

## Content and Language Integrated Learning: Potential and Obstacles of Its Implementation in Russia

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### Abstract

Reforms and initiatives applied to the field of Russian higher education during the past decade focus particularly on extending the scope of communicative educational space and scientific fields integration. Consequently, linguistic competence contributing to significant acceleration of the processes of globalization and internationalization of the society as a whole becomes the key component of higher professional education. It is necessary to ascertain that the current system of language education in Russian universities fails to deal with the tasks in hand comprehensively. The search for more efficient didactical tools and ways of organizing teaching processes culminated in choosing the paradigm of integrated education, specifically, integration of subject knowledge and foreign language. This approach is well-renowned in scientific and educational literature as CLIL (Content and Language Integrated Learning).

The major objective of the present article is to analyze the current attempts of implementing CLIL in Russian Universities through the example of Tomsk Polytechnic University. The analysis comprises the effectiveness of CLIL didactic capacity, the prerequisites for its emergence as well as needs and challenges in the system of Russian higher education and intellectual labor market. As a conclusion, we offer a systematic list of measures that tend to improve the situation.

**Key words:** *Content and Language Integrated Learning, professional training, synergetic effect, immersion, collaborative teaching, tandems.*

**Introduction**

The paramount objective of Russian higher education in accordance with The Strategy for Innovative Development of the Russian Federation until 2020 is to assure success and well-being of Russian society by ensuring a high level of population welfare and developing human resources in the fields of science, education, technology and innovation. Meeting this objective is within the area of responsibility of Russian universities (Glagolev, et al 2014:426). For this reason, a lot of projects and programs aimed at the development of higher education have been implemented with the support of Russian Government and the Ministry of Education and Science<sup>1</sup>. The global goals of these programs and projects are as follows: to increase the higher institutions' competitiveness among the leading scientific and educational centers and to increase the attractiveness and competitiveness of Russian education in the market of international educational services.

The “triangle of knowledge” model, which implies the integration of three elements being education, research, and innovation, is considered to be of top priority in the process of creating an innovative society. The synergy between these spheres is completely consistent with the requirements of global economy based on knowledge (Glagolev, et al 2014:426). Knowledge, in turn, is acquiring the status of convergence and interdisciplinarity due to the meta-competences required by modern technological processes.

Comprising knowledge and competencies as well as unifying approaches applied for solving global tasks of the world level are aimed to generate common concepts of recognizing the ways to solve these tasks and intensify the need for international collaborations. Ability to communicate, including fast language shift, which implies the ability of a communicator to join a discussion (written or oral) during the process of solving professional tasks of various levels, tends to be one of the most important requirements in addition to knowledge competences in subject areas.

Due to the primary responsibility for the teaching staff capacity building Russian universities are taking up the challenges of modern society and beginning an active search for effective teaching methods. The classical nature

of the higher education of the Soviet era is undergoing extensive renovation both at the level of education management and at the level of tools and didactics. In this case, we do not dare to assert that the approaches of the past have become obsolete, should be archived for the future generations and only signify the factual background and a certain stage of the development of Russian higher education. On the contrary, we tend to believe that modern technological stage and resources accumulated in the form of experience and knowledge can improve organizational and pedagogical conditions of learning environment in a certain amount of synergy and, thus, significantly affect the effectiveness of Russian higher education in general.

The search for new teaching methods was based on the concepts of knowledge efficiency and practical focus of skills. Their sustainability and stability are determined by the frequency of implementation practice, specifically, by direct involvement into the process of solving cognitive and personality-significant tasks. Knowledge cognition and personalization are the key components determining the effectiveness of the obtained knowledge as well as its sustainability and stability (Grigorieva 2016:223; Tsarenkova, Shpanovskaya 2016:187; Kuznetsova, Kuznetsov 2016:173; Zaripova et al 2017:7; Mehisto et al 2008:238; Baker 2011:497; Coyle et al 2010:17; Van de Craen et al 2007:9; Meyer et al 2010:19; etc.).

