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AESTHETIC PERCEPTION OF COLOUR IN THE PROCESS OF COLOUR TRAINING OF FUTURE DESIGNERS

Possession of colour science and aesthetic understanding of colour perception, combining colour combinations, harmonious use of accents, nuances, tonal divisions in created design objects are necessary skills for professional design activities. Aesthetic perception of colour is one of the most important components of a designer's colour competence. Correct understanding, analysis and creative interpretation of the colour scheme will contribute to the integrity of the design object, develop the future design specialist as a creator who is capable of self-development and self-improvement. Insufficient attention to this issue in the teaching of the disciplines of the professional cycle, changing priorities in the training of future designers, their limited adaptability to educational opportunities and the growing demand for highly qualified specialists in the field of design – all this requires a thorough study of the specified topic.

The work of scientists (V. Andrushchenko, O. Dubaseniuk, O. Karaman, S. Kharchenko, V. Kurylo, S. Savchenko, etc.) is devoted to the study of the organization of the educational process in institutions of higher education. The study of pedagogical technologies in the professional training of specialists was paid attention in scientific investigations (V. Bepalko, A. Verbytskyi, M. Vilenskyi, S. Sysoeva, etc.). Ukrainian scientists (O. Boychuk, O. Vasina, S. Milkevich, etc.) addressed the issues of professional competencies in design education. The aesthetic component in the training of future designers was studied (E. Antonovych, I. Zyazyun, V. Butenko, V. Tomashevskyi, etc.). It should be noted that in this direction, the dissertation works of: L. Lisunova, whose research is devoted to the formation of aesthetic perception of future specialists in the process of studying artistic and graphic disciplines, deserve special attention; V. Tomashevsky, whose work theoretically substantiates the formation of the aesthetic culture of future designers in institutions of higher education; V. Prusak, who defines the organizational and pedagogical principles of training future designers.

The purpose of the article is to study the aesthetic perception of color in the process of color training of future designers.

To find out the state of the raised problem, a set of scientific research methods was used: interdisciplinary analysis of philosophical, art history, psychological, and pedagogical literature. To substantiate the theoretical provisions and formulate the conclusions, the analysis of research literature, Internet sources are used; practical experience of specialists in the field of design; the synthesis and generalization of scientific principles revealed the current state of colour training of future designers, allowing to determine the directions of research and the conceptual basis in this field.

The modern system of providing educational services to students is based on an approach to learning through the formation of relevant competencies. The DeSeCo (Definition and Selection of Competencies) program, defines competencies as the ability to effectively satisfy individual or public

needs, to perform assigned tasks. According to the interpretation, competencies consist of interrelated cognitive attitudes, practical skills, values, emotions, behavioral elements, knowledge and abilities that can be applied to active activities (Rychen, 2002, p. 8). Similarly, the International Bureau of Standards for Teaching and Learning (IBSTPI) defines competence as the ability to perform an action, task or job competently. This concept covers the set of knowledge, skills, abilities needed by an individual for effective activity or performance of relevant functions aimed at achieving established standards in their professional field (Foxon, 2003, p. 144).

Regarding professional training, according to I. Zyazyun, competence is defined as the ability to solve specific professional tasks of a certain class, which require real knowledge, skills, and practical experience (Зязюн, 2005). Professional competence demonstrates itself within professional contexts through the adeptness in making suitable decisions and establishing correlations between an individual's knowledge, experience, and ethical standards. This proficiency enables individuals to adeptly navigate professional scenarios by amalgamating situational contexts with expertise, thereby delivering pertinent solutions to pressing issues.

In understanding the colour competence of future designers, we define that it is a comprehensive understanding of the concept of colour, its shades, harmony, aesthetic perception and the psychological impact of the choice of colour on the receiver (audience). The formation of colour competence in future designers takes place within the framework of certain pedagogical conditions during their professional training. The content of educational components from the cycle of professional training (Fundamentals of composition and colour science, Painting, Drawing, Projecting, Computer design and modeling, Basics of forming and mock-up, etc.) is aimed at acquiring knowledge in the field of colour science, which involves mastering principles, techniques and skills the use of colour harmonies, the construction of colour schemes integral to design, the study of their expressive possibilities, the development of aesthetic taste and the promotion of creativity.

