Methods of Teaching Graphic Design in HEIs for Art

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Abstract

Under the conditions of digitalization in technology and art, there is a sense of significant changes in visual creativity, where design projects are given not only new artistic expressiveness, but everything becomes an immeasurable resource base and source of inspiration for future graphic designers. This new reality encourages the permanent updating of approaches and the use of innovative methods of teaching graphic design in HEIs for art in the process of preparing for the professional activity of a future graphic designer. Therefore, a modern graphic designer, being the creator of a demanded graphic product that meets the requirements of business and clients, must have a sense of style, and artistic taste, track new trends in graphic design, be versed in styles, be creative, able to create original innovative design projects, have technical knowledge and computer programs, etc. The research aims to establish a pattern of promoting the use of differentiated methods of teaching graphic design in higher education institutions for art. The goal can be achieved by surveying higher education students on the Internet to determine the ability of HEIs for art to apply effective methods of teaching graphic design. Research methods: comparative analysis; systematization; generalization; survey. Results. The survey among higher education students found that online graphic design platforms such as Canva (98.3%), Pixlr (94.1%), Design Wizard (93.8%), Visme (92.4%), Snappa (89.8%), BeFunky (89.2%), etc. contribute to the formation of professional skills in the field of graphic design. It has been found that the following graphic design programs on PCs, namely Adobe Photoshop (95.5%), Affinity Designer (95.3%), Gravit Designer (91.5%), Adobe InDesign (89.9%), Adobe Illustrator (89.5%), best contribute to the formation of professional skills in future graphic designers. It has been determined that 3D graphic design programs such as Paint3D (91.9%), Autodesk Maya (89%), Sumo3D (87.9%), Blender (85.7%), Autodesk 3ds Max (83.3%), ZBrush (81.5%), etc. are the most conducive to the formation of professional skills. The study has revealed which methods of teaching graphic design in HEIs for art are used by teachers. These include innovative methods (91.8%), the method of graphic modeling (89.8%), the method of observation and independent reproduction of certain artistic images through graphic design (87.3%), the method of graphic illustration (86.2%), the method of projective and graphic form finding (81%), etc. It has been established that the successful implementation of differentiated methods of teaching graphic design in HEIs for art contributes to the formation of skills in using modern computer graphics programs to create design objects (91.2%), the ability to use basic skills in project graphics (89.3%), the ability to know color science to create a coloristic solution for a future design object (89%), etc.

Keywords: methodology, teaching, graphic design, graphic designer, HEI

1. Introduction

Modern society is marked by the century of digitalization, where modern innovative and digital technologies transform all spheres and sectors of the economy, including the sphere of graphic design (Sîrghi, Sîrghi, 2020). In the educational field, innovation is relevant for the organization and implementation of activities that contribute to the improvement of the educational process and for the application of design in the educational process (Salas & Vázquez, 2017; Han et al., 2019). In this regard, HEIs are obliged to modify teaching and learning activities with the help of innovative and digital technologies to meet the requirements of society in the XXI century (Jiménez et al., 2017; Premlatha et al., 2016; Palumbo & Verga, 2015). Thanks to the application of digital tools and technologies in society, this process protects the effective process of introducing pedagogical technologies into the activities of HEIs (Salas-Rueda et al., 2020; Wong et al., 2015).

Noting the main trends in the training of graphic designers in the twenty-first century, it has been found that the educational training of graphic designers is implemented through ICT (Islami et al., 2019) and the digitization of the educational process (Conde et al., 2014; Sriyanti & Jauhari, 2014). Educational methods and active strategies at the level of higher education, as well as the modern pedagogical models, appear due to intensive technological progress (Alharthi, 2020; Basuhail, 2019; Salas & Vázquez, 2017). The modern educational strategies in higher education appear due to the intensive use of virtual educational spaces, audiovisual content, and other differentiated digital tools (Jiménez et al., 2017; Chiu et al., 2019; Deng et al., 2019; Ledger et al., 2019).

Due to modern conditions, the educational sphere requires the use of innovative pedagogical technologies in higher education institutions, the main purpose of which is for lecturers to connect educational design disciplines with the current design experience of students of higher education. Institutions of higher education that provide training for graphic designers must adapt the traditional educational process to the latest requirements (Istanto, 2002). Due to modern conditions, differentiated digital tools, online platforms, and technological applications play a decisive role in the process of training graphic designers. Thanks to the application of technological achievements in the educational field, the educational process is improved for more effective assimilation of knowledge and development of competencies in the field of graphic design (Serhan, 2019; Omiles et al., 2019; Pereira & Wahi, 2017; Wingo et al., 2017).

