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APPLICATION OF GRAPHIC EDITORS IN SEARCHING THE COMPOSITION OF PAINTING WORKS

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Annotation. The article examines certain directions in the technological process of creating a composition of an artistic painting that have arisen in the modern creative world. digitalization, affecting not only business, but also cultural life. The introduction of computer technologies and graphic editors, with the help of which many tasks are solved when creating a composition, becomes a good help for a modern artist and is quite acceptable for study and application in the training program for students of artists. In this regard, appears the need for special training of future teachers of painting to work with digital devices, their mastery of methods of working on a computer with graphic tablets and various programs.

An artist-teacher who has knowledge in the field of computer technology and the use of specialized software in his arsenal can significantly speed up the process of mastering theoretical, practical and visual material, improving the way of presenting the necessary information, the opportunity to reach a qualitatively new level of education by changing the methods and forms of searching for a compositional solution.

Several directions of using «computer art», its advantages and disadvantages are examined, the most acceptable forms of artistic creation using a computer are described, using the experience of artists who turn to them. The analysis is carried out on the examples of the work of teachers and students of the Department of Fine Arts (Odessa State Academy of Civil Engineering and Architecture, Ukraine), as well as practicing professional artists.

This will directly affect the level of training of students and their further competitiveness in the profession market.

Keywords: digitization in art, graphic editors, composition, computer technology, integrity of perception, professional knowledge.

Formulation of the problem. This problem has arisen in the modern world at the intersection of creativity and computer technology. Using programs and image editors such as Adobe Photoshop, Adobe Illustrator, CorelDraw, Macromedia FreeHand and many others, makes it much easier for an artist to work in the process of creating a composition in professional work. They are mobile, allow you to work in a variety of color layers, have up to 180 brush options in their set and significantly reduce time costs, and this is just the tip of the iceberg of filling the software capabilities of graphic editors (copying, layering, cutting, erasing, transforming, pasting, etc.). It would be extremely shortsighted to refuse these opportunities.

Our main problem that needs to be solved is creating conditions for the interaction of innovations and traditions, strengthening the position of a realistic academic school, using the achievements of modern technologies, making it more mobile, universal, accessible and understandable. At the same time, it should be borne in mind that any innovations and changes made in teaching should not contribute to cardinal changes in the existing structure of the academic school.

The possibility of using specialized software and graphic editors should not replace and completely replace the creative process of creating a composition of a work of art. A computer program without art education, knowledge of the laws of graphic literacy, visual perception and the artist's life experience is just a set of algorithms.

Analysis of recent research and publications. This topic was addressed by S.A. Prokhorov, in the article «Computer technologies in modern painting» [9], D.F. Mironov in the textbook for universities «Computer graphics in design» [8], A.Yu. Demshina in the article «Possibility of painting in the era of media culture» [2], O.A. Isaeva «Digital painting as a current trend in fatherland art» [3], and many others. The general opinion is that painting, having reached its limit in terms of the perfection of technology and means, is not capable of offering anything to society anymore, new versions of art are needed, and they legitimately find and fill a niche in the general stream of fine art by the author. The age of computer technology gives rise to the need for the emergence of «digital» artists.

However, the methods of the combined use of the computer and the traditional school of painting in the study and teaching of art disciplines have not yet been covered in detail, mainly based on the experience of individual teachers. The need for application in the field of fine arts has become acute *with the transition of all educational institutions to online teaching,* in connection with the emergence and spread of *COVID -19. This has become a new form of teaching composition in painting with the use of graphic editors and the preservation of a holistic pedagogical teaching method.*

In the course of the research, we will consider several directions of the development of «computer art», its advantages and disadvantages, dwell on the most acceptable forms of artistic creation using a computer, using the experience of artists who turn to them.

The purpose of the research is in theoretical and practical settings, covering both scientific and methodological components of the introduction of new technical teaching aids based on computer programs and graphic editors when creating a painting.

The objectives of the research are that it is necessary to analyze and develop an algorithm for the actions of the service personnel and the method of integration training, using new technologies in the traditional methods of teaching a painting.

