

DEVELOPMENT OF PROFESSIONAL COMPETENCES OF FUTURE TECHNOLOGY TEACHERS BY IMPROVING THE EDUCATIONAL AND METHODOLOGICAL SUPPORT OF FOLK CRAFTS AND ARTISTIC DESIGN

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<https://doi.org/10.5281/zenodo.7834005>

Abstract. *The article analyzes the content of the subject "Folk crafts and artistic design" in the undergraduate course "Technological education" and the current state of the educational process, and suggests ways to improve it. The components of educational and methodological support aimed at shaping the professional competences of the technology teacher, and the work carried out on the creation and introduction of these educational tools into the educational process is highlighted.*

Keywords: *folk craft, practical art, artistic design, pattern, girih, islimi.*

Introduction

Creating an only educational environment in higher education requires the uniformity of the content of general education, academic subjects and fields of study. Technology teachers of general education schools are trained in most higher education institutions in Uzbekistan. The future technology teachers of general education schools should acquire knowledge, skills and abilities to organize the educational process of Uzbek folk crafts and practical art for students in higher education institutions. These tasks are carried out in the subject "Folk crafts and artistic design" specified in the country's educational standards for the "Technological education" bachelor's course. In most cases, the educational process of this subject is focused on training students in locally popular types of crafts, and the features of the future technology teacher's professional activity are not given much attention. Although the general components of folk crafts, applied decorative arts and artistic design are taught in higher education institutions of science taking into account regional components, the minimum level of mastery of the content of the subject should be the same in all higher education institutions. In this case, variability means paying more attention to learning specific directions and schools of handicrafts and practical arts formes in the regions, performing practical and graphic assignments for boys on the technology of processing construction materials, and for girls on the technology of processing materials such as paper, cardboard, and fabrics.

It is necessary to create the content of the subject "Folk crafts and artistic design", to process the materials based on it, and to develop a knowledge system that reflects the educational content of each of its separate sections in accordance with its constituent parts. These components consist of the following study blocks:

1) easily processed materials: paper, fabric, cardboard, etc. a block of practical technical knowledge that is learned through processing. In this, the content of organizing the practical activities of primary and lower grade students and girls will be studied by future technology teachers;

2) in the case of specific samples, for example, to copy or change the patterns of girih and islami according to the sample; block of technological knowledge in which processing of paper, cardboard, fabric and other construction materials is studied;

3) a block of constructive and technical knowledge that reveals the basics of creating and designing crafts, applied and decorative art products with the help of various tools and materials. In this, the tools, materials and techniques of their use, the stages of the product preparation process, used in crafts and decorative arts are studied;

4) block of information and technical knowledge. This block mainly reflects the graphic knowledge system and skills, as well as processing, saving and using information related to handicrafts and decorative arts using computers and other technical devices;

5) block of technical-economic and socio-technical knowledge. It is possible to bring knowledge in the direction of taking into account the elements of entrepreneurship in the preparation of crafts and decorative art products, as well as in their artistic decoration.

Materials and methods

The study of the problem of formation of professional competencies of future technology teachers in the field of "Folk Crafts and Artistic Design" during the educational process in higher educational institutions made it possible to conclude that special professional competencies are not formed by themselves during the educational process, but require specific goal-oriented actions for their formation. In this regard, there was a need to supplement the process of professional training of future teachers of technology with new, modern materials summarizing their motivational, cognitive and active qualities in the form of professional creative competencies.

Taking into account the specific aspects and content of the subject "Folk Crafts and Artistic Design" and its role in the professional activity of a technology teacher, the goals of studying this subject were defined as follows:

1. The history of the formation and development of folk crafts and applied decorative arts among students, types of crafts and applied arts formed in different nations and their characteristic aspects, types of Uzbek folk crafts and applied decorative arts, schools formed in the territory of modern Uzbekistan and their specific aspects formation of knowledge.

2. Forming a system of knowledge among students about the national crafts and decorative arts' importance to the element of national values, and their usage in many areas, such as national architecture, light industrial products, gift items.

3. Formation of students' skills in making uncomplicated craft products, decorating things in the style of national painting, making various models and models from materials such as paper, fabric, wood.

4. Formation of students' general knowledge on industrial graphics and basic skills on artistic decoration of goods and products.

5. Formation of students' skills in creating various didactic tools used in the professional activity of a technology teacher in the fields of folk crafts and decorative arts.