The study aims to establish a pattern of promoting the use of differentiated methods of teaching graphic design in HEIs for art. This goal can be achieved by surveying higher education students on the Internet to determine the ability of HEIs for art to apply effective methods of teaching graphic design.

Research objectives of the article:

1. To survey students to identify certain features of the methods of teaching graphic design in HEIs for art.
2. To determine the result of the use of differentiated methods of teaching graphic design in HEIs for art.
3. To distinguish between methods and techniques of teaching graphic design in HEIs for art.
4. To determine the benefits of using differentiated methods of teaching graphic design in HEIs for art.
5. To analyze the trends in the use of methods, tools, techniques, programs, and online platforms for teaching graphic design in HEIs for art in 2022-2023.

2. Literature Review

Recent research on the issue of teaching graphic design in art HEIs shows that it is important for graphic designers to acquire creative skills and modern knowledge in this field (Zerillo, 2005; Guo, 2011). A well-designed teaching strategy and curriculum are crucial for preparing future graphic designers for professional work (Guo & Jamie, 2015).

The implementation of design and design thinking at all levels of training of graphic designers is defined as a method of aegis for future professional activity (Cox, 2005; Design Commission, 2011). In the educational sense, design is noted as a structured basis for new forms of training for designers (Yamashita, 2012).

Design is defined as the discipline of developing and implementing differentiated projects from various design fields, in connection with which the provision of appropriate professional training for future designers plays a decisive role. The conducted scientific studies recommend devoting a large part of the curriculum to design projects, which should be selected by the specialization of the higher education students. A significant number of design projects are long-term, so higher education students can join the process of implementing a design project that is already underway. In the first years of study, higher education students in the field of graphic design acquire not only relevant skills and knowledge in the field of graphic design but also gain experience in the functioning of relevant graphic design teams. Therefore, teaching consistency is as considerable as teaching leadership to future designers, which is frequently neglected in design project courses (Meyer & Norman, 2020).

Graphic design is noted as a broad field of study since it is a rather "creative" occupation and requires solid problem-solving skills. A significant number of scientific works, in the field of graphic design, describe the processes used in this area. Bessant J., Whyte J., and Neely A. believed that graphic design is characterized by the purposeful use of creativity, which in turn leads to the development and implementation of a wide range of innovations in this field (Bessant et al., 2005). In the process of solving differentiated design problems, several complex processes take place, where the practice of graphic design is no exception, where differentiated problems are solved by using the appropriate design language (Tan & Gavin, 2010).

It has been established that teaching graphic design in art universities is noted as a multifaceted process. On the one hand, it is aimed at accumulating in-depth knowledge about specialization in the field of graphic design and professional training. On the other hand, it is aimed at a profound knowledge of design as an object of the cultural and educational process (CEDEFOP, 2008). Due to the conditions of the modern learning culture of training future graphic designers and the emergence of differentiated challenges and shortcomings around the educational process in the field of graphic design in art HEIs, the governments of different countries see the value of graphic design-oriented innovations and online educational platforms (Australian Government, 2012).

Graphic design education in art universities in the twenty-first-century call for a modern model of awareness of the culture of learning in the context of open access data, abrupt change, and earthly variety (Muntean, 2011). Educators become irrelevant to constantly providing the latest information, as higher education students take an active role in peer groups to develop new graphic design projects. By applying digital and innovative technologies, Design Minds admit that multidisciplinary learning promotes engagement and empowers future graphic designers to implement, develop and discover modern design solutions (Duell et al., 2014).

In a traditional graphic design education environment, lecturers use essential tools such as pencils, paper, sketches, rulers, and brushes to teach higher education students basic graphic skills for further work in graphic design programs. The traditional type of education, as Heller S. explains, means that graphic design students mostly learn typography through the use of classic approaches: "a lot of the lecturers use classic approaches in the educational process, such as manual typing, printing, etc.". However, these classic approaches can develop particular qualities or features in higher education students, such as sketching techniques in graphic design (Heller, 2004).

The traditional educational environment is that the graphic design academic system is to apply manual activities, where this system mainly makes allowances for the study of materials and key design tools, such as understanding color, texture, shape, light, and composition. The educator teaches future students how to draw and teaches them the theory of color science to create a coloristic solution for a future design object. He provides knowledge of ergonomics and artistic design and promotes the acquisition of practical design skills and technologies for the manufacture of design objects, etc. In this regard, further research is needed to analyze the key tools that can contribute to the development of creativity, intellectual abilities, and skills among higher education students in the field of graphic design.

Sevak P. noted that classic approaches are precious in terms of teaching higher education students to comprehend and follow the artistic process of graphic design. This process is explained by the fact that classic approaches used by graphic design lecturers also prioritize the development of technical skills along with creative problem-solving (Sevak, 2003).

