

## STOCHASTIC COMPETENCE OF THE FUTURE MATHEMATICS TEACHER.

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### **Abstract**

*in this article the concept of kompetensiya stoxastik upcoming school mathematics teachers, teachers of mathematics, mathematical kompetensiya of the necessary components have been studied and analyzed.*

### **Keywords**

*stoxastik, probability theory, pedagogical, kompetensiya, kompetentlik.*

Currently, lovely, stochastics (probability and mathematical statistics and stochastics, such as when elements in theo) have gained a serious place in science and applied activities. Her the idea, and the result are active in natural and technical science metho lovely use in economic planning, sociology, organization of production, etc. Ab a modern specialist should be able to extract, analyze and process information, make informed decisions in a variety of situations with random outcomes. Today, random events and their probabilities developer without sufficiently about the idea, without a good understanding of the phenomena and processes that deal with complex laws that the probability of theo we are your weather, productive people in any sphere of activity of the society is impossible. Probabilistic and statistical literacy without clonal minimal, it is difficult to adequately perceive social, political, and economic information and make informed decisions based on it. Comprehension, develops combinatorial thinking and understanding of the stochastic reflection problem, which is necessary in the modern world, a person who thinks and acts contributes to the format, and not only knows. Due to its specificity, has a current stochastics (if I may say so) "competency" potential. The manifesto itself can stochastics stochastics of social and practical significance of knowledge is demonstrated in situations that will be close to the speed of the experience to life for students.

The world observed in the processes of life you can't learn on the experience of stoxastik line. Main stoxastik them much more often than people with skills used in

life, this in turn is to help make the right decisions in various situations. Many matematiklar and methodologist of materials to add to the curriculum of secondary education in umm those who offer stoxastik: v. ya. Bunyakovskiy B. V. Gnedenko, Jurbenko G. I., A. N. Kolmogorov, A. I. Markushevich, V. V. Firsov, A. Ya. Xin, PL. Chebyshev i. m. Yaglom and others. Students stoxastik of elements in one of the most important goals of the train the students to figure out on the realities of the surrounding world is to help and show to determine the probability of the features.

Complex, constantly changing in this world is the person able to live and work in the formation of the younger generation probability-is requires the development of statistical thinking.

Bichkov I. o., s. i. Vorobyov, d. v. Manevichning scientific studies in the school of mathematics teaching readers that probability-statistical readers a picture of the school that stoxastik teaching and education at different stages of the formation of a clear scientific-methodical, is dedicated to problem solving. V. v. Firsova, S. V. Sherbatixlarning discusses practical teaching work in secondary education stoxastik direction. A. the school in the work of his mathematical Plotskiy stoxastik many given on the necessity to introduce them.

The modern school mathematics course in the works of e. a. bunimovichning school in the direction of the methodological aspects of teaching content stoxastik illuminated. In probability theory and statistics, the need for the study of school with elements provides the basis of the following facts: the socio-economic situation (much of the real situation and the possible development of diversity), the law of probability the versatility of the technique of developing stoxastik role, the practical nature of the law, the theory of probability, mathematics, and the interdependence of life.

Education secondary mathematics in the subject of the state educational standard according to the following main goals established:

educational in daily activities to support learning and mathematical knowledge and skills that are necessary for science to continue to receive education, formation and development of the system;

rapid development in the society which is in a successful business that can maintain clear and obvious, the person who takes away the formation of critical and logical thinking;

national, spiritual and cultural heritage value of natural preservation and sustainable use of material resources, mathematical culture as a component of human culture is to educate.

Practical mathematical technique in each of the above goals, the importance of nature - science as the language of description technique, and also as a tool for modeling processes and phenomena, including from the daily life also was noted. Above all his belongs into the mathematical technique that it is one aytilganlarni stoxastik.

Darsli on this areklar and methodological literature analysis shows that in the course of school mathematics with probability and statistical courses the school of materials to add in presenting this material is also very complex, the school in the course of probability theory and statistics needed to understand and master the basics of successful content to determine his compliance with the requirements of the state standard has produced as many problems.

