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### **Graduation qualification works in the bone carving art: the path to masterpieces**

**Abstract.** The article examines the criteria for characterizing graduation qualification works at the levels of secondary vocational and higher education in the field of artistic bone carving. The process of completing a graduation qualification work in material is justified, consisting of a sequence of stages of project activity and performing skills. A brief analysis of bone carving artworks created by students of secondary vocational and higher education at the Russian university of traditional art crafts is presented.

**Keywords:** bone carving art, Kholmogory bone carving, artistic items, openwork, relief, sculpture, engraving, graduation qualification work, materials, technologies, project activities, mastery.

Professional education in the field of artistic bone carving is one of the most important components of preserving and developing the traditions of Russian bone carving art. The formation and evolution of artistic bone carving as one of the types of traditional art crafts have led to the emergence of a system for training future masters and artists in this field.

Throughout a long historical period, the main methods of transmitting professional skills included family education and craft apprenticeship. Training was mainly conducted at home or in workshops, where knowledge and practical skills in the field of artistic bone carving were passed from older generations of masters to younger ones [2].

In the 20th century, the traditional family-based education and craft apprenticeship were replaced by the process of institutionalization of art and craft education. Gradually, the training of master-craftsmen and artists was incorporated into the system of vocational education, implemented in specialized educational institutions that provide initial and secondary vocational training in colleges, technical schools and vocational colleges [2].

In the 21st century, the training of artists in the field of bone carving art at the higher education level is carried out at the Russian university of traditional art crafts (formerly – Higher school of folk arts) in Saint Petersburg, which presupposes certain educational conditions and the formation of professional competencies. Higher education has a complex educational structure and is oriented towards the development of a wide range of professional competencies. Alongside mastering traditional technologies of artistic bone carving, it fosters and develops artistic and imaginative thinking, research skills, as well as the ability to adapt traditional artistic

practices to the conditions of the contemporary cultural and professional environment.

One of the final indicators of the level and quality of training of an artist in the field of bone carving art is the graduation qualification work, which reflects the knowledge, skills and abilities acquired by the graduate over the entire period of study at the level of secondary vocational or higher education.

At different periods of preparation of graduation qualification works, the requirements for the artistic products of graduates varied depending on the traditional schools of artistic bone carving (Kholmogory, Yakut, Tobolsk, Chukchi-Eskimo), artistic style, ornamental material, technologies, etc.

Secondary vocational education is aimed at training specialists in the field of bone carving art with basic skills of performing mastery. It is considered an important stage of training, providing the possibility of continuing education at the higher education level and contributing to the continuity of education [4; 5]. Graduates are prepared for the manufacture of serial products, copying of artistic works, as well as the creation of simple original pieces. At the same time, this level of training does not imply mastering complex constructive and highly artistic works of museum level.

Higher education is aimed at training a competitive artist in the field of bone carving art, who is a highly qualified specialist with developed creative potential, capable of independent artistic and creative, research and pedagogical activities. Within the framework of professional training, a system of theoretical knowledge about materials, artistic and technological methods of bone processing is formed, as well as the ability to apply them in practice in project and performance activities [5]. Graduation qualification works are carried out based on students' authorial projects.

The main professional criteria for evaluating the results of artistic works made of bone include: the quality of the compositional solution, artistic and plastic execution, the level of technological processing, as well as adherence to anatomical proportions and plasticity. These indicators are important for an objective and comprehensive assessment of the quality of the completed artistic work [5].

At the department of bone carving art of the Russian university of traditional art crafts, not only is classical training in the art of Kholmogory bone carving provided, but ongoing experimental work is also conducted, aimed at finding new solutions, innovative ideas and approaches, as well as the use of various technologies and ornamental materials.

The main criteria for evaluating artistic works of graduation qualification projects in the field of artistic bone carving can be conditionally divided into two blocks: the artistic composition of the piece and the materials; and the technological methods of artistic processing used in the manufacture of the item. The organic unity of these indicators in the creation of works contributes to the formation of a unique artistic image, in which tradition and innovation are harmoniously combined.

The graduation qualification work is the final stage of a student's professional training and reflects the level of formation of their professional competencies. The final work demonstrates the student's ability to apply theoretical knowledge and practical skills to solve complex creative and technological tasks.

The completion of a graduation qualification work requires knowledge of materials science, technology of material processing, mastery of performing skills and the fundamentals of project activity. In the process of creating an authorial piece, there is an integration of artistic, technological and research aspects.

Knowledge of the characteristics of various materials used in bone carving art, their properties and structure guides the student in their reasoned selection (such as cattle bone – tibia, reindeer or moose antlers, walrus tusk, mammoth ivory, etc.) and accordingly determines the choice of technology (gluing and turning works, inlay, etc.) and artistic carving techniques (engraving, relief, openwork, sculpture) [3; 6].