Thus, successful graphic design education systems may necessitate the use of advanced technologies besides certain classic approaches to teaching graphic design in art institutions. Kelly R. argues that "the computer provides the higher education student with endless options for size, location, selection, and colors for a graphic object, where each option is an opportunity to determine a decision." Therefore, to ensure the effective training of future graphic designers, it is necessary to combine traditional education in graphic design with computer-based learning. This is especially true in the first stages of any graphic design curriculum. This methodology allows higher education students to explore their skills, especially those who have an insufficiency of experience in art and design (Kelly, 2002). Sevak P. notes that mastering graphic software does not make a student a graphic designer. (Sevak, 2003). The software takes advantage of graphic design instead of tools and facilitates the learning process, but it does not train of thought and hands of future graphic designers. Therefore, the lecturer "needs to first teach the basics of design with familiar media and tools, leaving computers for more refined professional activities" (Alkholy, 2007; Alhajri, 2016).

Taking into account differentiated scientific publications in which the application of graphic design software and differentiated digital and innovative technologies are investigated. It can be stated that the problem of introducing the study of differentiated technologies into the process of training graphic designers is not enough developed (Alekhanovich & Abdurakhimovna, 2020; Chemerys et al., 2021).

Thus, the study of obstacles in the process of implementing effective methods of teaching graphic design in art м finds little reflection in scientific publications in the form of theoretical studies and practical investigations, therefore this issue remains relevant and open for further research.

3. Methods and Materials

The realization of the aim of this research involves the use of such research methods as:

- systematic and logical analysis to determine the result of the application of differentiated methods of teaching graphic design in art HEIs;

- the method of information synthesis to determine the benefits of using differentiated methods of teaching graphic design in art HEIs;

- generalization of the latest scientific publications related to the analysis of methods, tools, techniques, programs, and online platforms used to teach graphic design in art HEIs in 2022-2023;

- a comparison method to distinguish between methods and techniques of teaching graphic design in art HEIs.

To determine certain features of the methodology of teaching graphic design in art universities, a survey was conducted using descriptive statistics. Its data were provided as a result of a survey using MS Forms Pro. The survey was conducted to determine the perceptions of higher education students about the ability of art HEIs to apply effective methods of teaching graphic design. An online survey was conducted from October 22, 2022, to February 2, 2023, collecting information from 2500 students of the Kyiv National University of Technologies and Design, Kyiv National University of Culture and Arts, Kharkiv State Academy of Design and Arts, Lviv National Academy of Arts, and Kyiv State Institute of Decorative and Applied Arts and Design named after M. Boychuk. These participants answered questions about their learning experience, motivation, expectations, and overall satisfaction with the use of differentiated methods of teaching graphic design in artistic institutions. This online survey addressed the following research questions: 1. Which online platforms for graphic design are best suited to help students develop professional skills? 2. Which graphic design programs on PCs best contribute to the formation of professional skills in higher education students? 3. What are the main methods of teaching graphic design used by teachers in art universities?

