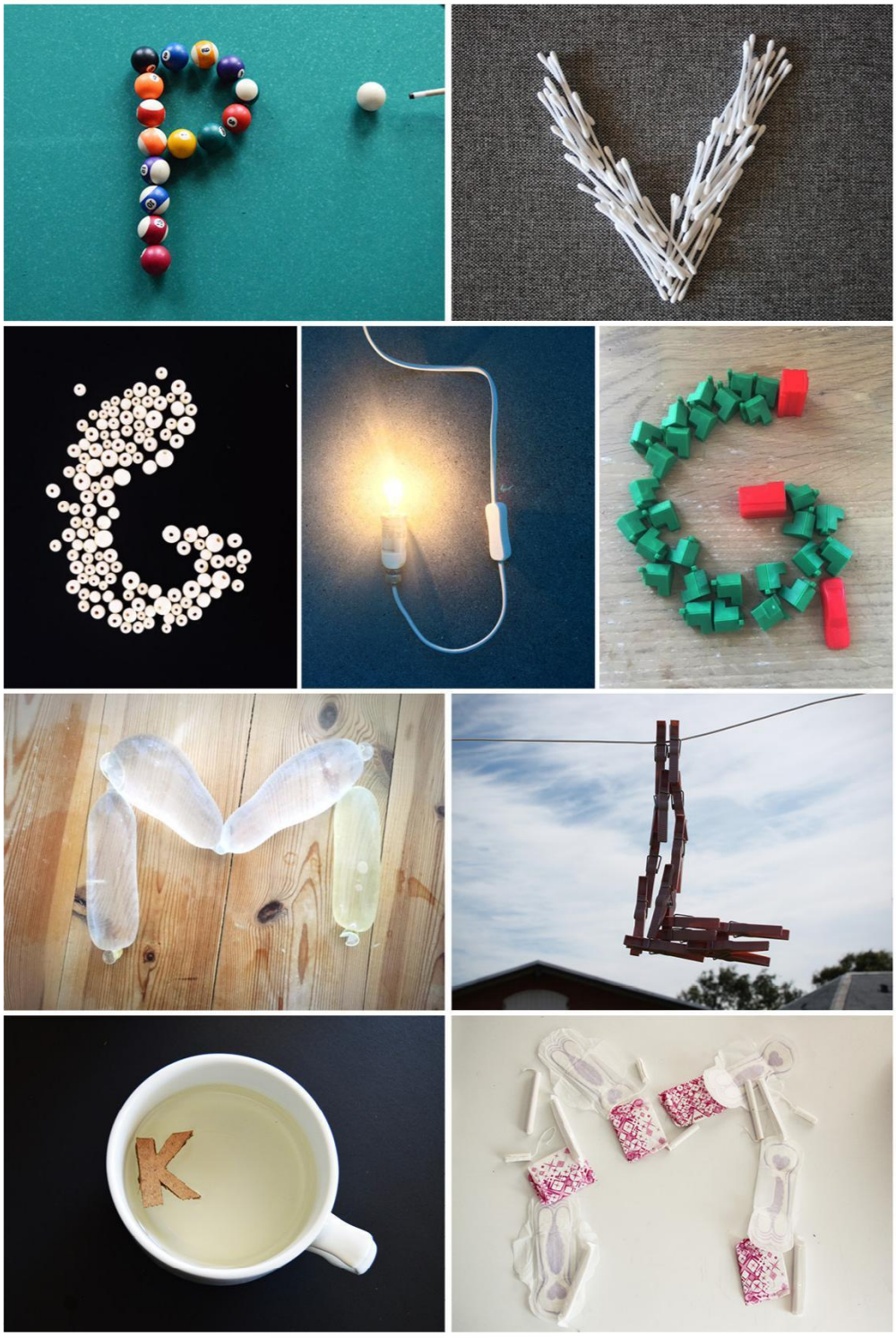
Furthermore, after photo-documenting some of their sketched letters the students were encouraged to develop their letters further, for example by experimenting with crushing, chewing, tearing, adding another material, etc. Only their imagination would set a limit for what to do.

