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Development of a structural-functional model for the content of higher education in the field of artistic embroidery

Abstract. The article substantiates the need to develop new content for higher education in the field of artistic embroidery, driven by the contradiction between preserving traditions and the need for their development: future artists in this art form are prepared to create highly artistic products with artistic embroidery, but they lack experience in applying structural and technological knowledge to create products demanded by society. The purpose of the work is to develop a structural and functional model of content for higher education in the field of artistic embroidery. The methodological basis consists of structural and functional analysis and the theory of pedagogical modeling.

Specific functions of the content have been identified: educational, developmental, educational, integrative and project-based. The basis for implementing the content of higher education in the field of artistic embroidery is a step-by-step organization of educational tasks, based on the theory of step-by-step formation of mental actions by P.Ya. Gal'perin and N.F. Talyzina. The structure-forming factor is the interdisciplinary integration of specialized disciplines. The project-activity block ensures the implementation of two project solutions: "from model to embroidery" and "from embroidery to model".

Keywords: structural-functional model, higher education content, artistic embroidery, professional training, design solutions.

The specific features of artistic embroidery as a form of traditional applied art are determined by three fundamental factors: its origin, the preservation of regional and historical artistic-technological traditions and their development. However, a discrepancy is observed between the preservation of traditions and their development: future embroidery artists are trained to create highly artistic items, but they lack experience in applying constructive and technological knowledge to create items that are relevant to society. The reason for this is the low demand for this type of traditional art crafts, which entails a decline in youth interest in the profession and, consequently, in specialized higher education. This is precisely why there is a need to develop the content of specialized higher education, which ensures not only the preservation but also the development of artistic embroidery through the creation of works that meet the contemporary requirements of society.

Resolving this contradiction requires the development of new higher education content in the field of artistic embroidery, which, on the one hand, reflects its internal structure, and on the other hand, describes its purpose and mechanisms of functioning in the process of professional training for an embroidery artist. This

content is presented in the form of a structural-functional model, which allows one to simultaneously fix its component composition, identify the connections between its elements, and justify their functional purpose.

The creation of the structural-functional model involves the use of two scientific approaches. The first approach is structural-functional analysis, which first appeared in sociology and anthropology and is represented in the works of T. Parsons, R. Merton and A.R. Radcliffe-Brown [5; 6; 8]. According to this approach, society and social institutions are viewed as a set of elements united by stable connections – functions. A function is understood as the role of an element within the structure, while the structure and the functions of its elements are considered in indissoluble unity.

The second approach is pedagogical modeling, within which a model is understood as “a mentally represented and materially realized system that, by reflecting or reproducing the object of study, is capable of replacing it in such a way that its study provides new information about this object” [11, p. 19]. The issues of pedagogical modeling are addressed in the works of V.P. Bespalko [1], N.V. Kuzmina [3], E.V. Yakovlev, N.O. Yakovleva [12].

The following theses were adopted as the basis for creating a structural-functional model of higher education content in the field of artistic embroidery:

- the educational content must be organized as a didactic system, where all components (goal, content, technology, result) are interconnected [1, pp. 6–14]. This substantiates the structure of the proposed model;
- each block of the model does not merely “exist” but performs a specific professionally significant function in the training of an artistic embroidery artist [3]. This justifies the name of the model – “structural-functional”.

A structural-functional model is a theoretical construct that describes the composition, hierarchy and interconnections of the components of educational content; it characterizes which tasks of professional training each component and their totality solve; and it reveals the mechanism of content deployment over time (staging).

The name of the model – “structural-functional” – is justified by the fact that the designed content must possess a structure, perform functions and operate as a unified whole.

In pedagogy, the concept of “structure” refers to the internal structure of a pedagogical system, which determines the law-governed order of interconnection and interaction of its elements (goal, content, methods, forms, tools, result), ensuring the integrity and stability of the educational process [1].

The understanding of the functions of educational content as a totality of its roles and purposes was first systematically substantiated in the concept of educational content by I.Ya. Lerner and M.N. Skatkin [4].

The integrity of educational content is possible only under the condition of the coordinated functioning of all elements, which ensures the phased formation of students’ professional training.

Thus, the structure determines the possibilities of functioning, while the functions, in turn, influence the formation and modification of the structure.

In the context of higher education content in the field of artistic embroidery, this implies the necessity of identifying the specific functions that the designed content must perform. These should include: educational function – the formation of a system of professional knowledge, skills and abilities in the field of artistic embroidery; developmental function – the development of professional thinking, creative abilities and the capacity for integrating specialized knowledge from various fields; upbringing (educational) function – the formation of a value-based attitude toward the regional and historical artistic-technological traditions of artistic embroidery; integrative function – ensuring the interdisciplinary integration of the content of specialized disciplines with the content of teaching clothing design and modeling with artistic embroidery; design function – the formation of the ability for design activity: from situation analysis and concept formulation to the creation of a unique work – a piece of clothing with artistic embroidery – and its presentation at an exhibition/fashion show, confirming its relevance in contemporary society.