In the formation of teaching-methodical support for the subject "Folk crafts and artistic design", taking into account its unique features serves to make the educational process more effective. As a result of the studying this subject, the future teachers of the science of technology, in addition to mastering theoretical information, should first of all acquire the skills and abilities to prepare uncomplicated products, decorate them in the national style, and creatively use the types of painting art. It should be noted that students acquire theoretical knowledge and practical skills

in practical graphic work, design and preparation of uncomplicated products, the basics of industrial graphics. It is necessary to devote more time to practical work in the independent education of students. Taking this into account, the components of the teaching-methodical support of the subject "Folk crafts and artistic design" were determined as follows:

1. Curriculum;
2. Theoretical materials on science;
3. Practical and graphic assignments;
4. Independent education topics and tasks;
5. Methodical instructions for performing practical work;
6. Illustrated and explanatory dictionary of terms;
7. Didactic, illustrative and exhibition materials;
8. Programmed test tasks and control questions.

In technology science in general secondary education schools today, great importance is attached to training students in design, service, simple repair of various modern equipment and tools, forming their creative skills through various assignments. Along with these, the "Technology" subject program of general secondary schools envisages formation of certain knowledge and skills of folk crafts in students at all stages of technological education.

Taking into account the above, the school technology teacher is required to have in-depth theoretical knowledge, practical skills and qualifications in these areas. When analyzing the sample program [1] of the field of "Folk Crafts and Artistic Design" that is in practice today, aimed at forming the professional competences of students of the technology direction in the fields of folk crafts and design, the knowledge, skills and it is evident that there are differences between the qualifications and the professional competencies of the school technology teacher in this field.

It is not intended to introduce students to crafts and applied art, its development, types formed in different nations and their differences, peculiarities of Uzbek national crafts and applied arts, newly emerging modern trends in folk crafts and applied art.

Twenty-two topics are offered in the section of instructions and recommendations for practical training in the program, which mainly include embroidery, embroidery, familiarization with pattern types and simple pattern compositions, wood carving, carpentry and pottery arts, in which it is planned to familiarize with the used materials and equipment. In the practical training, little importance is given to the design and construction of objects, practical tasks aimed at developing students' practical skills and competencies in national handicrafts and applied art, and their creative abilities. Also, it is not planned to carry out instructions on artistic design, teaching students to decorate handicraft products in traditional and modern styles.

Results

Taking into account the professional activity of the technology teacher, the modern changes in our society and education, and in order to help prepare specialists to quickly adapt to modern changes, since the 2016-2017 academic year, the subject of "Applied graphics" has been taught as an elective subject in the field of "Labor Education" of Urganch State University. In addition to providing theoretical information about the types of Uzbek folk crafts and applied arts, the products they make, the types of patterns used in them and various uncomplicated patterns, the fonts used in the artistic decoration of products (including calligraphy writing) and the procedures for their execution, educational institutions, special attention was paid to the development of students' theoretical and practical knowledge and skills in creating (designing) logos, symbolic

signs, corporate styles for enterprises and firms, designing packaging for industrial products, and preparing volume models. In the course of education, if the students expressed a special interest in some direction of folk crafts and practical art, and if suggestions were made for creative work, they were given an opportunity and given additional advice. The organization of the classes in such a content and order lead to an increase in the interest and activity of the students.

Taking into account that the textbook or study guide for students of "Labor education" direction in higher educational institutions of folk crafts and applied arts has not been published, a teaching-methodical complex was prepared and its electronic version was distributed to students. In it, an attempt was made to provide a wider coverage of theoretical information on the topics of the program prepared by the department, options for graphic and practical work performed by students, as well as methodical recommendations for their implementation, questions and test options related to the topic.

Patterns occupy a very important place in Uzbek national crafts and practical art. Objects and products of national architecture, crafts, and applied art are decorated with elegant patterns specific to each region of Uzbekistan. In the published literature on folk crafts and applied art, it is shown that Uzbek national patterns are mainly divided into two types - girihs and islami patterns. But there is a big difference in the types and use of the patterns of the peoples of the world. Theoretical information and examples of types of patterns were presented in the educational-methodical complex. Students assimilated this information and tried to be creative in performing practical and graphic work.

The organization of classes in this order showed that there are many talented young people interested in folk arts and practical arts among students. Creative works of students are presented at various exhibitions held at the university and regional level.

