

## METHODOLOGICAL TRAINING SYSTEM OF FUTURE TEACHERS FOR SPECIALIZED TEACHING AND ITS STRUCTURE

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**Abstract.** *At present, the system of teacher training for future teachers being formed does not take into account the true nature of the methodological assistance that arises in the process of solving various practical tasks of the teacher. Our research is dedicated to form a methodological preparation system of future teachers for specialized teaching in curricular and extracurricular teaching processes. In the current paper we list the opportunities for learning, teaching and learning, as well as the presence of a leading contradiction between the unidentified functional features of the components that form the methodological system for the training of future teachers in curricula and outside the learning process. Thus, scientifically formulated methodological training allows future teachers to adapt to various changes in their professional assistance, skillfully apply teaching methods and use them by changing, using traditional and innovative approaches flexibly within their pedagogical “laboratory” framework to combine methodological knowledge and skills.*

**Purpose of the study:** *To develop a system of methodological training of future professional education teachers in the process of study and out-of-class learning and to describe their functional components.*

**Research Methods:** *studying of the mechanism of conditions in the field of globalization, preservation of the originality, cultural values, customs, traditions, expressing the importance of self-determination.*

**Practical value:** *According to the system of methodological training provided, the future teacher develops methodological knowledge, business and skill based on subject and metaphorically developed functional character.*

**Keywords:** *Methodological Training; Functional Assistances; Subjective Methodological Training; General Methodological Subjects.*

## **Introduction**

There is a need to use a systematic approach in determining methodological training as the object of the study is considered as a system, on the basis of which many types of complicated objects and information are identified and a single theoretical view is made.

In order to define the concept of “methodological training system”, it is necessary to understand the concept of the system first. Scientific and pedagogical research has a number of definitions for the concept of the system.

V. P. Bepalko explains that the meaning of the system is a notion that many elements form a single unit that is communicated with each other (Bepalko, 1977; Murasulov, 2015). O. K. Filatov explains the concept of system as interconnected elements that being connected to one another in the functional relationships (Chernilevsky, 1996; Baydaliev, 2016; Poshayev, 2016).

One of the basic principles of systemic communication is its structure. The structure represents the integrated organization of a single system, that is, the way it interacts with the specific components.

Consequently, the principal methodological guideline for the system's development is its sequence and integrity.

Integrity is understood as a defined relationship between the elements, in conjunction with the internally coordinated system component. They have following properties:

- The whole system is integrated with the external environment and is determined by the general condition of the environment;
- Integrity systems are characterized by the existence of systemic factors:
- The whole system will have its own structure, which can be considered as a whole system of its individual components, which can be regarded as a part of a larger system as a whole. That is, we do not limit ourselves to a single-level system in practice; on the contrary, we consider the “partitions” of a single integrated system as a system.

## **Proposed Model**

In order to create a system of methodological training of a future professional education teacher, we have analyzed a number of methodological training systems (Bogatyrev, 1993; Kobozev, 1987; Skamnitsky, 1995). In the first case, the emphasis is placed on the integration of the various subjects in the curriculum of the specialty, with a significant role in the collection of methodological disciplines. In the second case, the system of methodological

training is considered as the management of educational and methodical activities of the future student. V. I. Zemtsova and A. I. Belenok consider tools such as tasks, contents, methodological complex, and results of methodological preparation as different parts of training process in the whole system of methodological preparation. (Belonok, 1996; Zemtsova, 1995; Volodarskaya, 1989; Kan-Kalik, 1990; Chernilevsky, 1996; Skamnitsky, 1995; Konakbaeva, 2013a).

A. A. Derkachev discusses the process of formation of methodological knowledge and skills in the system of methodological preparation of the teacher (Derkachev, 1987; Mukhamedjanov, 2012; Nykyforov, 2009).

Another principle of the system of methodological training is combined with the content of teaching process (learning objective, learning process and learning outcomes).

At the same time, the analysis of scientific and methodological researches indicates that in pedagogical educational institutions the future teacher is a multi-disciplinary system of training, and in most cases the components of the pedagogical system structure are used.

However, future teacher's methodological training system does not take into account the true nature of the methodological activities that the teacher does in addressing the various practical tasks. This is the preservation of the narrow-minded subject relationships for structuring the content of the changing role and importance of methodological activities in future vocational training and the content of future teaching methodologies. It also demonstrates that there is a major contradiction between the functional characteristics of the constituent components of a methodological training system of course lessons and out-of-class learning process of a future teacher. That is why scientifically-methodical training should allow the future teacher to adapt to the various changes in his / her work, to use the traditional methods and methods of teaching within the pedagogical "Laboratory", to effectively use and modify teaching methods, and to combine methodological knowledge and skills.

