

How can creation occur by 'drawing from masters' drawings' in undergraduate Graphic Design courses (a proposal)?

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Abstract

In this essay, we readdress manual observational drawing, in drawing classes of graphic design undergraduate courses. Our teaching proposal supports itself on exploratory, and empirical research studies as well as cognitive applied research: 1st validating that - through copying-imitating other artists' drawings, students can achieve creative outputs and develop other drawing fundamental skills identified as essential for graphic designers; 2nd how that can happen throughout - drawing from masters' drawings -, suggesting teaching strategies, deducted from five identified cognitive mechanisms fostering creativity - 'reinterpretation' or 'constraint relaxation'; 'flexible abstraction'; 'combinations'; 'borrowing structure' or 'mapping', and 'find a new problem space'.

Keywords

Observational drawing; drawing from masters' drawings; copy-imitation for inspiration, ideation, and creation; project-based-learning; Graphic Design undergraduate course

¿Cómo puede ocurrir la creación a través de 'dibujo de dibujos de mestres' en graduaciones en Diseño Gráfico (una propuesta)?

Resumen

Este ensayo problematiza el lugar del dibujo de observación manual en clases de dibujo de carreras de diseño gráfico. Nuestra propuesta de enseñanza se apoya en estudios de investigación exploratorios y empíricos y en investigación cognitiva aplicada: 1) validando que copiando-imitando dibujos de artistas, los estudiantes pueden lograr resultados creativos y competencias de dibujo esenciales para los diseñadores gráficos; 2) sugiriendo - dibujar de dibujos de mestres - y deduciendo estrategias de enseñanza de cinco mecanismos cognitivos identificados, que fomentan la creatividad: 'reinterpretación' o 'relajación de restricciones'; 'abstracción flexible'; 'combinaciones'; 'préstamo de estructura' o 'mapeando' y 'encontrar un nuevo espacio problema'.

Palabras clave

Dibujo de observación; dibujo de dibujos de mestres; copia-imitación para inspiración; ideación y creación; aprendizaje basado en proyectos; graduación en Diseño Gráfico.

Introduction

The main objectives that conducted this essay are rooted in research findings of exploratory and empirical studies, that are addressed in this essay, regarding: — The cognitive and pragmatic functions of manual drawing teaching in graphic design undergraduate courses, at higher education level; — Cognitive mechanisms that occur while copying or imitating art & design drawing works, allowing the leap of creativity.

These findings allowed us not only a new look at an ancient Academia learning methodology (Caiado, 2002, pp. 225-242) – Drawing from Masters' drawings (Cole, G., 2021), and its' potential, but to devise an approach to observational drawing, namely a 1st activity approach to the only Drawing Curricular Unit of our 1st year/1st-semester drawing classes, of a graphic design 3 years undergraduate course, that allows us to push forward both two students' profiles (those who have already observational drawing skills versus those that ended drawing around 15-16th years old), and to develop fundamental skills to pursue another Curricular Unit – Illustration (2nd year/ 1st semester) learning objectives, while sustaining that, in copy and imitation can foster visual literacy, along with cognitive and manual skills, providing opportunities for inspiration, ideation, and creation, suggesting learning outcomes (skills and knowledge) and teaching strategies.

We adopted the following definitions:

'Observational drawing', here understood as pursuing a depiction of the observed, implying its recognition in the drawing itself, entailing copying through the acquisition of a specific visual language rooted in Western inputs since the Renaissance, such as figure construction, anatomy, morphology, proportions, perspective, size and tonal gradations, light effect principles, line and plane construction, composition, etc. It can be naturalistic or realistic — a more neutral and literal depiction versus a more politically compromised one. It can be done from drawings, photographs/ images, or life. Our proposal, planned to launch right at the beginning of drawing classes, is to work from Masters' drawings.

The expression 'Master drawing', mainly related to Raphael, Leonardo, and Michelangelo's drawings, today encompasses drawings made by visual artists of all periods that show mastery in their composition and execution (involving faultless use of technique and mediums), social and politically compromised with issues, demonstrating style shifts, and capturing 'the rawness of human emotion, expression, and creativity... that

transcend the ordinary.' (Kai Xin Tai et al., Class of 2019).