School textbooks currently in use in all kombinatorika school, there are probability theory and statistics. They offers different levels of complexity of the tasks, the actual examples of statistical studies are considered. 9th grade assignments on probability theory and mathematical statistics for the state final attestation of for your test to the instructions included. However, the topics of this study, unfortunately, at the end of the academic year, as a rule, is going according to the residual principle. Stoxastik serious academic secondary school mathematics course should solve one of the problems is the introduction of the line: the next successful students to get education in the university level, and in the knowledge of the initial formation of stoxastik kompetensiya in the application of probability theory and mathematical statistics of life.

Today, "natematik probability theory and statistics" is the main subject in the university in the preparation of specialists in many fields. In this connection, readers a probability-statistical training to the development of teacher preparation is pressing the issue of who is able. Doctoral dissertation at d. v. Selyutin methodical preparation of teachers of mathematics, we teach readers to stoxastik created the basis for the formation of the school. The practitioner specialties of the master's degree in mathematics at erglenging e. v. stoxastik is considered the problem of the formation of literacy teachers. In the meantime, it should be noted that the scientific studies of the formation of future mathematics teachers among the works dedicated to the problem of stoxastik kompetensiya do not have.

Come on, the job's characteristics, in particular, stoxastik professional kompetensiya drew attention to the components of it. Graduates of pedagogical higher education institutions of a particular fan (knowledge of the scientific or

technological field) and be ready to read about certain subjects should have a holistic understanding<sup>184</sup>.

Kompetensiya of teachers of mathematics, mathematical say when basic mathematical knowledge, skills, and readiness to apply them in practice based on a business that has the ability to understand.

Teachers of mathematics, mathematical kompetensiya able to:

- the basics of mathematics, the history and development of the knowledge about their appearance, have an idea about the current trends of development of mathematics;
- Delivered they take in the scientific language of science, knowledge of the industry and is the basis for the expression on the basis of the rules could be got;
- basic mathematical structures and be able to aksiomatik method;
- the place and role of mathematical sciences in the system, understand the importance of his general culture;
- the content and method of mathematics and physics fundamental to possess;
- you need to understand the logic of the development of school mathematics courses<sup>185</sup>.

The basics of mathematical kompetensiya in school should be created. PISS identified as one of the aspects of mathematical literacy research “mathematical kompetensiya” concept is revealed as follows: this is the “most general mathematical abilities and skills, in particular, mathematical thinking, mathematical problem solving and mathematical modeling mathematical objects and situations, the use of different major forms of the image, the use of mathematical language, communication skills (oral and written mathematical speech), modern technical means (from different devices, from computers and other technical tools related to information technology use”<sup>186</sup>

PISS mathematical literacy and mathematics research identified that can solve problems using the surrounding reality which appear in the readers ability to recognize these issues in the language of mathematics formation; used or analysis

<sup>184</sup> Фролов Ю.В., Махотин Д.А. Компетентностная модель как основа оценки качества подготовки специалистов. // Высшее образование в России. - 2004.-№8.-С. 34-41.

<sup>185</sup> Медведева И.Н., Мартынюк О.И., Панькова С.В., Соловьева И.О. Компетентностная модель выпускника физико-математического факультета - Псков, 2008. - 160 с.

<sup>186</sup> Краснянская К.А. PISA-2006: Оценка математической грамотности 15-летних учащихся // Народное образование. - 2008. - № 9. - С. 169-179.

methods, considering the problem of putting the results of the review of the decisions of the results obtained and recorded without formation refers to.

Research devoted to the mathematical analysis of problems of formation and development kompetensiya kompetensiya in the composition allows you to separate the following components:

motivational-value (mastering mathematical knowledge the necessity of the directions the value in the field of mathematics),

content-foundations of science, processing of content and ability to solve practical problems;

intellectual skills: the problem, see<sup>187</sup>;

create new ideas;

large-scale implementation of the transfer;

evaluation activities;

full and is not allowed. (self-awareness, self-management, self-honor)<sup>187</sup>.

Kompetensiya formation is carried out and the process of mathematical science in the process of teaching is conducted in the following stages: adaptation (the formation of mathematical knowledge needs of adopters, educational activities, motives, development of theoretical knowledge and training to address the issues of the formation of the culture), cognitive problems, develop skills to solve the problems typical of a given algorithm, their activities self-assessment of the formation, the importance of the obtained knowledge, search and didactic (a deeper knowledge of mathematics to the attention of adopters formation and self-development, focus on the use of skills, theoretical knowledge and deepen tizimlashti to self-assessment and the knowledge, skills and the mutual assessment of the further development of skills), integration-reflektiv (creative work, and attention to the type of formation, the improvement of theoretical knowledge, develop skills to solve the most problematic tasks of the different types of self-esteem and the formation of awareness achieved the level of knowledge and skills)<sup>188</sup>.