### **CLIL Historical Data**

We consider CLIL (Content and language integrated learning) to be an example of effective approaches to university education. A distinctive feature of the approach is teaching in a foreign language when the foreign language is not a target object of study but a tool for studying other subjects. The approach under consideration is distinguished by augmenting the study of a foreign language with a functional nature. Specifically, the major objective of studying a language is to practice it via oral and written tasks rather than to drill lexical and grammatical material and to construct correct statements based on rules. In other words, the framework of the CLIL approach enables learners to extend their content and language knowledge into realistic contexts (Agolli R.I.

2013:20), solve professional problems and search for information in their professional domain.

It is worth mentioning that originally it was not the initiative of the education stakeholders to implement the approach into the Russian education system. The approach appeared at a time when the tasks of internationalization were gaining momentum and becoming more monumental; it was the period when foreign language competence was considered to be an integral part of the overall engineer competence and the need to save teaching and time resources increased.

CLIL approach initially generated as a form of bilingual education and had slightly different objectives in contrast to the ones it has at present. Moreover, it is worth noting that CLIL objectives can be special for different countries and are determined by the categories of incoming conditions and initial requirements ranging from cultural to political ones. These requirements include the following: the extent of university internationalization, the degree of the multilingual environment development, the level of incoming mobility, the degree of preparedness of the stakeholders being teachers and students, the level of development of teaching techniques and availability of practices.

CLIL approach is frequently associated with EMI (English as Medium of Instructions) approach, which does not specifically highlight teaching a professional foreign language as the goal of studying. As a rule, the EMI approach is effective in English-speaking countries where English is the main and single language of instruction. Indisputably, EMI includes the adaptation methods, which facilitate understanding due to the fact that the primary goal is actually subject knowledge and it is the subject knowledge to evaluate. The language in this case acts only as a tool for information transmission and cannot be subjected to evaluation.

The history of CLIL in the system of Russian higher education is not extended due to the lack of the approved and adjusted practices and theoretical concepts. CLIL approach is rather controversial with regards to ambiguity of understanding and perception of a new didactics by academic community. Moreover, the mentioned contradictions are observed both at the management

level and at the level of teaching, as well as at the level of understanding this practice by students and approving it. Much depends on the latter due to the fact that if the practice is not accepted, for example, for the reason of students' insufficient level of language proficiency, then the teachers' motivation to do their work in an efficient and more creative way decreases.

### **CLIL Experience of Tomsk Polytechnic University**

The attempts to generalize Russian experience concerning the CLIL developmental history were first made approximately 5 years ago, which can be seen from various theses and scientific publications (Zaripova 2016:196; Grigorieva 2016:223; Almazova et al 2018:379; Salekhova, Danilov 2015:226; Pichkova 2017:4; Litvishko, Chernousova 2015:4; Zaripova, Salekhova 2015:5; Laletina 2012:4; Gudkova, Burenkova 2015:7; Grigorieva, Yakhina 2017:6; etc.).

Following the generalized experience we are going to conduct our own research covering CLIL education through the example of Tomsk Polytechnic University. Herewith, our analysis assumes studying not only the current situation and prerequisites for its occurrence but also the potential of this approach from the standpoint of influencing the solution of multi-level tasks for different target groups. For a start, it is worthwhile to delve into the history of the issue and give brief information on how CLIL appeared in the "biography" of Tomsk Polytechnic University (TPU).

Thus, the approach under consideration replaced the approach of ESP and interdisciplinary tandems, which were unique in nature and, virtually, had no analogues in the Russian higher education system. Let us provide a concise presentation of the tandems.

Interdisciplinary tandems emerged in the practice of TPU in 2008 and existed until 2011. The main intended purpose of tandems was the collaboration of subject teachers and English teachers while delivering a single training course. Responsibility was distributed in accordance with the competences of teachers in the way that English teachers were responsible for the language component, while subject teachers were in charge of the subject knowledge delivering and skills development. Such training was specified by the narrow

professional scope of the courses, namely, a specific purpose was determined by a definite knowledge area, for example, not just Information Technology and Biomedicine, but “Databases” and “Nanocomposite Polymer Materials”, etc.

