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INCREASING STUDENTS' INTEREST IN THE SUBJECT BY TEACHING BIOLOGY IN ENGLISH

B. T. Zhakhav

Lyceum-School №61 named after K. Satbayev, Astana, Kazakhstan

The article discusses methods and techniques of integrated teaching of biology and English, also types of tasks on the subject. Collections of terminological dictionaries and tasks used in lessons on the subject under study are also presented, their structures are analyzed, and the sources of the literature used are given. It was said about the effectiveness of conducting a lesson in three languages using methods and techniques that contribute to the intellectual abilities of students. Particular attention is paid to CLIL methods, which are among a number of such effective methods. Using this method, the importance of conducting classes in the development of trilingualism is shown. A collection of these tasks can be used in lessons by biology teachers in English. Today, new forms of education are provided, which are used in the comprehensive education of

the younger generation for multiculturalism, diversity, and free communication of representatives of different nationalities and languages in society.

Keywords: trilingualism, integrated subject learning, CLIL method, teaching manual, multilingualism, terminological dictionary, method and method.

Currently, education is closely linked to the development of the global economy. In the modern education system, special attention is paid to multilingualism in the information age. New approaches to education are of great importance in the upbringing of the younger generation of a sovereign country. «Our path to the future is connected with creating new opportunities for unleashing the potential of Kazakhs. A developed country of the 21st century is comprised of active, educated, and healthy citizens,» said the first head of state, N.A. Nazarbayev, emphasizing that all conditions are being created in the country for the formation of competitive individuals capable of moving forward, navigating the global educational space, being well-rounded, and proficient in multiple languages.

In the very important strategy for the country, «Kazakhstan-2050», it has been repeatedly stated that our country must be among the 30 competitive countries in the world. The key to the successful realization of this statement is, first and foremost, the individual, whose formation begins in school. Therefore, the task entrusted to teachers remains challenging [1].

The result of educating students is the mastery of skills such as critical thinking, independent research, and deep analysis of information.In modern society, the education of a multicultural, multifaceted generation for free communication among representatives of different nationalities and languages is very important.

In this regard, the transition to teaching subjects (individual and whole cycles) in schools in the country in English – the language of international communication – becomes necessary and meets the demands of the time, rational, and quite logical.This approach is rational, primarily for subjects of the natural sciences (mathematics, physics, biology, chemistry) since they utilize symbolic systems (mathematics, physics, chemistry) and many systems that do not have specific term translations in the Latin language (biology). The latter allows the teacher to master the language quickly and at the required level, which is challenging, responsible, but necessary in modern conditions.

One of the main objectives of the «State Program for the Development of Education and Science of the Republic of Kazakhstan for 2016-2019» is to renew the content of general secondary education. This requires the development and implementation of a program for the development of the education system, creating conditions for a gradual transition to a competence-oriented teaching model [2].

One of such programs is the «Roadmap for the Development of Trilingual Education in 2015-2020». One of the main ways to implement this program is the development of educational materials for the integrated study of subjects (computer science, physics, chemistry, biology, natural sciences) and language.

Objective: To elevate the country's education to a global level by developing a set of tasks for conducting biology lessons in English to enhance students' educational and cognitive competencies and use in biology classes.

Tasks:

1. Define the significance of the task collection, essential for studying biology lessons in English.

2. Compile a terminology dictionary on topics covered in the 7-8 grades for the subject.
3. Summarize simple and optimized teaching methods for mastering the discipline.
4. Create a collection of tasks and assess their effectiveness in practice.

One of the features of these textbooks is that the primary material for each topic is accessible and understandable in English, with a brief summary of each chapter also provided in English. Additionally, each chapter includes a "Terminology" section where the main biological terms of the chapter are listed in English, Kazakh, and Russian languages, along with their correct scientific translation and definitions.

The textbooks were initially presented in the form of «terminology for classes with advanced English study» The main goal is to develop a multicultural personality, aware of their nation's traditions and customs, proficient in multiple languages, capable of engaging in communicative activities in three languages, and striving for self-improvement.

CLIL, Content and Language Integrated Learning, involves the integrated study of a foreign language with other educational disciplines. In defining the main principles of CLIL, four key aspects are highlighted, aimed at addressing subject-specific and educational objectives, encompassing the cultural and language environment in various European countries. Each of these four facets is implemented differently depending on the students' age, socio-linguistic environment, and the extent of CLIL penetration.

Let's focus on the features of a series of techniques for in-depth study of Biology lessons in English based on the updated curriculum. Conducting lessons in three languages using methods that stimulate students' intellectual abilities. Among the methods that give effective results are the CLIL methods. Special importance in mastering trilingualism is given to conducting classes using this method. Bilimland.kz, a great assistant in verbal education of students, sparked interest among students, encouraged them to save time, and efficiently utilize additional data.

Since the 2014-2015 academic years, an experiment was conducted in a specialized gymnasium for gifted children to prepare for teaching Biology in English. There was a need for programs and methodological manuals for integrated English language and Biology studies, which is why in the 2014-2015 academic year the «Terminological Dictionary for 6th Grade» was developed[3].

In the 2019-2020 academic year, the study of Biology in the 7th grade in English continued. In this class, Biology is studied in English using the Biology Introduction textbook from the «Zambak» publishing house with a load of 1 hour per week[4].

Based on these textbooks, a teaching aid was developed for teaching Biology in 7-8 grades in English using the bilingual textbook Biology, based on the educational standards of the Republic of Kazakhstan[5].