It should be noted that the functional activity of the research area of methodological training in general pedagogical science is considered as following (Erganova, 2007):

Analytical (analytical): Methodological analysis of the educational process in terms of theoretical and practical activities.

Design: long-term planning and content development, planning and training of teaching activities.

Structuring: Lesson Planning (Content Selection, Composite Formation of Educational Information), Identification of the Form of Training Material.

Calibration: identification and preparation of the means of realization of requirements in the educational process, meeting the educational standards,

educational programme requirements according to the functional features of educational institutions.

Research: methodology of conducting research work aimed at solving methodological issues.

We have reviewed two main directions in accordance with the functional nature of the constituent components of the structural-functional model of the system of methodological training of the future teachers of vocational training (Figure 1).

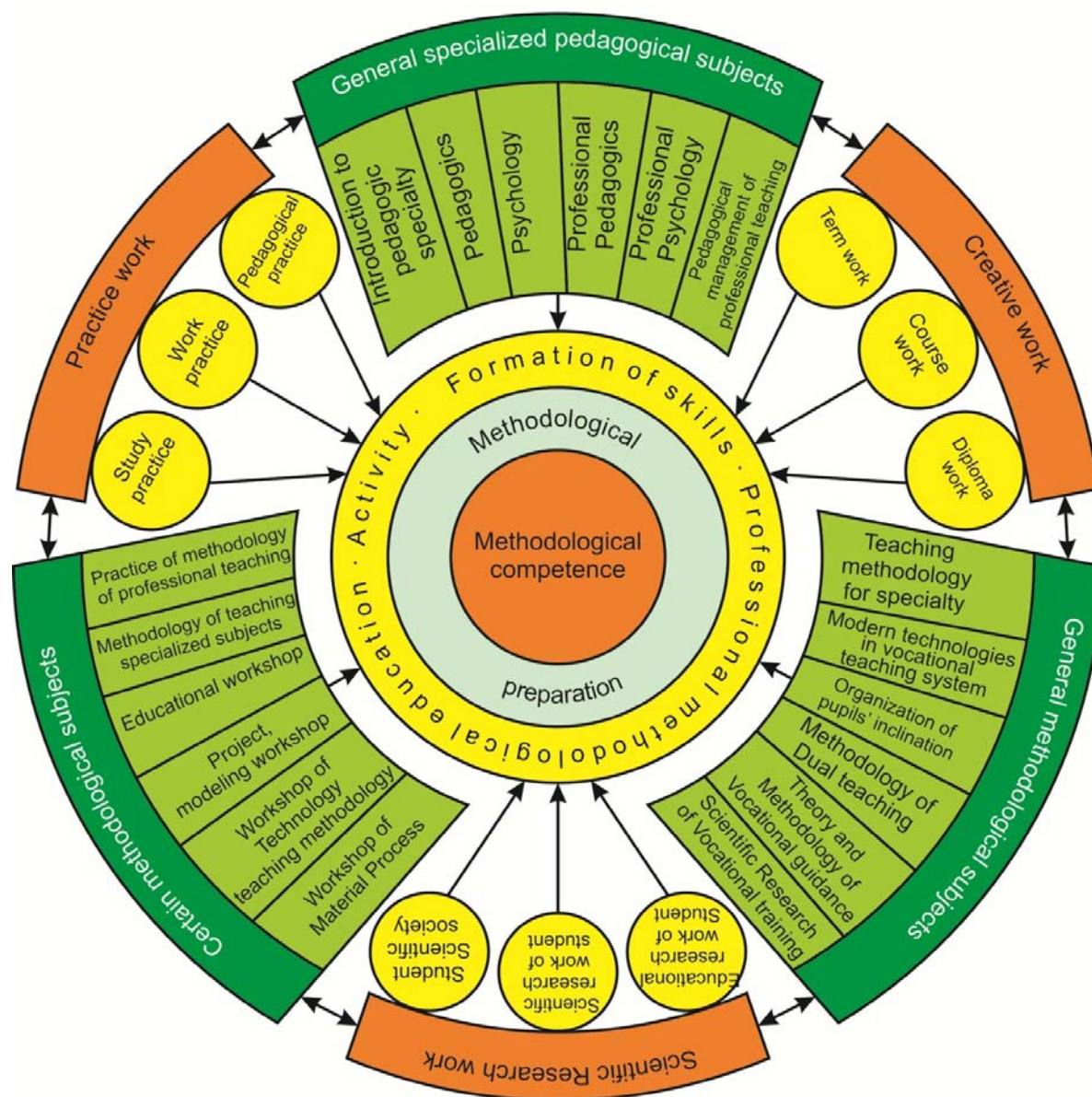


Figure 1. Structural and functional model of methodical training system for future teachers of professional education