Main text. In comparison with the history of fine arts and painting itself, part of the modern trend that uses computer technology to create pictorial compositions is still in its infancy. Its history began with the development by CompuServe for transmission of raster images over networks in 1987, GIF (Graphics Interchange Format) - a format for exchanging images, storing graphic images. GIF format, capable of storing lossless compressed images in up to 256 palette colors. It is mainly intended for drawings, graphs, etc. For more than 30 years, improving with operating systems and mobile gadgets, programs such as Adobe Photoshop, Adobe Illustrator, Corel Draw, Macromedia FreeHand, Corel Painter, Art Rage, GIMP, Krita, My Brushes and open Canvas on the base Windows and Android, more modern, supported by the platform iOS – Procreate and many others.

Since the 21st century, the impact of digital technology on artistic creation has become more and more evident. The capabilities of computer programs are constantly being updated and improved. They are used when editing photographs and photographs, creating sculptures using rapid prototyping technology. (Rapid Prototyping - RP), in the work of artists creating preliminary sketches on a computer. The ability of programs to take into account the various needs of the user to correct, cancel and save the results obtained at any stage of creativity, as well as return to them at any time, allows you to work many times faster and more efficiently. All digital painting programs, with the exception of vector painting programs, try to mimic the use of physical media, while graphics editors allow you to paint with the tools that artists use. In a graphics editor, you can get around the color mixing problem, since choosing the right color is choosing a button. Also, the selection of the required tool is almost instant operation. Both in procedure and in

appearance, bitmap, mesh, or bitmap painting is most similar to traditional painting with real brushes and paint. The image is created on the screen using a virtual brush in a spontaneous manner. Colors and lines are registered pixel by pixel. They do not add up or translate into a formula. As a result, shapes and lines retain all the characteristics of an individual painter's hand. The advantage of such technologies in comparison with traditional forms of collecting and processing information is:
- reduction of time due to the use of fast processors;
- cheaper, due to the exclusion of expensive materials from the process;
- simplification, due to the selection of a convenient program for implementation;
- the ability to create exact copies of images with little time and money;
- the ability to access the image through telecommunications;
- competitive ability by optimizing the creative process.

The advantages are undeniable, but the task was not to highlight the capabilities of each program, but to analyze its work in combination with the artist's creative potential. In this regard, appears the need for special training of future teachers of painting to work with digital devices, their mastery of methods of working on a computer with graphic tablets and various programs. This also highlights a number of disadvantages:
- expensive equipment and programs requiring a licensed connection are also not cheap to purchase, and if it is possible for amateurs to use «broken» versions, then for universities only analog ones are needed;
- constant updating and improvement of technical devices;
- availability of uninterrupted internet;
- copyright protection, due to the availability of the electronic version;
- color reproduction of the monitor and the ability to compete with the human eye;
- flatness of physical representation due to the technical impossibility of translating strokes into surface texture;
- bitmap painting is limited by the size of the image;
- print quality, etc.

Formula works are easily recognizable by their degree of perfection, which is literally «inhuman». This is especially true for vector graphics. The presence of such nuances as: transparency, symmetry, regular distortion, exact repetition, perfect circles, squares, embossing and other 3D illusions, very smooth gradients, monochrome color planes, a sharp and bold appearance of formula-based form vectors, resembles one from paper cutouts and stencil art. Alone or in combination with step-by-step «bitmap» painting, the computer creates a language of color and form that is completely new and can in no way compete with the artist's hand, «real» paints and brushes.