Creativity, a higher cognition process: neuroscientist António Damásio defined how the brain processes, and understands the world (cognition), starting with sensory stimuli that turn into emotions, and into mental and imaginative recreations generated, also, to tackle problems. Consequently, creativity is embedded in cognition and involves problem-solving: — From a cognitive point of view, creativity is a set of processes that seek variations around concepts, obtaining new and unprecedented forms of grouping, generally selected by value; — From a neuroscientific point of view, a set of activities performed by the brain searching for patterns that incite a perceptual identification of new "objects", using fragments of previous perceptions, presenting a singular resonance, creating a new value worthy of attention. (Caiado and Springer, 2022, p. 46)

Manual drawing 'place' in graphic design undergraduate courses.

There is a resurgent quest for manual drawing as a valuable skill coming both from its recognition as a thinking tool and as a complex expression method/process, within Academia. Furthermore, drawing is no longer just a representation tool "but more essentially as an experimental tool that conveys thought, process, desires, and sensibility" (Aramouny et al., 2019, p.18), from a rapid translator and builder of ideas to an artwork. This quest also arises from the professional design world, searching for graduate students with a more complete set of skills regarding the strong and distinctive character of manual graphic creations *versus* digital ones, that concerns also, for Academia, recovering craftsmanship, along with the need to integrate both digital and manual design practices (Neylan, 2011, cited in Weaver: 2012, p.7). Regardless of the long-established bias — 'Art and Design'-, the artistic dimension understood as a search for novelty-invention-creation, self-expression, and authorship, must also be pursued, and its' poetical, metaphorical, and connotative communication level instead of a literal/denotative one, since in terms of communication, graphic design also must accomplish aesthetical experiences as well as some entropy to captivate targeted audiences.

Although 'Basic Design' and 'Free expression', as teaching methods left their mark in Art & Design Schools from the sixties to the nineties, sougning freedom from the cultural constraints rooted in figurative classicist-naturalist depic-

tions and questioning the ontological status of representation in art, the current “trends” in drawing teaching regard again the practical and cognitive contributions of ‘observational drawing’, ‘ideational drawing’ and ‘Artistic drawing’, as equally important for graphic designers, while ‘common sense’ advises chaining before a set of learning outcomes regarding ‘observational drawing’, as previously defined. Anyway, nowadays we can see a fruitful mixing of all these teaching strategies, where ‘Basic Design’, developments, contributing with a universal grammar of a visual static 2-D language, are really embedded in Graphic Design learning outcomes and communication outputs.

Research findings into pragmatic and cognitive functions of drawing in the ‘graphic design’ academic and professional world.

Taxonomies derived from exploratory or conceptual interdisciplinary research have enlightened important drawing functions at graphic-design undergraduate courses, bringing scientific insight into the benefits of drawing for the producer (both cognitive and motoric), or for tracing its many uses in the designing process. These approaches, including mainly professionals and academics from the art and design field, have influenced three ways design in Academia looks at drawing teaching, such as: — an independent discipline that requires a large learning curve (in our course we have an independent discipline); — drawing activities embedded in project-based graphic design processes, across curricula, regarding its’ various outputs, exploring its conceptual and practical capabilities in design problem-solving, and as so, drawing will deploy its identified pragmatic functions for problem-solving, ideation, visualization, demonstration, instruction, presentation, production, communication — (Schenk, 2007, pp. 9-12), and — a work that can integrate the final layout of graphic design outputs.

So, regarding drawing functions in the broader design context, we considered two contributors:

Three practical functions that cross-fertilize in design processes, meaning that overall, drawing can be descriptive (done after things, fluid or more technical), analytical (how things function — e.g., an exploded isometric), and speculative (an attempt to bring something new into life, with a function and/or with an artistic drive) (Dayem, 2019, p.14).

Four cognitive functions of drawing, identified by Eileen Adams, the project coordinator of ‘Power Drawing – A Campaign for Drawing’,

in her book ‘Professional Practices’ (2006, p.2), presents a classification system based mainly on: — Perception (implies understanding, investigating, improving observation, even for the pure pleasure of drawing); — Communication (promoting communication using visual conventions); — Invention (drawings as part of the creative process and as so comprising a series of steps, with different communication functions, where ‘ideas are explored, repeated, refined, practiced, reworked, discarded, combined’); — Action (involves drawings designed to put ideas into action, allowing to test them).