In the first direction, the methodological knowledge and skills of the future teacher will be formulated in the direct learning process (Kudabaeva, 1995; Omarov, 2013; Omarov, 2016). According to the proposed model, it defines the basic principles that are the basis of methodological training, defined by a set of disciplines based on the curriculum of the specialist training. They are characterized by a series of disciplines divided into three major groups as follows:

1. General professional pedagogical disciplines
2. Collection of general methodical disciplines
3. Collection of autobiographical disciplines

As a result of the acquisition of these disciplines within the framework of the proposed methodological training, the future teacher carries out the methodological preparation functions such as analytical, designing, structuring and exploring. That is, analytical work aimed at improving future teacher's pedagogical activity; analyze the activities of colleagues to solve different pedagogical problems on an optimum basis; calendar thematic planning of the materials provided in accordance with the curriculum, definition of the structure of the lesson, selection of technical and technological information and their didactic processing; selection of working forms; selective analysis of effective educational methods and tools; In accordance with the functional peculiarities of educational institutions, the activities of identifying and preparing tools for meeting the educational requirements, meeting the requirements of educational standards and curriculum are mastered.

In the second direction, the methodological knowledge and skills developed by the future teacher are carried out outside the classroom, mainly during the educational, methodological, scientific and creative work of the student himself (Kamalov 2016a; Kamalov 2016b; Saipov, 2006; Saipov, 2016). Methodological knowledge and skills are divided into three groups:

1. Results of the internship.
2. Results of scientific research work.
3. Results of creative and methodical work.

The following analytical, design, structuring and research functions of methodological training are carried out during the creative and research work of student's self-study. That is, analytical work aimed at improving his pedagogical activity; analysis of the activities of colleagues for solving different pedagogical problems on an optimum basis; analysis of activity of students in order to determine the effectiveness of the pedagogical process and ways of its correction; development of didactic materials; organization of cognitive and behavioral activity of students in the course of lessons; pedagogical partnerships with students, ability to influence emotional senses; Methods of carrying out research works directed at solving methodological problems are studied.

## **General professional and pedagogical disciplines**

As a result of analyzing a set of subjects in the first direction based on the curriculum of the specialty and the formation of the methodological training of the future teacher, there were identified six characterising subjects of “General Professional Pedagogical”. (State Common Standard of Education of Republic of Kazakhstan 6.08.076, 2010). They include: Introduction to Pedagogy, Pedagogy, Professional Pedagogy, Professional Psychology, Psychology and Human Development, Pedagogical Management in Vocational Education.

As a result of studying these disciplines, the future teacher will contribute to pedagogical activity, the formation of professional and pedagogical orientation of theoretical and practical basis of future profession, understanding of its high social importance. At the same time, opening a cycle of pedagogical and psychological disciplines, the future teacher explains the general facts, phenomena, concepts, regularities and methods of pedagogical activity in logical relations with basic psychological, pedagogical and methodological courses.

Future teachers will get acquainted with the system of knowledge about the sphere of education, the essence, content and structure of the educational process, the history of the psychological and pedagogical concepts and the development of subject methods and the current system of knowledge. At the same time, the system of mental development, the system of knowledge about the factors influencing personal growth is mastered.

As a result of the analysis of the curriculum of the specialty “General Methodological Disciplines”, six main subjects were selected. These include: “Vocational Training Methodology”, “Modern Technology in Vocational Education”, “Organization of Professional Education for Students”, “Dual Teaching Methods”, “Theory and Methodology of Occupational Orientation”, “Scientific Research in Vocational Training.”

## **General Methodological Disciplines**

As a result of the analysis of the “General Methodological Disciplines” specialty curriculum, six main subjects were selected. They include: “Vocational Training Methodology”, “Modern Technology in Vocational Education”, “Organization of Professional Education for Students”, “Dual Teaching Methods”, “Theory and Methodology of Occupational Orientation”, “Scientific Research in Vocational Training.”

As a result of these disciplines, the basis of the general methodological training of the future teacher is formed, including design, implementation, evaluation and correction of the learning process, ability to create educational

and programme documents and use them to create educational content. Also, students learn the methods of designing and content of educational and production work, the ways to equip classes with didactic means.