No doubt this approach lies in the use of the ESP approach and fully adopts its methodology but at the same time it has a more precise content based on “special purpose”. However, there arises a question: “What prompted the university to move to a new level of understanding this approach?” The answer is rather simple, the university was triggered to make such a decision due to dissatisfaction with learning outcomes, which, according to a preliminary hypothesis, was the consequence of the limitations concerning the proposed learning context and context-based language forms that were chosen as the teaching basis by language teachers, who did not have engineering education, and was confined to the formation of common professionally oriented skills and knowledge. In other words, the discussion of professional topics was reduced to the problems stating under the conditions of inability to find practical solutions.

The effectiveness of the tandems was obvious; however, the massive introduction of such courses in the educational process required a significant increase in the time resource for the training materials development and implementation. In addition, this practice failed to provide the desired degree of sustainability while its effectiveness depended on a certain level of language proficiency (B2) of subject teachers.

Thus, the university had to abandon the “expensive” approach of tandems and make another attempt to optimize the resource and maximize performance by integrating subject and linguistic competencies as well as knowledge and to begin its CLIL history. Consequently, by the time CLIL courses were introduced the university in the person of subject teachers already had quite a lot of experience in delivering subjects in a foreign language. Accordingly, there was also a certain toolkit of methodological practices, including those created with the help of linguists (language teachers). However, even before the implementation of the new approach was triggered, the stakeholders started raising the following questions:

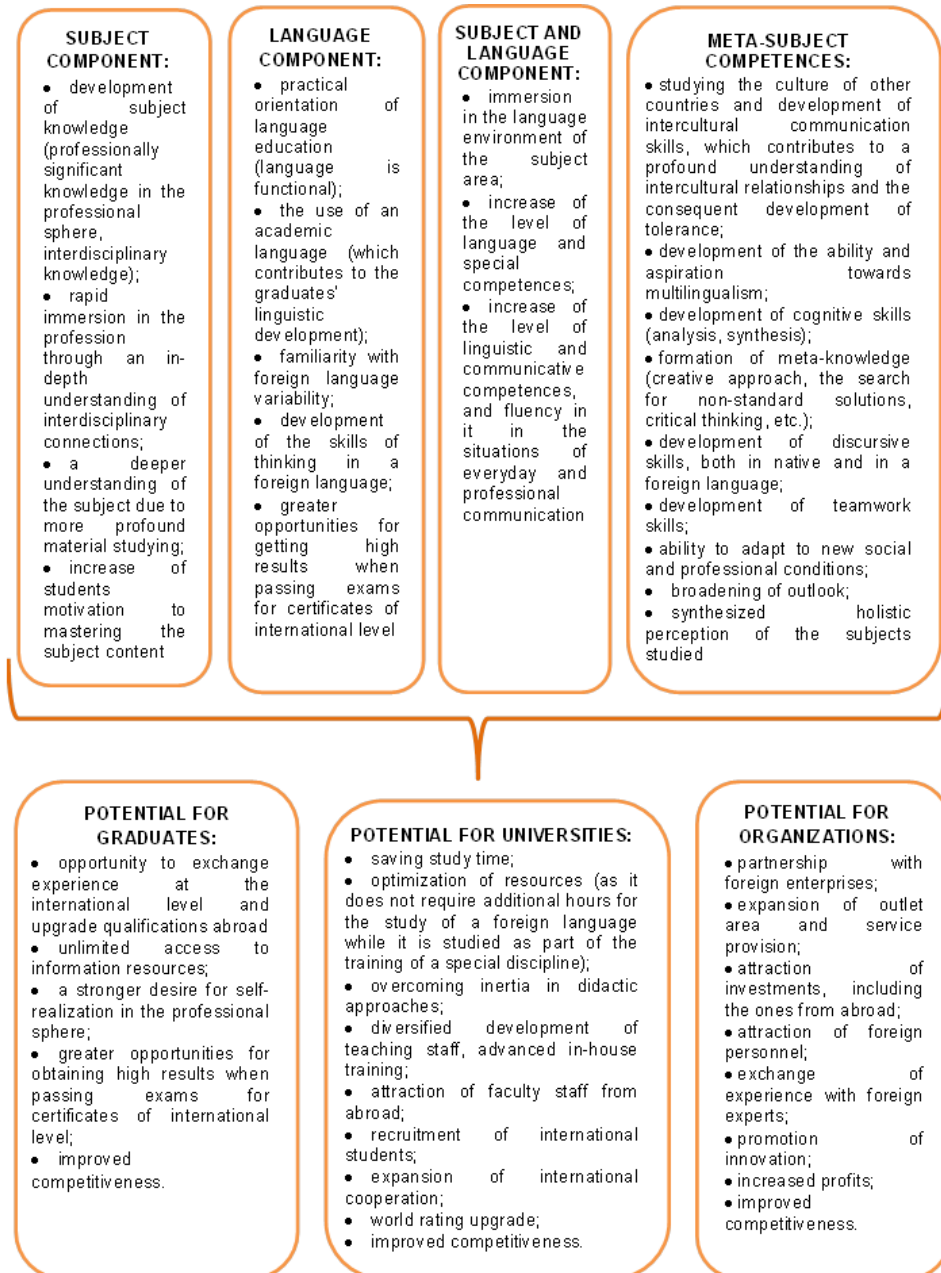
- What level of subject teacher's proficiency in a foreign language can be considered sufficient for the implementation of CLIL courses?
- Can a CLIL course have not a purely subject nature and be directed to the developing skills of academic writing, scientific communication, etc.?
- What is the nature of the language and subject departments' interaction?
- What exactly serves as content: subject or language?
- What to assess and in what way?

