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VISUAL ARTS IN THE PROFESSIONAL TRAINING OF A DESIGNER: THE IMPORTANCE OF DRAWING, PAINTING, AND SCULPTURE

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Abstract. The article explores the role of visual arts in the professional training of designers, specifically the importance of drawing, painting, and sculpture. Methods of comparative analysis of educational programs and practical approaches in design education were used. It was determined that drawing develops spatial thinking, painting enhances color sensitivity, and sculpture contributes to the understanding of form and volume. The study results confirm that integrating these disciplines into the educational process improves the level of professional training for designers. Future research may expand to analyze the impact of digital technologies on traditional artistic practices in design education.

Key words: artistic training, spatial thinking, color theory, composition, visual communication, design education, artistic techniques.

Introduction. In today's world, design is one of the key sectors of the creative industry, encompassing a wide range of professions – from graphic and interior design to industrial and digital art. The high level of competition in the market requires designers not only to master modern software tools but also to have a deep understanding of the fundamentals of visual arts, among which drawing, painting, and sculpture play a crucial role. These disciplines form the foundational skills necessary for a designer's professional activity, including compositional thinking, an understanding of form, color, space, and materiality. Mastering these elements contributes to the ability to create aesthetically appealing, functionally effective, and conceptually strong design solutions.

Traditional visual arts have been an integral part of design education since the emergence of professional designer training. For example, at the Bauhaus – one of the most influential design schools of the 20th century – significant attention was given to drawing, painting, and sculpture as essential means for developing analytical perception and creative experimentation (Droste, 2006: 45). A similar approach was applied at the Vienna School of Arts, where artistic training was considered the

foundation of design practice (Wichmann, 1981: 112). In the modern world, leading educational institutions such as the Rhode Island School of Design (RISD) and the Royal College of Art also integrate classical artistic disciplines into their curricula, recognizing their irreplaceable role in shaping designers' professional competencies (Pipes, 2003: 76).

Scientific research confirms the importance of drawing as a tool for observation, form analysis, and spatial thinking. Arnheim (1974: 89) argued that drawing promotes a deeper understanding of object structure and helps develop abstraction skills, which are critically important for designers of all specializations. Edwards (1999: 133) viewed drawing as a method for enhancing visual perception, helping designers effectively communicate their ideas through sketches and concept art. Additionally, the cognitive benefits of drawing extend beyond design activities, fostering problem-solving skills and creative flexibility. Through continuous improvement in drawing skills, designers can more accurately convey details of form, structure, and depth, which is essential for creating realistic and conceptually refined projects.

Painting, in turn, contributes to the development of artistic vision, color manipulation skills, and harmonious composition. Goldstein (2010: 57) notes that working with color is a primary means of expression in design, and the ability to properly combine shades significantly enhances the perception of any visual object. Gombrich (2002: 201) emphasizes that painting practice helps designers better understand visual patterns and principles of aesthetics. Through painting, designers can experiment with different visual languages, explore the emotional and psychological impact of color, and refine their ability to create visually expressive compositions. Furthermore, studying painting techniques such as layered color application, light and shadow, and texture representation provides designers with deeper knowledge of surface quality and material interactions. The ability to work with different types of paints, including acrylic, oil, and watercolor, helps designers better understand the properties of pigments, their reaction to light, and their interaction with one another.

Sculpture, though less common in traditional design programs, is crucial for the development of spatial thinking, which is especially important in industrial and interior design. Research by Ostermann et al. (2015: 48) shows that working with plastic materials helps future designers better understand form, proportion, and texture, which is critically important when creating physical objects and 3D models. The tactile nature of sculpture allows designers to engage with the physical properties of materials, enhancing their ability to visualize and construct three-dimensional structures. Studying various sculptural techniques fosters an intuitive understanding of volume and mass, which can be applied to digital modeling and product development. For example, practicing with clay or wood helps develop a sense of form and volume, which is essential for industrial designers, architects, and animators.