### **Individual methodical disciplines**

In accordance with the curriculum of the specialty, we have included six subjects listed in the “Personal Methodological Disciplines” series. These are: “Practice of vocational training”, “Methods of teaching special disciplines”, “Practice of designing, modeling, layout work”, “Workshop in the workshop”, “Practice of Technique of Teaching Technology”, “Practice of Materials Processing”.

In the course of studying a set of disciplines, the students will learn the peculiarities of the technology of the future professionally vocational training teachers and the methodology of professional work. At the same time, they will acquire the methodological competence of modifying, and analyzing the materials of the students' professional flexibility and skills in accordance with the specific didactic tasks and the level of readiness of the students.

According to the proposed model of the methodological training, the future teachers and methodologists will be taught on the basis of the independent work of students outside the classroom. They will be formed during the course of our internships as mentioned above, in research and creative work.

Students' self-fulfillment work is usually carried out without the direct involvement of the teacher, but under his assignment and under his supervision. The purpose of student self-study is to increase the motivation of students to master the curriculum. At the same time, information competence contributes to the development of researches and the ability to carry out creative work. As a result of students' independent work, a number of functions are implemented that contribute to the formation of methodological training of the future teacher. (Kamalov, 2013). They are as following: systematization and strengthening of the practical skills and theoretical knowledge of students; extension of theoretical knowledge; development of normative legal, reference and special documents in the educational process, development of research activity, acquisition of the ability to study independently in scientific research, professional work, solving actual problems and finding optimal solutions.

In assessing the results of student self-study, a number of principles are considered. They are displayed at five levels:

- verbal and transformation of information (reproductive business);
- ability to work independently on the model (logical business);
- ability to work on a self-regulating self-assessment (the ability to analyze and systematize);

- heuristic ability to work independently (research - research activity);
- creativity - self - study, self - development, self - development design, the ability to transform its activities;

Educational and research work of students is defined by the acquisition of techniques, methods and skills aimed at the development of technical creativity and scientific research on the basis of students' complex activities in the educational process. A number of functions of methodological training are implemented in the course of teaching and research work.

They help to:

- develop creativity in solving practical problems;
- find nonstandard solutions to solving professional problems by developing students' research activity;
- help to develop scientific methods of cognition, creative and advanced directions of teaching materials;
- develop learning methods and tools for the development of research skills, the solution of scientific and practical issues and skills in creative teams;
- form the scientific literature and work skills;

One of the components of the system of methodological preparation is the course work which is carried out independently by the council of students' scientific supervisors.

### **Final stage of training**

Execution of the course work is the final stage of the course's study and, as a result, the student will be able to demonstrate the degree of acceptance and use of the theoretical material.

The course work is considered to be a self-fulfilling study of the student and is presented in a special text of the results of the research work aimed at solving certain problems of logical completion of professional pedagogy. Moreover, one of the main goals of the course work is to develop the students' skills of research work, increase the level of professional and methodical training, deep study and exploring of the research area.

That is why one of the most responsible periods for controlling the level of readiness of the student to solve individual educational work is determined by the results of the course work.

During the course work, the following tasks will be solved to form the professional methodological training of a future specialist:

- the range of theoretical knowledge gained by a professional specialist is expanding, and the ability to apply this knowledge for the solution



of problems in the psychological and pedagogical methodological area of the particular educational process is deepened;

- the ability to use practical skills to solve problems is developed;
- the ability of independent work to search for pedagogical and technical information in solving problems in accordance with the relevance of the work are improved;
- improve the ability of students to independently evaluate and select the concepts, conclusions, proposals that can be used in practical activities of the teacher, as well as the effectiveness of different methods;

It is known that the role of practice in the process of forming a methodical preparation of a future teacher is significant, and therefore, the methodical training system that we offer has a key role in pedagogical practice.

Pedagogical practice as an integral element of vocational training provides students with theoretical knowledge gained in the learning process by including them in the real process of future professional activity and creates the personal qualities of the future teacher with professional skills (Abdullina, 1990).

The activity of students in pedagogical practice is carried out in accordance with the structure and content of pedagogical activity as an analogue of the teacher's professional activities and is realized in an actual school setting. It is characterized by many relationships and functions, such as the teacher's service.