4. Results

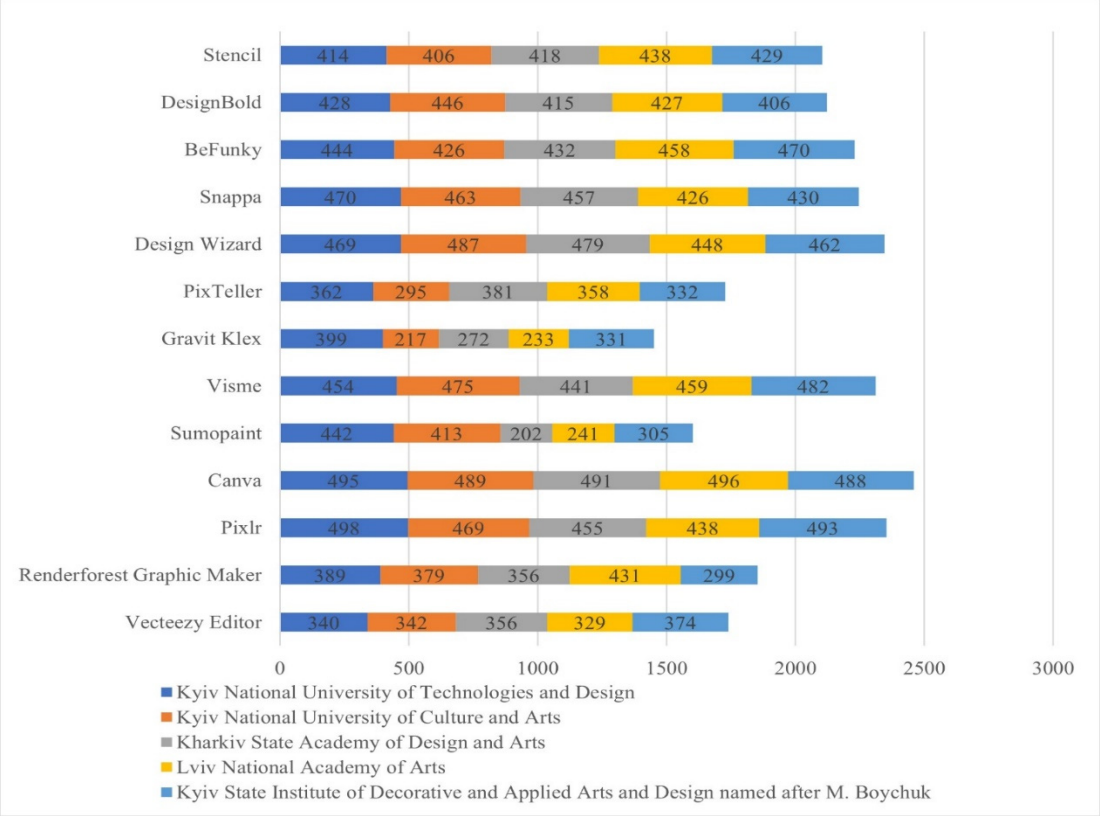

Figure 1. Which Online Platforms for Graphic Design Are the Best for Developing Professional Skills in Higher Education Students?

Source: Compiled by the authors.

To analyze the methodology of teaching graphic design in art universities in 2022-2023, a survey was conducted among students majoring in graphic design at the Kyiv National University of Technologies and Design, Kyiv National University of Culture and Arts, Kharkiv State Academy of Design and Arts, Lviv National Academy of Arts, and Kyiv State Institute of Decorative and Applied Arts and Design named after M. Boychuk, who answered the following questions: "Which online platforms for graphic design best contribute to the formation of professional skills in higher education students?" students of these educational institutions noted that: Canva (98.3%), Pixlr (94.1%), Design Wizard (93.8%), Visme (92.4%), Snappa (89.8%), BeFunky (89.2%), etc. are the best for developing professional skills in graphic design (see Fig. 1).

Based on the survey, it was found that the following graphic design programs on PCs: Adobe Photoshop (95.5%), Affinity Designer (95.3%), Gravit Designer (91.5%), Adobe InDesign (89.9%), Adobe Illustrator (89.5%), are the most beneficial for the development of professional skills in future graphic designers (see Fig. 2).