It is important to understand aesthetic perception in the process of training designers as a unique form of their spiritual self-awareness and creative realization. On the basis of the development of aesthetic perception, it is possible to show the available possibilities of positioning the future specialist as an object of artistic and creative activity, revealing readiness for independent awareness, for deep creative understanding of aesthetic phenomena, for the development and implementation of one's own aesthetic views on individual objects, phenomena, processes.

The ability to realize in practice the aesthetic potential for obtaining one's own original result of creative activity is key in the professional activity of the future designer. The educational component «Fundamentals of Composition and Colour Studies» is the basis of the colour training of designers, which is one of the basic disciplines of bachelor's training in the specialty 022.01 «Design» of the educational and professional program «Graphic design» SI «Luhansk Taras Shevchenko National University». In the process of learning, the educational component allows future designers to systematically and consistently learn the theoretical foundations of composition and colour science, professional terminology, compositional rules, patterns of colour perception and harmonies, principles and means of artistic expression in the process of designing and implementing design objects.

Today, in the formation of a qualified and practical colour solution of design objects, the ability to operate with various properties of colour is necessary and relevant. In addition, it is important to use special knowledge in creating harmonious colour combinations, developing colour profiles, applying colour separation methods and implementing colour reproduction technologies (Основи теорії, 2020).

On the other hand, colour perception is a complex psychophysical process that depends on the natural and biological structure of the human eye. Colour is perceived as a conscious visual sensation. When looking at an object, it may seem that the colour is a component of the object itself, as if the colour is built into it, but in fact it is not. Aesthetic perception of colour is an even more complicated process.

Awareness of aesthetic, artistic, and spiritual values from the standpoint of sociocultural and historical processes is added to the previously considered aspects in aesthetic perception (Костюк, 2022).

We will present separate tasks using interactive technologies that contribute to the formation of the aesthetic perception of colour in the process of colour training of students of higher education in the specialty 022.01 «Design» of the educational and professional program «Graphic design». We will define that the formation of colour competence in future design specialists is an important prerequisite and indicator of readiness for professional activity.

In the process of colour training of students from the educational component «Fundamentals of composition and colour science», during the study of the topic «Colour science as a science», the following are studied: colour as a cultural phenomenon, historical, cultural and philosophical aspects of the semantics and symbolism of colour; traditions, rituals, spiritual practices related to colour; problems of colour harmony in the process of historical and social development. In the process of developing the theoretical material, attention is focused on the peculiarities of the aesthetic perception of colour during the development of cultures and societies of different peoples.

It is emphasized that the definition of the problem of colour harmony appears as the most difficult problem of aesthetics due to the special attitude of a person to colour, which is formed under the influence of various complex factors. In this regularity, in its specific historical context, regardless of cultural, social, and time boundaries, universal ideals and values are developed and cultivated. Therefore, in accordance with the «Ideal image», «Ideal model», from the standpoint of cultural history, it is possible to trace the dynamics of the definition of the concept «Coloristic ideal ». Students of higher education are offered the task of solving a problem or situation related to the aesthetic perception of colour. As an educational method, case technologies are used, appropriate educational and methodological support, illustrative material is added. The identified problem is «Coloristic ideal».

Case. 1. The Greek philosopher Empedocles (5th century BC) was one of the first thinkers to explore the essence of colour. He proposed four primary colours – white, black, red and yellow – which corresponded to the basic elements: fire, air, water and earth. The preserved works of art of that era, in particular the paintings on vases, clearly show these colours and their combinations. The study of colour was continued in the writings of Plato, Aristotle and various ancient philosophers. Amid ancient thinkers' deep belief in numbers, logic, and the ideal nature of colours, the initial psychophysiological understanding of colours emerged in practical applications (Fig. 1).

The term «chromaticism», derived from the Greek «chroma» (colour), covers the essence attributed to ancient authors, including:

- colour as a mental, immaterial, ideal concept;
- colour as a physical, objective, material substance;
- physiological influence of colour on the human body;
- emotions under the influence of their information and energy balance.



