INTEGRATION OF EDUCATIONAL PROGRAMS OF PEDAGOGICAL SPECIALTIES WITHIN THE FRAMEWORK OF CONTINUING EDUCATION

[a]MARIYAM MUKATOVA, [b]ANAR TASTANOVA, [c]ZAURE ZHUMAGULOVA

[a,b,c]Altynsarin National Academy of Education, 010000, 8 Mangilik El Ave., Nur-Sultan, Kazakhstan
email: [a]amariam.m.e@mail.ru, [b]t.anar_astana@mail.ru, [c]abdrahmanovna@mail.ru

Abstract: This article is devoted to the problem of integration of educational programs of technical and vocational and higher (postgraduate) vocational education of the Republic of Kazakhstan, which is updated in connection with the modernization of the educational system, focused on updating the content of education. The update of the educational content, broadcast on the experience of Nazarbayev Intellectual Schools, is currently being transferred to all general education schools of the republic. Accordingly, the problem arises of training teachers who are ready for the working conditions in a new format, connected not only with the change of the objectives of the learning process but also with its organization. This problem is connected with the introduction of applied baccalaureate, which, primarily, is related to determining its place in the system of continuous pedagogical education. The authors suggest ways of incorporating applied baccalaureate on the basis of international experience in a higher education program.

Keywords: Technical and vocational education, higher vocational education, educational programs, integration of educational programs, applied bachelor degree, updating of educational content, continuing education.

1 Introduction

Integration of Kazakhstan into the world educational space, focusing on the ensuring of competitiveness and requiring the creation of a national model of average 12-year education, the transformation of knowledge of the centrist paradigm for competence, a radical change, and renewal of the content of school education.

From the 2015-2016 years, the Ministry of Education and Science of the Republic of Kazakhstan has begun the modernization of the education system, focused on the transition from the concept of “education for life” to an understanding of the need for “lifelong learning”.

This means a shift in emphasis from the target to mastering the amount of knowledge and skills (knowledge-centric) to form the ability to independently acquire, analyze, structure and effectively use the information for maximum self-realization and beneficial participation in society (competence).

In the Review of Secondary Education in Kazakhstan, conducted by the Organization for Economic Cooperation and Development (OECD) in 2014, it was concluded that academic subjects are taught with a focus on theory, not paying due attention to the practical orientation of training, with the result that students are not capable of sufficient at least effectively apply and use the knowledge gained in unusual situations.

As it turned out, traditional education provides a sufficient level of academic knowledge of Kazakhstani schoolchildren but does not prepare them to independently acquire, analyze and effectively use of knowledge.

It should be noted that in the domestic education attempts to depart from the traditional system of education were made repeatedly, but the fragmentary introduction of changes superimposed on the old content of education, which led to congestion, intensification of the educational process and the transfer of a large amount of ready information, while the student continued to be a passive "recipient" knowledge and skills.

Based on the results of international studies in Kazakhstan, it was decided to transmit the experience of Nazarbayev Intellectual Schools, which for a number of years introduced the best international experience in the field of educational innovations. (1)

What is the difference between the new content of school education?

Innovation is the transition from the knowledge paradigm to the activity (2). The educational process is characterized by the active activities of the student (3). For the first time, education is not built from content to learning, when in the state compulsory education standard and model curricula, content on subjects that were subject to compulsory mastering was primarily designated, but from expected learning outcomes.

