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# ТӘРБИЕЛЕУ ЖӘНЕ ОҚЫТУДЫҢ ТЕХНОЛОГИЯЛАРЫ МЕН ТЕОРИЯСЫ

## ТЕОРИЯ И ТЕХНОЛОГИИ ОБУЧЕНИЯ И ВОСПИТАНИЯ

### THEORY AND TECHNOLOGIES OF EDUCATION AND TRAINING

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#### **Problems of content and language integrated learning in educational institutions**

The article considers one of the most important directions of the development of education — the use of CLIL (Content and Language Integrated Learning) language-based integrated learning. Despite the fact that this issue is widely discussing in the scientific and pedagogical literature, the schools are dominated by a cognitive approach, and students remember (for a time) significant amounts of information, rather than developing the basic competencies necessary for successful activities. Education based on this approach provides students with the opportunity to learn discipline and a foreign language at the same time. The advantages of this method are revealed. Conditions are formulated for the successful introduction into the educational process of models of subject-language integrated learning. The difficulties of integrating the subject and language experience, both students and teachers, are determined. In modern society, where the issues of socialization of people in intercultural space are in the first place, the possession of a foreign language is regarded as one of the tools for expanding knowledge and opportunities. In this regard, new educational technologies are emerging.

*Keywords:* students, integration, intrasubject, interdisciplinary and intersystem integration; subject-language learning; foreign language; integration problems.

In the modern multipolar world, in the conditions of dynamic globalization of all spheres of real social reality, there is an urgent need for the formation and development of a highly educated, intellectually developed personality with a holistic view of the world picture, with an understanding of the depth of the connections of phenomena and processes that represent this picture. A multipolar world can not be assimilated by people with a narrow scope of thinking, for an increasing number of generally accepted problems, due to their multimodal nature, require interdisciplinary analysis and synthesis. While solving them, it is necessary to search and find the unity between various alternative positions, images of thinking and the language picture of the world.

On October 29, 2010, the President of the Republic of Kazakhstan issued a decree on the State Program for the Development and Functioning of Languages in the Republic of Kazakhstan for 2011-2020, which defines the language policy of the state for the immediate and long-term perspective, namely: strengthening the institutional status of the Kazakh language as a state language, preservation of the sociolinguistic activity of the Russian language and the development of English as a means of integration into the world. The developed program provides for the main points of modernization of the education system in the Republic of Kazakhstan, through the introduction of trilingual instruction and the need for a quality study of the English language. These circumstances and a number of external and internal factors initiate the transformation of integration into the leading pattern of the development of pedagogical science, including the methods of teaching English. The necessity and justification of using the concept of «integrative activity» is due to a number of circumstances [1].

First of all, there is a marked decrease in the interest of students in learning. In addition, students are not satisfied with the lack of thoughtfulness and the development of existing programs and textbooks for general education schools.

Secondly, in the minds of students are formulating active and comprehensive picture of the world, high school students begin to actively apply their knowledge in practice, because knowledge is easier to discover its applied nature, and the teacher sees and reveals his subject in a new way, clearly realizing its relationship with other sciences.

Thirdly, all school disciplines have a unique integration potential, but their ability to combine, the effectiveness of the integrated course depends on many conditions. Often the successful study of one subject by schoolchildren depends on the availability of certain knowledge and skills in another. For example, the competent construction of sentences in English depends on students knowledge of parts of speech in Russian. But even if such an exact indication of a possible partnership is lacking, while strictly evaluating the content plan of subject, the educator can see that «isolated» teaching is often detriment and unufficient.

Fourthly, in the programs of many disciplines there are many common themes, common problems and issues, phenomena are often studied, and the same objects are examined from different perspectives. All this is an «application» for integration, at least on specific topics, and it is in such cases that there arises the need for separating «managed» integration from «spontaneous» from each other.

Fifth, the form of conducting integrated lessons is non-standard, interesting [2]. The structure of such lessons differs with clearness, compactness, conciseness, the logical interdependence of the educational material at each stage of the lesson, and the great informative nature of the material.

Thus, being regularity in the development of modern methodological science, the integration of educational subjects is a very promising means of improving the entire education system.

The integration process (from Latin *integratio* — connection, restoration) is the unification of previously disparate parts and elements of the system on the basis of their interdependence and complementarity [3]. As a pedagogical concept, integration has a slightly different meaning. It can be defined as a multi-component, well-structured, purposefully organized link of all elements of the educational system, which as a result should lead to the student's self-development.

