

LEARNING BY DRAWING. A CONVERSATION ON HAND DRAWING WHEN EDUCATION IS GOING DIGITAL

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Abstract

The paper displays a conversation between the two authors. They reunite after ten years since the international summer school *Around the Wall*, which they co-organised and run in Lucca (Italy) in 2012, to reflect on hand-drawing education, mainly through their experience in teaching in different design environments. The conversation tells about how that summer programme represented for the authors the first steps to test some learning strategies that later on fed their teaching approaches, one at the BA in Design at Universidade da Madeira (PT) and the other at the BSc in Product Design at Politecnico di Milano (IT). In particular, *Around the Wall* summer school focused on hand drawing as a tool of personal discovery, reflection and visual communication, serving each phase of a design process. Also, the summer programme provided the participants with a multicultural and multidisciplinary environment to encourage a sense of collaboration and stimulate creative thinking.

Over the ten years of teaching drawing within different design curricula, the authors encountered various teaching challenges and requirements to respond. Hand drawing education at the Design BA at Universidade da Madeira follows a horizontal approach. The learner is provided with many hours to experiment with different exercises and techniques to identify and develop a personal style for visual communication. At the Design BSc of Politecnico di Milano, the approach is vertical. Here the teaching aims at optimising the few hours dedicated to drawing so that learners can effectively develop their skills and methods for drawing by hand within a product design process.

In the context of a design education moving faster toward digital learning environments - especially forced during the lock-downs in 2020 and 2021 - the authors reflect on their personal teaching experiences to identify educational guidelines for using hand drawing as a creative tool to learn to communicate, in any field. Finally, the authors conclude their conversation by imagining some future teaching/learning scenarios as a cross-pollination result between their personal experiences and considerations.

Keywords: *Hand drawing, design education, visual communication, learning-by-drawing.*

1. Around the Wall Summer School: discovering hand-drawing as a method to learn, research and communicate

The two authors share similar design training and a PhD in Design at the Department of Design of Politecnico di Milano. Their doctoral research focused on design education and representation techniques: mainly Flora Gaetani (FG) on hand drawing for product design and Valentina Vezzani (VV) on colour as a visual communication variable.

FG: *Do you remember why we decided to organise an international summer school based on hand-drawing?*

VV: We first met at a design summer school in Sicily in 2010 during our PhD years. We were so enthusiastic about that experience that it allowed us to connect with people from various parts of the world, studying and teaching in different creative and design fields. We realised that we could create a learning programme that could be exported and applied to different contexts and adapted to different needs. Thus, in the end, *Around the Wall* was born.

*We picked Lucca as the *Around the Wall* summer school location because the city could offer various opportunities to explore hand-drawing as a communication tool. Right?*

FG: The 500th anniversary of Lucca city walls inspired the central theme of our summer school; in fact, the walls define an enclosed space, but they can be walked, and they allow one to observe either outwards toward the more modern portion of the city or inwards toward the old city.

I remember that both programme and mentors' contributions had been chosen carefully to provide the participants with a complete educational experience. What were we trying to achieve?

VV: We had invited four mentors from different countries and with different professional backgrounds: Marianna Calia (IT), PhD in Architecture and Urban Phenomenology; Anthony Latino (US), Architectural Project Coordinator for The Pertan Group; Yulia Kryazheva (RU), architect and illustrator, and Jonas Piet (NL), service designer. The basic idea was to provide the participants with a multidisciplinary and multicultural learning experience that could enrich their personal and professional paths. In particular, each mentor proposed different hand-drawing exercises to observe and investigate the city. The ten-day programme included quick knowledge transfer moments, which we used to call *pills of knowledge*, and practical hand-drawing exercises. Each one of these was led by the expertise of one of the mentors. So, for example, you, Flora, proposed an exercise in surveying, Yulia and Jonas focused on collecting the voices and stories of the city, and I proposed to observe the city's colours and how they changed. We made the students walk and cycle along the walls, climb the Guinigi Tower to see the city from the top, get lost in the labyrinth of its narrow medieval streets and finally sit down in the main squares to capture the still-moving city. While the participants were learning about different methods to investigate the complexity of an old city in constant change and evolution, they were also using their drawings as a base for some design ideas to propose eventually to Lucca's councillor for culture.