For example, in the curriculum of the updated content on the subject “Mathematics” it is indicated that on the topic of “Statistics and Data Analysis” students in 5th grade should have an idea of circular, linear and bar charts; build circular, linear and bar charts; extract statistical information presented in the form of tables or diagrams; in the 6th grade to calculate the statistical numerical characteristics (arithmetic average of several numbers, range, median and mode of a series of numerical data); in the 7th grade to calculate absolute and relative frequency options; collect statistical data and present them in tabular form; represent the sample in the form of a frequency table; check table data for consistency; present the results of the sample in the form of a frequency range; analyze statistical information presented in the form of a table or a range of frequencies. (2, 3)

A typical curriculum in the Russian language against the background of the intensive development of communicative linguistics, the theory of speech activity and modern methodical research, which develops certain aspects of teaching speech activity to schoolchildren, is focused on the formation of competencies. At the same time, linguistic competence is traditionally related to mastering the linguistic system, mastering the linguistic material itself, while communicative competence is the knowledge, skills, and abilities necessary for understanding others and generating their own speech behavior programs that are adequate to the conditions of real verbal communication. In the program of updated content, for example, by the type of speech activity “Listening and speaking”, the section “Participation in dialogue” is highlighted. Pupils of the 5th grade should participate in the dialogue-inquiry, changing the position of "speaking" to "listening" and taking into account the age characteristics of the role being played; in the 6th grade to participate in the dialogue, exchanging views on the proposed topic; in the 7th grade to participate in the dialogue on the proposed problem, arguing their point of view; in the 8th grade to participate in the discussion on the proposed problem, arguing their own statements, convincing the opponent of the correctness of their position, to draw conclusions; in the 8th grade to participate in controversy, synthesizing different points of view and offering a solution to the problem. (4)

For comparison, a fragment of the traditional model curriculum in the 7th grade of Russia: “Adverbial Participation as a special form of the verb, verbal properties of a participle, adverbial signs of a participle, an adverbial manifestation of a perfect and imperfect type and impartial circulation, not with advertising, the transition of adversion to adverbs, the syntactic role of adversion in the sentence, morphological analysis of the adverbial participle.” (5)

Any reform and updating of the content of education should be systemic in nature and affect all levels of education. The previous attempts were not successful, largely because they were fragmented.

The term “content update” is used somewhat arbitrarily, since not only the content itself but also the organization of the educational process and the evaluation system are subject to reform (9). The school in terms of renewal is characterized by the fact that educational achievements have a productive character, and the educational process is characterized by the

active work of the students themselves to “acquire” knowledge in each lesson. Under these conditions, the student is the subject of knowledge, and the teacher acts as the organizer of the students' cognitive activity. Learning objectives become common to the student and teacher.

With this in mind, updating educational content affects all levels of education. In Kazakhstan, pedagogical education is carried out at three levels: technical and vocational, higher vocational education and postgraduate vocational education. At the level of technical and vocational education, primary school teachers are mainly trained. At the level of higher vocational education, graduates of pedagogical universities receive bachelor's qualifications, at the level of postgraduate education graduates receive an academic master's degree.

Accordingly, within the framework of updating the content of education, changes are made in the educational programs of technical and vocational, higher vocational education, to a lesser extent - in the educational programs of post-graduate education.

Thus, the problem of ensuring the integration of educational programs within the framework of the continuity of teacher education is objectified.

2 Materials and Methods

The actualization of the problem of ensuring the integration of educational programs of technical and vocational education and higher vocational education is connected, first of all, with the duplication of academic disciplines in educational programs of technical and vocational and higher vocational education.

Thus, the program of colleges (technical and vocational education) includes the study of the subject “Fundamentals of Philosophy” (33 hours), the program of the university (higher education institution) - the academic subject “Philosophy” (5 credits, or 150 hours). The subject of the fundamentals of political science and sociology (36 hours) is studied at the college, and the subjects of political science (2/60) and sociology (2/60) are differentiated at the university. The subjects “Fundamentals of Law” (33 hours and 2 credits, or 60 hours), and Culturology (42 hours and 1 credit, or 30 hours) are also duplicated.

From the cycle of humanities and in college and university, the subjects “Professional Kazakh / Russian language” (71 hours and 3 credits / 90 hours), “Professional foreign language” (71 hours, 3 credits / 90 hours), “Self-knowledge” (55 hours, 2 credits / 60 hours). At the level of technical and vocational education, the subject “History of Kazakhstan” (84 hours) is studied, at the level of higher professional education - “Modern history of Kazakhstan” (5 credits / 150 hours).