The core of integration as the process of establishing the interaction of integration objects is precisely the connection. In the modern school are implemented in several areas and at different levels: intrasubject and intersubject. An example of intrasubject integration is the systematization of knowledge within a certain discipline - the transition from disparate facts to their system in the process of opening a new law, clarifying the picture of the world. Integration of this level is aimed at «compressing» the material into large blocks, which ultimately leads to a change in the structure of the content of the discipline. In this sense, the integrated content is «information more capacious and is aimed at forming the ability to think in information-intensive categories» [4]. In school, content can have a different structure of presentation, where individual knowledge or their elements are «linked» in a different way. I.P Podlasyy distinguishes four types of structure: linear, concentric, spiral and mixed. Intra-subject integration is characterized by a spiral structure based on the concentricity principle. The knowledge of value in such an organization can be carried out either from the private (detail) to the general (whole) or from the general to the particular. The content is gradually enriched with new information, connections and dependencies. The peculiarity of this form is that the students, without losing sight of the original problem, expand and deepen the range of related knowledge.

Intersubject integration is manifested in the use of laws, theories, and methods of one discipline in the study of another. The systematization of content at this level leads to that cognitive result, like the formation of an integral picture of the world in the minds of students. This leads to the appearance of a qualitatively new type of knowledge, which finds expression in general scientific concepts, categories, and approaches. Intersubject integration significantly enriches the intrasubject.

B.Z. Vulfov distinguished inter-system integration of content. An example of such an integration process can be a system of additional education, focused on socialization, education and self-development [5].

Integration as a principle is manifested in the transformation of all components of educational systems of different levels: schools of an integrated type (schools-gymnasiums, school-lyceums); Integrated educational programs and integrated training courses are being developed;

Practice of integrated lessons, which will be discussed in more detail.

To successfully implement integrated learning, it is necessary to understand the functions of integrated lessons:

1. Methodological function — the formation in students of modern concepts of the disciplines studied.
2. Educational function — the formation of system, the connectedness of individual parts as a system, depth, flexibility, awareness of cognition.
3. Developing function — the formation of cognitive activity, overcoming inertia of thinking, broadening of horizons.
4. The educational function reflects the polytechnical orientation.
5. Constructive function-improving the content of educational material, methods and forms of organization of training.

In the case of integrated language and subject teaching, the CLIL (Content and Language Integrated Learning) approach, proposed by European scientists, based on the idea of integrating subject and language learning, it is important to purposefully assimilate the subject, the language and the learning skills simultaneously in a comfortable environment [6]. Students participate in the training, for which the language of instruction used is a non-native language. Despite the fact that the emphasis is on teaching the relevant subject, attention is always drawn to the mastering of the language and, first of all, to its understanding, therefore the result of learning the language depends on the language needs of the subject. For this purpose, joint work is required between the relevant teachers. The basis for the methodology of teaching language and subject is the principle that subjects are taught in a language that is not the mother tongue for the pupils. Mother tongue is a means of mastering the educational material, and not an end in itself. The approach is based on the context: the subject is integrated into the language lesson, and the language is taught in a lesson, the language is integrated with the rest of the curriculum. The subjects are integrated with each other (the content of the studied subjects in the native and target languages is also integrated among themselves) through themes and tasks. The use of language and assimilation takes place naturally in real life situations and is integrated with the entire learning process. Thus, all subjects and languages are mutually supported.

Practical experience of teachers shows that the study of a non-native language, where the language and other subjects are integrated among themselves, is much more effective than an isolated study of the language (the so-called traditional language learning). Despite the fact that the focus is on teaching the subject and language, in fact there are three areas of learning: subject, language and teaching. When teaching the language and the subject, the trainees must learn several new language strategies: to realize the values, to transfer the language skills and knowledge from one language to another, to develop metalinguistic and cultural competence. The above is achieved by completely immersing the instructors in the language environment, as they pass through themselves sufficiently large the amount of language material.

The vocabulary of the student is enlarged due to the subject terminology, his skills and skills are being developed in the use of an academic foreign language. There is a deeper understanding of scientific concepts, students are easier to learn the scientific concept, since the acquisition of the term and its correlation with the corresponding scientific concept occur simultaneously. In the process of using CLIL, the cognitive processes used in the study of a foreign language and the discipline of a non-linguistic cycle, for example, mathematics, physics, etc., interact, which has a positive synergistic effect, expressed in the development of the students' thinking skills and in increasing motivation to learn discipline and language.