Regarding graphic/designer drawing abilities, that reflect skills pursued by observational drawing practice, Schenk (2007, pp. 12-13) identified twenty-three, some of which we used to ground the learning outcomes and outputs for our teaching proposal: (1) control a range of specialist equipment; (2) control a range of media; (3) draw accurately; (4) draw quickly; (5) set out or lay out drawn imagery; (6) bring together a synthesis of imagery; (7) imitate the qualities of visual imagery; (8) understand how drawn imagery has been constructed; (9) observe accurately from life; (10) assess the elements of visual style; (11) assess the elements of visual imagery on a cultural or historical basis; (12) judge the appropriateness and quality of drawn images; (13) conceive and depict three-dimensional forms; (14) Ability to plan out sequences of actions or images; (15) resolve ideas in a visual form; (16) Ability to use drawing to instruct others; (17) communicate visual ideas to others; (18) conceptualize and commission potential images; (19) recall and use conventions and drawing systems; (20) memorize visual material; (21) recall visual material; (22) assess the appropriate use of drawing; (23) use drawing strategically in the context of the design process.

Drawing from masters’ drawings. Copying/ imitating for inspiration, ideation, and creation.

Evidence that the confrontation of expert artists with other artists’ works (or different cultures’) led to creativity. We mean by “confrontation”, deep study, through copy/ imitation and connoisseur scrutiny. Ishibashi and Okada (2016) mention this correlation between imitation and creativity:

...examples from art history like Pablo Picasso and Vincent Van Gogh, who created their artwork through active imitation of others’ artworks even after they became expert artists (Homburg, 1996; Takashina, 1983/1995), suggest that imitation is somehow an effective

driver of creativity, even for experts. We may be able to assume that expert artists actively and effectively integrate their creative visions and influences with others' styles to create new works. (pp.1832-1833)

Art and Design History provides strong testimonies that visual artists (including designers) have been influenced both by ancient and contemporary artists, and unfamiliar artists' works/art cultures, leading to reinterpretations, reinventions, and breakthroughs (disruption of previous art paradigms or styles), presenting distinctive signs of originality, even using intertextuality as an expressive and aesthetical resource (post-modernism presents lots of examples).

If we search for art-teaching methodologies since the medieval ages, passing through the journey of Art Academies and the completion of the learning process in famous artists' ateliers, we find a quest — copy, and imitation — as learning methodologies (Caiado, 2002, pp. 225-242). Many artists equipped themselves like this for the leap to creative contributions.

In search of studies that look for this encounter with borrowed ideas, forms, styles, cultures, tools, marks, gestures, themes, narratives, etc., Ishibashi and Okada (2016, p.1806) mention the following authors and respective contributions: — “Weisberg (2006) noted that artists gradually generate new work not only by borrowing ideas from others but also from their previous work”; — “Homburg (1996) suggests that many new styles of painting, and perhaps even entire movements in modern art, have been inspired through imitation”.

Designers search for references (new ideas, languages, and trends) to stay up to date regarding their professional field and to revitalize their work. They search for triggers. In the design methodic creative processes, research for inspiration and benchmarking are pivotal before the ideation stage.

The creative potential of imitating other artists' drawings. For us there is a slight difference between copy and imitation as drawing teaching-learning strategies: a) with 'copy' we mean a transposition of the observed, which is, *per se*, already a big challenge when speaking about drawing learning; b) with 'imitation' we want some degree of deviation of the observed through defined rules in teaching activities since imitation is embedded in our personal and social development process since childhood, and it's not just mimic-driven but,

above all, a constructive and adaptive process (therefore creative) — “imitation is a symbolic process in the sense that we do not only just mimic but also construct goals and sometimes new perspectives.” (Ishibashi and Okada, 2016, p.1807). So, being exposed to a diversity of examples, while learning drawing through copy and imitation, has various potentials we want to unveil.