Comparison of model curricula clearly demonstrates that a sufficiently large number of hours is devoted almost to the same academic disciplines at the level of technical vocational education and at the level of higher education. How expedient it is in a rapidly changing world, in a context of shifting emphasis from training, aimed at transferring factual material, which has an encyclopedic character, to learn how to obtain information; on the formation of the ability to independently extract, analyze, structure and effectively use information; to develop the ability to creatively use the knowledge gained?

The transition to the updated content of education has necessitated the creation of an innovative model for the development of the system of pedagogical education in the context of the integration of technical and vocational and higher education (10). In the Republic of Kazakhstan, this was laid down by the State Program for the Development of Education of the Republic of Kazakhstan for 2016-2019: “Taking into account the accumulated experience and international practice, the structure of the education system in Kazakhstan since 2016 has been brought into line with the ISCED levels (11). The classifier of technical and vocational specialties after secondary education has been revised. Separate educational programs of secondary vocational education will be assigned to tertiary education (applied bachelor degree), the status of colleges will increase. For admission to an applied baccalaureate program, it is necessary to complete a full secondary education.” (6)

The last thesis is related to the fact that in Kazakhstan the level of technical and vocational education involves learning after 9 and 11 grades.

As part of the grant funding of research works of the National Academy of Education named after Altynsarin and of the Ministry of Education and Science of the Republic of Kazakhstan, it is carried out a scientific project, the goal of which is to ensure the integration of higher professional and technical and vocational education to improve the quality of teacher training, to bring the teacher education system in line with the standards of the teacher’s professional activities and state general educational standards of updated content.

In this system, applied baccalaureate becomes a universal form of receiving professional pedagogical education, in which significant place is given, along with vocational training, socialization of the individual, professional self-determination, the formation of competencies and personal qualities, allowing to constantly improve their professional level in accordance with the requirements of the modern school.

A brief overview of applied baccalaureate programs in higher education in Western Europe showed that they belong to the system of higher non-academic education and are implemented both in universities along with academic undergraduate programs and in special institutions of vocational education.

It should be noted that training in applied bachelor programs in many European countries began at the end of the last century. To implement the programs, the new type of educational institutions were created, in which theoretical courses were closely linked with the development of professional skills. For example, vocational education colleges were formed in the UK in the 1960s, specialized higher education institutions in Germany in 1970–1971, state colleges in Norway in 1992, polytechnics in Finland in 1991, specialized higher education institutions in Austria in 1993, etc. (7)

In Russia, since 2009, an experiment has been started on approbation of applied baccalaureate programs in educational institutions of secondary vocational and higher vocational education. Based on a competitive selection organized by the Ministry of Education and Science of Russia in 2010, 37 universities and 65 specialized secondary schools from 47 constituent entities of the Russian Federation take part in the experiment. (8)

Thus, the basis for the participation of the Ryazan State Technological College in the experiment on the implementation of an applied baccalaureate program is the activity of the experimental site on the topic "Organizational and pedagogical conditions for the development and implementation of the program of training practice-oriented bachelors in the" profile school - college - university "system. As part of the monitoring, which was aimed at summarizing the first results of the experiment, the following key aspects were highlighted: the formation of the content of theoretical training and its methods should be carried out with the maximum involvement of the scientific and pedagogical potential of the university-social partner, and the formation of the content of practical training and its methods should be carried out with maximum possible participation of employers in the process of various types of practice.

The head of the Center for Primary, Secondary, Higher, and Additional Professional Education of the Federal Institute for Educational Development (FIRO) V. Blinov argues for the attractiveness of applied bachelor's studies by favorable employment. In his opinion, a bachelor is a degree that very often does not contain a certain qualification. For example, it is not enough to indicate that you are a philologist or a

mathematician; a diploma must contain some other qualifying qualifications. Therefore, an applied pedagogical bachelor degree is just a bachelor's program, where the main, basic part is the same as that provided for in the standard, and the additional, practice-oriented one takes the teacher to a clear qualification.

