УДК 378.147.091.12.011.3:745/749:004.5
UDC 378.147.091.12.011.3:745/749:004.5
DOI: 10.31475/ped.dys.2025.37.02

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Professional Training of Future Fine Art Teachers: Modern Tendencies and Methodological Approaches to Computer Design Education

Професійна підготовка майбутніх вчителів образотворчого мистецтва: сучасні тенденції та методичні підходи до вивчення комп'ютерного дизайну

У статті проаналізовано, що нині одним із динамічніших напрямів підготовки майбутніх фахівців є комп'ютерний дизайн, що вимагає не лише естетичного бачення, а й ґрунтовного розуміння користувацького досвіду, інтерфейсних рішень, адаптивності та інтерактивності.

Було розглянуто, що професійні компетентності майбутнього дизайнера формується як цілісна система знань, умінь, навичок, цінностей та особистісних якостей, що забезпечують здатність до ефективної діяльності в умовах реальних проєктних ситуацій

Нами була виокремлена проєктно-художня компетентність, яка є невід'ємним компонентом професіоналізму фахівців дизайнерського профілю в галузі образотворчого мистецтва. Вона забезпечує здатність творчого мислення, вміння реалізовувати ідеї за допомогою цифрових інструментів та успішно діяти в умовах реальних дизайнерських завдань.

Ми з'ясували, що при підготовці майбутніх вчителів образотворчого мистецтва у процесі вивчення дисципліни «Комп'ютерний дизайн» використовуються графічні редактори: Canva, Krita, Adobe Photoshop, Adobe Illustrator та Figma, які мають свої функціональні особливості, дидактичний потенціал і сферу застосування в освітньому середовищі, що потребує поетапного оволодіння відповідними інструментами та підходами. Саме тому доцільним є впровадження модульної структури курсу.

Визначено, що модульний підхід є ефективною стратегією у вищій освіті, особливо у вивченні дисциплін, що пов'язані з комп'ютерним дизайном, оскільки це дає змогу чітко структурувати зміст навчальної програми на основі окремих модулів, кожен з яких присвячений вивченню конкретних інструментів та підходів до створення цифрової графіки.

Отже, вивчення дисципліни «Комп'ютерний дизайн» у закладі вищої освіти спеціальності

А4 Середня освіта (Образотворче мистецтво) має базуватися на застосуванні цифрових технологій, які відповідають сучасним тенденціям креативної індустрії.

Ключові слова: *професійна підготовка, професійні компетентності, здобувачі освіти, образотворче мистецтво, майбутні вчителі образотворчого мистецтва, комп'ютерний дизайн, цифрова графіка, модульний підхід.*

The article reveals that computer design is one of the most dynamic areas of training of future professionals, which requires not only an aesthetic vision but also a thorough understanding of user experience, interface solutions, adaptability and interactivity.

It was considered that the professional competencies of a future designer are formed as an integral system of knowledge, skills, abilities, values and personal qualities that provide the ability to work effectively in real project situations.

We have identified the design and artistic competence, which is an integral component of the professionalism of design specialists in the field of fine arts. It provides the ability to think creatively, implement ideas of using digital tools, and act successfully in real design tasks.

We found out that training of future fine art teachers in the process of studying the discipline «Computer Design» involves the use of the following graphic editors: Canva, Krita, Adobe Photoshop, Adobe Illustrator and Figma, that have their own functional features, didactic potential and range of application in the educational environment, which require gradual mastery of the relevant tools and approaches. That is why it is advisable to introduce a modular course structure.

It has been determined that the modular approach is an effective strategy in higher education, especially in the study of disciplines related to computer design, as it allows to structure the content of the curriculum clearly on the basis of separate modules, each of which is devoted to the study of specific tools and approaches to creating digital graphics. Modular approach to learning makes it possible to ensure the flexibility of the educational process and forms a competitive portfolio of students.