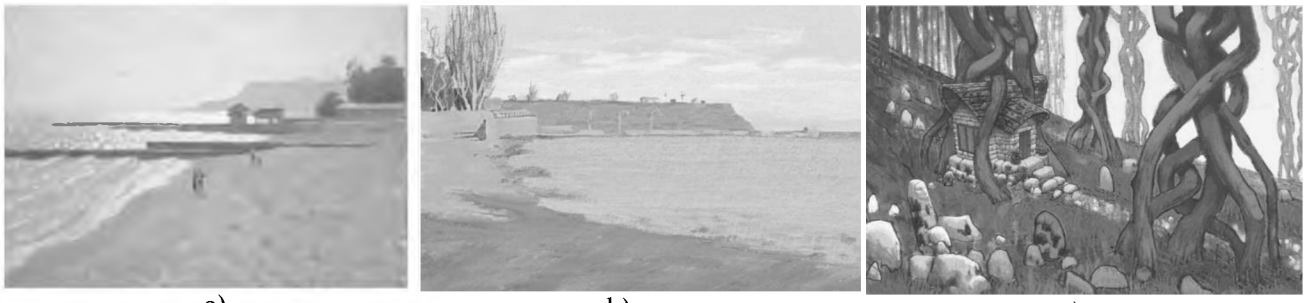
We are constantly studying, looking for, selecting the most acceptable and most valuable experience of contemporary artists and teachers, and subsequently adapting to our own educational process. Let us consider in our opinion the possible applications of «computer art» in the process of creating a work of art.

The first option, the use of graphics and visualization programs to create «miraculous» work. A graduate of Odessa State Academy of Civil Engineering and Architecture (OSACEA), an architect by profession, S. Ryabchenko, works in three-dimensional modeling programs, as an artist, and so describes the process of creation: «I do not make preparatory sketches, I immediately sit down to create a work. There is a clear space in front of my eyes, a mouse in my hands. The process is similar to the work of a director - new thoughts come, I combine something, some characters come, others leave. Ultimately, a plot with its own image and character is revealed, a microcosm is formed». Some of his works are compared with those of Dali (Fig. 1).

a) b)

Fig. 1 a) «Empire», S. Ryabchenko, digital printing on aluminum, 2012;
b) «Dance», S. Ryabchenko, digital printing on aluminum, plexiglass, 2016

The second option, where the artist uses the computer as a tool and means of implementing the laws that underlie artistic creativity. Let's dwell on it in more detail. In this case, the program carries the functions of a palette and a canvas, and a computer is a creative space in which the author is almost not limited in his choice of ideas, tools and colors. Skillful use of a computer program and basic art education allows you to combine in one work the artist's skill and computer effects, creating works that meet all the rules and canons of the school of painting. Consider the work of the assistant of the Department of Fine Arts A.Y. Izrailyan (Fig. 2). The first picture (Fig. 2 a) shows the work performed in the technique of oil painting on the canvas «Sunny Day», the other two (Fig. 2 b,c) - in the program Procreate «May 16» and «Fairy Forest».



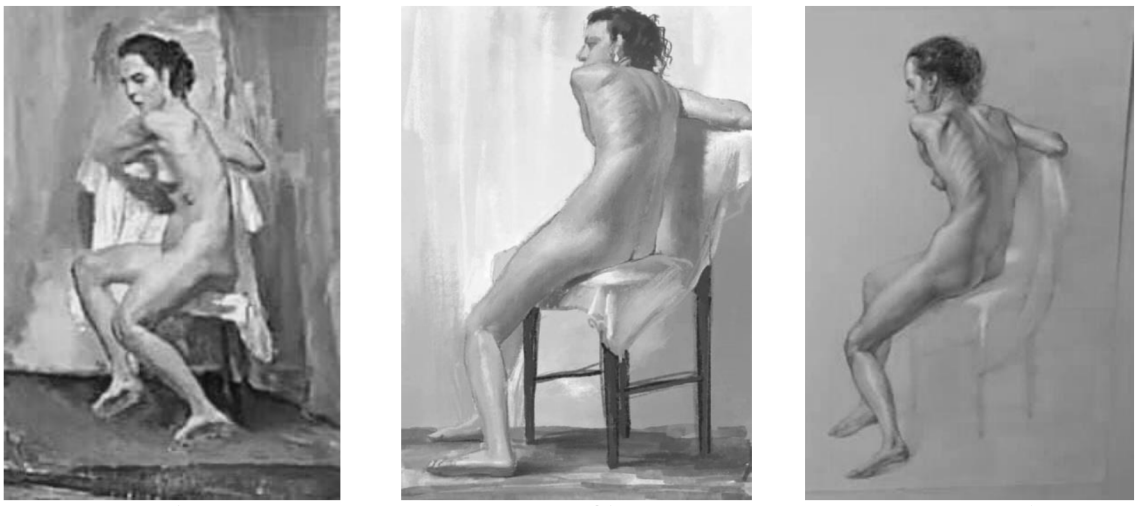
a) b) c)