It is fair to note that many of these questions have remained open, which once again justifies the necessity of conducting additional analysis and experiments in order to form a clearer understanding of the approach and developing its concepts and principles of organization and management.

We will base our analysis on the identification of 1) the degree of appropriateness of the approach and 2) the reasons preventing its correct implementation, which would enable to consider the approach to be undoubtedly efficient. In conclusion, we will offer a set of measures contributing to the improvement of CLIL implementation in Russian universities, in general, proceeding from our own experience and that of our colleagues.

To begin with, let us determine the benefits of the CLIL approach drawing on the research conducted in the past (Zaripova 2016:196; Grigorieva 2016:223; Shmakova, Fokina 2016:4; Filipovich 2015:5; Popova et al 2018:14; etc.). Now we are going to visualize the list of advantages, having preliminarily divided them into the following categories: subject, language, subject-language and meta-subject components. On the basis of the revealed content of each category, we will try to hypothetically determine the potentials for such stakeholders as universities, graduates and organizations. The results of the analysis are shown in Figure 1.

Figure 1. CLIL components and potentials for different stakeholders





Having analyzed the advantages of the CLIL approach, we can conclude that it is quite effective and can be used in educational trajectories of universities in view of the fact that:

1. A foreign language and its studying in accordance with university programs should be continuous, which is different at present. In compliance of educational standards a foreign language is an obligatory course and is studied by students during the first two years in university. Afterwards a two-year break follows. Some universities find local resources to fill this gap offering elective courses, however, this practice is troublesome and unstable. The negative outcomes of such a break are detected at the level of master programs, when the program requirements greatly exceed the students' level of a foreign language. A two-year break and the lack of practice and motivation to study a foreign language are to be blamed for this. As a result, the programs exist independently and the teachers have to alter their courses annually due to the need to adapt them to the level of students' preparedness, which also has a negative impact on the teachers' motivation and the quality of education.

