



Article

Aestheticization of the Educational Environment as a Factor in the Formation of the Aesthetic Consciousness of Future Designers and Artists in Higher Education Institutions

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Abstract

Aim. The relevance of the study is determined by the need to form aesthetic consciousness in future designers and artists. This is important for the development of their creative and professional competencies. The aim of the research is to study the influence of aestheticization of the educational environment on the students' aesthetic consciousness.

Methodology. The research employed the following methods: questionnaire surveys, statistical data processing, comparative analysis, observation, and experiment.

Results. The obtained results showed that aestheticization of the environment contributes to the development of aesthetic knowledge and skills. It increases the level of students' aesthetic consciousness, reflecting their ability to express creative concepts and evaluate artistic phenomena.

Conclusions. It is concluded that the aesthetic environment affects the development of professional qualities of future designers and artists.

Originality. The academic novelty of the study is expanded understanding of the role of aestheticization of the educational space. Research prospects include studying the influence of individual elements of the aesthetic environment on the students' professional development.

Keywords: religiosity/spirituality, traumatic situations, stress disorders, military personnel, stress tolerance.

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Introduction

Aesthetic education is an important part of the general culture and development of students' creative abilities. Higher education should create conditions for forming the aesthetic consciousness of future specialists, particularly designers and artists. Aestheticization of the educational environment (AEE) is key in this process. It contributes to developing emotionally rich relationships with art and culture, which is important for creative professions. Creating an aesthetically rich environment stimulates students to express themselves and develop aesthetic knowledge and skills. Modern trends in education require integrating aesthetic components into the educational process. It contributes to future specialists achieving a high level of cultural development. An aesthetic environment helps students to evaluate artistic phenomena and express themselves through creativity. However, how the AEE affects students' aesthetic consciousness has been poorly studied. The study focuses on the influence of AEE on design and art students. This study will determine how elements of the environment affect students' creative abilities and professional training.

The research aimed to study the impact of the AEE on the aesthetic consciousness of design and art students. The aim involved the fulfilment of the following research objectives:

- Assess the influence of the elements of the AEE on the students' aesthetic consciousness.
- Analyze changes in the students' aesthetic consciousness before and after the AEE.
- Study the impact of the AEE on the students' creative activity.

Literature Review

It is important to consider modern educational challenges in studying the AEE as a factor in forming the aesthetic consciousness of future designers and artists. Muzyka et al. (2021) and Ansorge et al. (2022) emphasize the integration of innovative approaches and technologies that contribute to the development of the aesthetic culture of the individual. In contrast, Shevtsova et al. (2023) emphasize the importance of an interdisciplinary approach that combines art, literature, and other subjects to develop harmonious students.

Tao and Tao (2024) focus on bibliometric analysis, demonstrating that integrating the aesthetic component into the educational process contributes to sustainable development and environmental awareness. They emphasize the individual's social responsibility and spiritual growth as consequences of aesthetic

education. At the same time, Zhang (2022) emphasizes the development of students' creative abilities through combining academic knowledge with artistic practice. On the other hand, Koycheva and Yuling (2022) consider aesthetic culture as the ability to reconcile professional activity with the aesthetic requirements of pedagogical reality. In turn, Catya et al. (2022) consider the importance of aesthetics in design education. Guo and Chen (2022), who study aesthetic education in art colleges and universities, agree.

Guo (2023) distinguishes an ecological approach to aesthetic education, emphasizing the harmony of the educational environment with nature. This position is supported by Bocheliuk et al. (2021). However, Han et al. (2021) question the sufficiency of the aesthetic environment and emphasize the need for interactive technologies that promote emotional sensitivity and interaction in digital learning.

Kostiuk (2024) focuses on the role of aesthetic elements in developing empathy and the professional growth of designers. Jian and Chng (2024) deal with social interactions in the learning process, emphasizing the importance of collective experience. Han et al. (2021) study the balance between creativity, functionality, and aesthetics in design, showing that a rich environment increases students' competitiveness.

Ukrainian researcher Atorina (2021) considers the AEE as the basis for the development of aesthetic competence of future preschool teachers. She argues that an aesthetically designed space shapes emotional and aesthetic perception. Chen (2022) agrees that space should consider functionality and aesthetics. Ivchenko (2021) supports Atorina but emphasizes actively integrating art into the educational process.