Therefore, the study of the discipline «Computer Design» of the speciality A4 Secondary Education (Arts. Fine Arts) in a higher education institution should be based on the use of digital technologies that correspond to the current trends in the creative industry.

It has been determined that the integration of current trends in computer design, UX/UI approaches and artificial intelligence helps to develop the professional competencies which are necessary for the future specialists to be successful in the digital space.

Keywords: *professional training, professional competences, students, fine arts, future fine art teachers, computer design, digital graphics, modular approach.*

Introduction / Вступ. In the modern society, characterised by the rapid development of digital technologies, design acquires new meaning and significance as an element of the creative industry and a powerful tool of visual communication. Training of design specialists in the higher education system is of particular importance, as the quality of professional education determines the ability of future designers to meet the challenges of time, technological changes and the requirements of the global labour market.

One of the most dynamic areas of training future specialists is web design, which requires not only an aesthetic vision but also a comprehensive understanding of user experience, interface solutions, adaptability and interactivity. At the same time, computer design education in a higher education institution should be based on modern methods, interdisciplinary approach, practical application, and continuous content updating.

Aim and Tasks / Мета та завдання. The aim and tasks of the article are to analyse effective methods of teaching computer design in a higher education institution, as well as to outline key trends in the field of digital design that should be integrated into the educational process of professional training of students majoring in A4 Secondary Education (Arts. Fine Arts).

Methods / Методи. In the context of the study, the following methods were used: analysis of psychological-pedagogical and specialized art literature, generalization of the experience of professional training of future visual arts teachers, synthesis, generalization, and systematization — aimed at identifying current trends and methodological approaches to the study of computer design.

Results / Результати. The competence approach is becoming increasingly relevant in design education, according to it the main goal is to develop not only students' knowledge but also the ability to apply it effectively in real project situations. In view of this, curricula are more and more focused on developing creativity, critical thinking, teamwork skills, visual analysis, and technical proficiency with tools.

The problem of competence formation in education was studied by such Ukrainian scholars as O. Havrysh, I. Dychkivska, I. Ziaziun, V. Kremen, I. Sushchenko, A. Shevchenko, S. Shevchuk, and others,

who emphasize the importance of combining theoretical knowledge and practical skills in the training of future teachers in accordance with the requirements of modern educational and professional environment.

According to A. Shevchenko, professional competences of a future specialist, a designer in particular, are formed as a holistic system of knowledge, skills, values and personal qualities that ensure the ability to work effectively in real project situations (Shevchenko A., 2016).

Therefore, it is also worth highlighting project-based learning, which involves students performing individual or group tasks as similar as possible to professional practice. This approach promotes developing responsibility, initiative and flexible thinking. When implementing training projects, students not only acquire new knowledge, but also learn to use design techniques, take into account the target audience, technical limitations, aesthetic requirements, and functionality.

Design and artistic competence is an integral component of the professionalism of specialists in the field of design, fine arts and art pedagogy. It provides the ability to think creatively, implement ideas using digital tools, and work successfully with real design tasks.

Among the academic disciplines, the key role is played by «Computer Design», which ensures the integration of artistic and design activities with modern information and communication technologies. This course is focused not only on technical mastery of graphic editors, but also on the development of creative thinking, the ability to visualise ideas and implement complete design projects in the digital environment.

Considering the importance of digital tools in training future fine art teachers, special attention should be paid to the analysis of software that is widely used in the process of studying the discipline «Computer Design».

Each of the graphic editors has its own functional features, didactic potential, and area of application in the educational environment. Let us consider in more detail the characteristics, application possibilities and pedagogical relevance of using such programmes as Canva, Krita, Adobe Photoshop, Adobe Illustrator and Figma in the professional training process of students majoring in A4 Secondary Education (Arts. Fine Arts).

