

***СОВРЕМЕННАЯ НАУКА:
ПРОБЛЕМЫ, ИДЕИ,
ТЕНДЕНЦИИ
(MODERN SCIENCE:
PROBLEMS, IDEAS,
TRENDS)***

*Материалы Международной
научно-практической конференции
18 февраля 2021 года
(г. Прага, Чехия)*

Р.К. Ахметова, С.С. Жумагамбетов Особенности построения учебно-тренировочного процесса женщин, занимающихся спортивной борьбой	257
Н.А. Бейсен Дислексия как базовая проблема обучения детей с особыми образовательными потребностями	261
С.М. Володько, Е.С. Сидельникова Переводческая компетенция как теоретическое понятие	265
Ye. Gavrilova Main components of professional education of mathematics teacher	271
Т.В. Диль-Илларионова, Е.В. Кондракова Некоторые аспекты проблемы преемственности дошкольного и начального образования	277
Н.А. Дорохович Понятие «музыкальность» в развитии хореографического исполнительства учащихся	281
А.Қ. Қалиева Бастауыш сынып оқушыларының дисграфиясын түзету тәсілдерінің ерекшеліктері	289
О.В. Леончик Су-Джок терапия как метод развития речи детей младшего дошкольного возраста	300
А.В. Макина Проблемный метод обучения в современной музыкальной педагогике (на примере предмета «Музыкальная литература»)	304
А.М. Maratova, N.P. Babaniyazova The influence of professional skills on the development of language skills on the example of journalists	309
Х.М. Мартазанов, Л.С. Озиева Физическая культура как часть общечеловеческой культуры	313
А.М. Москаленко, О.Ф. Сошенко, О.В. Орехова Педагогическая компетентность учителя как фактор реализации смысловой поисковой деятельности школьников в условиях межпредметной интеграции	317
К.К. Оразбай Ағылшын тілі грамматикасын оқытудағы интерактивті технологиялар	321
Д.А. Сарсен Шетел тілі сабағындағы коммуникативтік құзыреттіліктің маңызы	330
А.С. Ускенбаева, Б.К. Кыдырбаев, Б.К. Ахметов Педагогические аспекты формирования личности школьника	337

*Ye. Gavrilova,
3rd year doctoral student
of the specialty «Mathematics»,
e-mail: ketrin_301290@mail.ru,
research supervisor: S. Seitova,
d.p.s., prof.,
ZhU named after I. Zhansugurov,
Taldykorgan, Kazakhstan*

MAIN COMPONENTS OF PROFESSIONAL EDUCATION OF MATHEMATICS TEACHER

Abstract: the analysis of the psychological-pedagogical and methodological studies of the problems of improving professional training of a future mathematics teacher at a pedagogical university are presented in the article. Traditional and innovative components of professional pedagogical activity have been identified.

Keywords: professional activity, traditional components, innovative components, mathematics teacher

The definition of the content of the professional pedagogical activity concept and related terms such as «structure of pedagogical activity», «pedagogical abilities», «pedagogical professionalism», «professional competence», «pedagogical creativity», «pedagogical culture». The definition of the former has always been one of the relevant issues of pedagogical science and practice. Analysis of different approaches in defining the content of the concept of «professional pedagogical» activity shows that it is integrative, includes not only traditional, but also innovative components. In particular, the analysis of the concept of the figure of a mathematics teacher in the educational process (D. Rahymbek [1], A. Nugusova [2], A. R. Kabulova [3], G. I. Sarantsev [4], etc.) shows that it is composed of general pedagogical, psychological, mathematical and methodological activities. The main goal of professional pedagogical education of the future mathematics teacher is the formation of professional pedagogical knowledge and skills (V.V. Serikov, V.M. Monakhov, G.I. Sarantsev and others) [4-6].