2. From 2012 to 2022: ten years of drawing experience and tools evolution

VV: *From the experience of Around the Wall summer school to today's teaching methodology, what is the role you assigned to hand-drawing? And what for designers?*

FG: Drawing is the primary tool for professional designers to express their ideas for themselves and others. Over the past ten years, I have refined my drawing technique by favouring fast-sketching, investigating, researching and trying to pass on to my students the techniques I was experimenting with. On the relationship between drawing and design, in the introduction pages of the book *The Hand of Designer* (Serrazanetti & Schubert, 2010), Vanni Pasca starts from the historical meaning of the term drawing, dividing it into a double meaning: the *inner drawing*, such as the mental, ideational, intellectual one, and the *outer drawing*, that is the operational one, learnt through exercise and practice. With this in mind, teaching in *Drawing Studio*, a first-year course at the BSc in Product Design, I have built up a method to help the students develop the ability to express themselves through fast, instinctive drawing to develop the *inner drawing* in their daily practice. As for *outer drawing*, in my practice as a teacher, it is what I most associate with digital technologies, which allow us to arrive at aesthetically consistent results with the project and the scenario of use while decreasing the time it takes to create the final image. Optimising the time we have available is fundamental in teaching representation tools. In Politecnico di Milano, the number of hours available to teach drawing techniques is limited. Therefore, the idea is to optimise them by focusing above all on their ability to use the drawing daily: the ability to express a more aesthetic and evocative image is postponed to the teaching of digital rendering following three-dimensional modelling and the work that is done within the project laboratories.

What are the main objectives of your teaching hand-drawing? What do you want the learner to achieve?

VV: From a design education perspective, drawing by hand is functional for developing some of the professional design skills and capabilities mainly related to visual thinking and communication. Before this, though, I see hand-drawing as a tool for understanding the real and facilitating a process of self-knowledge. In fact, by experimenting with various ways to draw by hand and discovering different materials and techniques, the learner becomes aware of his interests, capacities, limitations and potential. These aspects highlight the importance of hand drawing in design curricula before any computer graphics course. To contextualise my beliefs, I have been teaching the BA in Design at the Universidade da Madeira for seven years. The three-year degree course provides the students with basic design knowledge and skills to look for specialisation either through professional experiences or a master's degree. In particular, I teach *Desenho2*, a first-year curricular unit, whose purpose it aims to provide tools and methods to become good communicators, aware of their skills and potential when it is to representation and visual communication. Anita Taylor writes: "As a primary visual language, essential for communication and expression, drawing is as important as developing written and verbal skills. The need to understand the world through visual means would seem more acute than ever; images transcend the barriers of language and enhance communications in an increasingly globalised world" (Taylor, 2014).

3. The teaching methodology built on ten years of experience.

FG: *What is your teaching methodology, then?*

VV: I have been able to build a teaching methodology that assigns hand drawing four main functions (and their learning outcomes): *drawing as therapy* (to get confident in hand drawing; to discover personal capacities and strategies); *drawing to learn* (to observe carefully and imitate brings to understand what is in front and get knowledge); *drawing to think* (to support visually a thinking process -

visual thinking); *drawing to communicate* (to communicate visually an idea, a concept, a process, a story). The proposed practical exercises and projects aim to make the students aware of these four functions and learn to consider hand drawing as a tool for designers to communicate. For instance, to rediscover hand-drawing and become confident in holding a pen and tracing some lines on paper, I have collected a series of basic exercises regarding lines, strokes, textures, and colour basics that will then be at the base of more complex projects. Alternatively, to learn to observe, I have gathered some short experiences of drawing in the field, either in the streets of the city or in a park, to allow the students to become more aware of scale, points of observation, and geometry or structure. I think I was inspired very much by our summer school *Around the Wall!*