Analysis of domestic and foreign literature suggests that scientists are actively searching for new educational models that allow modernizing the system of level pedagogical education in order to meet the socio-economic needs of society in terms of innovative development.

In the aspect of this study, the works of scientists (V.I. Baydenko, N.A. Selezneva, R. Wagenaar, I.A. Zimnyaya, A.V. Khutorskoy, E.N. Kovtun, Y.N. Pak, N.L. Babenko, etc.), who in their works reveal the main parameters of the Bologna process were studied. (11, 12, 13).

The experience of foreign countries in terms of Kazakhstan's reality still needs to be studied in order to generalize and replicate it. And here the problem of systemic adaptation of the parameters of the Bologna process to the conditions of the Kazakhstani system of technical and vocational education and higher pedagogical education is actualized in a special way.

It is assumed that the applied pedagogical bachelor degree, or the short Bologna cycle, will make up the first stage of higher pedagogical education, after which graduates will be awarded an academic degree of bachelor of additional education. The certificate obtained at this stage will give graduates the opportunity to work as teachers in the system of additional education and at the same time open access to training in a two-year pedagogical bachelor's program.

Successful completion of training in the pedagogical bachelor’s degree, the second stage of higher pedagogical education, will be confirmed by a diploma awarding an academic degree of bachelor’s degree in education.

Graduates who have studied under applied baccalaureate programs will differ in the practice-oriented nature of their skills and knowledge. This is achieved more than in traditional training, the volume of independent work and teaching practice.

The perspectivity and necessity of introducing applied baccalaureate programs dictate the increasing demand from employers for a combination of practical skills and theoretical knowledge among graduates of pedagogical universities (16). It is applied bachelors who will have sufficient professional competence and sufficient motivation to work in school.

The development of a methodology for the resource support of applying the tools of the Bologna process on the basis of innovation management in technical and vocational education, higher education will contribute to the promotion of Bologna reforms in the system of pedagogical education in Kazakhstan through the use and improvement of the tools of the Bologna process.

This will affect the enrichment of modern pedagogical science, the theory, and methodology of professional pedagogical education, as it will contribute to the development of the principles of student-oriented educational programs, the availability of high-quality higher education, continuity of education, and transparency of learning outcomes.

In general, the expected results will contribute to improving the quality of bachelor of pedagogical education by abandoning “sequential” training (linear trajectory) and creating conditions for “parallel” (nonlinear trajectory) “entry” into pedagogical training programs for different categories of students. Thus, the “profiling” of the bachelor degree will be implemented regardless of the direction of training (17).

Graduates of the educational program at this level have the opportunity to work in schools only as trainee teachers, but in order to receive higher pedagogical education, they need to complete a one-year pedagogical internship, the successful completion of which is confirmed by a qualification certificate already assigned by the professional community (20). That is, prior to the pedagogical internship, academic qualifications are awarded by the academic community. This is the undisputed law of universities.

In addition, as at any level of each level of pedagogical education, those who do not wish to undergo a pedagogical internship can continue their professional activities, but only as a trainee teacher and without the institution of mentoring. However, they still have the opportunity to enroll in the scientific and pedagogical magistracy in the presence of at least three years of teaching experience and compliance with the conditions of admission of applicants from each university.

To undergo a pedagogical internship, a system of cathedral schools should be formed, which, in accordance with the state license, will train interns through the coaching institute, or mentoring (14). It is in the cathedral schools that there is a real opportunity for introducing into the practice of education a new system of qualifying categories of teachers: teacher-moderator, teacher-expert, teacher-researcher, and teacher-master.

The assignment of these qualifications should be carried out in the system of independent certification of teachers, whose agencies/bodies are established in social and professional communities. This equally applies to the system of independent institutional and specialized accreditation of pedagogical universities (15).