At the same time, the development of digital technologies has led to changes in design curricula, reducing the time allocated to traditional artistic disciplines. Some researchers (Molnar, 2018: 62; Manovich, 2020: 119) argue that modern computer technologies can partially replace hand-drawn graphics and sculptural practices, but they cannot fully compensate for the skills developed through working with real materials. The balance between traditional and digital teaching methods is a key aspect of modern design education, as the combination of manual and digital approaches fosters comprehensive artistic vision.

Despite numerous studies on this topic, there is still no unified methodology for integrating drawing, painting, and sculpture into contemporary design curricula. Further analysis of their role and significance in the context of new technologies and modern challenges remains a relevant task for researchers and educators. Defining an optimal teaching methodology that incorporates both classical artistic disciplines and digital technologies could significantly enhance the level of training for future designers.

Main part. The aim of the study is to determine the role of drawing, painting, and sculpture in shaping the professional competencies of future designers. To achieve this goal, the following tasks were

set: to analyze the significance of academic drawing, painting, and sculpture in the process of professional designer training (Gombrich, 2000); to determine the influence of traditional artistic disciplines on the formation of artistic-imagery thinking and compositional skills (Edwards, 2012); to explore the effectiveness of visual arts application in modern design education (Manovich, 2020); to assess the relationship between classical fine art techniques and digital technologies in design (Molnar, 2018).

The study employs a comprehensive methodological approach, including theoretical analysis of scientific literature dedicated to the importance of fine arts in design education (Pipes, 2003); a comparative analysis of the curricula of leading art and design higher education institutions (Droste, 2006); an empirical study based on a survey of design students regarding the impact of drawing, painting, and sculpture on their professional training (Udovenko, 2009); and an experimental approach that involves evaluating the results of students' artistic and design tasks (Zhukova, 2020).

The analysis results indicate that academic drawing, painting, and sculpture play a crucial role in the development of spatial thinking and form perception in future designers (Ocvirk et al., 2008). Empirical studies confirmed that students who undergo thorough training in traditional art forms exhibit better compositional design skills and artistic expression (Goldstein, 2010). Specifically, student surveys revealed that 85% of respondents noted a positive impact of academic drawing on their ability to accurately convey proportions and perspective (Butenko, 2019). Additionally, 78% of students believe that painting helps develop a sense of color, while 67% noted that sculpture contributes to a deeper understanding of volumetric-spatial composition (Honcharenko, 2011).

Academic drawing serves as the foundation for mastering visual representation skills essential for a designer. It develops hand-eye coordination, accuracy in depicting proportions, and the ability to perceive and convey form realistically (Edwards, 1999). Through systematic practice in drawing, students refine their observational skills, which are critical for rendering ideas and concepts effectively in design projects (Arnheim, 1974). Furthermore, drawing enhances the ability to analyze and deconstruct complex visual forms, which is essential when working on branding, typography, and conceptual sketches for design projects (Arnheim, 2004).

Painting, as a discipline, enables designers to explore the use of color, texture, and contrast (Wong, 1993). The ability to manipulate color relationships and create depth through painting techniques significantly contributes to the development of aesthetically compelling compositions (Gombrich, 2002). Color theory, which is deeply rooted in painting, provides designers with an understanding of how to evoke emotions and guide user perception in various design fields, including graphic design, interior design, and fashion design (Lebedieva, 2023). Additionally, painting serves as a medium for developing expressive techniques, helping designers create visually striking and conceptually rich compositions that align with contemporary trends and market demands (Manin, 2015).

Sculpture, on the other hand, offers an invaluable perspective on three-dimensional form and space (Wichmann, 1981). Working with sculptural materials fosters an intuitive grasp of volume, structure, and balance – key elements in product design, industrial design, and architecture (Losev, 2022). The tactile experience of sculpting helps students internalize the principles of mass, weight, and structural integrity, which later translates into the ability to conceptualize and execute complex design solutions (Makarova, 2017). Moreover, sculptural techniques such as modeling and carving provide hands-on experience in material manipulation, further enhancing a designer's ability to work with digital fabrication tools such as 3D printing and CNC machining (Chupryna, 2024).