How can we foster creativity, through the encounter with others' artwork, especially through masters' drawings' imitation? What cognitive mechanisms occur in these encounters that allow the leap of creativity? Martin and Schwartz, in their paper (2014, p.80) titled 'A pragmatic perspective on visual representation and creative thinking' intend to offer a cognitive analysis of how visual (external) representations can increase or compromise the chances of creativity, referring the following “four cognitive mechanisms of creativity supported by visualization”: (a) “Reinterpretation” or “constraint relaxation” (Schwartz, Chase and Bransford, 2012, cited in Martin and Schwartz: 2014) where visualizations help let go of old or unneeded assumptions and constraints (opportunities for reinterpretation can happen when elements of the visualization can be moved or rearranged); (b) “Flexible abstraction” — where people choose which features of a referent are represented, highlighting the important ones while being able to discard the unimportant, using two types of abstraction: “covariant” and “resemblant” (a “resemblant” visualization achieves abstraction through subtraction (e.g.: a map), while a “covariant” representation maintains structural relations of the referent but doesn't look like it) (Cummins, 1991 cited in Martin and Schwartz: 2014); (c) “Combinations”, where visualizations allow joining multiple pieces and types of information into one place — Thagard and Stewart (2011), cited in Martin and Schwartz (2014), argue that “novelty in creativity is often, and perhaps always, the result of combining previously uncombined mental representations.”; (d) “Borrowing structure” or “mapping”, where people appropriate structures and conventions of one visualization type and apply them to a novel problem — “Formalisms come bundled with conventions for interpreting visual features like lines, circles, ordering of elements, distance and so forth, and these conventions differ from one representation to another.” (Collins and Ferguson, 1993, cited in Martin and Schwartz: 2014) (thus, when adopting visual formalisms, they adopt their representational conventions).

Ishibashi and Okada (2016, p.1804), investigating “the cognitive processes underlying creative inspiration” and testing “the extent to which viewing or copying prior examples impacted creative output in art”, concluded that “deep encounters with unfamiliar artworks — whether through copying or prolonged observation — change people’s cognitive representations of the act of drawing to produce novel artwork.” In part, this is a positive answer to our questions, although we must further understand what they mean by ‘unfamiliar artworks’. While examining cognitive research about creativity, these authors arrived at two indicator mechanisms that lead to representational change. Ward (1994), paraphrased by Ishibashi and Okada (2016, p.1806), referred that human knowledge structures itself in pre-existing representations of previously acquired knowledge and that these representations can “limit the scope of problem discovery and determination” which means that “to be inspired by others’ ideas” and engender novel ideas, there must be, at least, an internal process of representational change. So, these two indicator mechanisms that lead to representational change, such as “suppression of the existing default representation”, are: — (also) “Constraint relaxation in insight problem solving” (Hiraki and Suzuki, 1998; Knoblich et al.,1999; Miwa and Matsushita, 2000; Ohlsson, 1992, cited in Ishibashi and Okada: 2016, p.1806); — “Find a new problem space”, by triggering other spheres of knowledge besides the prevailing one (“the term “problem space” has been defined as “a set of symbolic structures within which to move around, an arena wherein many specific problems can be posed and attempted”.”) (Newell, 1993, cited in Ishibashi and Okada: 2016, p.1807). Consequently, constraints to knowledge prevent finding a new problem space because people are led to try to interpret (make sense), inferring from their actual cognitive framework.

Connecting both mechanisms and extrapolating to the context of imitating others’ work, Ishibashi and Okada (2016, p.1807), focused “on how the relaxation of such perspectives or constraints influences representational changes in creative drawing when people encounter others’ artworks through imitation”, finding through their research that people’s frameworks are challenged when confronted with artworks which do not fit in — a moment in which the influence of “the framework becomes weakened (i.e., constraint relaxation takes place). As they try to understand the artist’s intention by comparing it with their own, the process forces them to reconsider their framework, which contributes to the construction of a new framework (new perspective).” These researchers’ expectations