All the listed functions are in close interconnection and are realized in unity, ensuring the integrity of the educational process. Each of them is specified and reflected in the content of educational modules, forms and methods of teaching, as well as in the criteria for evaluating results.

Defining the functions of higher education content in the field of artistic embroidery allows one to outline the directions of its impact on the educational process; however, it does not establish its ultimate goal. To construct a structural-functional model, it is necessary, first and foremost, to define its goal-oriented component – the strategic focus that determines the selection of content, the choice of teaching methods and forms and the criteria for evaluating results.

The content of higher education in the field of artistic embroidery acts as the object of design, while the structural-functional model serves as the form of its theoretical representation. This model allows one to fix the component composition of the content, identify the connections between its elements and justify their functional purpose. In other words, the educational content and the structural-functional model relate to each other as an object and its theoretical representation: the content answers the question “what to teach?”, while the model answers the question “how to organize this content into an integral system?”.

The scheme of the structural-functional model of higher education content in the field of artistic embroidery is presented in Figure 1⁷⁵.

It includes seven main blocks: goal-oriented block, profile-content integrative block; technological block; design-activity block; criteria-evaluative block; organizational-pedagogical block; result-oriented block.

The goal-oriented block is focused on shaping a highly professional graduate – an embroidery artist capable of creating highly artistic works of this art type that are in demand in contemporary society.

⁷⁵ Fig. 1. Author's scheme.

