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USE OF TECHNICAL TRAINING TOOLS FOR ACQUISITION OF FUTURE QUALIFIED WORKERS-PAINTERS WITH THE TECHNOLOGY OF PERFORMANCE OF VARNISH PAINTING

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Abstract.

The *relevance* of the article is due, on the one hand, to the need to organize the educational process in the professional (vocational) education school (hereinafter - P(V)E school) at a level capable of meeting the requirements of the State standard of vocational education for training (advanced training) of workers in the profession of «painter» (a graduate of the P(V)E school with the qualification «painter of the 4th category» must, among other things, know the technology of varnishing), and on the other - the importance of using computer programs and technical training tools (hereinafter - TTT) in the educational process to increase the effectiveness of the formation of students' skills and abilities to work on the technique of «varnish painting».

Aim: to develop an algorithm for preparing and conducting a lesson to acquaint future qualified workers-painters with the technology of varnish painting.

Methods: illustrations and demonstrations to visualize the process of varnishing in order to increase attention, increase interest, improve memorization and assimilation of educational material by students.

Results: an algorithm for preparing and conducting a lesson on varnish painting has been developed, which has three successive stages: design of a wooden plate in the technique of «Dot painting»; using computer programs Windows Movie Maker, KMPlayer, MS Office PowerPoint, MS Office Word to edit video, defragment it into individual images, prepare a presentation and lesson plan; direct lesson.

Conclusions: subject to the previous change of sub-stages and their content, the developed algorithm is effective for painting lessons on other topics and can be used in mastering such disciplines as «Technology of art», «Fundamentals of composition», «Drawing».

Keywords: professional training, professional (vocational) education school, technology of varnish painting.

Introduction. According to the State standard of vocational education for training (advanced training) of workers in the profession «painter of the 2, 3, 4, 5, 6th categories» (Ministry of Education and Science of Ukraine, 2015), a graduate of P(V)E school for qualification «painter of the 4th

category» must, among other things, know the technology of varnishing; normative documents and requirements of labor protection, fire protection, industrial sanitation and personal hygiene for employees of this profession. In addition, he must be able to: analyze works of art by genre; to develop

compositions on the basis of works of fine and decorative-applied art; eliminate defects during execution; correctly perform work with the technique of «varnish painting»; comply with the rules and regulations of labor protection, fire protection, industrial sanitation and personal hygiene. General professional requirements for the future qualified worker-painter are: rationally organize and effectively use the workplace; adhere to the norms of the technological process; to prevent defects in work; adhere to the norms, methods and techniques of safe work. Future painters have the opportunity to acquire the above knowledge, skills and abilities during industrial training on the topic «Varnish painting».

In turn, in the Concept of implementation of state policy in the field of P(V)E «Modern professional (vocational) education» for the period up to 2027 (Cabinet of Ministers of Ukraine, 2019) one of the basic tasks of the reform of P(V)E defined quality assurance by:

- formation of the content of P(V)E on the basis of competencies;
- creation of external and internal system of quality assurance of education;
- modernization of the educational environment, which promotes innovation, accessibility, transparency, flexibility and openness of the educational process;
- improvement of the system of training of pedagogical workers in the field of P(V)E with the involvement of highly qualified workers of production and services in the educational process;
- introduction of motivational mechanisms to stimulate professional activity and development of pedagogical workers.

In this context, in our opinion, one of the areas of modernization of the educational environment is the use of technical training tools.

Sources. A number of publications by domestic and foreign authors have been devoted to various aspects of the use of information technologies and TTT in vocational and higher education in the field of art. Authors have studied: problems of integration of computer-oriented technologies into artistic and creative practice (Blyzniuk, 2008); computer technologies in the educational process of art educational institutions (Blyzniuk and Andreikanych, 2014); computer graphics as a component of art education of future specialists in fine arts (Kovalenko, 2019); the use of TTT in the educational and production process of vocational schools in Ukraine in 1960–1991 of the twentieth century (Smoliana,

2011); the essence and features of the use of computer learning technologies in art education (Cherniavskyi, 2014); interactive methods and media-educational elements in the artistic and aesthetic training of students of creative specialties at the university (Shelupakhina and Shelupakhina, 2014); problems and trends in sensitization and articulation of the computer for teaching art (Milbradt, Habowski and Conte, 2020); the needs of art painting and its educational reform in the context of virtual reality technology (Pan and Deng, 2020); digital technologies in art and design education (Radclyffe-Thomas, 2008); use of iPad among art and design students (Souleles et al., 2014).