Thus, the full cycle of higher pedagogical education involves five years of training in educational programs of universities.

Moreover, these educational programs should be developed in conjunction with employers.

Getting a higher pedagogical education provides access to training programs of the scientific and pedagogical magistracy, and further - the scientific and pedagogical doctorate of Ph.D.

For access to training in the scientific and pedagogical magistracy for those with higher non-pedagogical education, it is necessary to master the programs of the specialized pedagogical magistracy with the further passage of the pedagogical internship.

Today, in the real practice of Kazakhstani education graduates of undergraduate and not only pedagogical specialties enter the scientific and pedagogical magistracy. This leads to the fact that when developing educational programs for a scientific and pedagogical magistracy, it is necessary to “level off” the qualifications of graduates of pedagogical and non-pedagogical specialties.

As a rule, this is done to the detriment of bachelors of education, who have to study the psychological and pedagogical disciplines anew. Often, it turns out that graduates of scientific and pedagogical magistracy without higher pedagogical education are employed, as a rule, in universities, without having mastered the basis of either general pedagogy and didactics nor pedagogy and didactics of higher school.

That is, the traditional practice continues when teachers who have no professional pedagogical education are allowed to study at colleges and universities. But the pedagogical process has its own specifics. For its effectiveness and quality, the teacher also needs to know the didactic features of the discipline being read, the specifics of the methods and means of explaining educational material, constructing the logic of the course, knowledge of educational psychology, theory, and technology of education are of no small importance.

3 Results and Discussion

A teacher, regardless of whether he is a college or university teacher, or a school teacher, should possess integrated, complex knowledge: knowledge in a special field (mathematics,

geography, history, philosophy, etc.) and pedagogical knowledge (18).

The proposed structure of continuing teacher education implies:

- Gradual rejection of the training of teachers in the system of technical and vocational education;
- 5-year education at the level of higher education;
- 5-year education at the level of postgraduate education;
- Opening access to pedagogical education to persons with higher non-pedagogical education;
- A real opportunity to enter the labor market after each cycle of all levels of pedagogical education;
- Building a flexible trajectory for obtaining pedagogical education in accordance with the individual capabilities and needs of each student;
- Increase in the percentage of successfully completed training, since each level of pedagogical education consists of short cycles - No more than two years, with the exception of the scientific and pedagogical doctoral studies of Ph.D.;
- Real opportunities for improving educational programs of pedagogical specialties (Figure 1).