Possessing theoretical knowledge and practical skills in the field of material processing technology in bone carving art, students gain the opportunity to independently develop a process route map for manufacturing an item, which allows for the rational organization of work, taking into account the specific features of the material used and the choice of technological methods.

Students design projects of artistic works in bone carving art. At the level of secondary vocational education, bone items are characterized by small formats, traditional forms and types of artistic bone carving; at the higher education level, items are created using entirely new solutions.

The sequence of completing a graduation qualification work in material includes:

- design activity (development and execution of an artistic and graphic project/model);
- performing mastery (manufacturing of an artistic piece in material).

Design activity:

- development of sketches (preliminary sketches, draft sketches, final sketches);
- execution of a model/mock-up (creation of a three-dimensional model or mock-up from various materials based on sketches);
- final graphic project (presentation of the final version of the graphic project on a board).

Performing mastery:

- selection of ornamental material (sorting and selection of ornamental material for the manufacture of the piece);
- preparatory operations (various technological operations for processing ornamental materials: sawing, sanding, bleaching, drying, frame construction, etc.);
- main operations (execution of gluing works, artistic carving, turning works, etc.);
- final operations (final sanding and polishing, assembly of the item's structure, etc.).

At the stage of designing a future piece, it is necessary to determine the ornamental materials from which the work will be executed. The physical and aesthetic properties, as well as the technological capabilities of the selected material, largely determine the specifics of realizing the artistic concept. The characteristics

of the material may either limit or, conversely, guide the search for artistic and compositional solutions and influence the choice of manufacturing techniques.

Step-by-step design of the piece begins with the creation of sketches – from simple preliminary draft sketches to final ones with detailed elaboration of the main fragments and elements.

During the sketching process, the main subjects of the piece are determined: representatives of wildlife (animals, birds, insects, humans), architectural objects, elements of the environment. The search for variative compositional solutions at the sketch stage involves careful organization of pictorial space, analysis of options and selection of the most successful one.

Since artistic works in bone carving art belong to the category of three-dimensional and volumetric-spatial forms, the design process includes the creation of a model or mock-up of the future piece from available materials (plasticine, wax, paper, wood, cardboard, metal, etc.).

Depending on the specific features of the designed item, the model is executed at a scale of 1:1, 1:2, or other proportional ratios. The production of a three-dimensional model or mock-up allows for a visual assessment of the dimensions and proportions of the piece, its structural features and plastic structure, examination of the form and details from various angles, as well as more precise elaboration of the artistic and constructive solution.

After refining the composition sketches and creating a three-dimensional model, taking into account the identified features of form and construction, the final artistic and graphic project is executed. As a rule, it is presented on a board using a coloristic solution, conveying volume and plasticity, which enables a more detailed representation of the artistic image and material characteristics of the bone carving art piece.

The manufacturing of the piece in material proceeds in several stages. In accordance with the final sketch (project) and model, the ornamental material is selected (tubular bone – tibia, moose or deer antler, wood, etc.), manufacturing technologies and types of carving are determined. At the initial stage, the material is sawed and sanded into the necessary fragments, plates and parts. If necessary, the blanks are bleached or degreased and then dried for a certain period of time [1; 6].

After the completion of the preparatory operations, the main work begins. Depending on the design of the piece, the labor intensity and the complexity of the applied types of artistic carving, the execution process may vary. For example, the main works include artistic carving, gluing and turning operations, inlay, frame construction, etc. The final operations are technological procedures after which the piece does not require additional refinement of fragments or elements: finishing sanding and polishing, texturing, attachment of fittings, assembly of the piece, etc. [6].

Let us consider the stages of execution using the example of the graduation qualification work “Teremok” (higher education level).

At the first stage, the topic of the graduation qualification work was determined, related to the interpretation of a Russian folk tale; exploratory sketches

with various options for compositional solutions were created (Fig. 1<sup>21</sup>). The most successful composition is supplemented and refined.

