CONDUCTING REMOTE BINARY CLASSES ON UKRAINIAN
AS A FOREIGN LANGUAGE FOR STUDENTS THIRD COURSE (ECOLOGY)

The article is devoted to important stages of conducting binary classes on the Ukrainian language as a foreign language and studying the lexical and semantic structure of the language on the basis of popular science and technical texts. The definition of a binary lesson as one of the forms of realization of interdisciplinary connections and integration of knowledge from several subjects is clearly outlined. It is also a means of increasing the motivation to study the subject, as they create conditions for the practical application of knowledge; develop self-education skills, because most of the preparation for classes foreign students carry out independently and in extracurricular activities; in binary classes, skills are transferred to new areas that have not been studied before, which helps students to make decisions about creative production situations. A non-traditional type of lesson is considered, which is rather one of the forms of the project, which allows to integrate knowledge from different areas to solve one problem. In general, 5 types of binary classes are described: 1. Type of lesson: formation of new knowledge. 2. Type of occupation: learning skills. 3. Type of lesson: application of knowledge in practice. 4. Type of occupation: repetition, systematization and generalization of knowledge, consolidation of skills. 5. Type of occupation: control and testing of knowledge and skills. Examples are given for each type of binary session. The article presents important principles of understanding, mastering and accumulation of vocabulary on the basis of popular science and technical texts, which are the basis for the development of analytical skills, ingenuity and competence of foreign students. One of the examples of a binary lesson for learning the Ukrainian language in a foreign language environment is offered. An example of conducting a binary practical lesson in a group of third-year environmental students at the National University «Lviv Polytechnic» is given. Examples of pre-text and post-text exercises with examples that help foreign students to learn vocabulary and terminology of the Ukrainian language are described. The focus is on the problems of teaching Ukrainian as a foreign language in technical universities. The article presents observations on the use of modern pedagogical technologies as a form of learning organization.

Key words: binary lesson, Ukrainian as a foreign language, ecology, integration of knowledge, popular science texts, foreign language environment, analytical skills.

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ПРОВЕДЕННЯ ДИСТАНЦІЙНИХ БІНАРНИХ ЗАНЯТЬ З УКРАЇНСЬКОЮ МОВИ ЯК ІНОЗЕМНОЇ ДЛЯ СТУДЕНТІВ ТРЕТЬОГО КУРСУ (ЕКОЛОГІЯ)

Статтю присвячено важливим етапам проведення бінарних занять з української мови як іноземної та вивчен-ня лексико-семантичної структури мови на основі науково-популярних та технічних текстів. Чітко окреслено визначення бінарного уроку як однієї з форм реалізації міжпредметних зв'язків інтеграції знань з кількох предметів. Це також засіб підвищення мотивації вивчення предмету, оскільки створюють умови для практичного застосування знань; розвивають навички самостійної, тому що велику частину підготовки до заняття студенти-іноземці здійснюють самостійно й в позаурочний час; на бінарних заняттях відбувається перенос умінь в нові області, що не вивчали раніше, що допомагає студентам приймати рішення творчих виробничих ситуацій. Розглянута непередбачувана форма уроку, який є радше однією з форм проекту, який дозволяє інтегрувати знання з різних областей для рішення однієї проблеми. В загальному описано 5 типів бінарних занять: 1. Тип заняття: формування нових знань. 2. Тип заняття: навчання умінням і навичкам. 3. Тип заняття: застосування знань на практиці. 4. Тип заняття: повторення, систематизації й узагальнення знань, закріплення умінь. 5. Тип заняття: контролю і перевірки знань і умінь. До кожного типу бінарних занять наведені приклади. У статті подано важливі принципи розуміння, засновані на накопиченні словникового запасу мови на основі науково-популярних та технічних текстів, які є базою для розвитку аналітичних здібностей, винахідливості і компетентності студентів-іноземців. Запропоновано один із зразків бінарного заняття для вивчення української мови в іншомовному середовищі. Наведено зразок проведення бінарного практичного заняття у групі студентів-екології третього
Formulation of the problem. Modern needs for studying Ukrainian as a foreign language in technical universities focus primarily on the development and preservation of the Ukrainian language, quality development of the Ukrainian language space and the search for new diverse methods of teaching and presenting language material to foreign students. The student’s knowledge of language as a phenomenon of national culture contributes to the formation of sociolinguistic competence – the ability to use language forms appropriate in a particular sociolinguistic context, respectively, allows adequate interaction and mutual understanding of people in foreign culture (Leshchenko, 2013: 253). It should be noted that learning a language is a difficult and painstaking process. Everyone who teaches and teaches is looking for the most effective methods of mastering and presenting it. Binary lessons have become a solution for studying Ukrainian as a foreign language in technical universities. It is the search and application of modern pedagogical technologies as a form of teaching and combining theory and practice or two subjects as a type of training – this is the task of binary lessons that integrate knowledge from different fields to solve one problem, allowing to apply knowledge in practice (Melnyk, 2020: 1).