Scientific and methodological research shows that the

systemically important component of the professional education of a future mathematics teacher at a pedagogical university is his methodological training. One of the main directions of the co-improvement of the methodological training of the future mathematics teacher is the modernization of university components and components for the choice of methodological content (M.T. Iskakova, A. Nugusova, D. Rakhymbek, O.S. Satybaldiev, etc.) [1,2,7,8]. In the studies of these and other authors, the problems of introducing innovative approaches to the methodological training of a future mathematics teacher in the process of studying mathematical and methodological disciplines are solved: an active approach to learning, pedagogical integration and differentiation of teaching, pedagogical, including information, learning technology, etc. At the same time, in the practice of teaching, these innovative approaches are used fragmentally, in isolation, which, according to A.E. Abylkasymova, A.K. Kagazbayeva, V.A. Dalinger and others, does not lead to real changes in the quality of professional training of a mathematics teacher [9,10,11].

Thus, traditionally teaching methods and forms of organizing the educational process are aimed only at «familiarizing» students with the activity under the direction of teaching mathematics, while the teacher's training must be built in accordance with the well-known principle of the activity approach. In order to successfully form a particular activity in the process of teaching, the student must carry out activities that are adequate in their psychological content formed.

The training of the future mathematics teacher is currently carried out mainly through the study of the university components of elementary mathematics and the teaching methods mathematics. The course of elementary mathematics in pedagogical universities was introduced in order to strengthen the vocational and methodological training of the future mathematics teacher and to master the skills associated with the application of the acquired knowledge in the process of solving problems. Hence, here appears a necessity of comprehensive connection with the course of teaching mathematics.

The main components of professional pedagogical activity can be divided into traditional components, where the pedagogical process is oriented on the activity of a teacher, and innovative

components, where the pedagogical process is oriented on the activities of students. The role of the teacher is to be the organizer and leader of the process.

Traditional components include the following:

- cognitive (gnostic), which ensures the productivity in the intellectual and cognitive activity of the trainees, including knowledge not only of their subject, but also of the methods of pedagogical communication, the psychological features of the trainees (cognitive processes, legal and numerals of personality development), as well as processes of self-knowledge (own personality and activity);

- information, including collection and selection of information, its systematization, structuring, synthesis, etc.;

- organizational, including the main directions of the organization of pedagogical activities, the implementation of which depends on its effectiveness; the teacher's skills system to organize its activities, as well as the activity of students;

- constructive, including the peculiarities of the teacher designing his own activities and the activity of students taking into account the goals of training and education (lesson, occupation, cycle of classes);

- communicative, involving the organization and effective promotion of communication and interaction between objects and subjects in the course of pedagogical activities aimed at achieving didactic goals;

Innovative components of professional activity can be conditionally divided into two groups: components of activity, formulated generically, and specific components of activity.

1) Components formulated generically:

- management, which includes the ability to organize management, motif, target, predict, organize training activities, monitor it, correct and monitor results;

- innovative, reflecting the creative potential of the teacher, going beyond the limits of regulatory activities; including the ability to collect information, analyze pedagogical experience, predict, plan, model, experiment, transform, rearrange, evaluate, modernize, process results, implement.

2) Specific management and innovation components:

- design, which involves setting specific goals and tasks before students, as a result of which certain results of training, development and education are achieved;

- research, including the ability to find the problem related to the educational activities of students, its actualization; formulate goals, tasks, subject, object, hypothesis, master and plan methods of pedagogical research, conduct observation and experiment, process results, formulate conclusions;

- intellectual, including the skills of systematization, generalization, analysis, synthesis, classification, abstraction, comparison, reflection, isolation of general, single, goal-setting, reflection;

- diagnostic, including the ability to carry out diagnostic procedures for the assimilation of knowledge and skills, development and education, students in educational activities, process the results;

- corrective, related to comparison and correction of trainees «performance»;

- prognostic, including intuitive anticipation of the end result of training;

- creative, including skills of imagination, schematization, typification, anticipation, reconstruction, modernization of information;

- axiological, including skills to reflect the history of domestic school education in the history of Kazakhstan, orientation towards national values, etc.;

- reflexive, including the ability to analyze the teacher's own actions and states.

The structural diagram constructed in Figure 1 presents the results of the analysis.