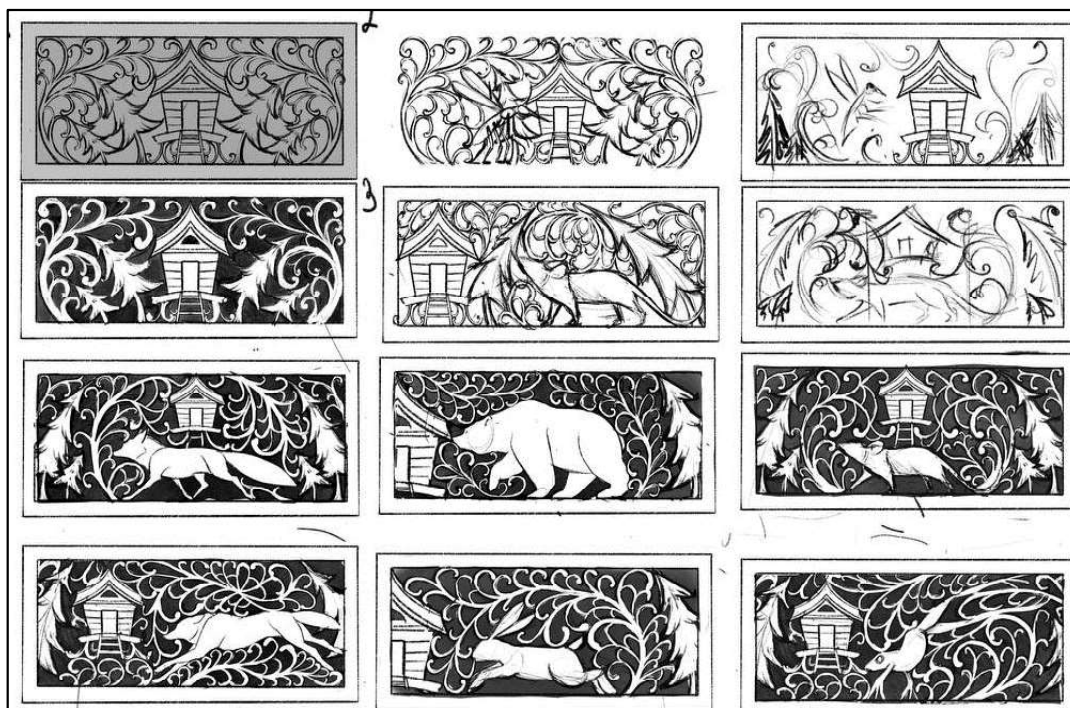


Fig. 1. E. Komarova. Exploratory sketches for the sculptural composition “Teremok”



Fig. 2. E. Komarova. Model of the sculptural composition “Teremok”

Particular attention is paid to the detailed elaboration of all fragments of the composition: characters from the animal world (bear, hare, fox, wolf, mouse, frog, mosquito), plant forms, architectural elements of a traditional hut – and innovative compositional solutions.

The next stage is the execution of a model study, in which the volumetric-spatial organization of the piece is reflected, with the arrangement of the main compositional forms (Fig. 2). This allows for the visualization of the structure of the work and the interrelation between the objects (Fig. 3).

After the completion of the design stages, the manufacturing of the piece in material begins, which presupposes a reasoned choice of ornamental materials and technological methods.

<sup>21</sup> Figs. 1-18. Photo by the author of the article.



Fig. 3. E. Komarova. Artistic and graphic project of the graduation qualification work “Sculptural composition based on the Russian folk tale ‘Teremok’”. 2025. Supervisor: V.N. Kolobov

In the process of creating the work “Teremok”, an experimental decision was made to use a material non-traditional for Kholmogory bone carving gray whale bone. Whale bone has a rather porous structure and a brown hue, which – requires a harmonious correlation of all compositional elements of the piece. To achieve the integrity of the work, the animal sculptures were toned and the natural color of the oak wood used in the construction was preserved. As a result, the “Teremok” composition organically combines materials and carving techniques, creating an expressive artistic image (Figs. 4, 5).



Figs. 4, 5. E. Komarova. Graduation qualification work “Sculptural composition based on the Russian folk tale ‘Teremok’”. 2025. Supervisor: V.N. Kolobov

Using the examples of graduation qualification works at the secondary vocational and higher education levels, let us analyze the specifics of technologies, ornamental materials and compositional solutions employed in students’ creative pieces.

Graduation qualification works at the secondary vocational education level at the Russian university of traditional art crafts are characterized by the use of traditional types of Kholmogory artistic bone carving (openwork, relief, sculpture, colored engraving), gluing works, turning works and the application of dyed bone.

The range of items includes boxes of various shapes, combining several types of carving and technologies in a single piece (for example, engraving, openwork, dyed bone), jewelry (necklaces, bracelets, earrings, brooches, etc.), openwork screens and small vases, small animalistic sculptures, table mirrors and other decorative items typical of traditional Kholmogory bone carving art [7].

The artistic design and imagery of the pieces are oriented towards the use of ornamental compositions consisting of vegetal, floral or geometric motifs, executed in various carving techniques (openwork, relief, engraving), as well as genre scenes featuring animals and birds within ornamental compositions and sculptures. While utilizing traditional ornamental materials, technologies and compositional techniques characteristic of Kholmogory bone carving art, students of secondary vocational education develop new forms and compositions for their graduation qualification works.