The graphic editor Canva is a convenient cloud-based service for creating visual content, which is actively used in teaching the discipline “Computer Design”. The programme combines an intuitive interface with a large number of templates, fonts, illustrations and other graphic elements, allowing students to implement quickly creative ideas without additional technical training. From the pedagogical point of view, Canva contributes to the development of key competencies such as:

- visual thinking;
- ability to structure information in a compositional manner;
- basic skills in typesetting and design of presentations, social media posts, infographics and printed materials.

In addition, its online format makes it possible for students to work together on projects in real time, that corresponds to the modern requirements for team design activities in the digital environment *(Canva Design School).*

Krita is a free and open-source graphic editor focused primarily on digital painting, illustration, and concept art. Within the discipline “Computer Design”, Krita performs an important function in the development of digital artistic practice, allowing students to work with a variety of brushes, textures, layers and effects that mimic traditional art materials.

Due to the high level of accuracy and flexible interface settings, the editor is an effective tool for developing digital artistic competence, which is relevant for specialists in the A4 Secondary Education (Arts. Fine Arts) speciality.

Adobe Photoshop is a professional graphics editor used for raster image processing, photo editing, and design.

In the educational process, Photoshop plays a key role in mastering retouching, collage, masking, colour correction and digital drawing techniques.

Due to its functional flexibility, the programme promotes the development of technical literacy of future fine art teachers and introduces the principles of professional training of visual content for print and digital media (Kovalenko O. M., 2019).

Adobe Illustrator is an industry standard for creating vector graphics. Its application in education allows students to learn:

- to create logos, icons, infographics;
- to develop packaging design and brand identities;
- to work with colour, Bézier curves, and typography.

This editor develops students’ geometric thinking, accuracy, and an analytical approach to composition, which is especially important in the professional training of future professionals *(Adobe*

Inc. Adobe Illustrator).

Figma is a modern cloud-based platform for developing interfaces and prototypes. In the process of studying computer design, it is used to get acquainted with the basics of UI/UX design, web layout and digital prototyping.

With its real-time collaborative editing capabilities, Figma enables project collaboration, teaches the basics of design communication, and meets the modern standards of the digital environment of designer work.

Figma allows students to model full-fledged digital products, analyse user experience, and practice design thinking *(Figma. Learn Design & Prototyping).*

Discussion / Обговорення. Considering the variety of functionalities of the programmes (Canva, Krita, Adobe Photoshop, Adobe Illustrator and Figma), there is a need for a systematic, logical and structured approach to their integration into the educational process. After all, each of these programmes has its own specific functions, interface, and scope of application in creative work, which requires gradual mastery of the relevant tools and approaches. That is why it is advisable to introduce a modular course structure.

According to A.Yu. Martyniuk, 'modular learning is a way of arranging the educational process on the basis of the block-modular presentation of educational information' (Martyniuk A.Yu., 2018, p. 55).

Modular approach is an effective strategy in higher education, especially in the study of design-related disciplines. It ensures a logical sequence of the educational process, which allows students to develop gradually professional competencies in accordance with the level of complexity of the educational material. This approach is especially important when studying the course "Computer Design" within the speciality A4 Secondary Education (Arts. Fine Arts), as it allows us to structure the content of the curriculum clearly into separate modules, each of which is dedicated to the study of specific tools and approaches to creating digital graphics.

The course is suggested to be implemented in the following modules:

Module 1. Fundamentals of Computer Design (Introduction to the concept of digital design, types of graphics (raster, vector), file formats, elements of composition. Learning the interface of graphic creation environments. Formation of basic ideas about visual language.

Module 2. Raster Graphics and Digital Painting (Photoshop, Krita) (mastering the techniques of working with layers, brushes, strokes and effects. Creation of digital illustrations, photo processing. Development of artistic vision skills in the digital environment).

Module 3. Vector Graphics and Graphic Design (Adobe Illustrator and Figma) (development of the skills of creating logos, fonts, infographics and visual identity elements. Introduction to the basics of UI/UX design, interface layout and prototyping).

