

ANNOTATION

to a thesis research of Akhmetova Madeniyet Kadesovna on a topic: "Scientific and methodological foundations of a foreign language natural science educational process in profile schools", presented for a Doctor degree majoring in specialty 6D011900 - "Foreign language - two foreign languages"

Relevance of the research topic: In the conditions of active development of economic and political relations and strengthening of competition there is a necessity of systematic professional development and mobility of personnel and, hence, development of modern innovative approaches in education.

Conceptually-oriented focus on state and strategic tasks and their implementation predetermined an introduction of stepwise stratification of school education with a clear specification of functional and educational performance of each stage of the structure of the general system of school education in our country. The special significance and focus on state program prospects and development strategy of the Republic of Kazakhstan is ensured by the introduction of profile education at the final stage of secondary school.

The new system-modernization orientation of state program development and renewal of tasks of secondary education sets complex-systemic tasks, such as the need for a conceptual-strategic-conditioned development adequate to the priority tasks of a succession system of educational programs of specially oriented training of graduates, and corresponding to the provision of their implementation, the personnel potential of teaching staff, especially for the level of branch-oriented final stage of education in a modern secondary school.

The urgency of the present research is caused by tasks of preparation of pedagogical personnel with foreign language and educational training that is especially necessary for a branch based level of school, complicated by the necessity of formation of generation of the graduates prepared to conditions of an openness and availability of a world science, technology, culture through adequate knowledge of the foreign language providing this branch based educational programs in English.

The methodology has accumulated extensive experience in theoretical reflection on various aspects of foreign language teaching, taking into account the professional interests. These include: learning objectives and social and cultural approach in foreign language education in domestic and foreign psychology and linguodidactics (I. A. Zimmaya, A. A. Verbitskiy, V. V. Kraevskiy, S. S. Kunanbayeva, V. V. Safonova, I. L. Bim, A. B. Khutorskoy, etc.); in foreign psycholinguistics and cognitive science (L. Bachman, J. F. Benito, M. Canale, D. Coste, D. H. Hymes, G. Zarate, J. A. van Ek, etc.); personally-oriented approach to foreign language teaching (I. L. Bim, N. D. Galskova, Yu. N. Karaulov, V.V. Kraevskiy, A.A. Leontyev, R.P. Milrud, A. A. Mirolyubov, E. S. Polat, O. G. Polyakov, A. V. Khutorskoy, I. I. Khaleeva, etc.); a communicative approach in teaching foreign languages (G. I. Bogin, I. L. Bim, G. A. Kitaigorodskaya, R. P.

Milrud, R. K. Minyar-Beloruhev, E. I. Passov, T. S. Serova, A. N. Shamov, S. F. Shatilov, etc.); a contextual approach in the teaching of professionally oriented foreign languages (A. A. Verbitsky, V. F. Tenishcheva, N. P. Khomyakova); modern philosophical, psychological and pedagogical concepts of personality (L. S. Vygotsky, V. V. Davydov, E. F. Zeer, A. N. Leontiev, A. K. Markova, S. L. Rubinstein, etc.); problems of profile teaching (E. I. Serpionova, E. G. Neumoina, I. S. Idilova, S. S. Kravtsov, T. V. Shultzeva, A. R. Demchenko, Y. A. Shikhov, M. M. Novozhilova, E. V. Gromov, V. N. Ramazanova, F. D. Khalikova, etc).

Along with culturally-oriented models, which imply that students master linguistic and social and cultural competencies, at the present stage profile-oriented models acquire special significance, when a foreign language becomes a means of studying blocks of single-profile disciplines (chemistry, biology, geography, etc.), which dictates the necessity of anticipating the introduction of "profile training" of a large-scale methodological and didactic study and development of the composition of educational programs in each direction with the purposeful reflection of the modern level of its scientific and technological development and with the definition of its basic profile-oriented directions and specifics, included in this direction of the specialties and its variable modern-demanded specializations with their basic profiling composition of training, on which already at the level of school education students need to have a proper level of knowledge. Accordingly, it is necessary to present developed models of basic specialties with their composition of profile training to represent the potential of each specialty.