For example, figures 6–9 present boxes of various shapes made from cattle bone (tibia). On the sides of the box “Winter patterns” (Figs. 6, 7), openwork ornamental compositions are inscribed within strict geometric forms, the decorative solution of which is associated with the coldest time of year. The blue background beneath the openwork carving enhances the emotional perception of the piece. Relief decorative elements further fill the white background of the smooth surfaces, giving the item a finished appearance.



Figs. 6, 7. V. Lyubinetskaya. Box “Winter patterns”. 2018.  
Supervisor: V.N. Kolobov

In the design of the box “Poppies in a summer garden”, rounded forms predominate; carved poppies are presented in the floral openwork, harmoniously combining relief, sculpture and openwork (Figs. 8, 9). In creating the relief, the technique of “applied openwork” is used, which is characteristic of Kholmogory bone carving art.

In the execution of graduation qualification works at the higher education level, the search for innovative ideas plays an important role, involving the use of various technologies, materials and artistic images, including non-traditional ones.

The scope of work and the tasks facing graduates are significantly more complex than at the secondary vocational education level.



Fig. 8. S. Borminskaya.  
Box “Poppies in a summer garden”. 2018.  
Supervisor: V.N. Kolobov



Fig. 9. E. Sablina.  
Box “Secret”. 2020.  
Supervisor: V.N. Kolobov

The range of items includes complex-constructed highly artistic pieces – caskets, chess sets, vases, panels: multi-figure sculptural compositions combined with gluing works and openwork elements; genre sculptural compositions with figures of people, animals and birds; items combining traditional and non-traditional ornamental materials.

The artistic composition and image of graduation qualification works largely depend on the ornamental materials used and the carving techniques. For example, figures 10–16 present works by bachelor’s students, which are authorial pieces of bone carving art featuring original technological solutions, materials and execution techniques. In the work “Seasons” (Figs. 13–16), the variability of expressive means of two types of decorative and applied art is demonstrated: Kholmogory bone carving and elements of the Nizhny Tagil “fly-painting” technique. Such an innovative approach to creating works allows for expanding the boundaries of established traditions and finding new possibilities for realizing original artistic concepts.



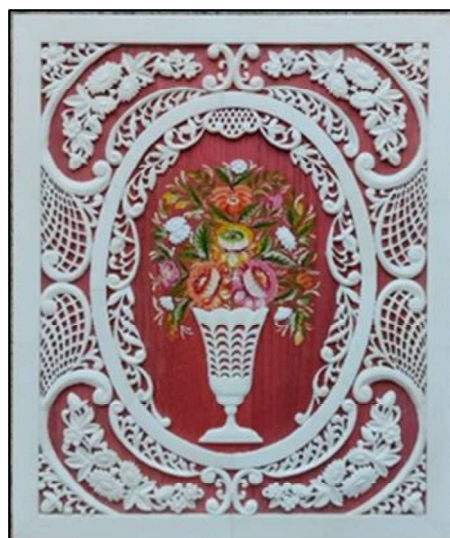
Fig. 10. Stepchenkova K. Sculptural composition “Sea journey”. 2017.  
Supervisor: V.N. Kolobov



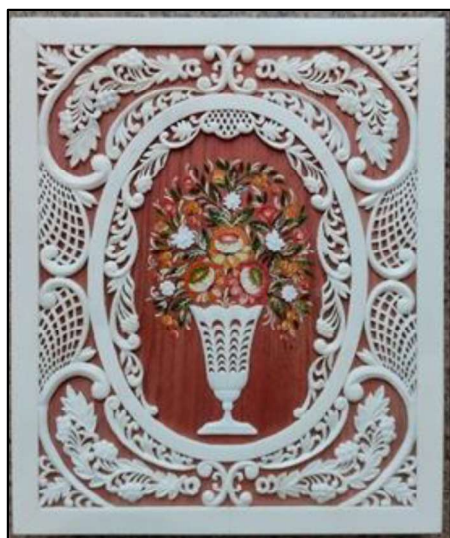
Fig. 11. Grubiyan A. Sculptural composition “Family idyll”. 2017.  
Supervisor: V.N. Kolobov



Fig. 12. Kudryavtsev P. Chess set "Black and white». 2018.  
Supervisor: V.N. Kolobov



Figs. 13, 14. E. Bogdanova. Set of decorative panels "Seasons». 2022.  
Supervisor: V.N. Kolobov



Figs. 15, 16. E. Bogdanova. Set of decorative panels "Seasons». 2022.  
Supervisor: V.N. Kolobov

A graduation qualification work in the field of artistic bone carving is a comprehensive artistic and creative process that includes the sequential solution of a number of tasks, based on the combination of tradition and innovation, experimental methods and original technologies.

The creation of a graduation qualification work unites project activity and performing mastery, theoretical knowledge and practical skills. This enables the production of unique bone carving art pieces of high artistic value, comparable to masterpieces of museum level.

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