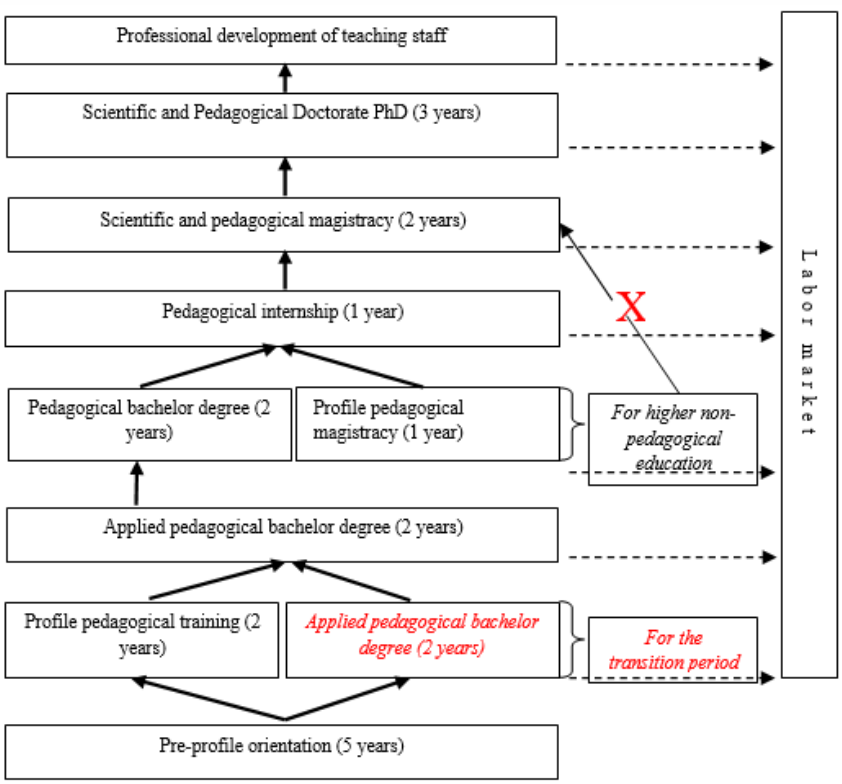

Figure 1. The proposed structure of teacher education

In Kazakhstan today, the introduction of applied baccalaureate is carried out at the experiment level. In accordance with the order of the Minister of Education and Science of the Republic of Kazakhstan dated May 26, 2018 No. 305, colleges have been established that are allowed to study as part of an applied pedagogical bachelor's program in 30 educational programs, for example, the Pavlodar Pedagogical College named after B. Akhmetova.

As part of the research, drafts of normative documents were developed for the experiment, accompanying the innovative development of level pedagogical education, providing:

- Increased flexibility and adaptability of standards and educational programs in relation to national and international contexts;
- Focus on "competencies" and "educational results", taking into account the requirements of the labor market and international trends;
- Improving the quality of education and the educational process, strengthening the role of employers and professional associations at all stages of designing educational programs;
- Designing optimal graduate competency models that are organically tied to Dublin descriptors, European and national qualifications structures.

The educational program of applied bachelor degree on qualification 0111083 - Foreign Language Teacher is submitted for testing. As the objectives of the educational program highlighted:

- Training practice-oriented specialists to work in the context of updated educational content;
- The formation of a linguistic personality, focused on the perception of the language as a spiritual value, communicatively active, tolerant in the intercultural space, ready for speech self-improvement, realizing the creative potential on the material of the target language;
- Formation of professional competence in the field of pedagogy, methods of teaching a foreign language, teaching the future teacher culture of pedagogical communication;
- Formation of a competitive personality.

The objectives of the educational program include:

- The formation of communicative competence, ensuring adaptation to the real speech reality, readiness to implement all types of speech activities: speaking, writing, reading, listening;
- Development of speech and mental activity, skills of independent information retrieval;

- Mastering the system of knowledge about language, speech, speech etiquette, mastering the norms of a foreign language, enriching the vocabulary and grammatical structure of speech, the active range of expressive means, the stylistic resources of the language.

The implementation of the educational program is aimed at the formation of the following competencies (19):

- Communicative competence, which provides the ability to implement skills in all types of speech activity, readiness for speech communication in conditions of spontaneity within different spheres.
- Linguistic, arming students with a system of knowledge about language as a science and social phenomenon, its history and development.
- Language competence, involving the assimilation by students of certain information about language and speech, language and speech units, language norms, including spelling and punctuation.
- Cultural studies, including knowledge of the culture, traditions of the people who speak the language, expressive means of language, aesthetic possibilities of speech.
- Discursive, giving the opportunity to build their own statement logical in content and form, as well as the ability to understand the meaning of the statements of other participants of communication.
- Socio-cultural, equipping students with the knowledge of the national-cultural peculiarities of the country of the language being studied, the norms of speech and nonverbal behavior and the ability to build their behavior in accordance with this knowledge in educational and actual speech situations.

The standard curriculum for the qualification "Teacher of a Foreign Language" includes the following modules.

Base module:

- The use of professional vocabulary in the field of professional activity;
- Drawing up business papers in the state language;
- Development and improvement of physical qualities;
- Application of the foundations of social sciences for socialization and adaptation in society and the workforce;
- Application of basic knowledge of the economy in professional activities;
- Understanding of the history, role, and place of Kazakhstan in the world community;
- The development of digital literacy.