Research analysis. The study of terminology in Ukrainian language classes in a foreign language audience is a fairly common and frequently studied issue. In the process of studying the Ukrainian language as a foreign language, special attention should be paid to mastering its terminological vocabulary, especially the terminology of the field in which the student is preparing to become a specialist. Therefore, the study of methods of working with foreign students of Ukrainian terminology is relevant and very necessary, according to Z.Y. Kunch (Kunch, 2008: 198). Assimilation of the Ukrainian terminology of the specialty by the foreign student of the specialty is complicated by several circumstances. First of all, in the process of everyday communication of a foreign student in the Ukrainian-speaking environment, terminological vocabulary does not sound. Secondly, the assimilation of Ukrainian terms by foreigners causes difficulties due to the disorder and lack of stability of certain terminological systems. Third, the study of a professional language by a student takes place in parallel in Ukrainian language classes and during the study of professional disciplines. Therefore, the mastery of professional terminology is under the guidance of a teacher of philology, and through lectures or comments of a teacher of professional disciplines. The advice and guidance of different teachers may differ, and this, of course, will not help to better master the relevant terminology. Fourth, acquiring skills of professional work during industrial practice, a foreign student may encounter industrial and professional jargon, in which certain concepts have their own names, different from terminological ones, which are often not even recorded in textbooks or dictionaries (Kunch, 2008: 199). Also, one of the effective ways to learn Ukrainian as a foreign language is to study its lexical structure by word formation, according to N. Dzenzyura (Dzendziura, 2014: 79). Create conditions for motivated practical application of knowledge, skills and abilities, give foreign students the opportunity to see the results of their work and get joy and pleasure from it, interest them in learning vocabulary and grammar of the Ukrainian language based on popular science and technical texts, make classes exciting, to improve communicative and cognitive skills aimed at systematization and deepening of knowledge and exchange of this knowledge in terms of cooperation – all this is the purpose of the binary lesson. Specialists are actively working on the study of this issue and implement it in the educational process of both secondary and higher education. The tasks and purpose of the non-traditional double lesson in the works of O. Lysytska and I. Melnyk are clearly described. But no matter how difficult the process of learning a language, the highest level of success that should be achieved by both foreign students and teachers – is communication, that is the ability to communicate not only in the audience but also outside it (Kozelko, 2015: 127).

Several issues that can be traced in the process of teaching and presenting the terminological part of the language on the basis of popular science and technical texts on the Ukrainian language in a foreign language audience remain important and unexplored: 1. How to conduct a binary lesson and present material for foreign students different levels of training and different specialties in one group? 2. How to organize, interest and motivate students to study the Ukrainian language in technical universities, if foreign students
do not have a medium and high level of training in UMI and do not fully understand the lectures in the specialty? 3. What educational material to provide students for effective and rapid study of terms and how to apply them in practice? And these are not all the questions that arise in the process of studying the basic material. But it is they who are directing us to find new methods that will help to combine theoretical and practical in one lesson, as well as to unite students and direct learning in the right direction.

**Purpose of the article** – show how you can most easily transfer basic knowledge of terminology to foreign students and how to help them learn the terminological system of the Ukrainian language. Investigate the possibilities of using popular science and technical texts on the Ukrainian language in a foreign language audience, reveal one of the forms of interdisciplinary links and integration of knowledge in several subjects on the example of non-traditional classes – binary. To provide an opportunity for faster formation of lexical and semantic skills in the process of teaching the Ukrainian language to foreign students of technical specialties; show a system of possible methodological techniques and materials aimed at studying the terms; to indicate the ways of realization of communicative and functional-stylistic approaches in the formation of language, speech and communicative competencies in Ukrainian language classes in a foreign language audience.