Karapuzova and Pavlenko (2020) emphasize the importance of museum resources in the AEE, agreeing with Ivchenko (2021) regarding artistic components, but emphasizing the uniqueness of the museum experience. Heybach (2020) and Shih (2020) emphasize the impact of aestheticization on the acquisition of knowledge, and Pinciotti and Verba (2021) add that aestheticization should consider the needs of all participants in the educational process.

At the same time, Prusak et al. (2023) insist on integrating various methods to develop a professional culture of designers, and Rozikova (2022) focuses on supplementing traditional approaches with digital technologies. Hayitova (2021) emphasizes the role of an aesthetically designed environment in increasing student motivation and developing activity.

Liu (2024) explores integrating scaffolding instructional approaches and AI models to improve children's aesthetic education, particularly in studying traditional Chinese painting. The author emphasizes using technology to develop cultural literacy

and creative skills. However, Liu (2024) reduces the research to Chinese culture only, which casts doubt on the universality of the proposed methodology. Unlike Liu (2024), Catalano (2024) focuses not on the technological aspect but on interpersonal interaction in the educational process. The author demonstrates how artistic research practices contribute to developing creative thinking and communication skills. However, the limited sample of research participants makes it difficult to generalize, unlike Ma's (2024) work, which considers the larger context of teacher-student interaction and explores the role of ambidextrous teacher leadership in the development of student creativity, emphasizing the importance of aesthetic experience as a mediating factor. In this aspect, Barton (2024) proposes a broader concept encompassing aesthetic experience and its impact on personal development.

Therefore, forming aesthetic consciousness of future designers and artists requires a synthesis of traditional and modern approaches to the organization of the educational environment. The combination of aesthetic and technological components enables the creation of a space that meets modern technical conditions while maintaining an educational and aesthetic function.

Methods and Materials

Research Design

The study was conducted at Luhansk Taras Shevchenko National University among students majoring in Design and Fine Arts. The research procedure was divided into three stages:

1. Summative stage. The students' aesthetic development level was initially tested using questionnaires containing questions about Ukrainian culture, traditions, ornaments, and decorative arts.
2. Formative stage. A series of workshops and practical classes was organized, during which students created sketches and design elements in the traditional Ukrainian style. Lectures on Ukrainian decorative art and classes on painting techniques, pottery, and weaving were held. The formative stage of the experiment aimed to involve students in creating an aesthetic educational environment in the Ukrainian style. The students majoring in Design and Fine Arts created sketches to update the interior of educational premises in the traditional Ukrainian style under the teachers' guidance, using regional ornaments and elements of decorative art, such as "vytynanky", folk paintings, and "petrykivka". At the formative stage, educational workshops aimed at students mastering traditional Ukrainian painting techniques, pottery, and weaving, which ensured the development

of practical skills and deepening knowledge about the national cultural heritage. The final event was the exhibition *Aesthetics of Ukrainian Space*, where designs created by students were presented, demonstrating their aesthetic level and understanding of Ukrainian cultural identity.

Table 1 presents the program of the formative stage of the experiment.

Table 1. The program of the formative stage of the experiment

Programme Stage	Description of the activity	Objective	Tasks
1. Introduction to the concept of Ukrainian style	Lectures on decorative art traditions, vytynanky, folk paintings, and petrykivka.	Introduce students to the basics of Ukrainian culture and the aesthetic aspects necessary for creating an educational environment.	- Lecture topics: Ukrainian Decorative Style, Ornaments, and Symbols.
2. Creative workshops	Practical classes on traditional painting techniques, pottery, and weaving.	Develop students' practical skills in using traditional Ukrainian techniques.	- Course 1: Techniques of Ukrainian painting (petrykivka, folk paintings). - Course 2: Pottery techniques. - Course 3: Weaving techniques.
3. Work on sketches for interior renovation	Creation of sketches for renovating educational premises in the traditional Ukrainian style.	Stimulate a creative approach to implementing national traditions in a modern interior.	- Creating sketches using regional ornaments and decorative art (vytynanka, paintings, petrykivka).
4. Final exhibition <i>Aesthetics of Ukrainian Space</i>	Presentation of student works, demonstration of aesthetic level, and understanding of cultural identity through design.	Evaluate student works that reflect the aesthetic values of Ukrainian culture.	- Organizing an exhibition to present design works. - Evaluation of aesthetic and cultural aspects of the completed works.
5. Evaluation of results and feedback	A questionnaire survey and interviews were conducted to collect feedback from students and teachers.	Evaluate the program's effectiveness and identify areas for further developing students' creative and design skills.	- Surveying students and teachers for feedback. - Evaluation of the quality of works according to the criteria of artistic value, compliance with traditions, and innovation.

