

роны, обеспечивают опережающий характер подготовки будущих педагогов профессионального обучения в области стиля и имиджа, основная профессионально-педагогическая деятельность которых направлена на подготовку соответствующих специалистов в области имиджмейкинга.

Решая проблемы развития профессионально-педагогического образования, необходимо учитывать основные направления развития всех участников этого процесса, начиная от запросов общества и работодателей, в частности, системы СПО.

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## **РОЛЬ КУРСА МАТЕМАТИЧЕСКОЙ СТАТИСТИКИ И ТЕОРИИ ВЕРОЯТНОСТЕЙ В ПОДГОТОВКЕ БУДУЩИХ УЧИТЕЛЕЙ МАТЕМАТИКИ**

## **THE ROLE OF MATHEMATICAL STATISTICS AND PROBABILITY THEORY IN THE PREPARATION OF FUTURE MATHEMATICS TEACHERS**

**Аннотация.** В статье представлена содержательная линия практико-ориентированного образовательного курса для восприятия основных понятий теории вероятностей и методов стохастического моделирования в профессиональной подготовке будущих учителей математики. Содержательная линия курса выстроена так, что понимание основных терминов теории вероятностей в контексте их подачи школьникам последовательно дополняется принципами создания вероятностных моделей в различных областях науки и использования статистических методов в психолого-педагогических исследованиях, что должно способствовать развитию профессиональных компетенций будущих учителей математики. Специалист сегодняшнего дня должен обладать информационными технологиями и статистическими методами применительно к профилю своей деятельности: будущие педагоги должны быть ознакомлены с основными математическими методами обработки эмпирических данных для оценивания эффективности учебного процесса, с основными концепциями и этапами педагогического эксперимента, с понятием вероятностной модели, с основными статистическими методами обработки наблюдений и проверки экспериментальных гипотез.

**Abstract.** In this paper we present a meaningful line of a practice-oriented educational course for the perception of the basic concepts of probability theory and stochastic modeling methods in the training of future mathematics teachers. The content line of the course is built in such a way that understanding the main terms of probability theory in the context of their presentation to schoolchildren is consistently supplemented by the principles of creating probabilistic models in various fields of science and the use of statistical methods in psychological and pedagogical research, which should contribute to the development of professional competencies of future mathematics teachers. Today's specialist should possess information technologies and statistical methods as applied to the profile of his activity: future teachers should be familiar with the basic mathematical methods of processing empirical data to evaluate the effectiveness of the educational process, with the basic concepts and stages of a pedagogical experiment, with the concept of a probabilistic model, with basic statistical methods for processing observations and testing experimental hypotheses.

**Ключевые слова:** теория вероятностей, вероятностные модели, математическая статистика, прикладная статистика, педагогические исследования, компетенция.

**Keywords:** probability theory, probabilistic models, mathematical statistics, applied statistics, educational research, competence.

Large number of political, economic, social, cultural, and other factors led to the modernization of modern education in general and mathematical education in particular.

One of the most important factors that led to the modernization of higher vocational education is the Bologna process. On June 19, 1999, the Bologna Declaration was signed by the 29 European countries' Ministers of Higher Education. The main aim of this document was the creation of a unified European space for higher education by 2010.

To traditional knowledge, abilities and skills, competences are added. The traditional approach to learning in the system of higher vocational education is being replaced by competent - there are changes in the requirements for evaluating learning outcomes, the transition from the concepts of "training", "preparedness", "education" to the concepts of "competence", "competency".

Remaining in more detail on the concept of "competence". In different literature, the concept of "competence", "competence" is interpreted differently. "All researchers who have studied the nature of competence pay attention to its multifaceted, diverse, and systemic nature". Let us examine some of the interpretations of these terms [5].

In the glossary of the Bologna process, the following definition is given: "competence is a dynamic combination of characteristics (related to knowledge and its application, skills, abilities, personalities and personal qualities), describing the results of training in an educational program, that is, effective professional activity, social activity and personal development, which he must master to demonstrate "[1]. In the same publication, "In a TUNING project, the concept of competence includes knowledge and understanding (theoretical knowledge of the academic field, the ability to know and understand), knowledge of how to act (practical and operational application of how to be (value as an integral part of the way of perceiving and living with others in others social context)".