were that in Experiment 1, the Japanese study’s participants (novice art students, with an average age of 20 years old): — would have arrived at higher education with a cognitive framework that prompts them to “translate” drawing as “drawing realistically” and, as proven in previous studies, novice art students’ profile also implies types of art appreciation, where the constraints (preferences) of realism and semantic content (recognition of a theme) prevails; — would have trouble replacing it with other types of ‘perspective’ unless the conditions given to them would allow “constraint relaxation”. So, Ishibashi and Okada decided to “use abstract drawings as models to be copied, as these often depart radically from the realistic style and are often unfamiliar to novices” (Furnham and Walker, 2001; O’Hare, 1976, cited in Ishibashi and Okada: 2016, p.1808). Their findings, per experiment, deserve an attentive look: — In — Experiment 1 — “through copying unfamiliar abstract drawings, participants were able to produce creative drawings qualitatively different from the model drawings”; — In — Experiment 2 — “exposure to styles of artwork considered unfamiliar facilitated creativity in drawing, while styles considered familiar did not do so”; — In — Experiment 3 — “both copying and thoroughly viewing artwork executed using an unfamiliar style facilitated creativity in drawing, whereas merely thinking about alternative styles of artistic representation did not do so.” (Ishibashi and Okada: 2016, p.1804)

So, regarding these findings we can easily extrapolate a universal rule — we must expose graphic design students to diversified examples, meaning art in general, different visual cultures, from different periods, in fact, anything we observe that they have, never, been exposed to, through planning hands-on-activities in order for them to copy or imitate, hands-on active critical experimentation being crucial for knowledge acquisition, processing, and management while developing other ways of seeing the world, and like these being able to, go behind “matter” preferences and invest in formal transmutations, allowing like this creation and innovation. These learning strategies lead teachers also to be creative while envisioning activities so that the final output shows a distinguishable response that departs from the individual response of students who approach the challenge/ problem with their luggage of knowledge, talents, cultural and social idiosyncrasies, and personality traits.

Our contributions to this essay. Drawing from representations of masters’ drawings.

In the realm of drawing activities ideation, pur-

suing creativity, while developing fundamental graphic design skills identified in the previously mentioned contributions of Schenk (2007) and Adams (2006), envisioning the extent of the functions of drawing in design teaching outcomes, amplifying their visual culture-literacy for improving visual communication skills while becoming more risk-taking and creative professionals, we propose copying/imitating drawings of multiple masters, styles, epochs, cultures, compositions with multiple references of visuality (human, animals, landscape, objects, architecture, environments, theatrical scenarios, props, etc.), with different design/art functions, because this sets the stage for students to develop the learning outcomes, which we will soon identify.

Why copy master drawings? (a) Because it is a time-tested teaching-learning strategy; (b) The experience of copying drawings is different from copying from life images/or from life itself once they imply different hand-eye-brain shifts; (c) For drawing beginners, it's advised to copy from drawings, because it allows more time for observation and the development of other skills that we will identify. (d) When feeling stuck or resistant to something they can't draw and for unlocking creativity; (e) Finally, the most important premise is that drawing is, *per se*, an abstraction (Caiado and Springer, 2021), therefore implying creation (from the producer and receiver) once the world is not made of lines, nor is it 2-D or static, although we accept/evaluate the veracity of drawing depictions regarding the real world translated by Western "visual tricks". Drawing demands, from the viewer, a perceptual recognition, as well as abstract thinking which is creation, a considerable mental achievement of the producer, given that a simple outline or line silhouette sketch is an abstract vehicle of artistic communication since prehistoric depictions. So, while Drawing from Masters' drawings, a handful of abstraction-creative strategies and other subtleties of artists' individuality graphic depictions, become conscient (cognition happens).

In — Table 1: Learning Outcomes — we can see the contents of observational drawing and the learning outcomes achieved through practice *versus* critical thinking stimulus.

Regarding teaching strategies: Table 2: Learning through an active critical approach to Masters' drawings observation — once just looking at a drawing or engaging in a mindless copy does not allow us to act as producers and visual communicators, the approach to Masters' drawings must be an active critical one, questioning why the artist did something and why it works — perceptually,

communicatively, and aesthetically -, further developing this sensibility to specific strategies for specific purposes transferable to student works and design problem-solving. To maximize their learning experience and further individual autonomous research, we advise a battery of questions, progressing from individual intuitive, sensorial, and emotional, to conceptual collective and cultural approaches, while integrating knowledge that requires, also from the teacher, deepening of fundamental knowledge. For this learning strategy, we based ourselves on the Visual Thinking Strategies approach (Housen, 1997; Yenawine, 2013) and Discipline-Based Arts Education Approach (Wilson, B. et al. 2004). constructing a battery of leading questions to foster self-reflection, critical thinking, and knowledge construction.

