ABSTRACT
of the dissertation for the degree of Doctor of Philosophy (PhD)
in specialty 6D011900 – Foreign Language: Two Foreign Languages
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«Scientific and methodological foundations of improving students’ independent work under the guidance of a teacher in teaching a foreign language at the technical university»

Relevance. In the conditions of credit technology education, one of the key roles is assigned to the students’ independent work that is associated with the present day paradigm of education, the requirement of which is to teach a person to learn, to promote the formation of motivation for self-educational activity.

At higher education institutions of Kazakhstan, there are two forms of organization of the educational process, the target orientation of which is the development in students of the ability to navigate independently in the educational space. These are the students’ independent work (SIW) and the students’ independent work under the guidance of a teacher (SIWT). The SIW fully involves the independent activity of the student, while the SIWT includes the interaction of the teacher and the student, which is determined by the need to guide the student's independent work. Thus, SIWT serves as a solid basis for the formation of the ability for self-educational activity, which predetermines the need for this type of training.

The analysis of the scientific and methodological literature and regulatory documents in the field of education regarding the students’ independent work under the guidance of a teacher indicates the ambiguous understanding of the role, place, significance and specifics of organizing this type of classes, which is reflected in the absence of a methodological platform for organizing SIWT. Despite a solid period of introducing the credit technology of education at the country's universities, there is still a problem of effective organization of the SIWT. This is caused by a lot of factors, the main of which is high dynamism of changes in the education system as responses to the global challenges of our time. The main trend in this aspect is the formation and development of learning skills throughout life. This is conditioned by the level of formation of independent cognitive activity of students. Therefore, there is an urgent need for continuous improvement of all the educational processes, including methodological platforms for organizing students’ independent work and mechanisms for organizing SIWT.

At the first approximation to the problem under study, it is easy to notice a very high degree of its development in present day pedagogical science. Among the scientists, L.G. Vyatkin, M.G. Garunov, I.Ya. Lerner, M.I. Makhmutov dealt with the problem. This problem appears to be classically developed in the works
by P.I. Pidkasisy. Among Kazakh scientists, this issue was the subject of a dissertation research by D.N. Assanova D.N., a number of studies by N.A. Solovyeva, G.T. Aubakirova, B.A. Doszhanov, Sh.A. Stamkulova, D.A. Kappasova and others.

In these works, many aspects of the problem under study are revealed in the context of traditional didactics. At the same time, there is an urgent need to find strategies, mechanisms for the constant modernization of all the aspects of the educational process at a higher education institution.

In this regard, there is a reason to assert that there is a contradiction between the need for continuous improvement of the SIWT organization and the absence of the targeted methodological support for the continuous improvement of this process. In addition, this contradiction is complicated by the specifics of those disciplines in which the SIWT is organized. Today, mastering a foreign language is especially important for professional communication of future specialists in the international environment. It is no coincidence that a firm course has been taken in Kazakhstan for the development of trilingual education, where among foreign languages the emphasis is on English. At the same time, representatives of non-linguistic specialties of the technical orientation experience special difficulties in mastering it. Thus, it seems quite reasonable to select the topic of the dissertation research as follows: “Scientific and Methodological Foundations of Improving the Students’ Independent Work under the Guidance of a Teacher in Teaching a Foreign Language at the Technical University”.

The purpose of the research is development and scientific substantiation of the technology for improving organization of students’ independent work under the guidance of a teacher in teaching a foreign language at the technical university.

The object of the research is the process of technical student cognitive independence formation in teaching a foreign language.

The subject of the research is the mechanisms and strategies of improving organization of students’ independent work under the guidance of a teacher in teaching a foreign language at the technical university.

The tasks of the research. In accordance with the purpose and hypothesis, there have been defined the following tasks of the study:

- to identify the features of students’ independent work under the guidance of a teacher when studying a foreign (English) language at the technical university;
- to determine the key competence of students for effective SIWT when studying a foreign (English) language at the technical university and to develop criteria and indicators for its assessment;
to develop a technology of improving organization of students’ independent work under the guidance of a foreign language teacher at the technical university, taking into account its features;

- to test experimentally the technology of improving organization of students’ independent work under the guidance of a foreign language teacher at the technical university.