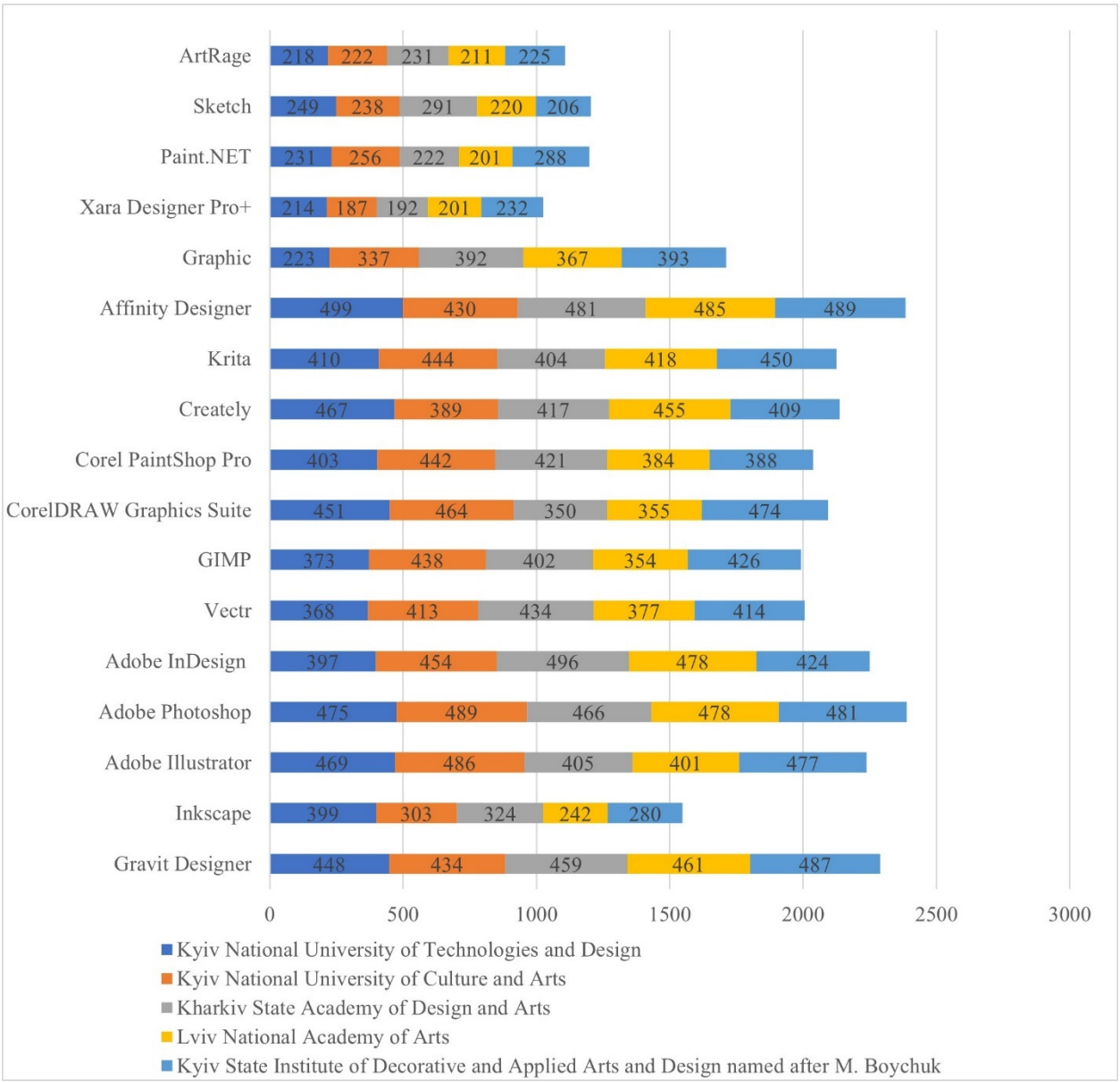

Figure 2. Which PC Graphic Design Programs Are the Best for Developing Professional Skills in Higher Education Students?

Source: Compiled by the authors.

Future graphic designers answered the question "Which 3D graphic design programs best contribute to the development of professional skills in higher education students?" by saying that Paint3D (91.9%), Autodesk Maya (89%), Sumo3D (87.9%), Blender (85.7%), Autodesk 3ds Max (83.3%), ZBrush (81.5%), etc. contribute to the development of professional skills in higher education students (see Fig. 3).

