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Ukraine

Implementation of bilingual education in ukrainian institutions of higher education

Summary

The article deals with issues regarded to implementation of bilingual education in Ukrainian universities. This process can be considered as part of Ukrainian integration into European and world scientific and educational space. Furthermore, this area is being developed according with the National Doctrine of Educational Development.

Specific aspects of bilingual education development at the end of the 20th century are noted. Bilingual educational system leads to both getting the education as provided by the bilingual system itself and personality formation when an individual is open to the interaction with the whole world. Applied to obtaining a certain specialty at the university, the goal of bilingual education is a synthesis of communicative and subject competencies. It is reported that a foreign (in particular, English) language is not only the goal, but also a means of understanding the world of special knowledge.

Bilingual education features are examined in detail. It is noted that at the moment a comprehensive concept of bilingual professional education in Ukraine has not been built. Currently, only certain aspects of the problem of bilingual education in higher education have been defined. A number of issues have been formulated which need to be theoretically comprehended in order to implement successfully the bilingual educational system at the universities. Attention is paid to the complex of didactically and methodically relevant factors which depend on the students' future profession and qualifications. Appropriate criteria have been identified, which influence on many levels on the content, organization and choice of methods of bilingual education in a certain

field of study. It is underlined that the factors (criteria) are both the linguistic ones and non-linguistic ones. Finding and taking into account all these factors is mandatory to create the scientifically based concept of the bilingual educational system at the non-language departments.

Keywords: foreign language education, bilingual education, model of bilingual education, bilingual professional education, subject-oriented bilingual didactic models

1. Introduction

In the period of growing globalization, Ukraine strives for close interaction with the world community in a wide variety of fields of international cooperation. The Ukrainian higher school, which is mastering the humanistic paradigm of education, does not remain aloof. The State National Program "Education" ("Ukraine of the 21st Century") (1996) and the National Doctrine of Education Development (2002) state that one of the priority areas of education development is its integration into the European and world educational spaces. This is possible provided that both teachers and students know one or more languages of the European community in a professional context for professional communication. In this regard, bilingual education (as a rule, in English) is being actively implemented in many universities of Ukraine with the aim

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of further integration of universities and their graduates into the international scientific and educational space.

A new direction of research, devoted to the problems of bilingual education and the construction of the educational process using the means of native and foreign languages, began to develop intensively in the second half of the 20th century. In foreign pedagogy, we can name American (J.A. Fischman, K. Kloss, W.F. Mackey, S.V. Paulston, J. Read, D. Spolsky, etc.), Canadian (J. Cummins, L. Driedger, J. Porter, etc.), German (W. Butikamm, J. Krist, etc.) scientific schools that formed in the 1960s and 1970s. These schools studied the acculturation type of bilingual education, the goal of which is the integration of ethnic minorities into the dominant culture. In the 1980s and 1990s, a European scientific-pedagogical school was formed, which researches an open type of bilingual education. Its purpose is to comprehend the world of special knowledge by means of native and foreign languages, as well as multicultural education and integration of pupils and students into the pan-European cultural space (Mackey, 1979; Mackey & Siguán, 1987). In Ukraine, modern pedagogical studies of bilingual education appeared on the wave of social renewal, the desire for an open society and integration into the world community. Bilingual education in the domestic system of higher education was studied in the works of such scientists as A. Husak, R. Devletov, A. Kovalchuk, N. Mykytenko, F. Moiseeva, S. Sytnyakovska, and others. Issues related to bilingual education of students of non-linguistic specialties were studied. Some issues of bilingual education in technical universities were considered in works (Ivanenko, 2019; Snizhko, 2022). But it should be noted that at the moment a comprehensive concept of bilingual professional education in Ukraine has not been built. Currently, only certain aspects of the problem of bilingual education in higher education have been defined. We also note that the methodological and technological foundations of bilingual teaching of professional disciplines are almost not developed.

The purpose of the article is to outline the specifics of the implementation of bilingual education in Ukrainian institutions of higher education and to establish criteria that affect the content, organization and choice of methods of bilingual education in a certain specialty.

2. Bilingual education in Ukrainian universities: purposes, values

The relevance of bilingual education is determined, as already mentioned, by the general world trend towards integration in the economic, cultural and political spheres. In the educational sphere, we observe a tendency towards the integration of subject knowledge, a focus on learning a holistic picture of the world. Studying on a bilingual basis, taking into account these trends, provides students with wide access to information in various subject areas, obtaining new information according to personal needs, and the possibility of continuous education. As a result, additional chances are created for students to compete on the pan-European and global specialist market. Studying on a bilingual basis contributes to the improvement of general language training and mastery of a foreign language for special subject purposes, the deepening of subject training and the expansion of the sphere of intercultural communication, academic mobility, as well as increasing motivation in learning a foreign language.