The science of studying the appropriate course of this stage methodology can be the basis for development of the student kompetensiya. Thinking of a particular

<sup>187</sup> Ходырева Н.Г. Методическая система становления готовности будущих учителей к формированию математической компетентности школьников: Автореф. Дис. Канд.пед.наук. - Волгоград., 2004.-23 с.

<sup>188</sup> Полякова Т.А. Прикладная направленность обучения стохастике как средство развития вероятностного мышления учащихся на старшей ступени школы в условиях профильной дифференциации : Автореф. дис. на соиск. учен. степ. канд. пед. наук / Т. А. Полякова; Омский гос. ун-т им. Ф.М. Достоевского, Омск. гос. пед. ун-т. - Омск, 2009. - 22 с.



type of teacher development and educational special, you should be able to kompetensiya science nodeterministik needed for the formation of ideas. Selyutin v. d. "School on the preparation of teachers for teaching them stoxastik readers in the article"<sup>189</sup> the school pupils to the university for the course probability theory that you can't direct the construction of the option is therefore certain that a teacher should be directed to the development of the methodology. a special type of thinking and readers special, deterministik the formation of the imagination. The main thing should be to teach the students practical experience of this subject, so it is recommended to start the task from those of the occupation. Thus, the real situation is given and statistical information initially given a put is required to find the solution of the problem.

Ready for the decisive direction of the teacher of the successful implementation of stoxastik there is no problem.

Taking into account the analysis, we stoxastik kompetensiya science teacher (mathematics) to divide and separate it from kompetensiya particular through development, we think that you should study. Using special methods that future teachers should take special stoxastik conclusions. The art of successful business to be able to stoxastik thinking of teachers of mathematics, an integral condition. Not only that, we stoxastik concepts, as a system of facts and statements, but also their mutual covering of the conclusion of the specific methodology associated probability and statistics as we should look at. The analysis of the teachers to solve the problem or clear the specific situation should not send chalkashtirib no answer. Pedagogical specialties of higher education institutions in the undergraduate curriculum of all mathematics and probability theory and mathematical statistics course. Nature of secondary education in the institute of theoretical teaching in the university and more than stoxastik this allows the development of the student's analytic and synthetic abilities. However, this view of science and the university also features should be used to the maximum extent practical.

This course not only within the framework of the probability model for the study of mathematical learn to pay attention to the hardware, but also to teach them to analyze structured and verify your eligibility to model the real situation should develop intuition and probability kompetensiya.

When we say we understand Stoxastik kompetensiya proven to business readiness, that is, the theory of probability, mathematical statistics, and the basic

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<sup>189</sup> Селютин В.Д. О подготовке учителей к обучению школьников стохастике Текст. / В. Д. Селютин // Математика в школе. 2003. - № 4. -С.63-67.

concepts of kombinatorika to be able to apply them in situations that may arise in practical activities and ability.

V. d.Selyutin<sup>190</sup> readers to the methods of mathematics teachers of school we teach stoxastik shows the allocation of the components of the preparation. Among them mathematical mazmuniy (school lies at the basis of theoretical knowledge of probability and statistics stoxastik to ensure the availability of the system), practical (and set up a connection between the material world close genetic probability model, aimed at the organization of the process of the construction and interpretation of the model) components of the activities of the pupils of the leading form as shown. In our opinion, these components “probability theory and mathematical statistics” in the process of teaching of science should form.

On the basis of state educational standard of education and pedagogical subjects in the development of working programs that have stoxastik kompetensiya the math:

main stoxastik will demonstrate knowledge and understanding of the basic facts will be associated with probability theory and mathematical statistics;

stoxastik technique will possess the conceptual apparatus;

tevarak-arising in the surrounding realities, is to distinguish that can solve problems using stoxastik;

stoxastik important and will identify the factors which influence them to solve the problem and the importance of gets separated;

tables, chart, and read reviews on the quantitative data given in the graph view and gets gets kept;

stoxastik practical knowledge gets used in life situations.

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