The didactic analysis of various integrated lessons makes it possible to determine the structure of the integrated teaching of the subject and language [7]:

- an introductory discussion or game that is related to the topic of the lesson (5 minutes);
- with the students discuss the language goals, objectives of the subject and the goal of learning skills, as well as the expected results (3-5 minutes);
- preliminary knowledge of pupils is clarified, the available information is arranged under the guidance of the teacher, students are helped to state that they would like to know the new topic (5 minutes);
- the students read the short text themselves, find in the text certain information on the topic (5 minutes);
- group work compares information received by students in reading, read is used for the purpose of drawing up something new, for example, a plan (10 minutes);
- students are asked questions that require critical / constructive thinking to improve the group's overall and language work (5 minutes);
- get acquainted with the results of one group, listen to constructive criticism or comments from other groups, the group will agree on general conclusions (5 minutes);
- the goals of the lesson or expected results are reviewed, their degree of achievement is analyzed, and further steps (3-5 minutes) are determined.

In addition, all types of speech skills should be used in every lesson: listening, reading, speaking, writing and recording 4 «C» CLIL techniques: content, communication, cognition, culturology.

The use of this technique in practice has made it possible to identify its advantages, as well as some problems of its implementation in the educational process. One of the main advantages of this technique is an increase in the motivation to learn a foreign language from students. Learning a language becomes more focused, because the language is used to solve specific communicative tasks. In addition, students have the opportunity to better understand and understand the culture of the language being studied, which leads to the formation of the sociocultural competence of students. It should also be noted that work on various topics allows you to learn specific terms, certain language constructs, which helps to replenish the vocabulary of the learner with the subject terminology and prepares him for further study and application of the acquired knowledge and skills.

Despite the obvious positive aspects of this technique, a number of problems can arise when introducing into the educational process, the main of which are as follows:

1. Lack of scientific and methodological support in general schools (programs, textbooks, methodological recommendations). The creation of new integrated courses (physics and foreign language, biology, geography and foreign language) for high school students will require a revision of the curriculum. In this regard, a thorough experimental and experienced verification of the various solutions to the problem is needed.

2. Lack of a multi-level model of integration (from pre-school education to higher educational institutions), which would provide for various stages of growing up children. A feature of high school students is the desire to penetrate into the essence of the phenomena of nature and social life, to explain their interrelations and interdependence. At the same time, students try to develop their own point of view, give their assessment of the events that are taking place. The average level of students is distinguished by an increased level of independence in the search and assimilation of knowledge, and at the same time inability to connect the perception of the surrounding life with the teaching material, the specific selectivity of attention. Non-standard lessons carry teenagers, and they can concentrate for a long time on one material or phenomenon, but mild excitability often causes involuntary switching of attention.

3. Subjects are selected by teachers spontaneously, without regard to similar topics. Meanwhile, it is necessary to carefully select those subjects that are supposed to be integrated in order to identify common directions in the topics and designate the purpose of the future integrated lesson. At the same time, one should not forget that the goal of the lesson should be directed to a deeper study of the material and practical reinforcement of theoretical knowledge, which is necessary for better mastering the material.

4. It is very difficult to integrate integrated courses, lessons into the school curriculum because of the multidisciplinary nature of the program. In the school there are subjects for which a small number of hours are allocated. There are difficulties in organizing the educational process. The result is insufficient quality of training. Eliminate multi-subjectivity can be due to the integration of academic disciplines. Integration will save time and its rational distribution.

5. Teachers who practice integrated lessons in their activities do not always follow the rules. This is due to the fact that teachers, not having the experience of joint cooperation, are carried away, forgetting that in carrying out this type of lesson, the amount of time allocated to each of the teachers is cut by half, and often do not have time to keep within the framework of one lesson. When drafting the lesson, teachers should clearly allocate the amount of time assigned to each teacher and adhere strictly to this rule.

6. Difficulty in presenting an integrated course. Conducting integrated lessons requires teachers to be highly professional. The uniformity of lessons in our school has long become a brake on developmental learning. Educators should not only carefully think through the forms and methods of work in such lessons, but also be able to interact in a coherent way, showing the children an example of mutual cooperation, if necessary supporting and replacing each other, i.e. actually own the subject of another teacher.

7. The study of subjects in a foreign language is new to students and causes fear and fear. Typical anxiety is associated with learning, its quality and academic achievement: experiencing due to suitable teaching materials, understanding in the lesson. They are afraid that they will spend more time doing homework, they are afraid of responding to a non-native language in school, etc.