The basic concept of “bilingual education” is defined as the interconnected activity of the teacher and students in the process of studying individual subjects or subject areas by means of native and foreign languages; as a result a synthesis of competencies is achieved that ensure a high level of foreign language proficiency and deep assimilation of subject content. Thus, bilingual education is both a means of obtaining an education and a process of forming a personality open to interaction with the surrounding world. The value of bilingual education lies in its philosophical and pedagogical principles: tolerance for dissent, rejection of established stereotypes, the desire for a worldwide exchange of values and ideas, a dialogue of cultures, and integration into a single cultural and educational space. The goal of bilingual education is a synthesis of competencies: communicative competence, which is a complex category in itself, and subject competence, which shows the peculiarities of educational disciplines studied in a bilingual mode and is determined by the level of assimilation of the subject content embedded in them.

Bilingual education is based mainly on communicative and functional methods that appeared at the end of the 20th century. Taking this into account, bi-

lingual education currently has its own specific features:

- bilingual education focused on didactic continuity and didactic positive interference when studying professionally oriented courses in native and foreign languages;
- with bilingual education, it becomes possible to analyze and compare the coverage of the same subject content in different educational cultures. Thus, the possibility of successful integration and adaptation to the conditions of the world educational space is realized;
- the implementation of the ideas of bilingual education opens access to a higher level of development of intercultural communication, allows you to get acquainted with the advanced experience of foreign countries in the field of professional activity. And this, in turn, provides good opportunities for adjusting the content of the material studied in a foreign language, for the implementation of new technologies and methods of learning, ultimately for the development of the individual.

3. The issue of the implementation of bilingual education in Ukrainian universities

Let's dwell in more detail on the peculiarities of the implementation of bilingual education in higher education institutions of Ukraine. Currently, we can state, on the one hand, the rather rapid spread of bilingual education in Ukrainian universities, and on the other hand, the lack of scientific development of the didactic-methodical foundations of bilingual education by means of native and foreign languages. This is explained by the fact that bilingual education and development of students is a very complex direction in the theory and practice of professional education. For its successful implementation, a theoretical understanding of a number of issues is necessary:

- 1) socio-pedagogical factors, didactic conditions and methodological possibilities that determine the expediency of including the bilingual sector in the university education system;
- 2) personal development potential of bilingual education, socio-pedagogical and didactic factors affecting its successful implementation;

- 3) psychological, didactic and methodological foundations of the transition from a foreign language as a subject to a foreign language as a tool of education and self-education; the range of didactic expediency of using a foreign language as a means of education and self-education when studying subjects of humanitarian and non-humanitarian cycles;
- 4) tasks, content and variability of bilingual educational programs, methods of analyzing bilingual lectures/lessons, modern technologies of bilingual education, principles of creating educational foreign language literature for bilingual educational programs;
- 5) modern approaches to the formation and development of bilingual competence and determining the levels of its formation, criteria for evaluating the success of students' educational activities when studying subjects or subject areas in a foreign language;
- 6) problems of linguistic and didactic training of teachers of professional disciplines for full or partial teaching of subjects in a foreign language.

As practice shows, in Ukraine, bilingual education through native and foreign languages is implementing according to various models and various disciplines (higher mathematics, physics, mechanics in a technical university, biology, chemistry, physiology in a medical university, history, geography in a pedagogical university, etc.). In each case, there are undoubtedly some features related to the goals of bilingual education and the subject taught in a bilingual mode, with the future specialty of the student. A bilingual course of a specific discipline can act as a compulsory course, and as a selective course, and as an optional course. Study terms are also different. Accordingly, the addressee also differs: it is a first-year student, bachelor's graduate, master's degree. Therefore, it is important to determine both general features of bilingual education and specific ones (for example, characteristic features of bilingual mathematics education of technical university students; these specific features should be taken into account when developing the concept of bilingual education of mathematics of future engineers in order to implement it more effectively).

4. Factors to be taken into account when organizing bilingual education

By specificity in bilingual education, we mean a set of all didactically and methodically relevant factors, determined by the specifics of the taught discipline and the student's future major, and even the specifics of the mastering process. It is possible to create a scientifically based concept of bilingual education at one or another non-language faculty only by identifying and taking into account all factors in their interrelationships. There are *non-linguistic factors* that can influence the content, organization and choice of methods of bilingual education. We refer to them: the structure of this science (mathematics, chemistry, computer science, physiology, etc.), the sequence of disciplines studied, conditions of study, specific interests of students or special goals of study, etc. In addition, there are actually *linguistic factors* – this is the ratio of commonly used and terminological vocabulary in one or another scientific discipline, the ratio of specific and borrowed terms, grammatical, stylistic features, etc.