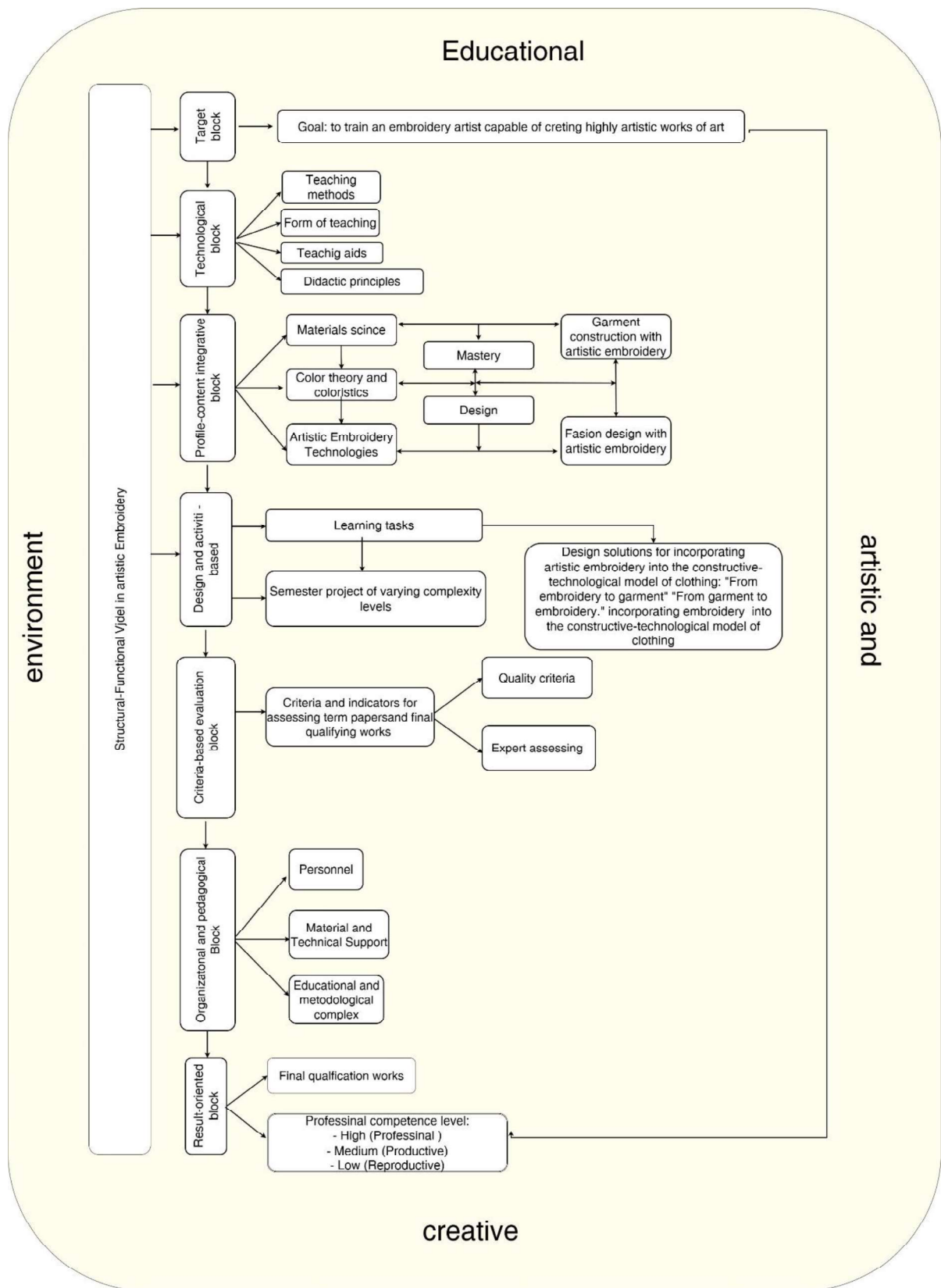


Fig. 1. Structural-functional model of higher education content in the field of artistic embroidery

The achievement of the stated goal is ensured through the systemic organization of educational content, which is represented in the structural-functional model as the profile-content integrative block. This block unifies the content of teaching materials science, embroidery technologies, craftsmanship, color theory

and coloristics, as well as the design, construction and modeling of clothing with embroidery. It ensures stable interdisciplinary connections between the corresponding specialized disciplines.

However, the educational content in itself, despite the internal interconnection of its components, does not guarantee the achievement of the stated goal. The content must be translated into a real educational process by determining the optimal forms, methods and means of teaching. This task is performed by the technological block of the structural-functional model.

The technological and design-activity blocks are in close interconnection: the former provides the procedural basis for training, while the latter fills it with specific content according to activity types.

The design-activity block provides for the completion of educational works of varying degrees of complexity and ensures the implementation of two design solutions for incorporating artistic embroidery into the constructive-technological model of clothing: “from the model – to the embroidery” and “from the embroidery – to the model”, ensuring relevance.

An important role in the implementation of higher education content in the field of artistic embroidery is played by the developed criteria and their indicators for evaluating term papers and final qualifying works. These are included in the criteria-evaluative block of the structural-functional model.

In the implementation of higher education content, it is necessary to consider the material-technical, personnel and educational-methodological support of the educational process as elements of the organizational-pedagogical block.

The result of the implemented higher education content in the studied field is the final qualifying work – a piece of clothing or an interior design object with artistic embroidery, which is in demand in contemporary society, as well as the determination of the graduate’s professional training levels, which are included in the result-oriented block.

Thus, all the aforementioned blocks of the model are interconnected; each is characterized by its own internal organization, ensuring its functioning as part of an integral model.

The basis for implementing the developed content of higher education in the field of artistic embroidery is the phased organization of educational tasks, ensuring the sequential accumulation of professional competencies through the logically structured content of teaching. The justification for the phased completion of educational tasks by the student relies on the theory of the phased formation of mental actions by P.Ya. Gal’perin [2] and N.F. Talyszina [9]: professional skill is formed through a sequential transition from the orientational basis of the action to its practical execution – from external practical actions to internal (mental) ones. In the field of artistic embroidery, this is particularly significant: “hand setting” as a skill, coloristic sense and design thinking do not arise instantaneously but are formed gradually through a series of tasks of increasing complexity. A set of tasks, structured according to the principle of increasing complexity and interdisciplinary integration, forms the substantive trajectory of professional training. Thus, the

educational content in the field of artistic embroidery ceases to be a set of “topics” and becomes a system of professionally significant sequential actions.

The structure-forming factor of the content of higher education in the field of artistic embroidery is the interdisciplinary integration of all specialized disciplines, which is considered not as an auxiliary element, but as a necessary condition for the formation of integral professional competence.

Previously, we examined the interdisciplinary integration of the content of specialized disciplines across the following cycles: artistic – color theory and coloristics, mastery of artistic embroidery; technological – technologies of artistic embroidery, materials science; design – design in artistic embroidery, construction of clothing with artistic embroidery, modeling of clothing with artistic embroidery. In this context, each discipline contributes to the formation of professional competence and it is precisely the interconnection of the content of specialized disciplines that ensures the possibility of creating a complete, highly artistic work in the field of artistic embroidery that is in demand in contemporary society [7].

The integrity of the model is ensured not only by the internal connections between the blocks and their components but also by their inclusion in the educational artistic-creative environment, which acts as a necessary condition for the implementation of the training content. It is within this environment – through exhibition and competition activities – that the testing and expert evaluation of learning outcomes are carried out. This allows for confirming the relevance and demand of the created works of artistic embroidery and adapting the content of higher education in the studied field to the external and internal challenges of modern society.

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