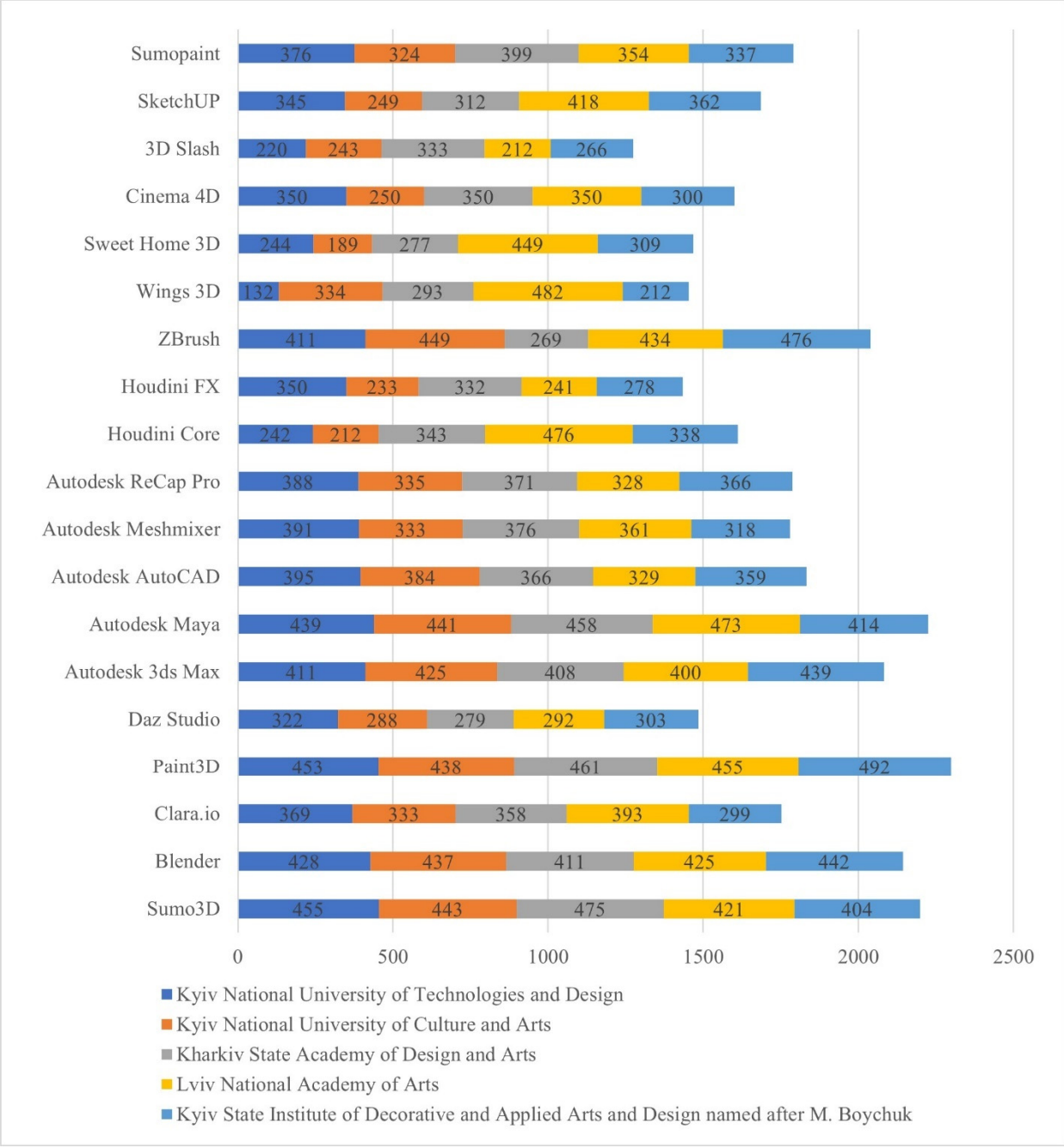

Figure 3. Which 3D Graphic Design Programs Are the Best for Developing Professional Skills in Higher Education Students?

Source: Compiled by the authors.

It has been found that teachers use the following methods of teaching graphic design in art universities: innovative methods (91.8%), graphic modeling method (89.8%), method of observation, and independent reproduction of certain artistic images through graphic design (87.3%), method of graphic illustration (86.2%), method of

projective-graphic form finding (81%), etc. (see Fig. 4).