2. The CLIL approach implies a foreign language functional studying, which naturally increases the efficiency of mastering the subject area with the objective to develop communication skills required for solving professional tasks.

3. It is widely-known that the motivation to learn a foreign language is rather low in Russia. This can be stipulated by the lack of necessity to use a foreign language in everyday situations due to the low level of migration and the dominant use of the Russian language, which is spoken by the overwhelming majority of people in the country. In other words, despite the multinational nature of the country there is lack of the problem of multilingualism at large, and, therefore, there is no need for language integration as a factor of social well-being. Hence, there is no need to equalize the professional opportunities of all graduates and develop training programs in a foreign language for all students. In this context, the use of the CLIL approach creates certain conditions of so called coercive nature or forced practice when a foreign language becomes the only language of instruction. However, there is a

sticking point here as well. According to the vice-rector of Moscow State University, academician A. R. Khokhlov, translating all courses into English is meaningful only when either the teachers or the students do not understand Russian. The situation when everyone speaks Russian at a far greater level than English, and the lectures are nevertheless delivered in English, will be at least unstable<sup>2</sup>. And this is the reason why the coercive nature must change its status of coercion to the status of necessity, which will be more accessible for each stakeholder (teachers, students, and management).

4. Russian universities feel the need to expand the boundaries of education internationalization and to enter the world level of competitiveness. This task turns out to be quite complicated and is accompanied by such difficulties as a low percentage of promising and unique educational programs in foreign languages, which can attract more foreign students. The situation is due to the unpreparedness of the teaching staff to conduct their courses in a foreign language. Thus, the CLIL approach is partially able to solve this problem by creating the conditions forcing continuous practice for teachers and constant development of language competence, because teaching professional disciplines in a foreign language becomes one of the prerequisites for qualifying a higher school teacher.

5. Enterprises have a need to share experience with foreign colleagues, attract foreign investment, etc. However, the lack of professionals who are able to work in international groups and projects, to represent their organization at the international level (at foreign exhibitions, conferences, etc.) impedes meeting this objective.

6. Russian education system has a rather rigid structure, which implies studying a certain set of disciplines with a set number of hours allocated for their mastering and it seems almost impossible to change this system. The CLIL approach can be integrated into the curricula of universities without the need for fundamental changes in view of its implementation flexibility. The choice of a model (partial CLIL, based on a modular system) can be chosen directly by a university with regards to the specific aspects of training, the level of

preparedness of teaching staff, specific professional requirements for future graduates.

Thus, the above stated arguments confirm our hypothesis about the feasibility of using content and language integrated learning in Russian universities to a certain extent. However, as is well known, there is normally a clearly stated inconsistency between a theoretical possibility and practical realization.

With the objective to find out whether Russian universities understand how CLIL training should be structured and what methodology the approach has we conducted a survey among the subject teachers currently engaged in CLIL in order to get a general impression of their satisfaction and understanding of the didactic goals they are to reach and tasks they are to accomplish.

### **CLIL Survey Results**

The survey comprises 35 subject-matter teachers of TPU. The participants for this research are lecturers of different academic rank and experience teaching different subjects – mechanical engineering, material science, computer science, and electrical engineering. All of them have the teaching experience in CLIL context at least of less than 2 years, if in percentage – 50% of respondents have been teaching CLIL for less than 2 years and 50% – for the period within 3-10 years.

The question falls into the categories as a) THREE things you enjoy in teaching CLIL and THREE biggest challenges in it; b) specific feature of CLIL methodology, your insights in it (goals and objectives, main principles); c) THREE most important professional qualities needed for CLIL teaching; d) CLIL teaching materials, their accessibility and availability; e) assessment standards – THREE weak and strong points.