The purpose of the article is to develop an algorithm for preparing and conducting a lesson on acquainting future qualified workers-painters with the technology of varnishing

Methods: illustrations and demonstrations to visualize the process of varnishing in order to increase attention, increase interest, improve memorization and assimilation of educational material by students.

Results and discussion. *Varnish painting* is a work of fine art made on a specially prepared surface (wood, canvas, fabric, etc.), which is covered with a thin layer of varnish after painting.

The technique of «Dot painting », or «Point to point», is a type of art that appeared relatively recently, although it has a long prejudice. The technique itself seems to repeat the ancient mosaics, embroidery, tapestries, embossed products. It can be used to decorate clothes, shoes, interior items. The technique of dot painting has the following types: geometric; intuitive; imitation of different styles. Geometric painting consists of simple shapes: squares, triangles, circles and various intersections of lines. Painting is called intuitive when the author draws what he wants: any lines, folds, shapes. Such images are not like anything, they are difficult to repeat. Imitating different styles is the creation of an ornament that resembles the motifs of Indian or Arab culture – everything that the author liked.

There are several ways to transfer an image to a work surface, such as a wooden surface. One of them is the transfer of the image using a stencil. The most popular paints that can be used to work on wood, stone, etc. are acrylic, oil, latex, water-based.

The algorithm for preparing and conducting a lesson on industrial training for painters in P(V)E schools using computer programs and TTT will be divided into three successive stages:

1) execution of painting;

- 2) use of computer programs in preparation for the lesson;
 - 3) preparatory, basic and final sub-stages of the

lesson with the use of TTT in the classroom.

The algorithm of painting in preparation for a lesson on industrial training for painters is shown in Fig. 1

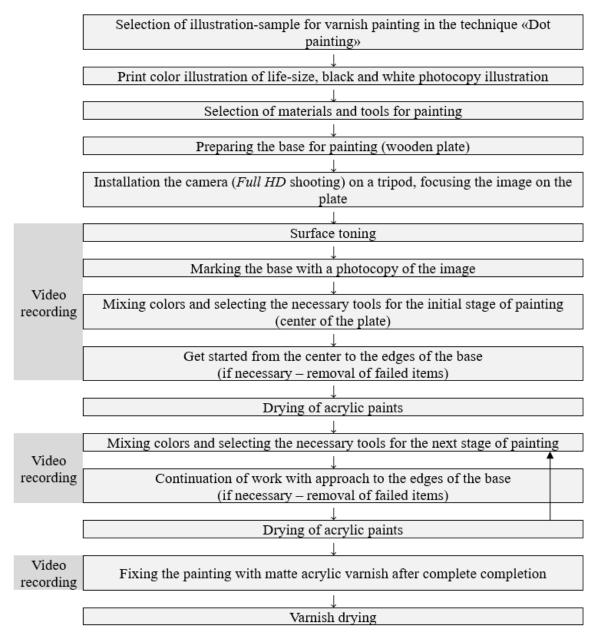


Fig. 1. Algorithm for painting

Therefore, before starting work, you need to print a sample illustration; spread paints and wooden base on the table.

The following equipment is required for the lesson: table (pupil's), base for painting (in our case – a wooden plate), white pencil for different surfaces, ruler, compass, palette with recesses, paints (acrylic), water, round brushes, dots, plastic caps and drills of different diameters, cotton swabs, wet wipes, alcohol or liquid for washing dishes or windows, pins, pipette (Fig. 2).



Fig. 2. Equipment for the lesson

Note that dots is a two-sided tool for dot painting (Fig. 3).



Fig. 3. Dots

As acrylic for painting is diluted and washed off with water, solvents are not required. Related materials for acrylic painting: phosphorescent and iridescent gels (shimmering), drying retardant for acrylic, solvent to give transparency to acrylic, gel to give volume, acrylic varnishes (glossy, matte, satin), brush cleaner from acrylic paints, acrylic contour in tubes.