G.K. Selevko, in his article, gives two interpretations of the concept of "competence". In the first version, competence acts as an educational resource, expressed in the preparedness of the graduate, in real knowledge of the methods and means of activity, in the ability to cope with the tasks. In the second option,

it acts as a form of a combination of knowledge, skills, which allows you to set and achieve goals at the request of the environment [4].

I.A. Zimnyaya interprets competence as a complex personality formation and highlights the following components of competency: intellectual, emotional, narrative [6].

According to j. Equally, competence is a phenomenon that “consists of competences, many of which are independent of each other, ... some components relate more to the cognitive sphere, and others relate to the emotional one ... these components relate more to the cognitive sphere, and others - to the emotional, ... these components can replace each other as components of effective behavior”.

By definition, A.V. Khutorsky [3], competence is a person’s willingness to mobilize knowledge, skills and external resources for effective activity in a specific life situation. Competence is the totality of the student’s personal qualities (value orientations, knowledge, abilities, skills, abilities), this is the ability to work in a certain personality-significant sphere.

One of the most multifaceted mathematical sciences – probability theory and mathematical statistics – acquires a special meaningful meaning in the professional activity of future mathematics teachers, which determined the peculiarities of teaching this discipline and its various applications at present.

Briefly about the stages of the substantive line:

1. Familiarity with the basic concepts of probability theory in a student audience begins at the school level: the concept of random events and the concept of testing, problems with double testing are solved.

2. The concept of random variables and the law of distribution of CB continues to study the theory of probability as a discipline for the future teaching of students.

3. The professional training of future teachers is closely related to research activities [5], which means that the use of statistical criteria as a way of proving the effectiveness of the chosen teaching and learning methods. Knowledge of the statistical methods used to process the result of a pedagogical experiment will allow students and graduate students to show a subjective position in future professional activity, and therefore, be realized in it. Research activity, in turn, is focused on the environment of professional tasks and problems. The main problem of teaching statistical methods is to create a pedagogical research environment: to prepare real tasks or real situations. This is perhaps the most difficult in applying the method of specific situations, but also the most productive, as it brings theory to practice and makes training really professional, and future bachelors and masters competitive and in demand in the profession. The ability to model a problem during the training period contributes to the active application of acquired knowledge in practice in the future. The teacher-researcher is an “acme” of all pedagogical activity, focused on the result.

Acmeology as a science of factors, ways of self-improvement of personality and activity of a specialist determines the modern paradigm of university education – self-movement and self-development of a professional. In a university educational system, a student (graduate student) is considered as a future professional and teacher. Our acmeological concept is aimed at the theoretical justifi-

cation of the conditions and possibilities of the teacher's pedagogical impact on students by means of a meaningful line of interconnected probable disciplines, in the implementation of which the acmeological approach to the development of the stochastic component of the teacher's competency-based management competencies of the teacher assisting each student [2].

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## **ФОРМИРОВАНИЕ У СТУДЕНТОВ ЦЕННОСТНОГО ОТНОШЕНИЯ К ПРАВОВЫМ НОРМАМ КАК ЗАДАЧА СОВРЕМЕННОГО ПРОФЕССИОНАЛЬНО-ПЕДАГОГИЧЕСКОГО ОБРАЗОВАНИЯ FORMATION OF STUDENTS 'VALUE RELATIONSHIP TO LEGAL NORMS AS A PROBLEM AS A PROBLEM OF MODERN PROFESSIONAL PEDAGOGICAL EDUCATION**

**Аннотация.** В статье ставится проблема формирования у студентов педагогического университета ценностного отношения к правовым нормам как одна из задач и значимый результат современного профессионально-педагогического образования.

**Abstract.** The article poses the problem of the formation in students of a pedagogical university of a value-based attitude to legal norms as one of the tasks and a significant result of modern professional pedagogical education.

**Ключевые слова:** обучающиеся, педагогический университет, ценностное отношение, правовые нормы.

**Keywords:** students, pedagogical university, professional pedagogical education, value attitude, legal norms.