8. The teachers and teachers of the subject and language have their own problems and fears: they experience that they do not know the language well enough and can make mistakes; subject teachers are afraid that their insufficient knowledge of the language will not allow teaching the subject at a high level. Also, the lack of methodological literature and the availability of educational materials are affected.

9. Students who study in English get tired, as a rule, faster than pupils who study in their native language. Their attention is dissipated, because in addition to the topic of the subject, students should focus on understanding the language. A teacher limited by a rigid framework of the regulation of the lesson does not always have the opportunity to vary the duration of any activity planned in the lesson.

10. Lack of a unified system for assessing the integrated lesson. Teachers today are much diluted evaluation criteria, because you have to evaluate both knowledge of the subject and linguistic skills. Not always assessments are objective; in this connection there is an urgent need to develop a system for assessing the results of integrated learning of language and subject.

11. The implementation of integrated language and subject teaching in Kazakhstan is currently episodic and, if implemented, partially, within individual educational institutions (Nazarbayev Intellectual School). At the level of the school program, this method is presented as separate integrated lessons (history - English, geography - English, etc.)

Thus, it can be argued that integration as a whole is a means of forming the cognitive competence of students and the real need of the time. Certainly integrated language and subject teaching is a rather complex system. And in order to effectively and professionally use them in practice, one must know the theoretical aspects of integrated learning, and also to understand the peculiarity of their use. Despite the absence of a unified approach to the problem, the integration process is a promising step towards modernization of education, leading to the formation of a polylingual personality is one of the main directions for the development of the multicultural educational space of modern Kazakhstan. Further development in the context of integrated learning is urgently required by all of the above problems.

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### Білім беру мекемелеріндегі пән-тілді кіріктіре оқытудың мәселелері

Мақалада білім беруді дамытудың маңызды бағыттарының бірі — CLIL (Content Language Integrated Learning) кіріктірілген (интеграцияланған) оқытуды пайдалану қарастырылды. Бұл мәселе ғылыми-педагогикалық әдебиетте кеңінен талқыланып қарамастан, мектептерде когнитивтік тәсіл басымдыққа ие, және оқушылар табысты әрекет үшін қажетті негізгі құзыреттілікті дамытудың орнына, маңызды ақпарат көлемін (уақытша) есте сақтайды. Бұл тәсіл негізінде оқыту оқушыларға пәнмен қатар шет тілін үйренуге мүмкіндік береді. Осы әдіспен берілетін артықшылықтар аталды. Тілді біріктірілген түрде оқыту үлгілерін оқу үрдісіне сәтті енгізу үшін жағдайлар жасалды. Сонымен, оқушылар мен оқытушылар сияқты, сабақты біріктірудің қиындықтары және тілдік тәжірибесі анықталды. Қазіргі қоғамда бірінші кезекте мәдениетаралық кеңістіктегі адамды әлеуметтендіру мәселелері шет тілін меңгеру мен мүмкіндіктерін кеңейтудің бір құралы ретінде авторлармен қарастырылды. Осыған байланысты жаңа білім беру технологиялары пайда болды.

*Кілт сөздер:* оқушылар, интеграция, пәнішілік, пәнаралық және жүйеаралық кірігу, пәндік оқыту, шет тілі, кешенді мәселелер.

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## Проблемы предметно-языкового интегрированного обучения в образовательных учреждениях

В статье рассматривается одно из важнейших направлений развития образования — использование предметно-языкового интегрированного обучения CLIL (Content and Language Integrated Learning). Несмотря на то, что этот вопрос широко обсуждается в научно-педагогической литературе, в школах преобладает когнитивный подход, и учащиеся запоминают (на время) значительные объемы информации вместо того, чтобы развивать базовые компетентности, необходимые для успешной деятельности. Обучение, базирующееся на данном подходе, предоставляет учащимся возможность изучать дисциплину и иностранный язык одновременно. Раскрыты преимущества, которые дает данная методика. Формулируются условия успешного внедрения в учебный процесс моделей предметно-языкового интегрированного обучения. Определяются трудности интеграции предметного и языкового опыта как учащихся, так и педагогов. Авторами сделаны выводы, что в современном обществе, где на первое место ставятся вопросы социализации человека в межкультурном пространстве, владение иностранным языком является одним из инструментов расширения знаний и возможностей. В связи с этим появляются новые образовательные технологии.

*Ключевые слова:* учащиеся, интеграция, внутрпредметная, межпредметная и межсистемная интеграция; предметно-языковое обучение; иностранный язык; проблемы интеграции.

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