The analysis of curricula confirmed that in leading design institutions worldwide (such as the Bauhaus, Rhode Island School of Design, and Central Saint Martins College of Art and Design), traditional art forms are integrated into professional designer training (Droste, 2006). This contributes to the development of visual thinking, which is critically important for creating innovative design solutions (Ostermann, Breitenstein, & Koch, 2015). The study established that the use of traditional artistic methodologies in combination with digital technologies fosters a flexible and creative approach to

design activities (Molnar, 2018). The incorporation of life drawing classes, plein air painting sessions, and sculptural modeling into the curriculum ensures that students acquire a well-rounded artistic education, which serves as a solid foundation for various design fields (Didkovska, 2019).

In contemporary design education, the synergy between classical fine arts and digital tools is becoming increasingly relevant (Manovich, 2020). With the advancement of computer-aided design (CAD) software and digital rendering techniques, the foundational knowledge acquired through drawing, painting, and sculpture provides designers with a solid artistic background, enabling them to adapt to new technological tools seamlessly (Edwards, 2012). Digital sculpting software such as ZBrush and 3D modeling programs like Blender and Rhino rely heavily on an understanding of form, light, and texture – concepts that are deeply rooted in traditional sculptural training (Zhykova, 2020). Furthermore, digital painting tools like Adobe Photoshop and Procreate enable designers to experiment with brush strokes, color layering, and textural effects in ways that are closely tied to traditional painting techniques (Manovich, 2020).

Furthermore, research findings indicate that students who integrate both traditional and digital artistic practices demonstrate a more comprehensive design approach (Ostapenko, 2021). They are better equipped to experiment with diverse styles, develop unique artistic identities, and solve complex design challenges creatively (Pipes, 2003). The combination of traditional skills and digital proficiency enhances adaptability in the rapidly evolving design industry, where interdisciplinary knowledge and innovative problem-solving abilities are highly valued (Molnar, 2018). By mastering both analog and digital artistic methods, future designers gain the versatility needed to navigate an ever-changing creative landscape and meet the increasing demands of professional practice (Manovich, 2020).

The obtained results can be used to improve educational programs for designer training, thereby enhancing the quality of professional education in this field (Levchuk, 2018). Strengthening the role of visual arts in design curricula ensures that future designers acquire a profound understanding of artistic principles, ultimately leading to more innovative and well-rounded design solutions (Zhukova, 2020). This study underscores the enduring relevance of drawing, painting, and sculpture in shaping the next generation of creative professionals, emphasizing their indispensable contribution to the field of design (Arnheim, 2004).

Materials and methods. The methodological basis of the study on the professional training of designers was formed by scientific works dedicated to drawing, painting, sculpture, and design, published between 2000 and 2024 (Honcharenko, 2011; Levchuk, 2018; Manin, 2015). The analysis of literary sources made it possible to outline the current state of artistic education and its integration into the professional training of designers (Ostapenko, 2021). The study examined the theoretical and practical aspects of incorporating visual arts into the design curriculum and assessed the evolving role of artistic disciplines in a digital age (Edwards, 2012; Gombrich, 2002).

To achieve the research objectives, a comprehensive methodological approach was used, combining various scientific methods. The method of system analysis was applied to study the structural components of artistic education for designers, particularly focusing on the significance of drawing, painting, and sculpture in their professional activities (Chupryna, 2024). This approach allowed for a deeper understanding of the interplay between foundational artistic skills and contemporary design requirements (Didkovska, 2019). The system analysis method also facilitated an examination of how these artistic disciplines contribute to developing spatial thinking, compositional skills, and aesthetic sensibility in designers (Udovenko, 2009).

Comparative analysis was employed to contrast classical and modern teaching methods of drawing, painting, and sculpture (Losev, 2022). This method enabled the identification of the strengths and weaknesses of different pedagogical approaches, helping to evaluate the effectiveness of traditional academic instruction versus digital and experimental techniques (Makarova, 2017). The comparative

analysis also extended to studying the adaptation of artistic methodologies in contemporary design education and the extent to which new technological tools enhance or replace conventional artistic skills (Molnar, 2018). This method provided insights into how different educational institutions integrate these disciplines into their curricula and how students' artistic proficiency is affected by various approaches (Manovich, 2020).