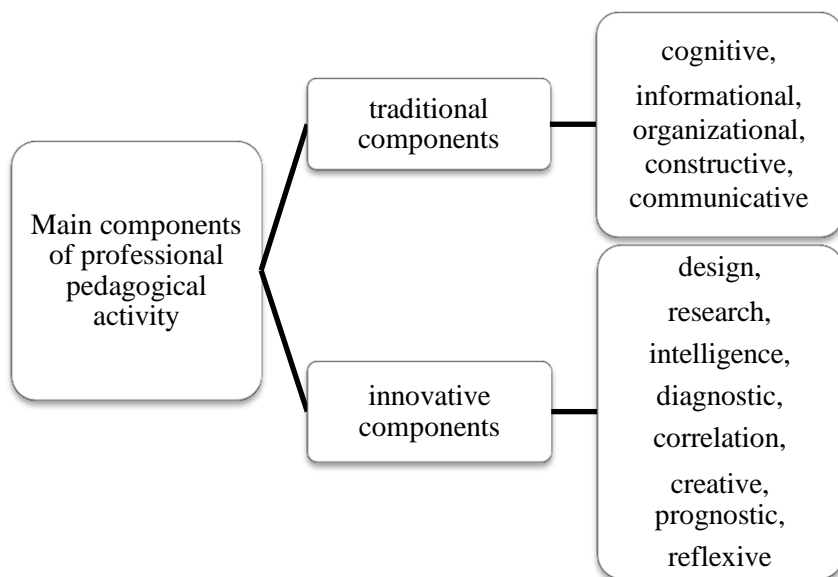


Figure 1 – Structural diagram of the content of the «Professional pedagogical activity» concept

The above-mentioned components of professional pedagogical activity (see Figure 1) are transformed in a certain way into the activity of teach mathematics.

Thus, it can be concluded that the formed components are the basis for the training of a future mathematics teacher and his professional competencies, which are manifested in the practical readiness of the future teacher to organize an educational process for teaching mathematics, based on the system of theoretical knowledge and teaching methods mathematics as a subject, readiness of the future specialist to independently and creatively solve methodological problems, which in the future will be a component of his professional activity.

List of sources and literature used:

[1] Rakhymbek D. Scientific and methodological foundations for preparing future teachers of mathematics for work on improving

the logical and methodological knowledge of students: abstract.... doc. ped. sciences: 13.00.02. – Shymkent, 1998. – 336 c.

[2] Nugusova A. Scientific and methodological foundations of preparing future teachers of mathematics for the formation of students' skills in solving problems: abstract.... doc. ped. sciences: 13.00.02. – Almaty, 2005. – 264 c.

[3] Kabulova A.R. Course «Methodological Foundations for Solving Problems» in the methodological training of a future mathematics teacher in ped.HEI: abstract.... cand. ped. sciences: 13.00.02. – Almaty, 1998. – 178 c.

[4] Sarantsev G.I. On professionalism in the training of a mathematics teacher/Mathematics at school. 1990. №4. – p. 11-12.

[5] Serikov V.V. Education and personality. Theory and practice of designing pedagogical systems. – M.: Publishing Corporation «Logos,» 1999. – 272 p.

[6] Monakhov V.M. Technological basis of design and construction of the educational process: VGPI. – Volgograd: Change, 1995

[7] Iskakova L.T. Methodological system of differentiated problems as a condition for monitoring and accounting of the results of mathematics in high school: abstract.... doc. ped. sciences. – Almati: KazNPU, 2005. – 42 pages.

[8] Satybaldiev O.S. Methodical system of teaching the course of mathematical analysis in the pre-university. Dis.... doc.ped.sciences. M.: Almaty, 2003. – 304 pages.

[9] Abylhasymova A.E. et al. Scientific and methodological foundations for improving the content of general education in the Republic of Kazakhstan. – Almaty, 2001. – 123 pages.

[10] Kagazbaeva A.K. Improving the vocational and methodological training of a mathematics teacher in the system of higher pedagogical education: dis.... doc.ped.sciences. – Almaty: AGU, 1999. – 324 pages.

[11] Dalinger, V.A. Main directions for improving the training of mathematics teachers in pedagogical universities//International Journal of Experimental Education. – 2014. – NO. 5 – Pp. 70-72.

© Ye. Gavrilova, 2021