Professional module:

- Modulation of educational information;
- Introduction of students to the system of social values;
- Methodical support of the educational process;
- Monitoring the quality of training, studying the level of learning of the content of education by students;
- Interaction with the professional community and with all interested parties in education.

Modules on the choice of educational organization:

The modules of choice are focused on the inclusion in the curriculum of disciplines from the university program.

Based on the analysis of educational programs of universities of the republic, the following are highlighted as data modules based on the analysis:

- Social and political;
- Linguistic;
- Introductory and pedagogical;
- Introduction-methodical;
- Educational and Cultural

The following disciplines have been introduced from the university component:

- “Basic foreign language”,
- “Practical course of a foreign language”,
- "Introduction to Linguistics",
- “Regional geography of the main foreign language. History and culture of the country of the studied language ",
- "Latin graphics."

The following disciplines are included in the disciplines reflecting the process of updating the content of education:

- “Principles and technologies of updating the content of education”;
- “The system of criteria evaluation”.

The discipline "Modern History of Kazakhstan" is also transferred to the level of a pedagogical bachelor degree.
The applied baccalaureate experiment assumes that, upon completion of college studies, the hours of academic disciplines transferred from the higher education level will be taken into account when entering university. In accordance with this, each of the colleges included in the list of experimental sites will coordinate the educational program with a certain university on the basis of an agreement on recognition of the results of students' academic achievements in academic disciplines of the DTE cycle of the university component. In our case, it is Pavlodar State Pedagogical University.

4 Conclusion

As part of the modernization of the education system of the Republic of Kazakhstan, aimed at updating the content of education, the system of teacher training, including the level of technical and vocational education and higher (postgraduate) vocational education, acquires special significance (21).

The continuity of pedagogical education indicated above implies the integration of educational programs, mainly according to the DLA cycle. Accounting for the results of formal education in the transition to the next level of education in the implementation of applied baccalaureate is focused on removing duplication of academic disciplines, ensuring focus on increasing the amount of study time devoted to the study of disciplines of the professional module.

Conducting an experiment should confirm or refute the expediency of transferring an applied bachelor degree to the level of higher professional education and thereby eliminating the need to train teaching staff at the level of technical and vocational education.

According to the results of the research, it is expected that the didactic and organizational support of training in the conditions of applied pedagogical bachelor’s degree will be formed, the regulatory legal framework for the implementation of teacher training in the applied bachelor’s system will be worked out, and didactic materials will be developed and published: scientific and methodological recommendations covering a wide range problems associated with the introduction of an innovative system of training highly qualified personnel in the conditions of applied higher education projects, competitive educational programs, guidelines and manuals for all the stakeholders of teacher education.

Such an update of the structure of teacher education will inevitably lead to an update of its content. In this aspect, at the level of basic and general secondary education it is proposed:

- Develop programs and mechanisms for the functioning of specialized pedagogical training and applied pedagogical bachelor degree at the level of TPE, taking into account the updating of the content of secondary education;
- At the level of higher and postgraduate education, develop uniform requirements for educational programs of applied pedagogical bachelor’s programs, pedagogical bachelor’s

programs and pedagogical internships, as well as joint and double-degree, including international, educational programs;
- To unify the content of basic disciplines of General Education Disciplines (GED) and basic disciplines (DB) for all specialties in the direction of "Education", taking into account the updating of the content of secondary education, the development of inclusive education, trilingual education, small-scale schools, per capita funding, etc.;
- To increase the share of psychological and pedagogical training in the educational programs of the applied pedagogical bachelor degree program.

The structure of continuing pedagogical education presented above is the result of the work of the working group on the modernization of pedagogical education of the Republic of Kazakhstan and the research project of the staff of the Nazarbayev University Graduate School of Education under the supervision of Professor University of Sussex (United Kingdom) Collin McLaffin.