In the improved curriculum of folk crafts and artistic design [2], 30 topics are recommended for the graphic and practical work of students in practical training, and at the beginning of the academic year, specialist teachers of the department should select the amount and volume of work that students will do from this list, and if necessary, take into account local conditions. It is noted that they can change it. Lists of topics and literature are provided for students to study independently. "Practical trainings on folk crafts and applied art", "Practical trainings on fonts" and "On industrial graphics and layout preparation" using materials collected over many years on Uzbek folk crafts and applied art and existing literature on national folk crafts and applied art at the department "practical training" methodological manuals were prepared and published in 2019. In these books, special attention was paid to the content of the subject "Technology" in general secondary schools and the organization of training sessions for the students of "Technology" (labor education) at the level of requirements in general secondary schools, to help students develop their creative abilities.

In the current model subject programs, the main focus in the educational process is on the formation of practical skills of students in the fields of some type of national craftsmanship - for girls - embroidery, golden embroidery, for boys - jewelry and wood carving. In the curriculum, 30 hours are allocated for lectures, 46 hours for practical sessions and 72 hours for independent study. During this time, necessary changes were made to the content of the subject program in order to form the knowledge of the types of national crafts and decorative arts formed in the regions of the country, their place in the life of the society, and their practical importance, as well as the practical skills necessary for their professional activities. In this, all the subjects of the model subject

program were preserved and the subjects that were allocated extra time without reason were condensed. In forming the content of the theoretical information on the subject, the knowledge, skills and abilities required by students in the subject "Technology" of general secondary educational institutions in the field of folk crafts, decorative arts, design and product preparation were analyzed on the basis of the subject curriculum, questionnaires conducted among teachers of the subject of technology and based on interviews. Based on the above, the content of the theoretical knowledge learned in the lectures and independent education of the students in the subject "Folk Crafts and Artistic Design" was formed as follows:

- 1-module. Folk crafts and practical art;
- 2-module. Graphic design;
- 3-module. Industrial graphics;
- 4-module. Artistic design

Practical and graphic assignments are aimed at strengthening and enriching the student's knowledge and skills on the main topics of the lecture. It is also recommended to strengthen students' knowledge based on textbooks and manuals, increase student knowledge through the use of handouts, schedule assignments, complete project assignments with creative elements, prepare demonstration materials, and others. In the approximate list of topics of practical exercises, topics of 23 practical and 31 graphic assignments are recommended. Listed topics can be reviewed, supplemented or changed in the department with the participation of subject teachers.

There are 23 topics and assignments for independent study, and students are recommended to use the following resources based on the characteristics of the subject:

- textbooks and training manuals;
- lecture texts;
- electronic textbooks;
- "INTERNET" resources;
- handouts.

When students perform practical and graphic tasks, they are required to have a certain level of graphic skills - the correct use of drawing tools, simple shapes (connecting elements, proportion, ...) and basic knowledge of color. Due to the fact that the majority of the students of the "Technological education" direction do not have training in coloring, this information was prepared in the form of a separate topic, and the students modified it in the process of practical work.

Brief methodological instructions were prepared for each of the practical and graphic works. Samples of their execution, images of products made by masters and craftsmen were widely used in practical training and independent education. Due to the great importance of students' acquisition of practical skills and competencies in mastering science, illustrative materials and their appropriate use in the educational process are of great importance. These materials help students expand their imaginations and creatively approach tasks. S.S. Bulatov [3, 4, 5, 6], P.A. Goncharova [7], D.I. Nesterov [8], O.I. Nesterenko [9], Paul Hughes [10] prepared illustrative materials. , Q. Qasimov [11] and educational and popular literature were widely used.

In the formation of the professional competences of the future technology teachers in folk crafts and artistic design, the skills of literate use of terms related to this field, understanding of the symbolic meanings of decorations in national applied and decorative arts and their appropriate usage have great importance in this field. The structure of elements of patterns, types of patterns

in folk decorative art, stages of their execution, and their symbolic meanings are widely studied in educational literature and scientific researches of S.S. Bulatov. We have used this author's works as a basis for creating illustrative descriptions and meanings of terms used in the category of national handicrafts and decorative arts.

Didactic, illustrative and exhibition materials play an important role in the educational process of "Folk crafts and artistic design". In addition to educational literature, catalogs and albums, Internet materials for the preparation of illustrative materials from crafts and applied decorative arts, the international festival "Handicrafts and applied decorative arts" held in September 2019 in the city of Kokand, traditional exhibitions of republican crafts held in Tashkent on March 21, 2018 and a lot of illustrative materials on modern crafts and decorative arts were collected and used effectively in further educational processes.