Fig. 1. Colour in antiquity

Case. 2. In the Middle Ages, the interpretation of the semantics of colour strictly followed the religious doctrines of Christianity and Islam. Elements of the theory of colour harmony began to appear in the works of scientists of that era. Many philosophers accepted the Aristotelian concept of the «golden mean» in aesthetics, but the concept of harmony underwent a new interpretation, emphasizing not unity, but the conflict of opposites. This rethinking led to the appearance of bright contrasts in colour schemes. Stained glass windows were characterized by high colour saturation, complemented by the brilliance of mosaics, precious metals and precious stones (Fig. 2).

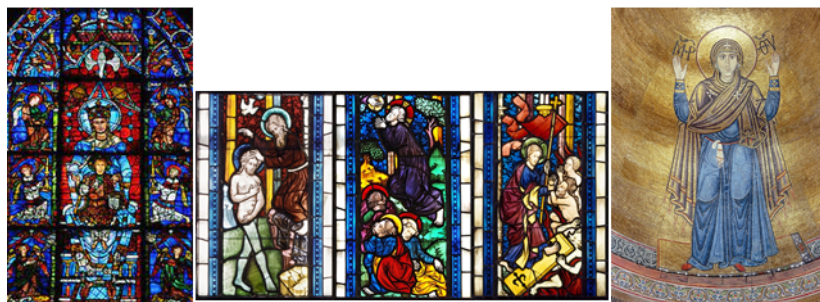


Fig. 2. Medieval colour harmony

Case. 3. The Renaissance saw a marked shift from the symbolic meaning of colour to the development of more pragmatic and visually appealing colour systems. Furthermore, the question of colour in the Renaissance was further complicated by the individualized nature of art: each country, school of art, and even individual masters displayed distinct colour preferences. Colour harmony at that time was based on contrasting tonality and brightness. However, these chromatic contrasts were softened by techniques such as chiaroscuro and aerial perspective, softening the impact of colour variations (Fig. 3).



Fig. 3. Colour harmony of the Renaissance

To summarize, in the teaching of the specified topic «Coloristic ideal» case technologies are used as an interactive method of learning, which solves the problem of aesthetic perception of colour. A certain complex of knowledge on the historical, cultural and philosophical aspects of the semantics and symbolism of colour is updated, the communicative and creative abilities of higher education students to solve the problem of colour harmony in the process of historical and social development are activated. Future designers learn to analyze, aesthetically evaluate and find alternative ways to solve a task.

To understand colour and its spectrum, future designers are faced with the task of creating abstract gouache compositions on watercolour paper. These compositions include such exercises as working with «pure colour»; inclusion of «bleached colour» with the addition of white paint; experimenting with «darkened colour» through the addition of black paint; the use of exclusively «saturated colour»; the study of shades of «pastel colours»; creation of «autumn abstraction» using warm shades; creation of «winter abstraction» using cold shades; construction of «night abstraction» using dark tones.

In the process of colour training from the educational component «Fundamentals of composition and colour science», during the study of the topic «Psychology of colour perception», the following are studied: objective factors that affect colour perception and subjective (physiological, psychological, aesthetic) factors that determine colour associations and colour symbolism, national and cultural specificity of colour perception, examples of colour solutions are given. Objective factors include: characteristics of the object, light sources of the environment, lighting and colour of neighboring elements, perspective of perception. We determine that colour subjectively affects the physiological and psychoemotional aspects of the receiver of information (audience). Therefore, we emphasize that when choosing a colour scheme in design objects, it is necessary to rely on the physiology and psychological portrait of the average receiver of information (audience): (gender, age, physical condition, character, peculiarities of thinking, emotional etc.). The approximate impact of a colour solution on a person is also determined through associations, metaphoricality, aesthetic perception. Association acts as a subjective image that arises outside of human consciousness in the form of connections between phenomena and objects of the real world. Metaphor is the transfer of features of one object to another based on their similarity. Aesthetic perception is based on the definition of beautiful, perfect, harmonious, valuable to the relevant culture and society.