Despite the proper level of scientific research in traditional comparatively-typological linguistics and branch foreign languages, as well as the presence of linguistic studies on discrete branch languages, specifically-methodical and didactic-projected for the development of profile school education in such areas as natural-science foreign-language profile-target interactive education in a profile school is not sufficiently developed, which determined its choice as the object of this study.

Thus, the urgency of this problem is determined by the state order in the development of a model of the foreign-language natural science educational complex in profile schools. According to the state order it is necessary to teach schoolchildren separate subjects of a science cycle in English, as English is a language of integration into the world community, demands cardinal pedagogical innovations.

Contradictions in the system of foreign-language education, which led to the relevance of the work:

- 1) contradictions between discrete-knowledge presentation of subjects without their inter-science-applied and profile-branch unity, which would provide the initial perception in their functional-profiling significance;
- 2) the need to introduce a program "module-integrated profile planning", within this module, the sequential inclusion of disciplines in accordance with their importance and scientific and technological application for the students' perception of these disciplines in the objective and legal system characteristic for the profile-differentiated educational program of modern domestic school;

3) module and inter-subject profile structuring of the subjects of the school educational program, which provides an objective and legal transition from discrete-knowledge subject perception to its integrated application projection at the profile level of the school program suggests the need for the introduction in the near future the international profile and branch training of students in the domestic "school of the future", which should provide and form the basis for international branch cooperation, the instrument of which will be the "foreign language" of professional communication and interaction.

These contradictions caused the scientific problem, revealing the necessity of creation of scientific and methodological foundations of foreign-language natural-science educational process in profile school and practice-based development of a model of foreign-language natural-science educational complex in profile school.

The aim of the thesis research is the theoretical justification and practical development of the theoretical and methodological basis of the foreign-language natural science educational process in the profile school.

The object of the thesis research is the natural scientific profiling of foreign-language education in the conditions of modern school education.

The subject of the thesis research is the methodological system of the foreign-language natural science educational process in a profile school.

The hypothesis of the thesis research has the following premise:

Foreign-language natural science education in a profile school will be effective,

if the technology of modeling the foreign-language natural-science educational process as a profile complex with subject differentiation of its content is created, the objective and legal transition from discretely-knowledge subject perception to its complex integrated applied projection at the profile level of the school program will be provided due to the formation of foreign-language natural-science subject orientation of the students of the profile school and the formation of the basis of international-branch interaction, the tool of which will be the "foreign language" of professional communication and interaction, which contributes to the creation of conditions for the solution of the problem of quality training of a competitive specialist, as the personal and activity, cognitive and conceptual and professionally-oriented basis of training will be realized.

The aim and hypothesis of the research allowed formulating the following **objectives of the thesis research:**

1. To determine the didactic foundations of the foreign-language natural science education in profile schools;

2. To substantiate the complexity of the concept of "cognitive content educational complex" from the position of a module-structured complex approach with a competency-based education result and to reveal its structural, substantive and functional characteristics;

3. To explain the essence, content and component composition of the foreign-language educational natural science competence (FLENSC);

4. To develop a model for the formation of a foreign-language natural science educational complex;

5. To carry out an experimental check of the efficiency of the developed model of the formation of the foreign-language natural science educational complex.

The theoretical and methodological basis of the thesis research was the following:

- cognitive-linguistic-cultural methodology as a universal conceptual basis of the modern theory of foreign language and polylingual education (S.S.Kunanbayeva);

- theories of foreign language teaching (I.L. Bim, N.D. Galskova, N.I. Gez, R.K. Minyar-Beloruhev, E.I. Passov, I.I. Khaleeva, etc.);

- the theory of intercultural communication as a realizing theory of learning (P.G. Kozlov, S.S. Kunanbayeva, A.M. Ivanova, M.K. Karmysova, A.K. Artykbayeva);

- competent modeling of foreign language education (I.A. Zimmaya, A.V. Khutorskoy, V.V. Kraevskiy, V. Polonskiy, S.S. Kunanbayeva, D.N. Kulibayeva, A.M. Ivanova, M.L. Kataeva, K.M. Gnezdilova, S.O. Kasarum);