The last and most important thing about these exercises was that the students were completely free to follow some of the previous suggestions. And there were absolutely

no rules to follow in this exercise in being an Experimenter. That also meant that in this assignment the students could not do anything wrong.

3.3 Workshop example no.1

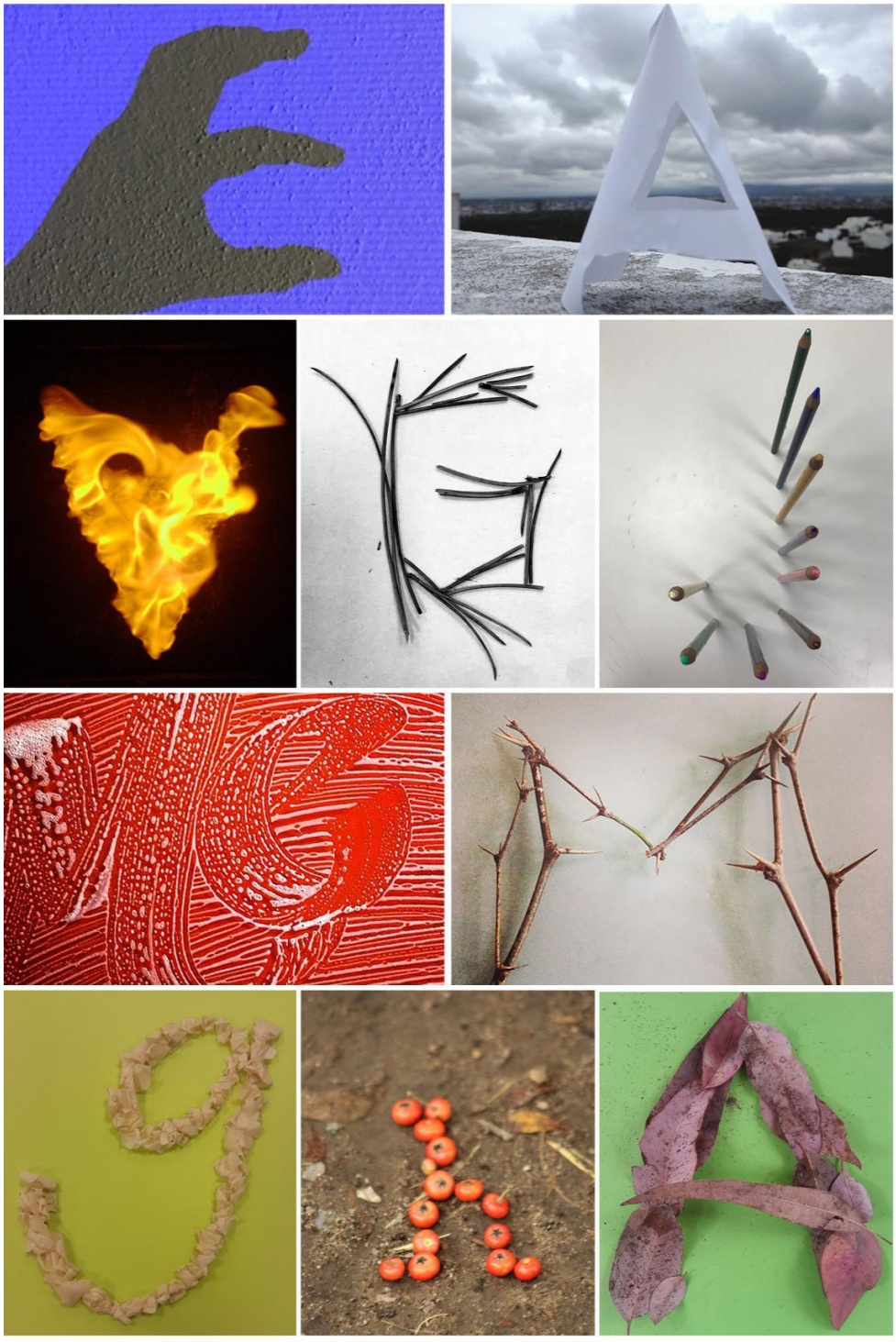
This workshop was conducted with young graphic design students aged 15 to 16 who were all new to the field of graphic design. Each student was asked to produce 100 tangible letters in two days, without any use of computers. This class had 15 students so the result was 1500 letters documented by photos.