The activities of the student during pedagogical practice are characterized by a number of functions (education, development, upbringing, etc.) and relationships (pupils, parents, teachers, students), such as real professionals. At the same time, pedagogical practice is defined as a form of vocational training based on fundamental special and psychological and pedagogical knowledge, which provides for the principles of professional activity and the principles of practical knowledge. During the practice, internship students are firstly trained by psychologist-pedagogical, social-humanitarian and special disciplines under the guidance of teachers of higher education institutions; secondly, internship students work with pupils, organize their educational and cognitive activities; and thirdly, by communicating with the school's pedagogical staff, get acquainted with their experiences, and improve their professional-methodical level.

During the pedagogical practice, a number of valuable issues that form the basis of professional and methodological training will be solved. They are as following:

- professional teacher is prepared for the whole pedagogical process management;
- the professionalism of the teacher of professional education and the necessity of self-education for pedagogical education;

- formation and development of pedagogical abilities (organizational, gnostic, constructive, research, communicative);
- to solve the problems of social, humanitarian, psychological, pedagogical and special methodological skills, to solve certain pedagogical problems;
- development in professional and methodological skills;
- development of creative, research principles in pedagogical activity;
- constant interest in the profession of a tutor.

Pedagogical practice is one of the most complex multidisciplinary processes in the methodological training of the future teacher.

The diploma work carried out by a student's scientific supervisor, who is a comprehensive integration of the professional teaching methodology of future teachers in higher education institutions, is the final stage of complex methodological training. In the process of its implementation, the student's progressive self-fulfillment skills are improved. There are a number of peculiarities in the diploma work compared with the course works. For example:

- The theme of the diploma work is considered to be of great relevance and size;
- The course of the diploma work is characterized by research and creative orientation;
- Consideration of significant and important issues of designing, structuring, organization, gnostic, technological services in the content of the diploma work;
- Theoretical and methodological approach of the work is studied, its scientific and methodical and practical value is determined.

In particular:

- a) The true meaning of the concepts in the educational process is specified;
- b) the process of coordination, comparison, systematization and classification of notions;
- b) the cause and effect relationships are defined;
- c) the ability to apply concepts in practice (State of the art standardization of the Republic of Kazakhstan, State Common Standard of Education of Republic of Kazakhstan RK 6.08.076, 2010).

During the exploring a diploma work, a future teacher learns teaching methodologies such as modeling, designing, structuring, and didactic maintenance of the educational process.

In addition, according to the system aimed at improving the level of methodological training of the future Vocational Training teacher, the

methodological training of the future teacher is a continuous professional pedagogical process for four years. Moreover, during the research, 12 components of the methodological training system were analyzed (Table 1).

**Table 1 Methodological training system**

№	Components of methodology preparation system	Year			
		I	II	III	IV
1	Professional Pedagogical Subjects	+	+	+	
2	General Methodological Subjects		+	+	
3	Individual Methodological Subjects			+	+
4	Educational research work	+	+	+	+
5	Scientific Research work		+	+	+
6	Students' work in the scientific associations		+	+	+
7	Educational-experimental practice	+			
8	Psychological and pedagogical practice		+		
9	Pedagogical practice			+	+
10	Student's term work	+	+	+	+
11	Course work			+	+
12	Diploma				+

According to the Table 1, 75 % of the methodical training of a future teacher is established on 3-4 courses.

Besides, as a result of the experimental practice, it has been established that the process of forming the methodological level of the future teacher can be divided into three main stages. They are as following:

- Formation of methodological bases of methodological training;
- Formation of basics of general methodological training;
- Formation of the basis of subject-methodological training;

The methodological basis of methodological training is determined by the formation of a whole set of professional pedagogical and psychological disciplines in the educational process. Besides, the basis of the methodological training is that the set of general methodological disciplines will be formed in the educational process and in the creative work of the student in his own research work.

Particular methodological training in the third stage revealed that personal methodological disciplines will be formed in the course of teaching and pedagogical practice in course and diploma work.

## Conclusion

In the curriculum, the training of specialists, methodological disciplines play a major role and the methodical system of training is considered as the head of educational and methodical activities of the future teacher. In accordance with the model, the methodical preparation of branch disciplines based on the training of specialists is determined. These are “General professional pedagogical subjects”, “General methodological subjects” and “Individual methodological subjects”. After the development and mastery of these disciplines, the future teacher can perform such functions as analytical, project, structuring, standardizing. In accordance with the proposed model of methodological training, the skills of the system that can be developed by the future teacher can also be developed in the process of independently executed work.

According to the system aimed at improving the methodological preparation of the future teacher of “Vocational Training”, the system of forming this level can be divided into two periods such as general methodical preparation and preparation of the basis for methodological training.

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