3. Control stage. The students' aesthetic development level was re-evaluated through testing, analysis of completed creative tasks, and participant

feedback. The outcome was an exhibition of works, Aesthetics of Ukrainian Space.

Research Methods

1. Questionnaire survey. It assessed the level of aesthetic consciousness and knowledge about Ukrainian culture. The questionnaires included questions on aesthetic values (20 questions) and cultural history (20 questions, “yes” or “no”).
2. Practical tasks. They included creating samples of decorative art (bas-reliefs, mosaics, and graphic compositions) and sketches for interior design.
3. Essay. The topics concerned the influence of Ukrainian culture on design, the artist's role in preserving national identity, etc.
4. Observation. The creative processes and the level of students’ activity during their completion of tasks were assessed.
5. The method of pedagogical experiment was used to determine the level of formation of aesthetic consciousness; three main criteria were used: cognitive, activity, and value semantics. This approach enabled a comprehensive assessment of the level of development of aesthetic consciousness and the impact of the proposed program.

Sample. The study involved 63 students from the 2nd to fourth years of study, of whom 31 were in the control group (CG) and 32 in the experimental group (EG). The students were selected from two majors: Design and Fine Arts. The characteristics of the contingent at the faculties and the voluntary consent of the participants determine the difference in the number of students in the groups.

Selection criteria: studying majors related to art and design, and being willing to participate in all stages of the study.

Research Instruments

Statistical methods of Excel and SPSS were used for data processing, particularly formulas for calculating the mean and standard deviation. Fisher’s exact test was used to check the significance of the results and assess the statistical significance of the differences between the CG and the EG.

Results

The survey at the summative stage showed that among 32 EG students, 25% demonstrated a high level of knowledge about culture, 34.37% medium, and 40.63% low. In the CG, out of 31 students, 29.03% had a high level of knowledge, 38.71%

medium, and 32.26% low, which indicates an approximately equally low level of knowledge about culture in both groups. At the control stage, after the implementation of the program in the EG, 59.37% showed a high level of knowledge, 37.51% medium, and 3.12% low, which indicates an increase in the number of students with a high and medium level and a decrease in those with a low level. According to the results of the survey of the CG students, it can be noted that 11 people out of 31 (35.48%) demonstrated a high level of knowledge of Ukrainian culture, 17 (54.84%) students showed a medium level, and 3 (9.68%) a low.

Based on statistical data processing using φ^* , Fisher's angular transformation, it can be concluded that the share of students with a high knowledge of Ukrainian culture significantly increased after implementing the program for the AEE in the EG. At the same time, the share of students with a low knowledge of Ukrainian culture significantly decreased compared to the CG. This fact indicates that the EG experienced a shift towards an increase in the level of the cognitive component of aesthetic development.

In the CG, significantly fewer students had little knowledge of Ukrainian culture. It may be due to objective participation in the educational process of the higher education institution (HEI), but no other changes were noted. The values of the φ^* criterion are presented in Table 2 (EG1 and CG1, groups at the stage of the summative experiment, EG2 and CG2, groups after the formative experiment). The results of the value of the φ^* criterion are presented in the Table. 2.

Table 2. The value of the criterion φ^ when comparing data from the study of knowledge of Ukrainian culture in the CG and EG at the formative experiment stage*

Levels of development	CG2 and EG2	CG1 and CG2	EG1 and EG2
High	1.89*	0.53	2.78**
Medium	1.36	1.26	0.24
Low	1.08	2.24*	4.00**

Note: * - significance level of the coefficients of * Fisher's angular transformation $p \leq 0.05$; ** significance level of the coefficients of * Fisher's angular transformation $p \leq 0.01$.