Fig. 2 a) «Sunny Day», A. Izrailyan, x. m., 2021; b) «May 16», A. Izrailyan, program Pro with reate , 2021; c) «Fairy forest», A. Izrailyan, program Pro with reate, 2021

The finished composition is a prerequisite for any piece of art. The creation of a composition is not only the ability to correctly position objects in the plane of the drawing, to combine them into a single whole, but also the ability to interest the viewer, to attract his eyes to his work [1].

It carries the idea and expresses the character of the entire work. The expressiveness of individual parts of the image and color combinations are very important, but the work will be whole only if all its elements are interdependent, consistent with each other, subordinate to one idea. In other words, if all parts of the work are compositionally related. And in this case, what methods the artist achieved this result does not matter, the main thing is that the work is built competently, in accordance with the rules of composition and painting. The expressive means and techniques used by each artist are individual; in this case, new computer capabilities are used, revealing the inner world, conveying feelings and emotions. And in these works, technology and tools have played an important role for perception.

An example of the depicted nude (Fig. 3) illustrates that the chosen tool for the embodiment of the idea and composition is not so important as knowledge of the anatomy, proportion, structure, texture of the human body. Thus, a computer program is just a tool, like a brush or sanguine, paper or canvas, on which the artist embodies his ideas, and is not able to replace the creative process.



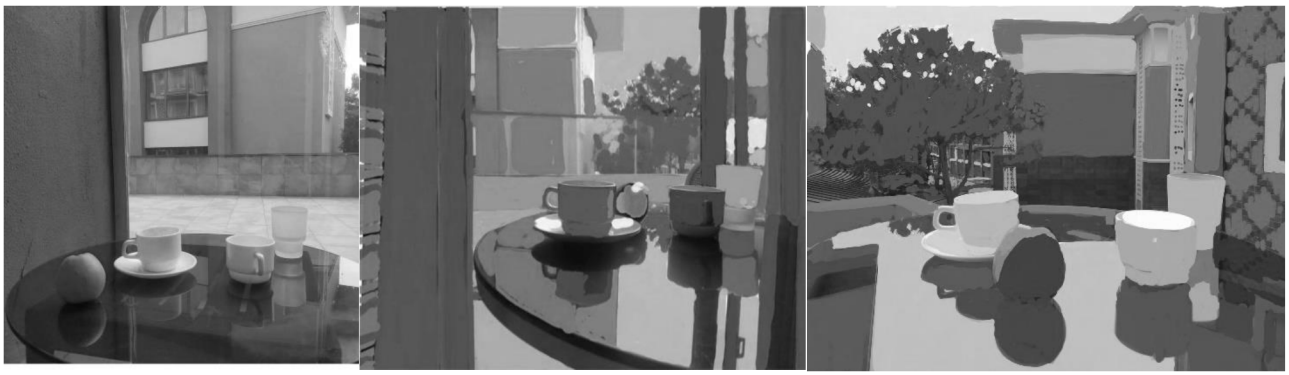
a) *b)* c)

Fig. 3 a) «Nude», M. Zybkin, oil on canvas, 2021; b) «Nude», A. Izrailyan, Procreate program, 2021

The third option is the alternative creation of the composition, which is technically different from the academically accepted norms.

The program allows artists to manipulate various images and their parts, combining and composing them into a single whole. It also allows you to adjust the hue, tone, saturation, lightness of the image and its individual elements.