This manual presents vocabulary terms on sections and topics in accordance with the educational standards, tasks for studying and assessing the topic. When developing tasks, the levels of students' knowledge are taken into account. When planning an integrated lesson, I, like other teachers teaching in two languages, use the CLIL method and other approaches, conducting lessons based on two goals: subject and linguistic. There were difficulties in planning the lesson at the initial stage. However, feeling these difficulties, I worked on overcoming them. When studying common themes, students should have all types of speech activities, but in CLIL approaches, you can plan so that there is time not only to speak but also to

watch audio and video. In addition, I made sure that the material can be interpreted through dialogue and conversation using search methods of learning.

During the integrated study of the subject, I noticed that students have achieved the following successes: 1. Compared to biology, I noticed that students have an increased interest in learning terms in English; 2. The methods and techniques used in integrated teaching have increased cognitive activity and engagement of students; 3. If students have a good command of the English language, they will have fewer difficulties in passing other subjects in English. When planning a lesson, every teacher should consider the following points:

For the subject:

- What are the goals/objectives of the lesson?
- What learning outcomes am I focusing on?

Connections:

- What phrases and special terms should I prepare?
- Do I need to test the students' grammatical knowledge (e.g. degrees of comparison of adjectives)?
- How do I conduct discussions?

Cognition:

- What questions do I need to ask to develop critical thinking skills?
- What tasks should I prepare to develop critical thinking skills?
- How can I integrate language and subject content in the development of critical thinking skills?
- What are the goals/objectives of the lesson?
- What learning outcomes am I focusing on?

During lessons:

- Clearly state the goals and expected outcomes of the lesson;
- Create a favorable educational environment for language learning;
- Repeat unclear sentences and phrases several times, if necessary;
- In the early stages of learning the subject, when using a second or third language, students should answer in the second/third language in class;

Encourage and reward students for using the second/third languages in class;

Increase student engagement in various activities. CLIL stands for Content and Language Integrated Learning - it involves the integrated study of a foreign language with other academic subjects.

In defining the basic principles of CLIL, four main aspects are highlighted, aimed at solving subject-specific and educational tasks, encompassing cultural and linguistic environments in various European countries. Each of these 4 aspects is implemented differently depending on the students' age, socio-linguistic environment, and the extent of CLIL penetration[6].

Therefore, the task formats provided in the compiled textbook include:

- Necessary terms;
- Completing missing words in gaps;
- Tasks based on pictures;

- Identification tasks;
- Mind map creation;
- Brief answers to questions;
- Translation of texts;
- Test tasks;
- Discussion of questions;
- Compilation of glossaries;
- Writing terms in three languages;
- Drawing tasks;
- True/false statements;
- Filling in tables.

The topics covered in the textbook are based on the updated curriculum for 7th grade. Sincethe thematic-calendar plan is written in accordance with the curriculum, the lesson content does not deviate from the curriculum.

Nowadays, society is becoming more and more complicated. In accordance with the new century, a generation with outstanding abilities and qualities is being formed. And all this directly depends on the sphere of education-science. Pedagogical skills, new pedagogical methods, new types of classes based on new pedagogical technologies, represent various means of arming the younger generation, the personality with knowledge and skills. This partly means that biology lessons are taught in the language of instruction in Kazakh or Russian, but with very carefully thought-out «inserts» of English terms in the course of the lesson. In this case, the explanation of the essence of the terms being introduced takes place in the language of instruction. The English interpretation of specific terms is given in the language of instruction [7].

To visually display such a scheme, the following is proposed in this section of the training manual:

- a list of terms by subject and class;
- lesson plan, or short-term plans,
- collections of tasks for mastering topics.

Summarizing the above concepts, it can be concluded that the joint performance of tasks by students, along with independent work, gives an effective result. The most important task of school education is to solve the problem of forming an information culture of students based on interdisciplinary connections. Based on the above, a short dictionary of biology terms and forms of tasks that are important for learning the lesson are presented in the subject-language integrated classes. The work on the compiled collection will be further improved. The difficulties and problems encountered in the study of the discipline in the previous time are taken into account. We hope that the collected collection will allow us to develop the cognitive and creative potential of students. It is worth noting that in the republic, within the framework of the National Plan «100 concrete steps», a phased transition to English is being carried out in secondary schools in Kazakhstan.

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РОЛЬ ЛАБОРАТОРНЫХ РАБОТ В РАЗВИТИИ ИССЛЕДОВАТЕЛЬСКИХ КОМПЕТЕНЦИЙ ШКОЛЬНИКОВ

Жузбаева Г.О., Шайбек А.Ж., Сейсебаева А. Д.

Карагандинский университет имени академика Е.А.Букетова, Караганда, Казахстан

The article presents the results of a pedagogical experiment on the formation of research competencies in schoolchildren within the framework of the organization of laboratory work in biology. The laboratory work was organized in such a way that all assignments contained research tasks and exercises.

Keywords: research activities, competencies of schoolchildren, laboratory work

Идея вовлечения учениковв исследовательскую деятельность для улучшения эффективности достижения целей обучения начала прослеживаться уже в работах методистов А.Я. Герда, Р.Э. Армстронга, которые сформулировали общие подходы в методике исследовательского обучения. С того времени педагоги и методисты систематически возвращаются к исследовательской деятельности школьников, которая при этом рассматривается в качестве продуктивного средства развития у них познавательной мотивации [1,2], при этом главной целью исследовательского обучения всегда являлось формирование у учащегося способности самостоятельно, творчески осваивать и перестраивать новые способы деятельности в любой сфере человеческой культуры [3].

Особое развитие исследовательское обучение, а соответственно формирование исследовательских навыков и умений, познавательных компетенций обучающихся, приобрело в обновленном содержании образования. Здесь исследовательское обучение рассматривается как фактор саморазвития и самообразование школьника, также оно оказывает большое влияние на