

THE STRUCTURE OF THE DESIGN COMPETENCE OF FUTURE ENGINEER-TEACHERS OF THE SEWING PROFILE

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Introduction

The design activity in the process of professional preparation of future engineer-teachers of sewing profile shows up in implementation by them calculation, structural, creative, practical and other types of works, that touch both an engineer and pedagogical constituents of preparation. A planning result is the development of project, documented by the professional language of certain industry and intended for technological multiple-use. The specific of preparation of engineer-teachers of sewing profile consists in that a design activity of future specialists is examined both in industry of pedagogics and professional preparation. The pedagogical planning by a future engineer-teacher consists in the selection and ground of maintenance, forms, methods, facilities of studies, that will be realized in the development of didactics projects on different levels: educational discipline, division, themes of lesson and others like that. At the same time the engineering design in sewing industry consists in the development of package of technical documentation, like the projected model of clothes in obedience to the requirement specification, by the way of the grounded constructing and proper calculation.

The design engineer-pedagogical activity of future specialist is the means of forming of a design competence for him.

Typology of knowledge

The research purpose consists in the determination and theoretical ground of structure of a design competence of future engineer-teachers of sewing type.

The essence of a design competence of future engineer-teachers of sewing profile remains scantily explored for today. The design competence of engineer-teacher of sewing profile, as a specialist of double qualification, is dual, that touches the engineering and pedagogical cycles of preparation. At the same time the design competence of engineer-teacher of sewing type is considered as a basic in forming of the professional competence of future specialist. On the basis of analysis of determinations of research workers we have specified the essence maintenance of the concept a design competence of engineer-teacher of sewing type, as a computer-

integrated result of the educational preparation of future engineer-teacher of sewing type, which represents the formation of the proper knowledge, abilities, professionally important qualities and consists in the ability to carry out a design activity in industry of pedagogics and sewing production by the development of pedagogical and production projects.

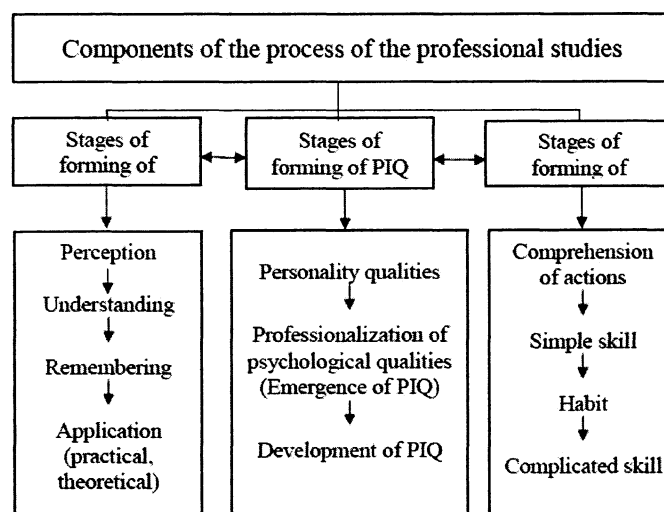
The determination of structure of a design competence provides the selection of its components, but research workers present their composition on own discretion. In the work of L. Useinova it is selected active, cognitive and personality-motivational components of the competence [1, p. 8]. The competence, in the opinion of E. Zeer, shows up as a synthesis of the cognitive, subject-practical and personality experience [2, p. 51]. In the scientific research M. Smirnova selects motivational-incentive, gnostic, practical-operational, emotionally-volitional, control-estimating and communicative components in the structure of a design competence of bachelors of technique and technology [3, p. 6]. In the structure of a design competence of teacher S. Yarmakeeva distinguishes cognitive, activity-practical and valued-motivational components [4, p. 5]. The structure of a design competence of future engineer-teacher of sewing profile as integral unity of interdependent components is certain by the theoretical query facilities: gnostic (system of professional knowledge, that provide implementation functions of engineering and pedagogical design), activity (system of professional abilities, that consists in the determination of aims, formulation of hypothesis, development and ground of technical and pedagogical projects) and personality (assumes possession of the necessary professional qualities for the design activity).

The system of professional knowledge (gnostic component of a design competence), as a basic constituent of a design competence is a means for forming of abilities (activity component of a design competence).

The German researcher I. Lompsher points out four types of knowledge: subject, methods of actions, knowledge of norms of interpersonal relations and knowledge of values [5, p. 326], which must be mastered in a complex by future specialists for forming of them intellectual and creative potential. The system of professional knowledge (gnostic component of the design competence), as a basic component of the design competence is a means for forming of abilities (activity component of a design competence).