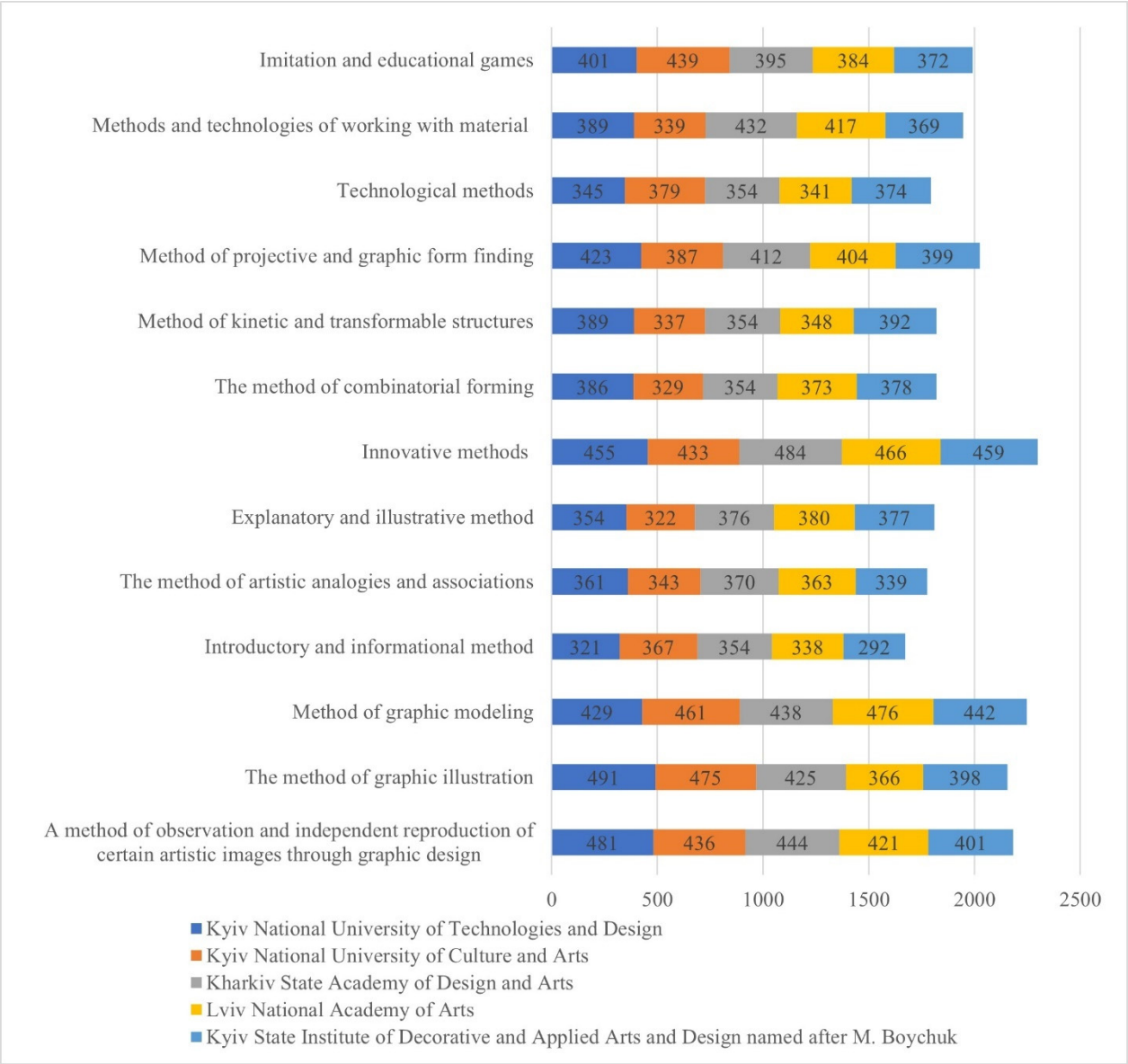

Figure 4. What Are the Main Methods of Teaching Graphic Design Used by Teachers in Art Universities?

Source: Compiled by the authors.

The successful implementation of differentiated methods of teaching graphic design in art universities contributes to the formation of certain skills. These include the use of modern computer graphics programs to create design objects (91.2%), the ability to use basic skills in project graphics (89.3%), the ability to know color science to create a coloristic solution for a future design object (89%), the ability to use basic knowledge of compositional construction of design objects (83.3%), practical skills in design and manufacturing technologies for design objects (81.5%), etc. (see Fig. 5).