As an example, online classes with the use of graphic editors, a painting teacher from the city of Nikolaev, I. Andrazhevskaya with already established professional artists on drawing up a color sketch for further transfer to the canvas (Fig. 4).



a) b) c)

Fig. 4 a) ph otography; b, c) processing in a graphical editor, L. Kabanikhina, Akademgorodok (Novosibirsk), 2020

Here we are talking about the composition of color spots, organization, balancing of individual parts of a picture or drawing. Balancing of individual parts is also achieved by the relationship of color spots that make up the entire image as a whole.

Digital painting, like traditional painting technique, is a method that becomes a means of producing art in the artistic process. The power of digital painting is used by many artists today in addition to other imaging techniques.

Let us consider another example of using the capabilities of graphic editors in the process of creating a composition of the thesis «New Life», student of the Department of Fine Arts of OSACEA, A.S. Sviderskoy (Fig. 5).

a) b) c) e)

Fig. 5 Search for composition and color spot
a) a sketch by hand; b) sketches in a graphics editor; c) a variant of a linear solution;
d) a variant of a tone solution

The complexity of the artistic task at hand was to use a computer program (in this case, Adobe Photoshop) to imitate on a sketch unusual, from the point of view of image technology, graphic techniques.

The initial sketch of the idea, created by hand (Fig. 5 a) and its transfer to the graphic editor (Fig. 5 b), is presented. With the help of the standard options of the program, variants of the tone solution were created in operation (Fig. 5 c,d). Further, after comparing and approving the most successful solution, the student proceeds to the next stage of developing a sketch. All the prepared elements were collected and refined into one image, using brushes and layers in Adobe Photoshop.

Having determined the tonal spot, we proceeded to fill and search for the desired state. In parallel, there was a drawing, detailing and a search for the necessary characteristic motives and materials. In this case, the student was inspired by the works of Alphonse Mucha and Gustav Klimt. The final version used gold leaf, graphic printing techniques, stencil and canvas printing. The program's capabilities to compile images gave the final result close to the conceived idea (Fig. 6). At this stage, the work on the creation of the drawing is over, after which the finished sketch was transferred to the canvas. Then you can start looking for the transfer of the desired effects using graphic and painting techniques.

a) b) c) d) e)

Fig. 6: a; b; c; d) stages of work in a graphical editor; e) the final result in a graphics editor

Another example of using a computer program for long-range searches, for the thesis of a student of the Department of Fine Arts of OSACEA, S. Dzhulay «Caucasian hospitality» (Fig.7). Here, a full-fledged compilation with a photograph is used and its transformation in the technique of oil painting on canvas.

a) b) c)

d) e) f)

Fig. 7: a; b; c; d; e) background solution options in a graphical editor; f) the final result in a canvas

As can be seen from the examples presented, the computer was used to visualize and quickly represent the relationship of spots and tonality, it is noticeable how the color of the Chokhi, the national Georgian costume, changes depending on the background.

Findings. It is not enough just to communicate professionally in the language of algorithms when creating a composition; it is just a machine that reproduces the movement of a hand. Knowledge of anatomy, a sense of rhythm, the ability to see interesting events in the surrounding life, characters, motives, angles and states, the constant implementation of sketches from nature develops not only the eye and hand, but also the compositional thinking of a professional artist, providing an opportunity to masterfully solve tasks of any complexity using a computer. An artist with a similar arsenal of knowledge will be able to work in any technique that suits him.

Drawing on a computer, with the help of various graphic editors, contributes to aesthetic education and a new assimilation of reality, forms coloristic skills, reveals and develops the creative abilities of students. Most of the successful practicing «digital» artists received a traditional art education and only then independently switched to digital art.

Thus, the introduction of computer technologies in the process of teaching artists in the future increases the percentage of graduates' implementation in the labor market, due to the actualization of professional skills.

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ЗАСТОСУВАННЯ ГРАФІЧНИХ РЕДАКТОРІВ У ПОШУКУ КОМПОЗИЦИИ ЖИВОПИСНИХ ТВОРІВ

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Анотація. У статті розглядаються певні напрямки в технологічному процесі створення композиції художнього живописного твору. Впровадження комп'ютерних технологій і графічних редакторів, за допомогою яких вирішуються багато завдань при створенні композиції стає гарною підмогою для сучасного художника і цілком прийнятно для вивчення і застосування в програмі підготовки студентів художників. Здатність програм, враховувати різні потреби користувача виправляти, скасовувати і зберігати отримані результати на будь-якому етапі творчості, а також повертатися до них в будь-який момент - дозволяє працювати у багато разів швидше і ефективніше.