The collected data show a wide range of responses regarding the overall attitude of the teachers towards CLIL pedagogy in general and their practice in it. We will present the answers in the order of frequency:

– things they enjoy in CLIL – *good support through constant practice to English language skills, acquiring new professional knowledge through original*

*sources, easy to teach and learn terminology; control absence from part of administration to CLIL teaching that gives more academic freedom to experiment; no restrictions in tools and materials; flexible teaching, we can change the content adjusting it to today's needs of students;*

*– the biggest challenges in CLIL – the level of students' English proficiency is cardinally different. That complicates the process of preparation for teachers and does not influence positively the students' motivation due to the extent of their involvement into exercising practical tasks and understanding how to combine different teaching methods and approaches – 'should I teach the language and if yes, how, what is the balance between the language and content, and should I assess the language progress at the end of a course?'*

50/50 percent picture was obtained in terms of special preparation of teachers to run CLIL courses. Thus, the most part of the teachers had a vague insight in how to work within the CLIL context. As specific features of CLIL methodology, particularly how teachers understand its essence and their functions in it, the most part responded that they see their role in preparing students to professional communication in English, being aware with basic professional vocabulary and terminology. As a key focus in CLIL methodology the teachers put the following (order of importance): subject knowledge (100%), language skills (100%), terminology, translation, academic speaking; academic writing was left as absolutely non-needed.

Their awareness in CLIL methodology the teachers evaluated as 25%. The students' need satisfaction by means of CLIL courses the teachers evaluated as on average 39%. That is a sort of reflection and illustration of the teachers' uncertainty in what they are doing in CLIL methodology, as well as its effectiveness and necessity.

As for (c) part addressing professional teaching qualities to work with CLIL methodology, the teachers responded – high skills in English, wide professional outlook, communication skills. The qualities and skills the teachers need are: knowledge in CLIL methodology, how to motivate students.

From the part of teaching material in CLIL (d), almost 100% of the respondents answered that there are no special textbooks in CLIL; they use ESP (developed by language teachers) or authentic materials, including video and audio, from the Internet or other sources. The cooperation between language teachers in terms of developing teaching materials has the figures as 25/75 – no/yes correspondently.

The last section of questions addressed the point of assessment (e), where the main question was: are you satisfied with the existing standards of assessing a CLIL course at the university? 100% of the respondents answered – no, identifying as an issue in it the lack of any standards on how to assess and particularly what to assess. The issue regarding the ratio between language and content remains still unsolved in TPU practice at least. Consequently, the question about – do you think the existing assessment should be changed? 100% of the respondents gave the answer “yes”.

As to resume, we have to point out some problematic zones that are required further research-based consideration and more real classroom observations. Among these challenges or problematic zones we can refer to the following:

- 1) lack in knowledge regarding CLIL methodology,
- 2) lack in qualified or experienced CLIL teachers,
- 3) lack in learning materials. The materials to be used are lectures translated into English.

Consequently, after analyzing the survey findings we came to reckoning that the approach needs some changes to be more successful in practice. We present a chain: What is needed? What do we have now in the current situation? What can we do to make the situation better (Table 1).

*Table 1*

**CLIL 3D analysis**

<b>What is needed</b>	<b>Current situation</b>	<b>Measures-actions</b>
motivated teaching staff without fear to using new methods and teaching tools.	teaching staff have a vague insight in CLIL methodology; they are very resistant to	demonstrating CLIL practices through workshops and advanced training programs; allocating additional hours for

	changes.	CLIL teachers to prepare materials for classes; reducing the teaching load; introducing additional stimuli (incentive payments).
qualified teaching staff having the set of competences required for implementing CLIL courses.	teachers do not have the necessary CLIL qualification.	
special competences in CLIL pedagogy; advanced training programs.	lack of CLIL training programs.	
motivated students who understand the importance of a foreign language for developing the overall competence of an engineer.	the majority of students do not see any feasibility in CLIL courses. The quality of classes is often low; the types of activities do not meet the requirements and personal needs of students.	raising students awareness concerning the benefits of the high proficiency in a language; using a variety of activities in a class and relevant to goals learning material.
peer professional communities that discuss current issues related to CLIL teaching at tertiary level.	lack of a university-wide community for accumulating CLIL practices and experience.	creating professional communities within the universities; encouraging CLIL teachers' initiatives to participate in conferences, inter alia, international ones.
developed university-wide CLIL conception with some regulatory functions and rules.	lack of the unified CLIL concept.	analyzing the existing experience of Russian and foreign universities in practicing CLIL approach; developing the system of recommendations on adapting the approach to the settings of Russian universities, with the focus on local or country-scale objectives and requirements; developing the CLIL university strategy and conception.