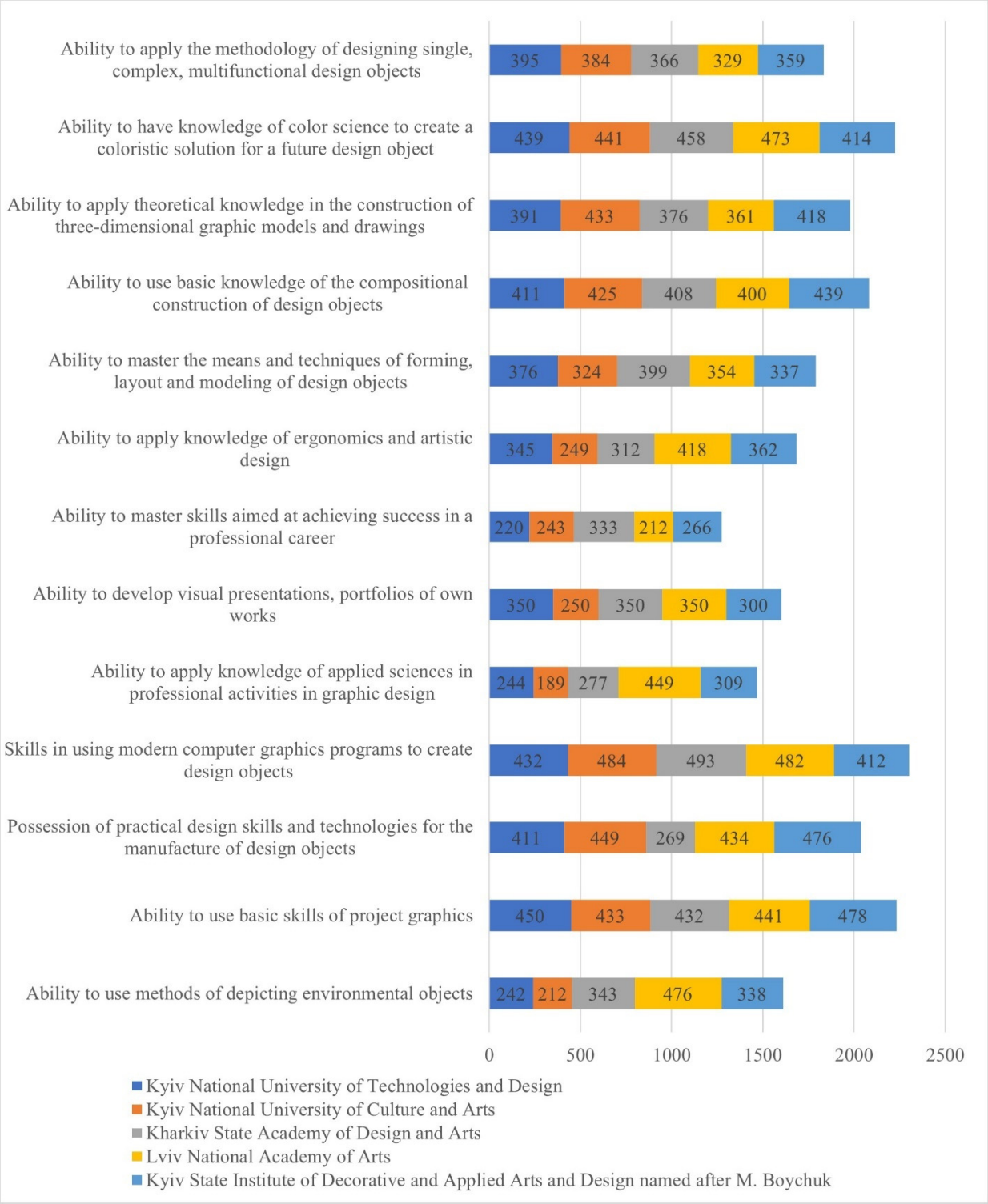

Figure 5. The Main Advantages of Using Differentiated Methods of Teaching Graphic Design in Art Universities

Source: Compiled by the authors

5. Discussion

The results of the study of the methods of teaching graphic design in art universities led to the following conclusions. Nowadays, the educational process requires a combination of differentiated techniques, methods, and approaches to make the training of future graphic designers effective and fruitful.

Firstly, the research reveals many benefits of using differentiated methods of teaching graphic design in art universities. Moreover, they contribute to the development of the capability to master the methods of depicting environmental objects and the capability to use basic project graphics skills. They develop the ability to have practical skills in design and manufacturing technologies for design objects and the capability to use modern computer graphics programs to create design objects. Differentiated teaching methods develop the ability to implement knowledge of applied sciences in professional graphic design activities, application of knowledge of ergonomics and artistic design, and master the means and techniques of forming modeling, and modeling design objects. Through these methods, students learn to use basic knowledge of the compositional construction of design objects. It is equally important that students acquire knowledge of color science to create a coloristic solution for a future design object and apply the methodology of designing single, complex, multifunctional design objects, etc. (Chemerys et al., 2021).

Secondly, the survey proves that the organization of design education of graphic designers by utilizing modern digital and information and communication technologies, online platforms, and programs for graphic design in education serves to increase the creative thinking of higher education students. Moreover, it helps in the development of independent decision-making and teamwork skills through the organization of practical classes in special subjects in the field of graphic design. The introduction of graphic design teaching methods in HEIs for an art based on the use of ICT in design education will be the base for ameliorating the educational effectiveness in the training of graphic designers (Alekhanovich & Abdurakhimovna, 2020).

Thus, the methods of teaching graphic design in artistic higher education institutions and current trends in graphic design education based on the use of ICT tools will face new challenges. These problems will be associated with changes in globalization, digitalization, and innovative requirements for the professional competencies of future graphic designers. An in-depth study of this issue will lead to greater emphasis to ameliorate the methods of teaching graphic design in art HEIs.

6. Conclusion

As a result of the analysis of methods of teaching graphic design in art HEIs, it was found that the use of innovative and digital technologies in educational trials and the training of graphic designers are different. A lot of complications call for special methodology and research methods for teaching graphic design in art HEIs. In this connection, it is useful to accept and accommodate the foreign experience of HEIs in teaching graphic design in art universities.

Thus, the specificity of modern graphic design education in artistic universities lies in an individual approach to teaching special disciplines and the use of differentiated methods of teaching graphic design. This, in turn, requires additional regulation and transformation of curricula. The key to a successful and professional graphic designer after graduating from an art university is, on the one hand, the personal aspiration of the student to a creative specialty and the motivation of the university. And on the other hand, it is the importance of the lecturer's participation in the development of the higher education student's personality, accompanied by an individual approach and the use of differentiated methods of teaching graphic design.

The practical value of the study is that the recommendations and conclusions developed by the author and proposed in the paper can be accustomed to select digital and innovative technology tools for teaching graphic design in art universities. Further investigation can be attempted for enhancing and developing methods of teaching graphic design in art HEIs and transforming curricula to ensure quality professional training of graphic designers and studying the effectiveness of their implementation, which corresponds to each stage of the higher education system in the training of graphic design specialists. Expanding the opportunities and widespread use of digital and innovative technologies, online platforms, and graphic design programs in the course of professional education of future graphic designers can become the basis of the learning process in art universities for the future.

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