У зв'язку з цим виникає потреба в спеціальній підготовці майбутніх викладачів живопису для роботи з цифровими пристроями, освоєнні ними методик роботи на комп'ютері з графічними планшетами і різними програмами. Цифровий живопис, як і традиційна техніка живопису, є методом, який стає засобом виробництва мистецтва в художньому процесі. Художник-педагог, який має в своєму арсеналі знання в області комп'ютерних технологій і використання спеціалізованого програмного забезпечення, може значно прискорити час засвоєння теоретичного, практичного та наочного матеріалу, удосконаливши спосіб подачі необхідної інформації, можливість вийти на якісно новий рівень навчання, змінивши методи і форми пошуку композиційного рішення.

У процесі дослідження розбираються кілька напрямків використання «комп'ютерного мистецтва», його переваги та недоліки, описуються найбільш прийнятні форми художньої творчості з використанням комп'ютера, використовуючи досвід художників, які звертаються до них. Аналіз проводиться на прикладах робіт педагогів і студентів кафедри образотворчого мистецтва, Одеської державної академії будівництва і архітектури (Україна), а також практикуючих професійних художників.

Стає цілком зрозумілим, що використання комп'ютерних програм і графічних редакторів в системі підготовки художників, безпосередньо позначиться на рівні підготовки студентів і їх подальшої конкурентоспроможності на ринку професії.

Ключові слова: діджиталізація в творчості; графічні редактори; композиція; комп'ютерні технології; цілісність сприйняття; художня освіта.

ПРИМЕНЕНИЕ ГРАФИЧЕСКИХ РЕДАКТОРОВ В ПОИСКЕ КОМПОЗИЦИИ ЖИВОПИСНЫХ ПРОИЗВЕДЕНИЙ

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Аннотация. В статье рассматриваются определенные направления в технологическом процессе создания композиции художественного живописного произведения. Внедрение компьютерных технологий и графических редакторов, при помощи которых решаются многие задачи при создании композиции становится хорошим подспорьем для современного художника и вполне приемлемо для изучения и применения в программе подготовки студентов художников. Способность программ, учитывать различные потребности пользователя исправлять, отменять и сохранять полученные результаты на любом этапе творчества, а также возвращаться к ним в любой момент - позволяет работать во много раз быстрее и эффективнее.

В связи с этим появляется необходимость в специальной подготовке будущих преподавателей живописи для работы с цифровыми устройствами, освоении ими методик работы на компьютере с графическими планшетами и различными программами. Цифровая живопись, как и традиционная техника живописи, является методом, который становится средством производства искусства в художественном процессе. Художник-педагог, который имеет в своем арсенале знания в области компьютерных технологий и использования специализированного программного обеспечения, может значительно ускорить время усвоения теоретического, практического и наглядного материала, усовершенствовав способ подачи необходимой информации, возможность выйти на качественно новый уровень обучения, изменив методы и формы поиска композиционного решения.

В процессе исследования разбираются несколько направлений использования «компьютерного искусства», его преимущества и недостатки, описываются наиболее приемлемые формы художественного творчества с использованием компьютера, используя опыт художников, которые обращаются к ним. Анализ проводится на примерах работ педагогов и студентов кафедры изобразительного искусства, Одесской государственной академии строительства и архитектуры (Украина), а также практикующих профессиональных художников. Становится вполне понятным, что использование компьютерных программ и графических редакторов в системе подготовки художников, непосредственно отразится на уровне подготовки студентов и их дальнейшей конкурентоспособности на рынке профессии.

Ключевые слова: диджитализация в творчестве, графические редакторы, композиция, компьютерные технологии, цельность восприятия, художественное образование.