- the most important provisions on interrelation of language and thinking (V.A. Artemov, E.S. Avetisyan, B.V. Belyaev, L.S. Vygotsky, N.I. Zhinkin, A.A. Leontiev, L.D. Frank, L.V. Scherba, A.I. Yatsikevicius, A.V. Yarmolenko, W.R. Arsenian, M. Bialystok, R. Craik, T.H. Gollan, M. Hakuta, E. Jones, M. Klein, E. Lambert, R. Pintner, W.E. Peal, D.J. Saer, M. Siegal, K. Viswanathan, etc.);

- competence approach (I.A. Zimmaya, J. Raven, A.V. Khutorskoy, M.L. Zueva, A.S. Belkin, E.F. Zeer);

- psychological, pedagogical and philosophical concepts of personality (L.S. Vygotsky, A.N. Leontyev, E.F. Zeer, A.N. Platonov, V.V. Davydov, etc.);

- conceptual provisions of theory and practice of higher professional education (V.I. Andreyev, S.A. Arefieva, R.A. Valeeva, S.G. Dobrotvorskaya, V.A. Komelina, L.N. Makarova, F.L. Ratner, V.A. Slastenin, etc.).

The following **research methods** were used in this research to achieve the objectives and provide evidence for the hypothesis: a method of study and critical analysis of literature; observation of the learning process in a profile school; written and oral survey, a method of surveying students in the profile school; modeling method; stating and forming stages of experiential learning to test the effectiveness of the proposed in this study foreign-language natural science educational complex; analysis of the received results.

Scientific novelty and theoretical significance of the thesis research is determined by the following components:

1) The scientific and methodological bases of the foreign-language natural science educational process in profile schools within the framework of complex subjects of the natural science direction in accordance with the program requirements in the 12-year general education;

2) A step-by-step methodological model for the formation of a foreign-language natural science educational complex has been developed;

3) The essence, content and component structure of the foreign-language educational natural science competence (FLENSC) are revealed.

The practical importance of the thesis lies in the development of technology for modeling a foreign-language natural science educational complex in a profile school. The results of the study can be used in the practical work of school teachers and university teachers, in the system of training and professional development of teachers.

Approbation. The main theoretical provisions of this dissertation research were reflected in reports and articles at international and national scientific-practical conferences: “The diversity of social economic and cultural and linguistic manifestations in the Republic of Kazakhstan”, KazUIR&WL named after Ablai khan, 29 November, 2017 (Almaty, Kazakhstan); International Conference “Modern scientific challenges and trends”, issue 4 Part 3, Collection of scientific works, 20 May 2018 (Warsaw, Poland); Proceedings of the International Scientific and Practical Conference on December 24, 2018. Volume 7 (Prague, Czech Republic); Journal of foreign language teaching and applied linguistics. Volume 6 #3, 2019, Proceedings of the International conference on foreign language teaching and applied linguistics (FLTAL) 2-3 May 2019 (Tashkent, Uzbekistan). The results of the dissertation research were published in scientific and pedagogical publications recommended by the Committee for Control and Sphere of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan in the International Popular Science Journal "Science and Life of Kazakhstan" № 3 (58) 2018, Pedagogy, Astana: Kazakhstan, 2018; in the Bulletin of KazNPU named after Abay, Pedagogical Sciences № 1 (57), Almaty: Kazakhstan, 2018; in the Bulletin of Kazakh National University named after Al-Farabi, a series of "Pedagogical Sciences" № 1 (62) March 2020; in the scientific multi-thematic peer-reviewed journal "Research of the XXI century" № 2 (2) 2019 Neftekamsk, Republic of Bashkortostan; Journal of Language Research and Teaching Practice. Vol 2 No 2 (2018): Journal of Language Research and Teaching Practice KazUIR&WL named after Ablai khan; in foreign journals: «Bulgarian Journal of Educational Research and Practice» «Pedagogics» Nauchno Spisaniye, Az-buki, Volume 92 Number 6(2020) Sofia, Bulgaria; in the Scopus database - Rupkatha Journal on Interdisciplinary Studies in Humanities (ISSN 0975-2935) Indexed by Web of Science, Scopus, DOAJ, ERIHPLUS Vol. 11, No. 2, July-September, 2019.

Content of the thesis. The thesis research consists of an introduction, three chapters, conclusion, list of references and applications.