## Conclusion

Expanding practices and raising motivation to generate them will over time develop clearer concepts based on experience and regarding the specifics of the actual educational system. Organizational measures such as the tandems of English teachers and subject teachers, professional communities for subject teachers who are involved into CLIL training will be able to reinforce the interdisciplinary component of the educational process.

The identified measures for increasing capacity and acquiring a more positive experience should be approved by universities and included in their management policy possibly to be primarily implemented in pilot training projects. This implies additional funding as well as incentives in the form of reducing CLIL teachers' class hours. The university policy focused on the renewal of educational technologies should regard CLIL methods as one of the priority course of tertiary education development.

Thus, taking into account the considered concepts and potential of the CLIL approach, we can conclude that this approach can and should be implemented in Russia despite certain difficulties associated with the specifics of the educational system. The measures proposed by the authors of the article are just hypothetical assumptions and possible directions of development, which need special attention when planning the universities activity in the course of modernization and globalization of educational processes.

## Notes:

1. <<http://government.ru/programs/202/events/>>
2. Training in English in high school: Pros and Cons. URL: <[http://www.strf.ru/material.aspx?CatalogId=221&d\\_no=47139#.WBtkJC2LTIU](http://www.strf.ru/material.aspx?CatalogId=221&d_no=47139#.WBtkJC2LTIU)>.

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**Բովանդակության և լեզվի ինտեգրացված ուսուցման  
կիրառման հնարավորություններն ու  
խոչընդոտները Ռուսաստանում**

Վերջին տասնամյակում Ռուսաստանում բարձրագույն կրթության ոլորտում կատարված բարեփոխումներն ու նախաձեռնությունները հիմնականում սևեռված են հաղորդակցման կրթական տարածքի ընդլայնման և գիտական ոլորտների ինտեգրացման վրա: Հետևաբար, հասարակության համաշխարհայնացման ու միջազգայնացման գործընթացի արագացմանն էապես նպաստող լեզվական գրագիտությունն ընդհանուր առմամբ դառնում է բարձրագույն մասնագիտական կրթության գլխավոր բաղկացուցիչներից: Հարկ է նշել, որ ռուսական համալսարաններում լեզվի կրթության ներկայում գործող համակարգերին չի հաջողվում առկա խնդիրների համակողմանի լուծում առաջարկել: Առավել արդյունավետ դիդակտիկ գործիքների և դասավանդման պրոցեսի կազմակերպման նոր եղանակների փնտրտուքի արդյունքում ընտրվել է ընդհանուր կրթական հարացույց, ավելի ստույգ՝ կոնկրետ առարկայի և օտար լեզվի իմացության համադրությունը: Այս մոտեցումը գիտակրթական գրականության մեջ հայտնի է CLIL (բովանդակության և լեզվի ինտեգրացված ուսուցում) անվամբ:

Սույն հոդվածի նպատակն է վերլուծել ռուսական համալսարաններում CLIL-ի կիրառման ներկա փորձը՝ Տոմսկի պոլիտեխնիկական համալսարանի օրինակի հիման վրա: Վերլուծությունը ցույց է տալիս CLIL-ի դիդակտիկ հնարավորությունները, դրա ծագման նախադրյալները, ինչպես նաև Ռուսաստանի բարձրագույն կրթության համակարգում և աշխատաշուկայում առկա խնդիրներն ու մարտահրավերները: Հոդվածում առաջարկվում է միջոցառումների համակարգված ցանկ, որը կարող է նպաստել իրադրության բարելավմանը:

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