Programmed test assignments and control questions were created to use in the process of monitoring students' theoretical knowledge of the subject.

The above-mentioned educational tools were summarized and published in 2019 in the form of third teaching-methodical books in the fields of folk crafts and decorative arts, graphic design and industrial graphics, and art design [12, 13, 14]. Later, the collected materials were supplemented with materials on national crafts and decorative arts, and in 2022, "Folk Crafts and Decorative Arts" [15] and "Artistic Design" training books [16] were published and included in the educational process.

Creating new educational literature or improving it requires a large amount of analytical work. In this case, it is necessary to take into account general didactic principles and create educational programs for the subject, special principles of selection and systematization of educational materials arising from the goals and tasks of the educational subject, and the educational content should be formed taking into account the logical structure of the basic subject.

Educational materials for the course "Folk crafts and artistic design" were selected and organized on the basis of a number of principled legalities determined from the goal, task and logical structure of knowledge, skills and abilities in this field, taking into account the general didactic principles. These laws can be summarized as follows:

1. In practice, the educational material is formed around the main concepts of the logical structure of the course and develops their content. For example, important concepts such as craftsmanship, applied art, and painting are clarified and studied in detail during the process of studying their types and performing practical work.

2. In the selection of educational material, connections with other subjects in the higher educational institution were taken into account.

3. When choosing the practical and graphic tasks to be performed by the students, their ability to design various products, artistically decorate products, and use elements of graphic design and industrial graphics in the professional activity of the technology teacher was taken into account.

4. In the selection of educational materials, students' knowledge of natural sciences, skills in using mathematical and graphic equipment were taken into account.

5. Socio-economic aspects were relied upon in the selection of educational materials. In this, an effort was made to shed light on the reflection of national values in Uzbek folk crafts and applied decorative arts, the symbolic meanings in the images and the laws of their creation and practical use, as well as the possibilities of using them in the preparation of products.

6. The selection of materials for educational and practical assignments performed by students was chosen taking into account the fact that students will get to know and use handicrafts and practical-decorative tools during practical training.

7. In the selection of materials, we tried to create an opportunity for students to show their creative abilities and personal interests more widely. In the implementation of some practical assignments, it was considered that the student should do practical work in the areas that are interesting for him.

8. In addition to the general information about the types of handicrafts and applied arts formed in different nations, Uzbek folk handicrafts, schools of applied and decorative arts, their bright manifestations and examples of creative works performed by them were covered in the course content. It serves to develop students' feelings of respect for national values, patriotism and pride in their country.

9. In the course, the use of applied and decorative art, graphic design and industrial graphics in life, in the educational process, in construction and architecture, in the processes of making various products, i.e. illustrations depicting its place in human life were widely used.

10. The content of the course includes material of the nature of nature conservation, in which, as an example, images of samples of products using waste-free technology - environmentally friendly materials are presented in the design of packages.

Conclusion

It is necessary to note the following changes from the work carried out to improve the educational and methodological support of the subject "Folk crafts and artistic design":

1. The lectures and practical sessions, as well as the topics and content of independent education planned in the current science program, were fundamentally revised. Subjects aimed at acquiring theoretical knowledge, practical skills and qualifications necessary for the professional activity of the future teacher of technology, graphic and practical assignments were included in the content of the science program within the time limit allocated to the study of science in the curriculum. As a result, the following new topics were planned to be mastered in the lecture sessions:

- The content of teaching students the basics of national crafts and applied art in technology classes in general education schools;
- Painting art as a component of folk crafts. Schools of painting and their peculiarities. Pattern types and elements used in them. Girih and islami patterns;
- Modern miniature art in our country and its place in applied decorative art. General information about the art of calligraphy;
- Modern development of folk crafts and applied art in Uzbekistan. Introducing students to folk crafts and applied arts in technology classes. Peculiarities of organizing training sessions;
- Basics of graphic design and its application possibilities in the professional activities of a technology teacher. Fonts;
- Signs and symbols, their areas of use;
- General information about the design and preparation of industrial graphics, brand, company signs and packaging;
- General information about artistic design and artistic decoration of objects; - Preparation of layout. Preparation of large scale models.

2. Practical training and independent education of students are focused on the development of skills and competencies of students in designing and making products by performing practical and graphic assignments of acquired theoretical knowledge. Most of the types of tasks performed by students are creative in nature and varied in form, in which the student is given the opportunity to choose, taking into account the interests of the students. In particular, the creative assignments offered in graphic design, industrial graphics and artistic design were performed with great interest by the students.

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