**The methodological bases of the research** are the works by domestic and foreign scientists in the field of:

- methodology and theory of foreign language, multilingual education (S.S. Kunanbayeva, B.A. Zhetpisbayeva);
- organization of the educational process according to the credit technology of education (S.B. Abdygapparova, G.K. Akhmetova, A.A. Kussainov and others);
- theories and methods of teaching a foreign language (N.I. Gez, N.D. Galskova, A.N. Shchukin, G.V. Rogova);
- theory of personality and philosophy of activity (G. Hegel, I. Kant);

In accordance with the tasks set, there have been used such research methods as studying regulatory documents in the field of education, studying and analyzing psychological, pedagogical and methodological literature on the research problem; pedagogical experiment, observation, questioning, testing, comparative method, statistical data processing.

**Scientific novelty and theoretical significance** of the dissertation work consists of the following:

1) disclosure of the features of students’ independent work under the guidance of a teacher when studying a foreign language at the technical university;

2) development and scientific substantiation of the technology for improving organization of students’ independent work under the guidance of a foreign language teacher at the technical university;

3) the presence in the study of conclusions that expand the degree of scientific elaboration of the problem of organizing and improving students’
independent work under the guidance of a foreign language teacher at the technical university.

**The practical significance of the research** lies in the following:
- developing a system of exercises aimed at the formation of cognitive independence of technical students when studying a foreign (English) language;
- developing an electronic manual “Professional English in Metallurgy; Materials Science”;
- preparing and publishing the Guidelines for students’ independent work under the guidance of a teacher.

**Validity and reliability of scientific provisions and results** is ensured by the correspondence of the applied methods to the tasks of the study, the main of which are the following: for solving the first two tasks searching for scientific literature, methods of scientific analysis of theoretical and empirical materials on the problem under study; for solve the third problem methods of systematization, classification and modeling of pedagogical systems; for solving the fourth task methods of scientific discussion by publishing the main results of the dissertation work in the open press, methods of practical verification of applied research results in the real practice of higher education, methods of collecting and processing, as well as comparative and correlation analyzes of the obtained statistical data.

**Scientific provisions to be defended**

1. It is expedient to state the features of students’ independent work under the guidance of a teacher when studying a foreign (English) language at a technical university in the following logic: the goal – the means of transforming the goal into a result – the expected result. In this interpretation, the goal of the SIWT in teaching a foreign language at the technical university is to differentiate the educational process, taking into account the level of foreign language training of students aimed at independent developing their speech skills and skills in the use of special terminology for professional communication in the international environment. This goal is projected into the expected result, the image of which is determined by the sufficient level of forming: 1) reading skills and strategies, writing a written message in a foreign (English) language using professional terminology; 2) skills in mastering the strategies of cognitive and practical independence, the components of which are educational and informational, compensatory, self-creative ones. At the same time, the planned results can be achieved through selecting adequate methods, forms and means of organizing the SIWT in teaching a foreign language at the technical university that: 1) must obey the principle of integrating the level and profile differentiation and the principle of "double entry of knowledge", 2) in terms of the content, they must be represented by a system of training tasks aimed at developing specific skills due to the
systemic set of the content of a number of academic disciplines, including "Foreign (English) language", "Profession-oriented foreign (English) language", possibly other elective disciplines in a foreign language, as well as special (technical) disciplines in a foreign (English) language.

2. It has been established that in order to improve SIWT, the basic competence of students is their cognitive and practical independence in mastering a foreign (English) language that is determined by the level of their learning motivation and learning activity in independent learning activities. The features of developing cognitive and practical independence of technical students consist in their ability to apply the following learning strategies for mastering a foreign language:
   • educational and informational;
   • compensatory;
   • self-creative.

3. The technology of improving organization of students’ independent work under the guidance of a foreign language teacher at the technical university, taking into account its features is developed in accordance with the main provisions of the present day theory of continuous improvement technologies and the concept of a continuous improvement process (Kaizen technology). In addition, this technology takes into account the identified features of SIWT in teaching a foreign language at a technical university, which ensures its scientific reliability and substantiates its relevance.

Testing and implementation of research results. The content of the dissertation work has been reflected in 21 publications of the author, including scientific publications included in the Scopus database (3), in publications recommended by the CCES (3), in the materials of international scientific conferences (8), other publications (3). In addition, there has been developed and issued a methodological tutorial for technical specialties, 2 guidelines on organization of the SIWT, a certificate of intellectual property.

The developed technology of organizing SIWT when teaching a foreign language at the technical university has been tested on the basis of Karaganda state technical university in Karaganda.

The structure and volume of the dissertation. The dissertation is presented on 140 pages, consists of an introduction, two chapters, a conclusion, a list of sources used. The dissertation has 6 applications. The work contains 20 tables and 11 figures. The list of references includes 185 sources used.