Table 3: Learning through practice (hands-on experimentation) — concerning the five previously mentioned cognitive mechanisms of creativity, we can follow two socially 'consented' copy/imitation teaching strategies:

1. Copy to appropriate and combine.
2. Copy to honor and play.

Postmodernism, the quintessence of the need to look at the past, as raw material, used imitation as reinvention/ reinterpretation/ decontextualization/ disoriented readings, pastiche, leading to creativity, questioning copyright rules and the high and low culture bias, through intertextuality (when artworks evoke their depth to other artists' oeuvres), using the cultural, rhetorical, and semantic power of citation to honor, play joyfully or ironically, evoking in the observer an identification, recognition or the shock of the new, creating enough entropy and consequently, exchanges in communication and aesthetic experience that visual artists seek in audiences (Efland, A. et al., 1996). In this table, we partially justify-conclude the chosen teaching strategies.

Conclusions

Presently, the proposed activities are in the realm of ideas needing to be implemented and monitored to evaluate students' outputs, concerning teaching strategies and respective learning outcomes (above all, the battery of questions, tutorial guidance also on hands-on activities, and theoretical frameworks such as rhetorical tropes and basic design elements and principles).

We have been able of inferring observational drawing activities, correlating them with reviewed theoretical framework about cognitive mechanisms of creativity, contributing to rethink

Table 1: Learning outcomes:		Table 2: Teaching strategies
<p>A. Expressive elements of observational drawing tackled:</p> <ul style="list-style-type: none"> – Traditional drawing and painting techniques approaches. – Mixed-media approaches (collage, assemblage, frottage, grattage). – Graphic-pictorial plasticity-expressivity. – Various shapes for the same referents — characters, environments, and props diverse depictions. – The mark of each scratching and drawing and painting tool, materials, procedures, surfaces, and its expressive interrelations. – Visual and tactile textures and creating patterns through repetition, symmetry, etc. – Proportion <i>versus</i> disproportion. – Anatomy and structure of natural/artificial forms (bionics). – Perspective (one, two, three, four, five points) – Expressive resources such as affective perspective, transparency, simultaneous representation from multiple viewpoints/ angles, animism-anthropomorphism, or animalism. – Styles from different art history movements/ or artists. – Use of tone and color or color palettes and their contrasts. – Order and characteristics of the different layers. – Point-of-view angles (e.g.: scorching; birds-eye-view; worm eyes-view...). – Photography grammar as shot choices (wide shot / long shot; medium shot; close up shot ...) and their expressive possibilities. – Visual rhetorical tropes. – Typography and words expressionistic use (constructivism, dadaism, and futurism) – Type and word as characters (calligrams and visual poetry). – Composition of the various elements (rule of thirds, golden ratio, grids, ...) using design principles. 	<p>B. Learning outcomes (skills and Knowledge):</p> <ul style="list-style-type: none"> – Increasing observation-depiction drawing-pictorial skills. – Developing sensibility for “translations” of the world (interpretations, visions, and creativity processes). – Seeing through others’ eyes — different approaches to the same theme/ referent, narrative-met-anarrative, learning multiple representational strategies. – Controlling drawings’ quality and training the hand to move intentionally. – Experiment with graphic plasticity differentiating marks. – Hand-arm-body-brain coordination (gesture experiencing through small drawings <i>versus</i> large drawings and the exercise of enlarging/reducing the original drawing). – Understanding the “shift” that the artist has already made to transform something 3-D into a 2-D language. – Training in the language of drawing and its specific communication/ visual language codes. – Developing a critical view of what we visually consume and produce. – Feeling the emotions of the artist in the drawing. – Appropriating world representation <i>modus</i>. – Learning through practice how to ‘read’ a drawing. – Applying design elements and principles (learning ‘Basic design’, through observation and practice). – Experiencing tools, techniques, and surfaces, namely drawing surfaces (different formats and proportions and paper qualities — texture, finishes, thickness, color) and drawing materials-tools (charcoal, graphite, oil, and chalk pastels, colored crayons), water-based inks (watercolor; gouache; acrylic canvas paint), pens (fountain pens, fiber-tipped or alcohol or ball-point pens, brushes, metal styli). – Experiencing semantics (visual narrative) and semiosis (meaning production) and how climax moments are achieved. – Identifying/analyzing how rhetorical tropes are visually used. – Getting out of their cognitive framework and appropriate centuries of visual culture (learning art and graphic design history by experiencing it). – Answering graphic-design problems while providing the student with a more versatile profile, capable of responding to a series of briefings/demands of the current graphic-design professional market. – Finding their style, vision, and graphic-plastic expression (authorship) 	<p>C. Learning through an active critical approach to Masters’ drawings using the following battery of questions:</p> <ul style="list-style-type: none"> – What emotions/ feelings does the work arouse in you? — Describe what you see? — What is your favourite part of the drawing and why? — What is the most challenging part of copying this drawing? — What is/are the main and secondary theme(s)? — How is the narrative approached? — How are space-time visual clues approached? — What rhetorical tropes are used? — What kind of line/plane drawing and shading techniques, tools, materials, and surfaces were used? — How is the drawing composed in terms of structural lines, their directions, rule of thirds...? – Organization (how do the elements give the arrangement a sense of whole? How is the image organized? What does the organization of the image tell us?) – How are design principles managed in the overall composition? <ul style="list-style-type: none"> a) Emphasis (what is the area that attracts the viewer’s attention (search for the stress of the image)?): — Contrast (how do — values, colors, textures, and other elements — differences attain emphasis and interest (search for the element that stands out in the image)? why were certain colors used in this image? what does the choice of these colors tell us?) b) Variety (how does the combining of one or more elements create interest? What elements give the image a sense of variety?) and Pattern (how does work visual repetition? How is this repetition achieved?) c) Proportion (how is the relation between parts, and parts and the whole, achieved?) d) Balance (how is visual equilibrium achieved?) e) Unity (how does the arrangement of elements-principles, convey completeness-wholeness?) and Harmony (why is element blending pleasing?) f) Alignment (how does the alignment control how eyes view the image?), Movement (what is the component that gives the sense of action, or what is the path the viewer’s eyes throughout the composition?) and Rhythm (how does the repetition of an element or elements give the sensation of action or vibration?) g) Gradations (what kind of resources allow a series of gradual changes in the elements of design?) h) Proximity (how is the space (figure <i>versus</i> void) used? How close are the elements portrayed in the image? What meanings do they convey?); — what kind of consistencies gives the sense of style? if you could connect to a style(s), which one(s) would you name?