Module 4. Project Visualisation in Design Environments (Canva, Figma) (working with templates, creation of presentations, posters, posts for social media. Mastering the principles of information design. Collaborative work on team projects).

Module 5. Final Creative Project (development of the original design (poster, series of illustrations, interface or branding) with the presentation of the results in digital format. Emphasis on the integration of artistic and technological components).

Each module includes:

- lecture classes;
- practical works (from simple to more complex tasks);
- independent assignments (development of an individual project);
- group reviews (analysis of groupmates' works, consideration of solution options).

Teaching the course "Computer Design" for students majoring in A4 Secondary Education (Arts. Fine Arts), we can use the following methodological techniques:

1.Project-based learning

Students work on real or close-to-practice projects, such as designing a web page for an art gallery, an artist's personal portfolio, or an online exhibition. This facilitates the combination of creativity and technology.

2. Integration of classical artistic concepts

Tasks on the application of compositional principles, colour schemes, typography in the digital environment using Adobe Illustrator, Photoshop or Krita.

3. Module-based learning of graphic tools

As we have already noted, the course is divided into modules, in which students learn Canva (for rapid prototyping), Figma (for UI/UX and teamwork), Krita (digital painting), Photoshop (raster processing), and Illustrator (vector graphics).

4. Analysis of current trends

Discussion and practical implementation of the trends of minimalism, neomorphism, and

glassmorphism. Creation of responsive layouts based on UX principles.

5. Teamwork and reviewing

Arranging of group workshops where students present their work, receive feedback, and discuss artistic and technical solutions.

6. Using artificial intelligence in design

Introduction to generative tools (e.g. Adobe Firefly) for creating visual effects and concepts, which expand creative possibilities.

The course content is primarily focused on practical training. It is implemented through the integration of real and close to professional activity tasks that make students think independently, make creative decisions and use digital tools effectively.

The main emphasis of the discipline "Computer Design" is on the formation of a project approach: planning the stages of the task, selecting the appropriate tools, and presenting the results of the work.

For example, the project "Development of a responsive design for an artist's personal portfolio" involves:

- to develop a layout in Figma software on the basis of classical principles of composition and colour;
- to use Adobe Illustrator to create unique vector elements (logo, icons);
- to carry out processing of work images in Photoshop for the presentation;
- to develop a page concept in Canva as a presentation for a client;
- to present the work in a group and justify design decisions.

Conclusions / Висновки. Thus, the study of the discipline "Computer Design" of the speciality A4 Secondary Education (Arts. Fine Arts) in a higher education institution should be based on the use of digital technologies that correspond to modern trends in the creative industry. Programmes Canva, Krita, Photoshop, Adobe Illustrator and Figma are effective tools for the comprehensive mastery of both theoretical fundamentals and practical skills in computer design. Modular approach to learning, based on a step-by-step study of these programmes, makes it possible to ensure the flexibility of the educational process and forms a competitive portfolio of students. Integration of current trends in computer design, UX/UI approaches and artificial intelligence helps to develop the professional competencies which are necessary for the future specialists to be successful in the digital space.

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Дата надходження статті: «22» січня 2025 р.
Стаття прийнята до друку: «07» лютого 2025 р.

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Цитуйте цю статтю як:

Бучківська, Г., Барановська, В., & Греськова, В. (2025). Професійна підготовка майбутніх вчителів образотворчого мистецтва: сучасні тенденції та методичні підходи до вивчення комп'ютерного дизайну. *Педагогічний дискурс, 37,* 12–17. doi: 10.31475/ped.dys.2025.1237.02.

Cite this article as:

Buchkivska, G., Baranovska, V., & Greskova, V. (2025). Professional Training of Future Fine Art Teachers: Modern Tendencies and Methodological Approaches to Computer Design Education. *Pedagogical Discourse, 37*, 12–17. doi: 10.31475/ped.dys.2025.37.02.