Source: Developed by the author

So, the EG showed an increase in the number of students with a high level of knowledge about Ukrainian culture and a decrease in the number of students with a low level (cognitive criterion). The level of students' knowledge about Ukrainian culture in the CG did not change significantly compared to the summative stage. These results can be presented as a graph (Figure 1).

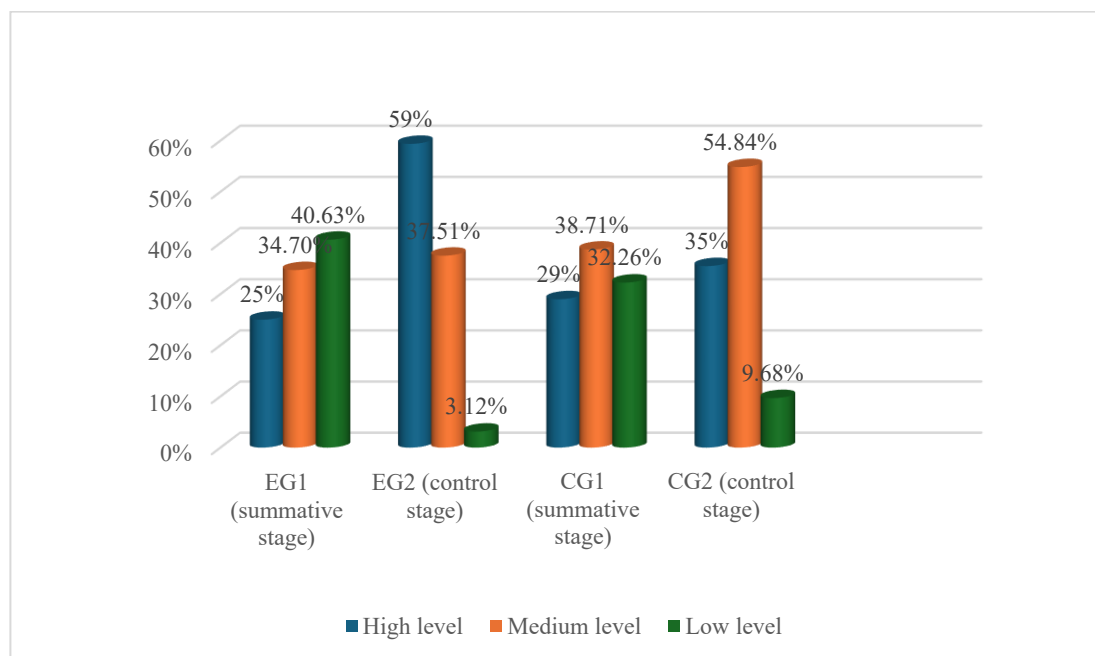


Figure 1. Results of the questionnaire of EG and CG students on knowledge of the history of Ukrainian culture (cognitive criterion) at the control and summative stages

Source: Developed by the author

The survey on knowledge of the art of traditional Ukrainian wall painting at the summative stage showed that out of 32 students of the EG, 21.87% demonstrated a high level of knowledge, 43.75% medium, and 34.38% low. In the CG, among 31 students, 19.36% had a high level, 51.61% medium, and 29.03% low. The medium level of knowledge prevailed in both groups.

The first stage of our study gives grounds to state that most design students and art students had insufficient knowledge about the art of traditional Ukrainian wall painting.

After the implementation of the program, the control stage showed that out of 32 EG students, 20 students (62.5%) had a high level of knowledge about Ukrainian wall painting, 10 (31.25%) had a medium level, and 2 (6.25%) had a low level. It indicates an increase in the number of students with a high and medium level of knowledge compared to the summative stage.

A survey of the CG design and art students showed that out of 31 respondents, nine students (29.03%) had a high level of knowledge, 18 (58.07%) had a medium level, and 4 (12.9%) had a low level. So, there have been minor changes in the level of knowledge of traditional Ukrainian wall painting in the CG. The results obtained at the beginning and end of the study are presented in the form of a graph (Figure 2).