It is necessary to notice that such stages of process of mastering of knowledge are isolated (pict. 1): perception or primary acquaintance with material, a comprehension or understanding of the perceived material, memorizing or fixing of material, mastering the material or applying it to practical or theoretical [6, p. 168; 7, p. 131]. All stages of mastering of knowledge are mutually constrained and mutually get to each other. An active capture by knowledge by students, unlike a passive transmission by their teacher, is important in this process. The high level of the mastered knowledge will give possibility to the students to apply them at the decision of wide circle of theoretical and practical tasks in different terms.

During professional studies forming of knowledge for students must answer such criteria: accordance of knowledge of maintenance of studies to the subject domain of knowledge, that is studied; application of the got knowledge in educational aims [8, p. 121]. Will mark that mastering of certain structure of knowledge of corresponding industry by students must answer maintenance of competence, that is formed.



Pict. 1. A chart of forming of components of a design competence of the future engineer-teachers of sewing profile in the process of professional studies

The processes of capture knowledge and abilities are mutually constrained and mutually recover each other, how the last stage of forming of knowledge takes place due to application of them in practice. In this process abilities are forming. Quality of abilities is determined by the high level of the knowledge, mastered by students, that lies in their basis.

Forming of abilities, in our research - difficult abilities - is the process of development for the students of ability purposefully, effectively and creatively use the purchased knowledge, simple abilities and skills for realization of professional activity [7, p. 135]. Forming of difficult abilities takes place consistently, in obedience to the certain stages (pict. 1):

1. Comprehension of actions and ideas about them.
2. Capture by students of simple ability, characterized by the clear understanding of methods of implementation, but by an inexact and unsteady recreation them.
3. Forming of simple skill, that consists in speed-up correct implementation of action and leading to of it's to automatism and association of elementary motions in an only action. On psychological maintenance distinguish such skills: mental, sensory and motive.
4. Forming of difficult abilities, that consists in a capture of the arbitrary adjusting of character of action, when speech goes about ability to apply the acquired habit or complex of the acquired habits [6, p. 171-172; 7, p. 132-134].

Professionally important qualities are the component of the design competence, except knowledge and abilities (personality component of a design competence), that are the constituent of psychological activity of personality.

Qualities of personality are rich in content signs of personality, as forms of existence of psyche of man, that is integrity, apt to independent development, determination, conscious subject activity and independent adjusting and provided with the own unique and unique inner world [5, p. 1019]. In the process of implementation of activity psychological qualities become professional gradually [9, p. 25]. Appearance of the professionally important qualities takes place on the stage of forming of difficult abilities [7, p. 136], but their further development takes place simultaneously with the development of all constituents of competence (pict. 1).

Effective development of professionally-important qualities of future engineer-teacher of sewing profile is possible subject to condition, if an educational process will come true, taking into account professional inclinations of students, taking into account an educational level, profile of preparation, specialization, real terms of future professional activity, function that future specialist will execute.

Will pass, actually, to the description of components of the design competence of future engineer-teachers of sewing type. A gnostic component of engineering

constituent of preparation is based on knowledge of theoretical bases of necessary for implementation of a design activity, such as: assortment and description of materials for making of clothing, concepts and tasks of confectionery, requirements to quality of clothing and properties of materials, methodology of selection of materials, bases on the artistic planning and composition of the suit, modern styling of the suit, methodologies of construction of drafts of base constructions of details of clothing and implementation of project-designer works at creation of new models of clothing, methodology of development of working designer. Next to it the gnostic component of pedagogical constituent of preparation consists in the knowledge of theoretical bases of didactics in relation to aims, regularities, principles, forms, methods and facilities of organization of educational-educator process; methodologies of teaching of professional disciplines, essence and features of pedagogical technology and her varieties. Activity component of engineering constituent of preparation is based on abilities to characterize different materials for making of clothing, ground requirements to quality of clothing and properties of materials, to organize and to execute the expert evaluation of quality of materials and develop confectionary maps, develop the sketches of models of suggestions and create the series of sketches of models of clothing(collections), conduct measuring of figure of man, build the draft of base constructions of details of clothing, execute the structural design of wares, develop designer documentation on sewing product. The activity component of pedagogical constituent of preparation consists in ability of future engineer-teachers of sewing profile to determine aims, tasks of the pedagogical planning, and also criteria of evaluation of effectiveness of pedagogical activity, to formulate a hypothesis about the effectiveness of the conditions defined in the pedagogical project and to model the future pedagogical situation develop methodology of teaching of professional disciplines for the system of vocational education.

The personal component is based on the formation of future professional engineer-teachers of the sewing profile of the professional qualities, that are necessary for carrying out professional designing activities in the field of pedagogy and sewing production.

Summary

Thus, based on the analysis of scientific and pedagogical literature, the essence of the concept "design competence of the engineer-teacher of the sewing profile" is

specified, the structure of design competence of future engineer-teachers of the sewing profile is determined, which consists in the unity of the gnostic, activity and personal components.

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