Preparation of the base for painting is its gluing and covering with soil. In Fig. 4 shows a plate covered with evenly distributed acrylic soil and two layers of black acrylic.



Fig. 4. Toning the surface

After drying of each layer of acrylic the marking of a surface by the «powder» technique is carried out. Then, with the help of a white pencil and a ruler, the main axes are marked on the formed points, which will serve as landmarks: horizontal, vertical, center of the drawing (see Fig. 5).



Fig. 5. Marking the surface

It is better to start drawing ornaments from the central point to the parties that will allow to keep symmetry and to follow a pattern. It is expedient to deduce round or figured motives from the center of drawing to the parties, filling with sectors. It is important to allow each color and a number of dots to dry, otherwise the picture may smudge or merge into unattractive spots.

The peculiarity of dot painting is the size of the dots, the distance between them, the color combination. After stirring the appropriate paint, you need to put a dot in the center. Then others of smaller size are placed around it (see Fig. 6).



Fig. 6. The beginning of painting

For our example, the first circle is surrounded by a chain of yellow dots, the second – blue. Around the blue «sharpened» small white dots (see Fig. 7).



Fig. 7. Continuation of painting

To get a dot, not a stain, you need to properly place the dots (or brush) on the surface. This should be done vertically (see Fig. 8).

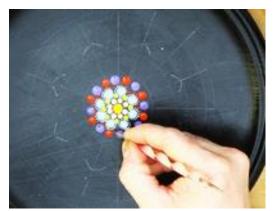


Fig. 8. Working with dots

If it works out, another point is placed next to it. The dots should try to make the same size, adjusting the pressure on the dots, as well as put them as close as possible to each other, but so that they do not merge.

After applying purple dots (one large and three medium), petals of yellow dots are formed around them. Then a yellow dot is placed in the center, and then another five dots on each side of it with a gradual decrease in the size of the dots (see Fig. 9).

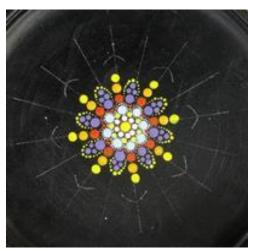


Fig. 9. Formation of petals

Unsuccessful points are removed with a cotton swab dipped in alcohol. When the chain is close to perfection, the next circle is formed (see Fig. 10–11). The paintings are allowed to dry for at least a day, making the acrylic strong and durable.



Fig. 10. Continuation of painting



Fig. 11. Completion of painting

Finally, the finished, well-dried work in the technique of point-to-point is fixed with acrylic varnish to prevent mechanical damage (Fig. 12).



Fig. 12. Varnish coating

The algorithm for using computer programs in preparation for an open lesson is shown in Fig. 13.

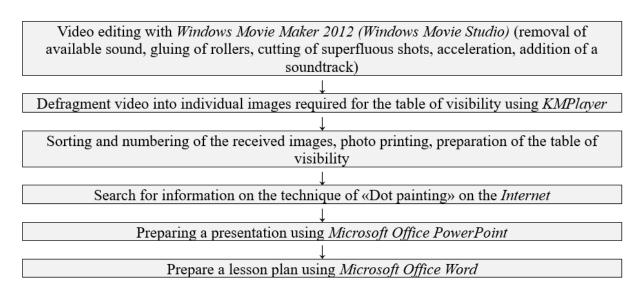


Fig. 13. Algorithm for using computer programs in preparation for an open lesson

As you can see, the following programs were used during the preparation:

Windows Movie Maker 2012 is a free video editor that has a simple and intuitive interface that allows you to edit videos from a variety of media files.

KMPlayer is a media player for audio and video files that supports a large number of media formats.

Microsoft Office PowerPoint is the world's most

common program for creating and viewing presentations, which is part of the Microsoft Office suite.

Microsoft Office Word is a software editor for creating, editing, and saving text, which is also part of the Microsoft Office suite.

The algorithm of the preparatory, basic and final sub-stages of the open lesson (in class) is shown in Fig. 14.