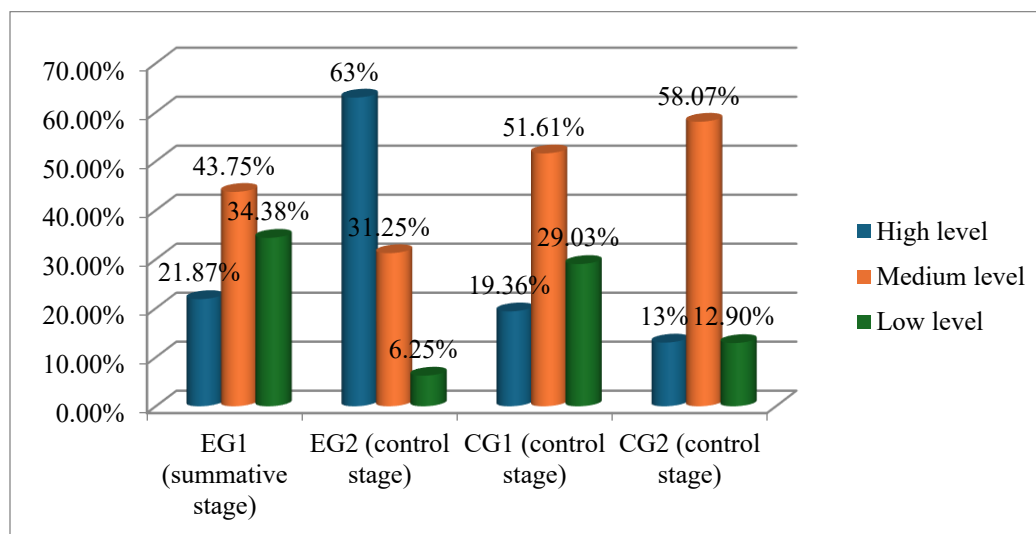


Figure 2. Results of the questionnaire survey of the EG and CG students on knowledge of the features of the art of traditional Ukrainian wall painting at the control and summative stages

Source: Developed by the author

A significant increase in the share of students with a high level of knowledge about traditional Ukrainian wall painting was found, as well as a significant decrease in the share of students with a medium level of knowledge compared to the CG. This fact indicates a shift towards an increase in the cognitive component of aesthetic development in the EG. No significant changes were found in the CG. The values of the φ^* are presented in Table 3.

Table 3. The values of φ^* when comparing data based on the results of the study of knowledge about traditional Ukrainian wall painting in the CG and EG at the stage of the formative experiment

Levels of development	CG2 and EG2	CG1 and CG2	EG1 and EG2
High	2.67**	0.87	3.31**
Medium	2.12*	0.49	1.01
Low	0.9	1.56	2.92**

Note: * significance level of the coefficients of * Fisher's angular transformation — $p \leq 0.05$; ** significance level of the coefficients of * Fisher's angular transformation — $p \leq 0.01$.

Source: Developed by the author

The essay assessed the ability to express an attitude towards Ukrainian art and design decisions and assessed the significance and uniqueness of elements of folk art. Some students with a low level could not determine the meaning of the selected element or its connection with Ukrainian culture. The students expressed their attitude, but did not establish a connection between the elements, and the idea of the work was of a medium level. The high level was marked by the ability to determine

the uniqueness of the works, understand their ideological intent, and assess the connection with national values.

At the summative stage, the essay results of the EG students according to the value semantic criterion were as follows: high level 17.3%, medium 51.2%, low 31.5%. The CG level is high at 15.1%, medium at 59.4%, and low at 25.5%. Most students in both groups demonstrated a medium and low level. After implementing the program in the EG, the level was at a high level of 60.2%, medium 30.4%, and low 9.4%. The CG level is high at 20.3%, medium at 63.7%, and low at 16%.

Based on statistical data processing using φ^* , Fisher's angular transformation, it can be concluded that in the EG, there were significantly more students with a high level of ability to express and evaluate the significance of works of traditional Ukrainian art, and significantly fewer students with medium and low levels, compared to the CG. This fact indicates a shift towards an increase in the level of the value semantic component of aesthetic development in the EG. No significant changes were detected in the CG. The values of φ^* are presented in Table 4.

Table 4. The values of φ^ when comparing data from the results of the study on the ability to express and evaluate the significance of cultural works in the CG and EG at the stage of the formative experiment*

Levels of development	CG2 and EG2	CG1 and CG2	EG1 and EG2
High	3.27**	0.53	3.58**
Medium	2.65**	0.34	1.66*
Low	0.78	0.92	2.21*

Note: * significance level of the coefficients of φ^* - Fisher's angular transformation — $\rho \leq 0.05$; ** significance level of the coefficients of φ^* - Fisher's angular transformation — $\rho \leq 0.01$.