the Drawing from Masters’ drawings method, devising the necessary strategies to allow creativity and other identified fundamental skills listed as essential to graphic designers, specifically introducing the “collage” process, and reversing the ideation process, students must make use (both conceptually and through practice), of the five mechanisms of creativity, identified: — *reinterpretations and constraint relaxation*; — *combinations*; — *flexible abstraction* (when students must select fragments, figures, etc., to conceive the

collaged compositions, students must choose which features are represented, emphasizing the important ones, discarding the unimportant, making (or not) their way to covariant or resemblant abstractions); — *find a new problem space* (activating thinking through design and other domains of knowledge, other than the current dominating ones that are embedded in the originals used); — *borrowing structure or mapping*, since students will appropriate structures and conventions of observational drawing (abstractions, formalisms,

Table 3: Teaching strategies - Learning through practice (hands-on experimentation)

<p>B. Activities briefing (Gaming process) for students: 1st - chose several drawings from the drawings gathered by the teacher and combine them in a manual or digital collage to form a composition from which to draw/copy/ experiment through:</p> <p>a) Decontextualization – of a form, fragment, etc., of a known drawing that has a strong/ cultural meaning, accentuating the original one through a paradox, and other rhetorical tropes such as hyperbole, ... (implies, on the part of the teacher, to explain how visual rhetorical tropes function, for example, in advertising an area fundamental for graphic and communication designers).</p> <p>b) Starting from a drawing, students must change the original, integrating elements that are strange or confrontational regarding historical context, narrative, culture, or style.</p> <p>c) Chose different styles of drawings, generating a new composition that articulates them, through essaying multiple combinations until the moment where balance and integration is achieved (students will benefit from the contrasts and expressive strengths of each style, challenged by the articulation of different graphic languages that will lead them to find, above all, spatial and formal links suspending the constraints of the thematic leading ones).</p> <p>d) Chose drawings and elements that can be repeated, creating rhythm, visual movement, or patterns to form a composition.</p> <p>e) Using the collages or the obtained drawings, combine the previous deconstruction strategies to form a new composition.</p> <p>2. Lastly, facing all previous drawings obtained (this last task will concern, more closely, developing graphic-design projects):</p> <p>a) Students are welcome to try to figure out, looking actively (individually and collectively) at these final drawings, which graphic-design functions/ problems/ target audiences/ products/ services/ experiences each drawing can attain (this will be done under teacher guidance, with the collaboration of Project Design teachers).</p> <p>b) A list of graphic-design functions/problems will be created connecting them with all the final drawings of the whole class, being transformed into project-based challenges. We can conduct students to narratives that address, for example, fundamental issues, such as the 17th Sustainable Development Goals (United Nations), further stimulating the awareness and contributions of students, as future graphic designers, to responsible citizenship.</p> <p>c) The last work will be to adapt those final drawings into a final layout following its briefing (new rearrangements-combinations take place and students must integrate typography or other elements and use design principles to respond to the briefing). In this final stage, drawings will be further worked on, through exaggerating/ deforming, using repetition, or translating forms by their surrounding space and contrasting them with figures, to further explore different levels of abstraction, analysis/ synthesis... to accomplish the perception, communication, and aesthetic adequate to the briefing.</p>	<p>A. Game/ Challenge rules and their justifications:</p> <p>(a) Teachers should gather an assortment of reference drawings, varying in referents, themes, epochs, style, and functions (academic "classical" drawings; scientific illustrations; concept art, etc.), graphic linear/shape expression, tools, mediums, monochromatic or polychromatic, hyperrealist, naturalist-realist, along with abstract drawings or drawings that mix both realistic and abstract elements (because the confrontation with unfamiliar works can lead to creativity, the chosen array of drawings, therefore, defies students in this sense)</p> <p>(b) They will never copy from only one drawing but from a composition of several drawings that each student must create, executing a digital or manual collage with photocopies (good quality copies) from original drawings, copying subsequently from this composition.</p> <p>(c) Like this, students: 1st use collage with all its possibilities, once it is a reinterpretation and combining method per se (combinations are one of the identified cognitive mechanisms of creativity) allowing, from the start, not only the change of 'perspective', but also to serve as an exercise where they can approach the skills of composition/design layout and the construction of visual narratives, other than the ones that the originals conveyed; 2nd draw from their creation since this collage is already an artwork, resulting from stimulation of active critical thinking and fundamental related graphic design knowledge acquired also through learning by doing; 3rd - Digital combination of images and their transformation is a process students intensively use, so having the experience of manual collage is complimentary, making them face other different image production challenges; 4th - In collaging, there is an implicit playful learning approach with its ludic side.</p> <p>(d) Being aware that the preference of novices is recognizing themes and identifying what is depicted, teachers can capitalize on that, by allowing them to combine drawings that approach realism in differing ways fostering constraint relaxation.</p> <p>(e) As people tend to appropriate what resonates within them or what feeds their imagination, teachers must ask students to search for the master drawings they "like" (this allows teachers to have an idea of their preferences - even generational ones) and introduce them in the reference assortment.</p>
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distinctive graphic-plasticity registrations, experimentation with different tools and drawing-painting materials) while drawing from collaged combinations and solving the problem of applying them to a novel output that has also other visual communication conventions (graphic design, different outputs functions). Drawing conventions and drawing abilities, that reflect skills pursued by observational drawing practice in design, as listed by Schenk (2007, pp. 12-13) are tackled in our activity proposal, specifically, excluding only number — (9) observe accurately from life – and, regarding number — (23) use drawing strategical-

ly in the context of the design process –, closer attention must be given to the chosen battery of masters' drawings to be used, and also to the purpose of identifying design briefings in the obtained drawings composition. Furthermore, the 23 skills identified by Schenk, and still regarding our contributions, are multiplied in a series of related skills, that are not normally identified, probably because the drawing-from-drawings approach is normally discharged from observational drawing learning, although they represent a clear surplus and a quicker method for learning how-to-draw from observation.

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