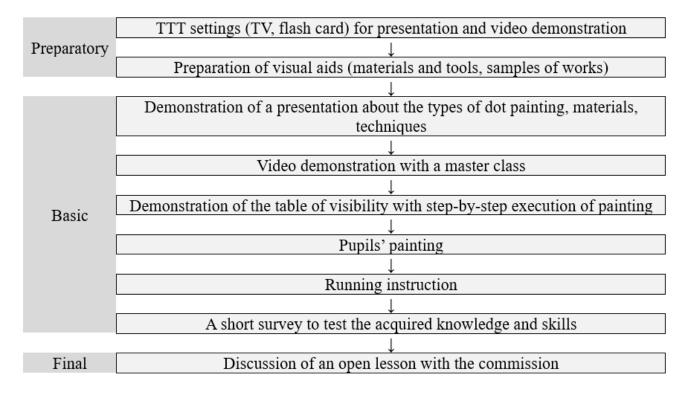


Fig. 14. Preparatory, basic and final sub-stages of an open lesson using TTT (in class)

Note that for illustration we used the table «Varnish painting», made on cardboard size 100×70 cm with pasted 24 photographs of the gradual execution of the painting (format 10×15 cm).

Conclusions. The developed algorithm for preparing and conducting in professional (vocational) education schools of a lesson on industrial training for painters on a subject «Varnish painting» with use

of TTT allows to qualitatively visualize process of execution of varnish painting that leads to improvement of concentration of pupils, growth of their interest, improvement of memorization and assimilation of educational material. At the same time, provided that the substages are changed and their content is changed, this algorithm can also be used for painting lessons on other topics, as well as for art

disciplines («Technology of art», «Fundamentals of composition», «Drawing»). It is advisable to use Windows Movie Maker 2012 (Windows Movie Studio), KMPlayer, Microsoft Office PowerPoint, Microsoft Office Word for preparing and conducting the lesson, but does not exclude the possibility of using other computer programs with similar or larger functionality for preparing and conducting lessons.

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ВИКОРИСТАННЯ ТЕХНІЧНИХ ЗАСОБІВ НАВЧАННЯ ДЛЯ ОЗНАЙОМЛЕННЯ МАЙБУТНІХ КВАЛІФІКОВАНИХ РОБІТНИКІВ-ЖИВОПИСЦІВ З ТЕХНОЛОГІЄЮ ВИКОНАННЯ ПІДЛАКОВОГО ЖИВОПИСУ

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Реферат.

Aктуальність статті зумовлена, з одного боку, необхідністю організації освітнього процесу в закладі професійної (професійно-технічної) освіти (далі — $\Pi(\Pi T)O$) на рівні, здатному задовольнити вимоги Державного стандарту професійно-технічної освіти для підготовки (підвищення кваліфікацій) робітників з професії «живописець» (випускник закладу $\Pi(\Pi T)O$ за кваліфікацією «живописець 4-го розряду» серед іншого повинен знати технологію виконання підлакового живопису), а з іншого, — важливістю використання в освітньому процесі комп'ютерних програм і технічних засобів навчання (далі — T3H) для підвищення ефективності формування у здобувачів освіти умінь і навичок роботи за технікою «підлаковий живопис».

Mema: розробити алгоритм підготовки та проведення уроку з ознайомлення майбутніх кваліфікованих робітників-живописців з технологією виконання підлакового живопису.

Memodu: ілюстрування та демонстрації для наочного відображення процесу виконання підлакового живопису з метою підвищення уваги, збільшення зацікавленості, покращення запам'ятовування й засвоювання здобувачами освіти навчального матеріалу.

Результати: розроблено алгоритм підготовки та проведення уроку з підлакового живопису, що має три послідовні етапи: оформлення дерев'яної тарілки в техніці «Крапковий розпис»; за допомогою комп'ютерних програм Windows Movie Maker, KMPlayer, MS Office PowerPoint, MS Office Word здійснення монтажу відео, його дефрагментація на окремі зображення, підготовка презентації та плану уроку; безпосереднє проведення уроку.

Висновки: за умови попередньої зміни підетапів та їх змістового наповнення розроблений алгоритм ефективний для проведення уроків з живопису на інші теми та може використовуватися при опануванні таких дисциплін як «Технологія виконання художніх робіт», «Основи композиції», «Рисунок».

Ключові слова: професійна підготовка, заклад професійної (професійно-технічної) освіти, технологія підлакового живопису.

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