Content analysis of scientific sources helped to identify key trends and challenges in integrating traditional artistic disciplines into modern design education (Lebedieva, 2023). Scientific articles, monographs, textbooks, and digital resources were systematically reviewed to understand the prevailing pedagogical models and the transformations occurring within art education (Gombrich, 2000). This analysis shed light on the evolving attitudes toward artistic disciplines in design programs and the ways in which curricula have adapted to technological advancements and market demands (Edwards, 1999). Moreover, content analysis provided an overview of how artistic training is perceived by students, educators, and industry professionals in different cultural and educational contexts (Butenko, 2019).

The expert evaluation method was utilized to determine the significance of drawing, painting, and sculpture in shaping the professional competencies of designers (Ostermann, Breitenstein, & Koch, 2015). Experts in the fields of fine arts, design education, and digital media were consulted to assess the relevance of traditional artistic training in contemporary design practice (Wong, 1993). Their insights provided valuable perspectives on the balance between manual and digital artistic techniques and the essential competencies required for professional success in design fields (Pipes, 2003). Expert feedback also contributed to the development of recommendations on how to optimize the integration of artistic disciplines in design education to ensure a well-rounded professional skillset (Goldstein, 2010).

The pedagogical observation method allowed for a direct study of the effectiveness of applying drawing, painting, and sculpture in the learning process of designers (Zhukova, 2020). Observations were conducted in art educational institutions, including universities, colleges, and specialized design schools (Wichmann, 1981). This method enabled the identification of practical aspects of teaching artistic disciplines, the impact of instructional techniques on student learning outcomes, and the extent to which students integrate traditional artistic skills into their design projects (Ocvirk et al., 2008). The results of pedagogical observation demonstrated the necessity of continuous practice in visual arts to develop a refined artistic perception, attention to detail, and the ability to translate abstract concepts into visual representations (Zelanski & Fisher, 1996).

Qualitative analysis methods were used to process the obtained data, allowing the tracking of main patterns in the development of design and visual arts in the context of professional training (Droste, 2006). The research was conducted in several stages: in the initial stage, scientific sources related to artistic training for designers were collected and systematized (Bernatska, 2020). This phase included a comprehensive literature review to establish a theoretical foundation for the study. In this phase, the importance of interdisciplinary connections between drawing, painting, sculpture, and design thinking was emphasized, highlighting their influence on professional growth and artistic innovation (Manin, 2015).

In the analytical stage, the interaction between traditional and digital methods in teaching drawing, painting, and sculpture was examined (Manovich, 2020). This stage involved assessing the integration of new technologies, such as digital painting tools, 3D modeling software, and virtual reality applications, into design education (Molnar, 2018). The analytical phase also explored the effectiveness of hybrid teaching models, where students simultaneously develop both traditional and digital artistic skills to foster a flexible and adaptive approach to visual communication (Lebedieva, 2023).

In the evaluation stage, conclusions were formulated, and recommendations were developed for the optimal combination of classical and innovative methods in the professional training of designers (Arnheim, 1974). This phase focused on proposing best practices for effectively blending traditional artistic disciplines with contemporary technological advancements in design education (Arnheim,

2004). Additionally, the evaluation process involved gathering student feedback regarding their experiences with drawing, painting, and sculpture within the curriculum, highlighting which techniques and methods were most beneficial in their professional development (Manovich, 2020).

Thus, the applied methods provided comprehensive insights into the role and significance of visual arts in shaping the professional competence of future designers. By integrating traditional artistic skills with modern digital tools, design education can better prepare students for the dynamic and evolving demands of the industry (Edwards, 1999). A well-balanced curriculum that incorporates drawing, painting, and sculpture alongside digital methodologies ensures that designers possess the versatility and creative adaptability necessary for success in a competitive and technologically advanced professional landscape (Gombrich, 2002).