FG: While your methodology is based on providing hand-drawing with specific functions, particularly as a visual communication tool, the teaching methodology I have developed over the years at the Politecnico di Milano - that, let us remember, it is a technical university - reflects the challenge to enhance the limited time available for teaching representation subjects in design courses. Integration with digital tools allows a significant improvement in time, focusing efforts on communicating project content effectively. However, the fact remains that, even when assisted by digital technologies, drawing remains an analogue gesture involving hand-eye coordination and the ability to perceive and analyse shapes and proportions (Coradeschi, 1986). To systematise the knowledge required from the students, I mapped the representation skills a product designer must possess and the tools he or she must master. Then, focusing on freehand drawing, I created a second map that relates the tools to the design process (Brevi et al., 2018). The leitmotif of the two maps is represented by the *shape-image* axis that describes the fields to be investigated during the Product Design creative process: from creating the shape to choosing materials and finishes that define the final image of the object.

4. Results from the two teaching methodologies

FG: *What have you got out of applying your methodology within your teaching practice?*

VV: The semester is relatively short for the students to become very confident in hand drawing, develop good observational and representation skills and find a personal visual language to apply to different visual communication project intents. So the first two weeks are dedicated to producing an A5 booklet gathering various experiences with lines, strokes, textures and colour samples as a visual and practical index for following projects and illustration experiences. From the basic exercises, the students then move to a project that requires life drawing experiences. They again move through a series of propaedeutic exercises of discovery: from identifying the morphology structure to the drawing of the same subject with different lines and strokes, changing material and types of gesture (Figure 1).

Figure 1. Life drawing experience with a focus on some endemic plants in Madeira Island; from morphology studies to free exploration of representation techniques.



Figure 2. Collection of fanzines for the project Fanzines Against Apathy.



The final project would instead focus on visual narratives, and these require the students to connect their visual choices of composition, style and technique firstly with the message they want to convey visually. I have proposed that the students use fanzine formats to disseminate their visual

narratives and ideas in the last few years. In particular, during the lockdown, I started to get worried about the quantity of disinformation and apathy that hit today's societies and our youngsters. The project *Fanzines Against Apathy* demonstrated promising results in making the students gather exhaustive research on a particular theme, identify the message to convey, and test and identify the visual style and sequencing to catch the attention and effectively communicate the contents (Figure 2).

What about your methodology? How did you apply it?

FG: The numerous exercises provided during the Drawing Studio demand the students to keep up with their daily hand drawing practice routine (Figure 3). Drawing reviews occur collectively so that by participating in the critique of their peers' work, they can develop their critical way of observing and thinking. The collection of all the exercises in a coursebook integrates analogue drawing tools with digital ones and makes communication more effective, enhancing the expressiveness of initial sketches (Figure 4).

Figure 3. A student's (J. Lopez) evolution of graphic technique during the First Year Drawing Studio.



The idea of the booklet had a double sides goal: to train students in a process from analogue (sketches on paper) to digital (the scan, the selection of the better images, the filling of the graphic template) and back to analogue (booklet printing) keeping a good quality all over the entire process; to start putting students on the path for the future creation of their portfolio, a composition that will become of fundamental importance for them in the following years. Avoiding the booklet's design helped save time and let the students be more focused on the quality of visual communication.