In order to solve the problem, we found the criteria that can be used to determine the specificity of the bilingual education method for a certain specialty. The most important criteria are those that allow us to characterize the structure of this specialty, that is, the ratio of its component disciplines and their connection with everyday reality.

The first criterion: *the number of basic sciences for this specialty and the degree of their interrelationship*. It is known that all sciences to some extent use the data and methods of other sciences, as this follows from the dialectical nature of any research activity. However, the exception is mathematics, which is the highest degree of abstraction and is itself the basis of scientific research in many areas of knowledge. For example, physics is based on mathematics as a basic science; for chemistry, the basic sciences are mathematics and physics; for biology, the basic sciences are mathematics, physics, chemistry, etc. If there are a lot of basic and related sciences, it makes bilingual education in this specialty much more difficult.

The second criterion: *degree to which the main subject area for this specialty is multicomponent*. So, for example, mathematics is the main subject area at the Faculty of Mathematics; it consists of many scientific

disciplines (linear algebra, analytical geometry, calculus, differential equations, probability theory, mathematical statistics, etc.). Other subject areas are also a complex system of interconnected disciplines, and, as a rule, not all disciplines are studied with the same depth. In this regard, when discussing and solving issues related to the specifics of bilingual education, it is necessary to take into account the intra-subject division.

The third criterion: *the ratio of scientific and non-scientific components in the linguistic communication related with professional activity of a specialist*. For example, in linguistic communication (reading and speaking), related to the professional activity of a specialist in physical education and sports, the specific weight of the non-scientific and practical element is incomparably higher than that of a doctor or a mathematician. This is explained by the fact that his professional sphere includes communication with spectators and judges, personal experience of other athletes and coaches, sports promotion, problems of international relations in sports and many other practical issues. The specific weight of this subject far exceeds the scientific component. The non-scientific practical component is also very significant in the teacher's professionally oriented linguistic communication. As for the mathematician, for example, this component is almost completely absent. As we can see, it follows that the ratio of scientific and non-scientific practical elements in the linguistic communication related to professional activity of a specialist, affects the solution of specific issues of bilingual education of this specialist. Taking into account this criterion is ensured by the correct selection of literature by specialty, setting the scope of country studies, socio-cultural topics, determining the scope and content of work on the speech development, etc.

The listed criteria are non-linguistic. Linguistic criteria follow.

The fourth criterion: *the degree of variety of styles and genres of literature by certain specialty*. The essence of this criterion is that several functional styles are distinguished in stylistics: scientific, journalistic, official-business, popular, etc. Certain types of texts correspond to each style. In this regard, various specialties differ from each other. For example, literature on mathematics is the least diverse in terms of style and genre; the opposite example is literature on art

history or psychology. This criterion affects the selection of special literature, the sequence of inclusion of its various types in the bilingual educational process.

The fifth criterion: *the total number of terms and the rate of appearance of new terms, saturation of the literature with terms*. In some subject areas, the total number of terms does not exceed a few hundred, while in others it is counted in tens of thousands. There are stable, established sciences, new terms appear in them very rarely; and in young sciences, for example, computer science and information technology, hundreds of new concepts and words are constantly being born. It is clear that in the first case, the teacher during the bilingual education of students should focus his efforts on students' memorization of terms; and in the second case, in addition, he should pay serious attention to studying the regularities of term formation. For example, there is information that in the special literature on music, terms are only about 6%, and in medicine this figure reaches 80%.

The sixth criterion: *the degree of obligation to sequentially enter information on the specialty* in a foreign language. For example, at the history faculty, first-year students can be offered topics from modern history for study in a foreign language (although modern history is studied in senior years), but this cannot be done at the mathematics faculty, because here it is necessary to follow the sequence of introduction of new topics. If a student of any course is able to understand any information in their native or foreign languages, even if it refers to the disciplines studied in senior courses, this obviously greatly expands the possibilities of bilingual education.

As we can see, the specifics of the subject area and the student's future specialty affect the content, organization and choice of methods of bilingual education. This is a complex problem, and we believe that the proposed list of criteria can be supplemented.

5. Conclusions

Therefore, bilingual education has undeniable advantages in the context of globalization. In connection with integration processes, the implementation of bilingual education in higher education institutions is spreading. At the current stage, bilingual education has specific features. A foreign language is not

only a discipline at the university, but also a means of acquiring professional knowledge. When implementing bilingual education, it is necessary to take into account the totality of all relevant factors, in particular, the peculiarities of the taught discipline and the future specialty of the student. Criteria that reflect the specificity of the subject area affect the content, organization, and selection of methods of bilingual education in this specialty.

We see the prospects for further research in the development of the concept of bilingual education of future engineers and the construction of a didactic model of bilingual education at a technical university.

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