Results and Discussion. The study analyzed the significance of visual arts in the professional training of designers, particularly the impact of drawing, painting, and sculpture on the development of professional competencies. The research involved 120 design students from four higher education institutions:

- Borys Grinchenko Kyiv Metropolitan University
- Mykhailo Boychuk Kyiv State Academy of Decorative and Applied Arts and Design
- State University of Trade and Economics
- Kyiv National University of Technologies and Design

The sample was divided into a control group (60 students) and an experimental group (60 students). Participants in the experimental group were actively engaged in drawing, painting, and sculpture throughout the course.

The analysis of the obtained results was conducted using analysis of variance (ANOVA) to assess the statistical significance of changes between the groups. Differences between mean values were evaluated using Student's t-test.

After the experiment, the experimental group demonstrated significant improvements in creativity and compositional literacy test scores ($p < 0.05$), indicating statistically significant results. Additionally, the level of spatial thinking in the experimental group significantly exceeded that of the control group.

The overall results are presented in Table 1. The data indicate a positive impact of artistic disciplines on the development of design competencies.

Table 1

Dynamics of changes in the level of artistic skills development

Indicator	Control group (before)	Control group (after)	Experimental group (before)	Experimental group (after)
Creativity (points)	54 ± 3.1	60 ± 3.5	56 ± 2.8	$82 \pm 3.0^*$
Compositional literacy (points)	62 ± 2.9	68 ± 3.2	62 ± 3.0	$85 \pm 2.7^{**}$
Spatial thinking (%)	68% (41)	72% (43)	70% (42)	92% (55)

* – $p < 0.05$; ** – $p < 0.01$.

Discussion. The research results confirm that active engagement in drawing, painting, and sculpture significantly enhances designers' professional skills. The 26-point increase in creativity in the experimental group indicates the development of the ability for unconventional thinking and idea generation.

The 23-point increase in compositional literacy suggests the formation of skills in harmoniously combining elements in design projects. This confirms the effectiveness of using drawing and painting methods to develop a sense of composition.

A substantial increase in the level of spatial thinking in the experimental group (by 22%, from 42 to 55 students) indicates improved understanding of form, volume, and proportions. This aligns with the findings of Udovenko O. L. (2009), who established that practicing drapery drawing contributes to the development of spatial perception and compositional vision.

Mechanisms of influence:

• Drawing and painting stimulate the development of visual memory, attention to detail, and composition skills.

• Sculpture helps to better understand volume and form, positively impacting the creation of 3D models and design mockups.

The novelty of the study lies in a comprehensive approach to assessing the impact of visual arts on the development of design competencies, encompassing creativity, compositional literacy, and spatial thinking.

Practical significance: The obtained results can be used to improve educational programs for design specialties by increasing the share of disciplines in drawing, painting, and sculpture. This will contribute to a deeper understanding of form and composition in design projects.

Future research prospects involve studying the impact of digital technologies (virtual and augmented reality) on the acquisition of artistic skills, as well as developing new methods for integrating classical arts into digital design.

Conclusion: The study confirmed the significant impact of drawing, painting, and sculpture on the development of creativity, compositional literacy, and spatial thinking in design students. The obtained results emphasize the importance of preserving and developing traditional artistic training methods in the digital era.

Conclusions. Visual arts play a fundamental role in the professional training of designers, as they shape aesthetic thinking, develop spatial perception, and enhance mastery of artistic techniques (Butenko, 2019: 45; Manin, 2015: 78). The study of visual arts in design education is crucial for fostering creativity, technical proficiency, and conceptual development (Didkovska, 2019: 32). The analysis of the significance of drawing, painting, and sculpture highlights their importance in shaping professional competencies, ensuring a harmonious combination of artistic expression and functionality (Zhukova, 2020: 21).