Figure 4. Students Coursebook



5. Discussion and conclusions.

VV: *How do you see hand-drawing today? I mean, why is it essential for you?*

FG: Freehand drawing is essential because it allows one to jot down a thought. According to Franco Raggi (Serrazanetti & Schubert, 2010), a Milanese architect and designer, it serves to explain oneself by following a quick and elusive thought. He asserts that drawing is the only way to express ideas that pass through the head like phantoms because: "drawing can also be deficient, approximate, partial, wrong, but it is still a testimony of our thought that becomes legible, that can be looked at and criticised and even sometimes thrown away if it is not very effective" and, about the drawing exercise, he claims that: "the quality of the exercise of drawing [...] choosing what to look at, choosing what to draw means training the hand, and the eye first and the brain before that, to erase, to remove to decide what to erase and overshadow and instead focus on what is (seems) interesting". It is not vital which tool one decides to use, as long as it is always available and allows us to have a trace of what is needed and essential.

What do you think is still missing, either in design education or in higher education in general?

VV: In design education, especially at a bachelor's degree level, I can notice that the trend is to create design technicians, able to cope with the demands and intense rhythms of the industry. However, universities should have the pure role of enabling students' critical consciousness, supporting them in training curiosity and engagement with societal, economic, political and environmental issues. In today's design education, foundational courses must provide essential knowledge and tools to understand, think,

and do in a design context. However, they must boost the learners' self-confidence, break their system of misconceptions, and open their minds by building curiosity and motivation as the main engines for creativity and innovation.

FG: *Thanks to Around the Wall experience, we had started to figure out how freehand drawing can become a valuable tool of communication, not only for creativity or arts. Haven't you found more opportunities to explore the learning opportunities that this type of practice can open?*

VV: Oh yes! I can mention the events *Drink & Draw Funchal* that my colleague Elisa Bertolotti and I have been running since 2019, following the international movement based on informal gatherings of people interested in spending some fun and social time through hand drawing. In the situation of a Drink & Draw, the activity of drawing is once again a collective experience and allows people to open up, connect and sometimes even heal. Another experience that I would mention was the *Atlantic Wonder 2019 Summer School* when we provided the participants with a booklet rich with different types of papers and layouts to record their discoveries in the field and dialogue with local biologists and natural scientists. In that case, we were assigned to hand drawing the role of communication tool, or better, to bridge the technical and scientific information with a simple and personal way of representing internalised reasoning.

So to conclude, tell me three keywords or guidelines that cannot be missing from freehand drawing teaching or even design education in general?

FG: The first guideline that comes to mind is also the most obvious: show students how to do the exercises through practice. **Displaying the exercise** allows students to *learn by seeing* through their mirror neurons (Freedberg et al., 2007), which activate when we see an action being performed, as drawing is. For this reason, it is essential to allow all students to see the teacher's hand drawing rather than using stationary materials (such as slides) to transfer the technique. **Continuous, daily practice** is an exercise that is important to stimulate. In this way, students will be able to use drawing as a natural language, without worrying about the gesture made but concentrating exclusively on the message to be communicated. In this way, the representation will be more effective. Moreover, it is essential to create the conditions for classroom time to be used for **collaborative activities and experiences** from a horizontal didactic perspective. In this way, the teacher does not assume the role of the leading actor but instead becomes a kind of facilitator, the director of the teaching activities, and the students feel free to help each other.

VV: I agree with your idea of **sharing** and **collective experience**; what matters is that in this *learning-by-doing* process, they find comfort and curiosity in other people's work and visual/technical solutions. As solving problems requires more than ever, the participation of more minds and types of expertise, also hand drawing in a shared mode, would set the right mindset for future creatives and designers! **Autonomy** is another essential concept. Learning is a progressive path that requires patience and self-discipline. Even in the case of hand drawing, learners should have clear in mind that the professor cannot provide the complete recipe to become the best drawer or illustrator. Each person is different and may take different time and types of practical experiences to achieve optimal results. Finally, hand drawing has got this reputation of being only for a few talented people. I introduce *Desenho2* classes by clarifying that everyone can draw, just most of us have forgotten how not to be scared of the white paper and old a pencil. **Making mistakes is a good thing**, it is essential, but it is also essential to reflect on the error and try again and again until satisfaction. Moreover, I would say that personal satisfaction is a real prize to achieve.

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