Source: Developed by the author

It can be concluded that after the program implementation, there was a significant increase in the number of individuals with a high and medium level of the value semantic criterion among the EG design students. At the same time, the changes were insignificant in the CG. The results are presented in Figure 3.

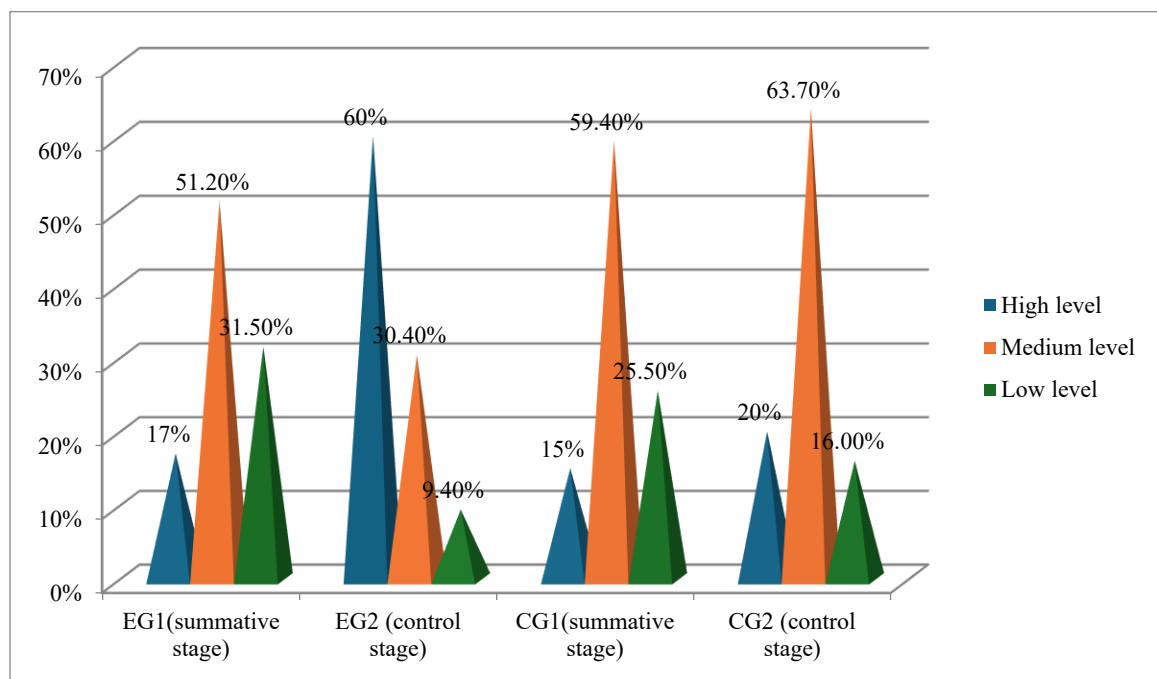


Figure 3. Results of essay writing by the EG and CG students according to the value semantic criterion at the control and summative stages

Source: Developed by the author

According to the activity criterion, which determines the ability to realize aesthetic ideas, the students received the following results during the performance of the practical task: in the EG, a high level was noted in 10.1% of the subjects, a medium level in 57.3%, and a low level in 32.6% of students. In the CG, a high level was found at 12.4%, a medium level at 61.1%, and a low level at 26.5%.

According to the results of mathematical data processing, the frequency of high, medium, and low levels of the ability to implement aesthetic ideas in the CG and EG at the beginning of the experiment does not differ significantly (range of change $\varphi^* = 0.284; 0.304; 0.518; \varphi > 0.05$). In general, it can be concluded that most students demonstrated an insufficient level of the activity criterion in the CG and EG at the beginning of the experiment.

After the program implementation, the students demonstrated the following results for the activity criterion during the performance of the practical task: in the EG, a high level was noted in 40.6% of respondents, a medium level in 56.4%, and a low level in 3% of students. In the CG: a high level at 20.9%, a medium level at 63%, and a low level at 16.1% (Figure 4).