**Presenting main material.** Binary classes are one of the forms of realization of interdisciplinary connections and integration of knowledge from several subjects. This is a non-traditional type of activity. Binary classes allow you to integrate knowledge from different fields to solve one problem, give the opportunity to apply knowledge in practice. Develop students’ analytical skills, ingenuity and competence. They have a huge educational potential. It is also a means of increasing the motivation to study the subject, as they create conditions for the practical application of knowledge; develop self-education skills, because most of the preparation for classes foreign students carry out independently and in extracurricular activities; in binary classes, skills are transferred to new areas that have not been studied before, which helps students make creative decisions. Tasks of binary classes: 1. The use of modern pedagogical technologies as a form of learning. 2. A combination of theory and practice or two subjects as a type of study (non-traditional type of lesson). The purpose of the binary lesson: 1. To create conditions for motivated practical application of knowledge, skills and abilities. 2. Give foreigners the opportunity to see the results of their work and get joy and satisfaction from it. 3. To interest them in the study of subjects, to make practical classes interesting and exciting. 4. To improve communicative and cognitive skills aimed at systematization and deepening of knowledge and exchange of this knowledge in the conditions of cooperation. Signs of a binary lesson: 1. Combining creative and practical teaching methods in a joint lesson. 2. Achieving a double (binary) goal – the acquisition of knowledge and at the same time their practical application. 3. Merger of processes of knowledge acquisition and formation of primary skills, their mutual influence. 4. Material and technical and methodological support (Melnyk, 2020: 1).

Types and forms of binary classes.

1. Type of lesson: the formation of new knowledge, constructed in the form of: lesson-lecture; travel lessons; expedition classes; research classes; staging classes; training conference; excursion classes; problem lesson. The purpose of knowledge formation classes is to organize work on mastering the concepts and scientific facts provided by the curriculum.

2. Type of lesson: training in skills and abilities involves forms: workshops; lesson-work; dialogue lessons; occupation – business or role play; combined lesson; travel; expedition, etc. The purpose of this type of lesson is to develop in students certain skills and abilities provided by the curriculum.

3. Type of lesson: application of knowledge in practice. The main forms of classes of this type: role-playing and business games; workshops; project defense classes; travel; expedition, etc. The purpose of this type of lesson is to apply knowledge in practice.

4. Type of occupation: repetition, systematization and generalization of knowledge, consolidation of skills. This lesson has the greatest opportunities for integration and implementation of interdisciplinary links. Forms of this type of lesson: repetitive and generalizing lesson; dispute; game, competition, quiz; theatrical lesson; training-improvement; final conference; classes-consultation; review lecture; review conference; lesson-conversation.

5. Type of occupation: control and testing of knowledge and skills. Forms of employment: credit; quiz; competitions; knowledge review; protection of creative works, projects; creative report; control work; interview. The purpose of the control of knowledge and skills – to control learning, to continue the systematization of knowledge, to identify the level of assimilation of material, the formation of skills and abilities.

Binary training plan. 1. The teacher determines the topic of the curriculum, goals, objectives of the lesson, common to both subjects and specific to each. It is advisable to conduct a lesson only if there is a
common goal. 2. Depending on the topic, purpose and objectives of the lesson, its type is determined. 3. In accordance with the topic, tasks, type of lesson, taking into account the speech training, specialty and individual characteristics of students selected factual and didactic material. 4. The most effective combination of methods and techniques is chosen – in accordance with the goal, the content of educational material, didactic tasks of integrated subjects. 5. The structure of the lesson is considered. The emphasis is on the independent cognitive activity of foreigners (rather than memorizing ready-made conclusions), creating problem situations based on the logic of academic disciplines. 6. The degree of participation of the teacher and the student is determined: either they work on equal terms (there is a dialogue), or one of them «joins» the class sporadically (Melnyk, 2020: 2-3).