Few examples from the workshop

3.4 Workshop example no.2

The second workshop was held with second- and third-year graphic design students in Mexico. The students had four hours every day for three days and were asked to produce 30-40 tangible letters. This class also had 15 students who produced around 500 letters documented by photos. This time we asked the students to bring some materials from home.



Few examples from the workshop

3.5 Workshop example no.3

The third workshop was held with third-year graphic design students in Jordan. The class met for three hours every day for three days. They were asked to produce 30-40 tangible words of their own choice in Arabic; it could be the same word or different words. This class also had 15 students who produced around 500 letters documented by photos. We also asked the students to bring materials from their home.

Few examples from the workshop. Translation of the words in the pictures:

From top left - Hope - Cover - Hunger - Woman - Imagination - Patch - Love - Cold

4. Turning sketches into posters

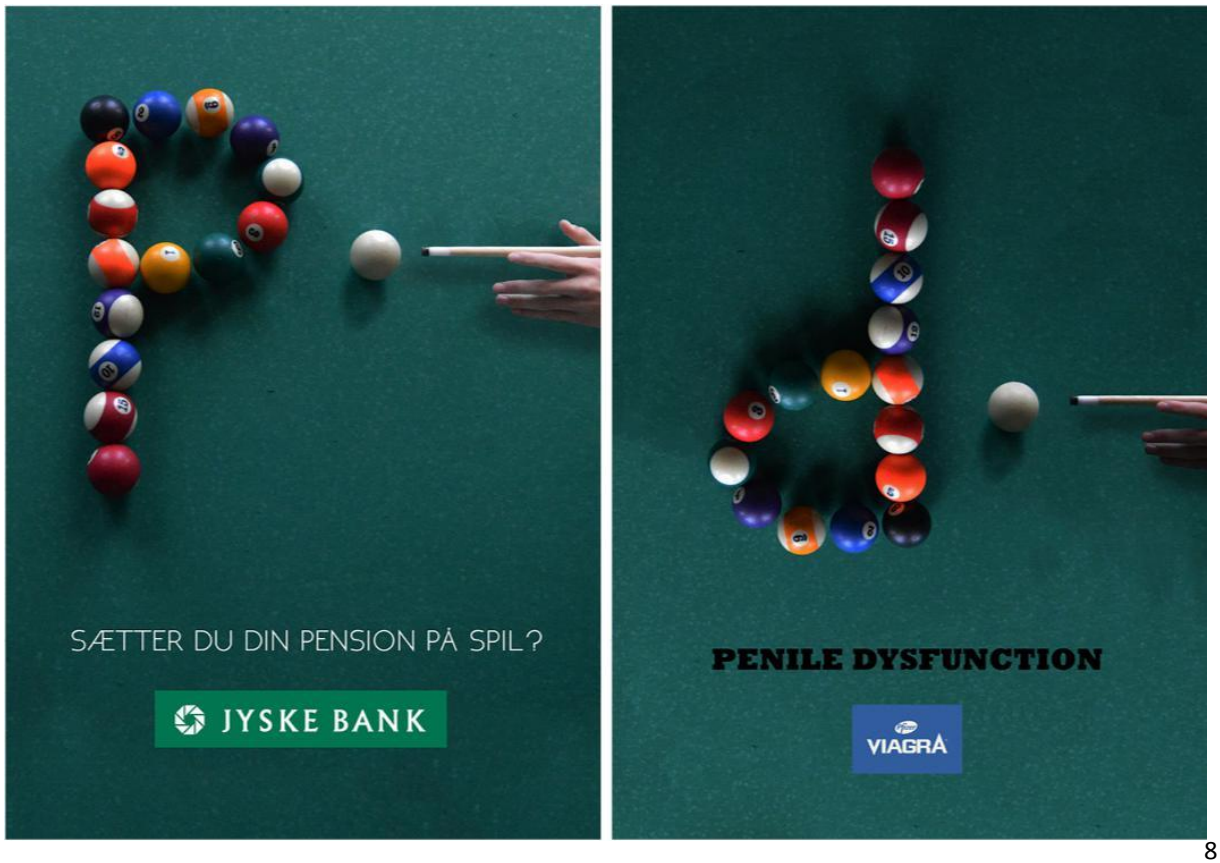
4.1 Brief description

We had time to select some of the sketches from some of the workshops and turn them into posters. The purpose of the first exercise sketching as an Experimenter was to allow the students to play and just sketch trying out different approaches without a special communicative purpose.

When the tangible prototyping exercise was done and the students presented the different sketches, we asked them to pick one or two of the sketches and turn them into posters.

4.2 Workshop example no. 1 - Turning sketches into posters

In workshop example no. 1 we asked the students to pick one sketch and turn it into two posters. They had to use the same picture but make them appear as if they came from two different sources.



Poster examples from two different sources

Left: Poster for a bank, talking about retirement savings

Right: Poster advertising the product Viagra

Left: Poster for open air music festival. Source: Roskilde Festival

Right: Poster for a shopping center advertisement for a spring sale. Source: Rosengardscentret shopping mall

The purpose of this exercise was for the students to experience how communication can change using the same image and making a few adjustments to the text, depending on who the source is and whom you are communicating with.

4.3 Workshop example no. 2 – Turning sketches into posters

In workshop example no. 2 with the second- and third-year students we formulated the questions a little differently, asking them to pick one or more of their sketches and turn them into a poster for the workshop they participated in at the International Design Conference, CID2016.