Students of higher education are offered the task: Prepare for a «brainstorm» on the topic: «What is the essence of a personally-oriented presentation of a colour decision». «Brainstorming» is divided into several stages: generation of ideas, selection of the best idea, analysis. At the beginning, participants without criticism and evaluation can express thoughts (even absurd, fantastic), connecting emotions, relying on associations, metaphors, subjective aesthetic perception of colour. Creative activity of students of higher education is stimulated with the expression of the maximum number of decision options. In the future, the most rational ones are chosen, already with an orientation to the receiver of information (audience). So, the purpose of the brainstorming on the topic: «What is the essence of a personally-oriented presentation of a colour decision» is to reveal the meaning of the concept of «psychology of colour perception», to determine the objective factors that affect the perception of colour and subjective (physiological, psychological, aesthetic). During the class, the participants find ways to solve the problem situation, which is related to the aesthetic perception of colour as a structural component of the colour competence of future designers.

Colour training of future designers plays a key role in the development of their competence in the field of design. Modern requirements for future designers, the definition of professional tasks, the performance of which is necessary in the process of practical activity, emphasize the importance of developing colour competence as an integral part of the educational components of the cycle of professional training. This development focus contributes to the formation of future designers into unique, competitive and sought-after professionals in today's design market. Prospects for further research are related to the improvement of educational methodologies and educational and methodological support, adapted to the colour training of future designers. This includes enriching the content with creative and scientifically oriented tasks, developing a methodology for diagnosing the levels of colour competence of future designers, a special course on the aesthetic perception of colour for students of the educational level «bachelor» in the specialty 022.01 «Design» of the educational and professional program «Graphic design» and its implementation in the practice of teaching work.

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Костюк О. П. Естетичне сприйняття кольору у процесі колористичної підготовки майбутніх дизайнерів

У статті висвітлюються аспекти колористичної підготовки майбутніх дизайнерів, розглядається поняття колористичної компетентності та її значення в процесі професійної підготовки майбутніх фахівців у сфері дизайну. Метою статті є дослідження естетичного сприйняття кольору в процесі колористичної підготовки майбутніх дизайнерів. Колір виділено як найважливіший елемент естетичного сприйняття та емоційної виразності об'єктів дизайну, що чинить психоемоційний вплив на реципієнта (аудиторію) та має певне інформаційне значення. Естетичне сприйняття кольору розуміється як складний процес, у якому відбувається усвідомлення естетичних, художніх і духовних цінностей з позицій соціокультурних та історичних факторів. Наголошено на необхідності формування кольорознавчої компетентності через вивчення комплексу фахових дисциплін, що є визначальним у процесі підготовки майбутніх дизайнерів. У дослідженні подано окремі завдання з використанням інтерактивних технологій,

які сприяють формуванню естетичного сприйняття кольору в процесі кольорознавчої підготовки здобувачів вищої освіти спеціальності 022.01 «Дизайн» освітньо-професійної програми «Графічний дизайн» ДУ «Луганськ Тарас. КНУ імені Шевченка». Зазначено, що формування колористичної компетентності майбутніх дизайнерів є важливою передумовою та показником їхньої готовності до професійної діяльності.

Ключові слова: естетичне сприйняття, колір, компетентність, колірна компетентність, майбутні дизайнери.

Kostiuk O. Aesthetic perception of colour in the process of colour training of future designers

The article examines the aspects of colour training of future designers, discusses the concept of colour competence and its importance in the process of professional training of future specialists in the field of design. The purpose of the article is to study the aesthetic perception of color in the process of color training of future designers. Color is highlighted as the most important element of aesthetic perception and emotional expression of design objects, has a psycho-emotional impact on the receiver (audience) and carries a certain informational value. The aesthetic perception of color is understood as a complex process in which the awareness of aesthetic, artistic, and spiritual values takes place from the standpoint of sociocultural and historical factors. The need for colour competence through the study of a complex of professional disciplines is emphasized, which is decisive in the process of training future designers. The study presents separate tasks using interactive technologies that contribute to the formation of aesthetic perception of colour in the process of colour training of students of higher education in the specialty 022.01 «Design» of the educational and professional program «Graphic design» SI «Luhansk Taras Shevchenko National University». It is noted that the formation of colour competence of future designers is an important prerequisite and indicator of their readiness for professional activity.

Key words: aesthetic perception, colour, competence, colour competence, future designers.

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