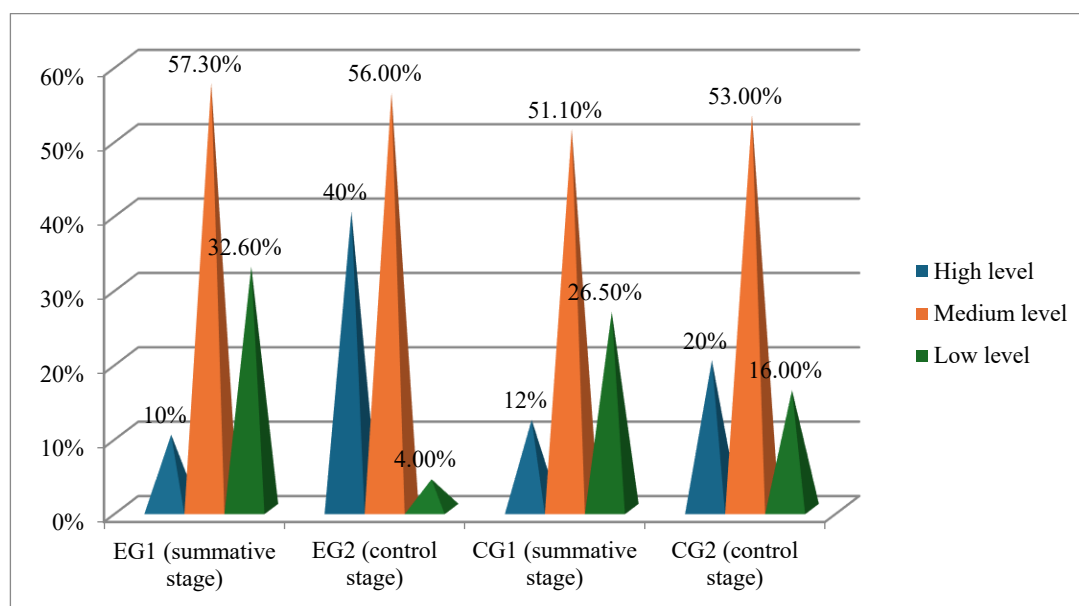


Figure 4. Results of the practical task for identifying the activity criterion of the EG and CG students at the control and summative stage

Source: Developed by the author

In the EG, after the program implementation, the proportion of students with a high level of ability to implement aesthetic ideas became significantly higher, and the proportion of students with a low level of this ability significantly lower compared to the CG. This fact indicates that the EG showed a shift towards an increase in the activity component of aesthetic development. No significant changes were detected in the CG. The values of φ^* are presented in Table 5.

Table 5. The values of φ^* when comparing the data of the study of the activity criterion in the CG and EG at the stage of the formative experiment

Levels of development	CG2 and EG2	CG1 and CG2	EG1 and EG2
High	1.68*	0.87	2.86**
Medium	0.52	0.26	0.07
Low	1.86*	0.99	3.38**

Note: * significance level of the coefficients of φ^* Fisher's angular transformation — $\rho \leq 0.05$; ** significance level of the coefficients of φ^* - Fisher's angular transformation — $\rho \leq 0.01$.

Source: Developed by the author

The control stage of the experiment showed that the overall level of aesthetic development in the EG students significantly increased: a high level was noted in 57.5% of respondents, a medium level in 35.4%, and a low level at 7.1%, while in the CG a high level was found in 28.9% of respondents, a medium level at 58.2%, and a low level at 12.9% (Figure 5).