In general, the proposed structure is designed to improve the quality of teacher education in accordance with international standards. First of all, it is connected with the Concept of Continuing Education for Sustainable Development and the principles of the Bologna process. Moreover, the proposed structure of pedagogical education does not contradict the legislation of the Republic of Kazakhstan.

Literature:

1. Nazarbayev N. The Third Modernization of Kazakhstan: Global Competitiveness. Astana; 2017.
2. Ministry of Education and Science of the Republic of Kazakhstan, The model curriculum in the subject "Mathematics" for grades 5-6 of the level of basic secondary education in the updated content. Order of 25, 2017 No. 545. Astana; 2017.
3. Ministry of Education and Science of the Republic of Kazakhstan, The model curriculum for the “Algebra” school subject for grades 7–9 for the level of basic secondary education with updated content. Order of October 25, 2017 No. 545. Astana; 2017.
4. Ministry of Education and Science of the Republic of Kazakhstan, The model curriculum in the Russian language for grades 5-9 on the updated content. Order of October 25, 2017 No. 545. Astana; 2017.
5. Ministry of Education and Science of the Republic of Kazakhstan, The model Russian language curriculum for grades 5-9. Order of April 3, 2013 No. 115. Astana; 2017.
6. Nazarbayev N. [Internet]. The State Program for the Development of Education of the Republic of Kazakhstan for 2016-2019; 2016. Available from: http://adilet.zan.kz/rus/docs/U1600000205
7. Chugunov DY, Vasilyev KV, Frumin ID. Introduction of applied baccalaureate programs in the Russian education system: why and how? Educational Issues. 2010; 4:247-267.
8. Ministry of Education and Science of Russia, Letter of 03.06.2013 N05-650 “On the implementation of educational programs of applied baccalaureate in 2013/2014 academic year. Moscow; 2013.
9. Shamin AE, Frolova OA, Shumilova ON. Nizhny Novgorod State Engineering and Economic Institute: a qualitative approach to economic education. Higher Education Today. 2014; 6:15-19.
10. Your Choice: Intellectual Elite. Narva: Narva College of the University of Tartu; 2014.
11. Baydenko GI. *The Bologna Process: The Middle of the Way*. Moscow: Research Center for Problems of the Quality of Specialist Training. Russian New University; 2005.
12. Baydenko VI, editor. *The Bologna process: Learning outcomes and competence-based approach*. Astana; 2010.
13. Baydenko VI, editor. *The Bologna Process: European and national qualification frameworks*. Astana; 2010.
14. Selezneva NA. Reflections on the quality of education: an international aspect. Higher Education Today. 2004; 4:35-44.
15. Wagenaar R. Accumulation of credits, competences and determination of learning outcomes. The EUA and Swiss Confederation conferences. 2002; Zurich.
16. Zimnyaya IA. *Key competencies as an effective target basis of a competence-based approach in education*. Moscow: Research Center for Problems of the Quality of Specialist Training; 2004.
17. Khutorskoy AV. Key competencies as a component of the student-centered education paradigm. In Pupil in a renewing school. Collection of scientific papers, edited by YI. Dick, AV Farmhouse. Moscow: IOSO RAO; 2002; pp. 135-157.
18. Kovtun EN. *A model for building basic educational programs in humanitarian areas of training based on the Tuning-ECTS methodology for implementing the principles of the Bologna process in Russia. Directions of preparation of the VPO "History" and "Culturology"*. Chelyabinsk, 2008.
19. Pak YN, Narbekova BM. Competence-based approach to the new generation of SES and the quality of education. Proceedings of the University KSTU. 2011; 2:5-11.
20. Babenko NL. Competence approach as the basis for the modernization of educational standards of higher education. Materials of the Pedagogical Institute of the Southern Federal University. Moscow; 2007.
21. Parliament of Kazakhstan, Hearings on continuous training in the Republic of Kazakhstan. Astana; 2014.

Primary Paper Section: A

Secondary Paper Section: AM