Different posters for the workshop Experimental Typography at the International Design Conference CID2016

5. Conclusion

In this paper we have presented a case of introducing students to doing tangible prototyping as a method of idea generation. Through the workshops the students were introduced to design methodologies based on IDEO's method of being an "Experimenter," the importance of play and the philosophy of rapid experimentation. Working with tangible prototyping is another way of showing the students how to explore creativity.

A widely held myth suggests that creative geniuses rarely fail. According to Professor Dean Keith Simonton, the opposite is actually true. His research has revealed that creative people simply do more experiments. Their ultimate "stroke of genius" does not come about because they succeed more often; they just work harder. Creative geniuses like Mozart or Darwin were quite prolific in terms of failure; it just did not stop them. The simple recipe for innovation, according to Simonton, is: if you want more success, you have to be prepared to shrug off more failure (Kelly & Kelly 2013, 40).

The set-up of the assignments – creating a space and an environment where the students can be playful and dare to try different ideas and approaches – is of great importance. In our opinion there are still ways to explore the set-ups of the workshops. For example, in terms of time, these workshops were short. What would happen if they ran for three hours, one day a week for six months? What if there were a specific theme or client to design for? These might be steps to take in future workshops.

As pointed out in the introduction, the exercise started as an assignment for students who were new to the field of graphic design and for the most part had no experience in working with typography or designing on computers. This exercise has been used as an introduction to graphic design and idea generation. It has also been used to show an alternate way of sketching ideas that does not necessarily have to be with pen and paper. For some students it has been an eye-opening method to use in their further development of working as a designer.

The case presented here shows how speed can be (or become) a great and fun tool for idea generation and also what tangible prototyping can add to idea generation.

This paper also points to a topic we all try to get our head around: How do designers get their ideas? How do I (as a student) get ideas? How do I overcome the fear of not succeeding, the fear of making mistakes or, in a worst case scenario, not getting any ideas

at all? We are all human beings with different approaches, tastes and interests. And we all have to individually develop our own skills and curiosity in our way of working as designers.

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