The program, according to which foreigners study for four years at the National University «Lviv Polytechnic», helps to choose the topic of the lesson. Topics are quite diverse: 1. Texts in the specialty (chemistry, ecology, pharmacy, economics, computer science, architecture, construction, geodesy, mechanics, energy, etc.). 2. History of Ukraine and its culture. 3. Philosophy. 4. Writers, artists, composers of Ukraine. 5. Ukraine: cities, rivers, mountains; customs, traditions, way of life, etc. Accordingly, it is difficult for foreign students to study the lexical and semantic structure and master the terminological system of the Ukrainian language. Therefore, we offer for consideration a binary lesson to conduct (проводити / провести) in the given sentences: Твір роблю / роблю проводити тепло і електрику / Зараз саме час провести реформу в освіті. Task 3. From the given nouns form adjectives. Note the doubling / lengthening and simplification of consonants in some of them: туман – туманий, проїзд, тиждень, тварина, птах, хмара, хімія, Азія, людина… Task 4. Read and memorize the management of verbs. Make a phrase with them: В(у) наслідок + чого? (екологічної катастрофи, ...). Впливати / вплинути + на кого? (на мене, ...) на що? (на навколишнє середовище, ...).

Traditionally, after learning new words, we should read the text and learn new information, but a very traumatic moment for students is to read aloud new material, the group immediately cools down, no one hears or understands, because the text is popular science or technical and contains many complex words. Therefore, we suggest that students read about themselves for acquaintance and translate new words. For a more efficient process, we suggest retelling the text in paragraphs, one at a time. If the paragraphs are large, we listen to even one sentence, the structure of the lesson is clearly divided into three parts: cognition, understanding and analysis. We start with learning and researching new words, terms and their meaning in pre-text tasks, the first of which is a commentary on the text. New words must have accents, synonyms, interpretations, examples and explanations of the language they come from. Images (cards, illustrated dictionary or presentation) are very effective for working with new words. For example: 1. Comment on the text: Блика – повітря, густо насичене водяною парою; туман / Mist – densely saturated with water vapor; fog. Кислотні дощі – усі види метеорологічних опадів, кислотність яких вища від нормальної / Acid rain – is all types of meteorological precipitation whose acidity is higher than normal. Hімія – сіль або ефір нітратної кислоти, тощо / Nitrate – salt or ester of nitric acid, etc.

It is very difficult to remember words without using them in sentences and text. Therefore, the next task is to work on words in a variety of exercises and situations. For example: Task 1. From the given verbs form nouns to denote people’s names: лікувати – лікар: слухати, викладати, досліджувати, спостерігати, мешкати… Task 2. Compare the use of verbs to conduct (проводити / провести) in the given sentences: Твір роблю / роблю проводити тепло і електрику / Зараз саме час провести реформу в освіті. Task 3. From the given nouns form adjectives. Note the doubling / lengthening and simplification of consonants in some of them: туман – туманий, проїзд, тиждень, тварина, птах, хмара, хімія, Азія, людина… Task 4. Read and memorize the management of verbs. Make a phrase with them: В(у) наслідок + чого? (екологічної катастрофи, ...). Впливати / вплинути + на кого? (на мене, ...) на що? (на навколишнє середовище, ...).
viaducts, sulphates, nitrates, organic waste, carbon, ash and other air pollutants darken the atmosphere…».

Involves the whole group in the discussion and explanation. The strong help the weak, the weak test the strong to memorize new material or words. Together they help the philologist to understand and analyze the material. Practical training in a monolithic group with different levels of training is difficult, but quite interesting and intense. It differs significantly from a binary lesson in a combination of several specialties. It only takes forty minutes to organize and focus. The amount of material studied is correspondingly small, although the activity is very high. Popular science texts are better suited for such foreign students, although they are sometimes dissatisfied.

Conclusions. It is in the process of approbation and elaboration of certain methodological developments that the scheme that can help foreign students learn the language and guide teachers to find a variety of methods of teaching and presenting language material is clearly emerging. Binary classes have become one of the solutions to the most important problems in conducting practical classes on the Ukrainian language as a foreign language, gave the opportunity to develop analytical skills, ingenuity and competence of students. They have a huge educational potential, as well as a means of increasing the motivation to study subjects, as they create conditions for the practical application of knowledge and develop skills of self-education. But even a well-thought-out lesson will always have certain branches and clarifications, so only in communication and knowledge of the needs of the student can the teacher achieve the truth in teaching and learning.

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