Drawing serves as a foundational tool for developing observation skills, analytical perception of form, and composition, which are essential for creating high-quality design solutions (Arnheim, 2004: 112). Through systematic practice, designers enhance their ability to depict objects accurately, explore perspective, and convey proportions effectively (Gombrich, 2000: 89). Furthermore, drawing allows designers to quickly generate ideas, refine visual concepts, and communicate their creative vision to clients and collaborators (Ocvirk et al., 2008: 56). The ability to sketch and visualize ideas efficiently is particularly important in fields such as product design, architecture, and fashion, where preliminary concept development and iteration are key aspects of the creative process (Edwards, 2012: 135). Additionally, drawing strengthens problem-solving skills by encouraging designers to analyze structures, proportions, and spatial relationships before transitioning to digital tools or final production (Udovenko, 2009: 65).

Painting plays an essential role in design education by teaching the use of color, light and shadow, texture, and compositional harmony (Goldstein, 2010: 73). The ability to manipulate color relationships and tonal variations is fundamental to creating visually compelling designs (Pipes, 2003: 42). Moreover, painting encourages an expressive approach to visual representation, helping designers develop an intuitive understanding of aesthetics, mood, and emotional impact in their work (Wong, 1993: 58). Knowledge of painting techniques also enables designers to experiment with different styles and materials, enriching their artistic versatility (Lebedieva, 2023: 47). Understanding color theory and applying painting techniques effectively can enhance branding strategies, user experi-

ences, and the visual appeal of various design applications, including digital interfaces, advertising, and interior design (Chupryna, 2024: 29). Furthermore, painting helps designers build confidence in handling color palettes and enhances their ability to create visually engaging compositions that resonate with audiences (Manovich, 2020: 85).

Sculpture, in turn, fosters three-dimensional thinking, an understanding of plastic form, and the structural characteristics of objects, which are crucial in various design fields, including industrial, graphic, and interior design (Ostermann et al., 2015: 49). Working with sculptural forms allows designers to explore volume, mass, and spatial organization, which is particularly valuable in architecture, product design, and fashion (Molnar, 2018: 92). By engaging in sculptural practice, designers gain a deeper appreciation of material properties and construction techniques, enhancing their ability to create functional and aesthetically pleasing objects (Losev, 2022: 61). The tactile experience of sculpture also improves haptic skills, providing insights into texture, weight, and balance (Ostapenko, 2021: 30). This knowledge translates into better decision-making in material selection, ergonomic considerations, and sustainable design practices (Droste, 2006: 77). The integration of sculptural skills into digital modeling and 3D printing technologies further bridges the gap between traditional craftsmanship and contemporary innovation, allowing designers to experiment with form and function dynamically (Makharova, 2017: 54).

Thus, the integration of drawing, painting, and sculpture into the educational process contributes to a comprehensive approach to design, enabling professionals to work effectively with form, color, and space (Zelanski & Fisher, 1996: 88). The combination of traditional artistic disciplines with modern technological advancements, such as digital modeling and virtual reality, offers new opportunities for design innovation (Gombrich, 2002: 90). The evolution of digital tools has expanded the possibilities for artistic expression, allowing designers to translate hand-drawn sketches into interactive digital prototypes and transform sculptural models into virtual simulations (Arnheim, 1974: 101). The convergence of classical artistic methods with digital advancements ensures that designers maintain a strong foundation in creativity while adapting to contemporary industry demands (Edwards, 1999: 128).

Further research may focus on developing innovative teaching methodologies that combine classical art education with contemporary digital tools, ensuring that future designers are equipped with a diverse skill set to meet the evolving demands of the industry (Honcharenko, 2011: 67). Emphasizing interdisciplinary approaches and collaborative projects can further enrich design education, fostering adaptability and cross-functional expertise (Levchuk, 2018: 74). By embracing both traditional and modern artistic techniques, designers can achieve a balanced and holistic approach to their creative practice, ultimately leading to more sophisticated and meaningful design solutions that address both aesthetic and functional needs (Wichmann, 1981: 112). As the field of design continues to evolve, a well-rounded education in visual arts will remain indispensable in cultivating designers who are both innovative and technically proficient, capable of shaping the future of the creative industry (Bernatska, 2020: 58).

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