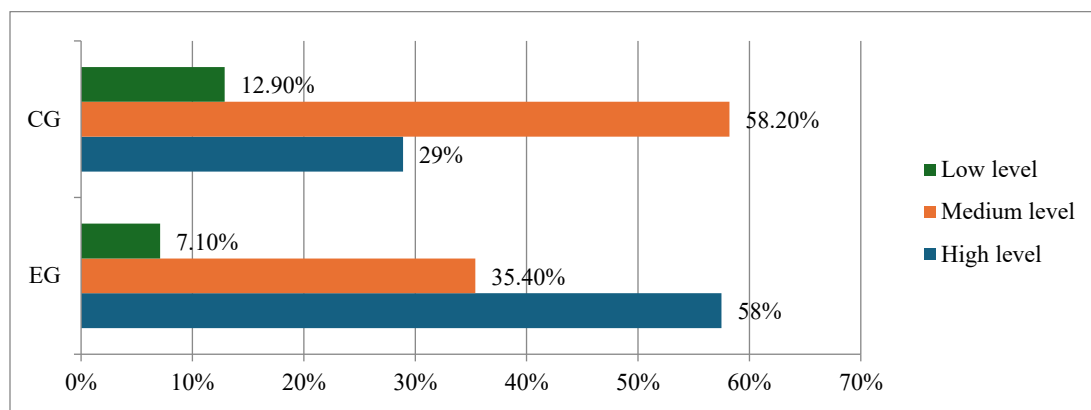


Figure 5. Comparative indicators of the level of aesthetic development of the EG and CG students at the control stage

Source: Developed by the author

In the EG, there were significantly more students with high and medium levels of aesthetic development than in the CG. This fact indicates that in the EG, there was a shift towards the development of all criteria of aesthetic development: cognitive, value semantic, and activity. The values of φ^* are presented in Table 6.

Table 6. The values of φ^* when comparing the data of the study of aesthetic development in the CG and EG at the stage of the formative experiment

Levels of development	CG2 and EG2
High	2.28*
Medium	1.80*
Low	0.76

Note: * significance level of the coefficients of * Fisher's angular transformation — $\rho \leq 0.05$.

Source: Developed by the author

Discussion

During the study, we used the cognitive, activity, and value semantic criteria proposed by Stepanova and Dorohan (2023) to determine the level of aesthetic consciousness. Our results indicate that the level of aesthetic consciousness increased significantly after the implementation of the AEE program. In particular, the cognitive criterion improved in 78% of participants, the activity criterion at 72%, and the value semantic criterion at 75%. In general, positive changes were recorded in 82% of respondents. Basler and Kriesi (2019) indicate that aesthetic education combines the study of art history and the basics of creativity, which corresponds to the approach implemented in our program. We agree with their conclusion that creative practices contribute to deep emotional experience, as 67% of our participants noted that new methods aroused their interest in art.

Hawari and Noor (2020) emphasize the importance of the project-based approach in education, which we partially integrated into our program. Project tasks increased student engagement by 58%, which coincides with their findings. However, we noted the lower effectiveness of this approach for developing the value semantic criterion (only 38% increase), which may be related to the specifics of our sample. Jagtap (2019) emphasizes the importance of creativity in learning but considers it the main driver of the development of aesthetic consciousness. Our data demonstrates that creativity is a significant, but not a determining factor: only 45% of respondents noted it as a key element of change.

Kirdan and Titorenko (2021) confirm that extracurricular activities significantly impact aesthetic education. We agree with this statement, as our extracurricular activities contributed to the growth of aesthetic awareness in 62% of participants. Marqués-Ibáñez (2024) suggests that experimental spaces create ideal conditions for aesthetic development. We confirm this conclusion, as 84% of respondents positively assessed the implementation of such spaces. Discordance in opinion is observed with Unterhalter (2019), who emphasizes the role of political goals in the quality of education. Our data show that the effectiveness of the aestheticization program does not depend on these factors, as all respondents noted its positive impact regardless of the context.

Conclusions

The statistics confirmed that implementing the AEE positively impacted the students' aesthetic development, indicating the formation of aesthetic consciousness of future designers and artists studying in HEIs. The experiment proved that the AEE methods significantly progressed the cognitive, value, and activity components of the EG students' aesthetic development. It confirms the appropriateness and effectiveness of the applied approaches in forming aesthetic consciousness.

Our results confirm the effectiveness of the AEE program through the development of cognitive and activity criteria. A comparative analysis of the level of aesthetic development indicators demonstrated statistically significant differences between the EG and the CG. In the EG, a high level of aesthetic development was recorded in 57.5% of students, almost twice as high as in the CG (28.9%). The share of students with a medium level in the EG was 35.4%, while in the CG, it was 58.2%, which indicates the transition of a significant number of EG students from a medium level to a high level. The low level remained in only 7.1% of EG students versus 12.9% in the CG, indicating a decrease in participants with insufficient aesthetic development.

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