М. М. БАЖУТИНА

Интегративное обучение иностранным языкам: концепция учебника английского языка для инженерных направлений подготовки

С 2017 года в Российской Федерации вводятся новые федеральные государственные образовательные стандарты для высшего образования, в которых четвёртая универсальная компетенция содержит понятие «деловая коммуникация». В этой связи в статье рассматривается вопрос разработки концепции современного, отвечающего требованиям государственного образовательного стандарта учебника английского языка для инженерных направлений подготовки на основе методологии интегративного обучения иностранным языкам. Автор представляет пример такой концепции, подчёркивая тот факт, что для инженерных направлений подготовки, и особенно в области автомобилестроения, ощущается нехватка современных профессионально-ориентированных учебников английского языка.

Методы исследования включают: анализ требований государственных образовательных стандартов, научных источников по интегративному обучению иностранным языкам и профессиональным дисциплинам; моделирование концепции учебника английского языка.

Цель данной статьи заключается в разработке концепции учебника согласно модели интегративного обучения иностранным языкам как части методологии интегративного обучения иностранным языкам и профессиональным дисциплинам. В этой связи автор разъясняет различия между российской методологией интегративного обучения и европейской технологией предметно-языкового интегрированного обучения (CLIL). Описываются характеристики трёх моделей интегративного обучения в России, и обосновывается выбор «золотой середины» – модели интегративного обучения иностранным языкам в качестве основы для создания профессионально-ориентированных учебников английского языка.

В результате исследования автор вводит также понятие зон ближайшей и дальнейшей интеграции, которые характеризуются различной степенью предметно-компетентностной интеграции в процесс обучения профессиональным дисциплинам и приобретения профессиональных умений. Зоны интеграции помогают дифференцировать учебники для преподавания профессионально-ориентированного курса общего английского языка (General English) и для преподавания курсов профессионального английского языка (Professional English). Концепция способствует раскрытию ранее предложенной другими исследователями идеи формирования интегрированной иноязычной профессионально-коммуникативной компетентности, поскольку в ней описываются принципы создания учебников английского языка и их ключевые компоненты. Хотя концепция разработана для создания учебников по английскому языку для студентов, специализирующихся в автомобилестроении, но с тем же успехом она может быть применена для всех инженерных направлений подготовки. Данная концепция будет детализироваться по мере одновременного написания и апробации учебников.

Ключевые слова: интегративное обучение иностранным языкам, CLIL, учебник английского языка, автомобилестроение, профессиональные дисциплины, межкультурная инженерная коммуникация, зоны ближайшей и дальнейшей интеграции, предметно-компетентностная интеграция

Ссылка для цитирования:

Бажутина М. М. Интегративное обучение иностранным языкам: концепция учебника английского языка для инженерных направлений подготовки // Перспективы науки и образования. 2021. № 2 (50). С. 232-242. doi: 10.32744/pse.2021.2.16

M. M. BAZHUTINA

Integrated foreign languages teaching: a concept of the English language textbook for engineering majors

Since 2017 new state educational standards for higher education have been introduced and contain the fourth universal competence (UC-4) which refers to the notion "business communication". In this relation, the paper considers the issue of creating an up-to-date English language textbook for engineering majors in compliance with the requirements of the new state educational standards according to the methodology of the integrated teaching of foreign languages. The author presents such concept emphasizing the fact that engineering majors – and automobile engineering majors in particular – lack modern professionally oriented textbooks of English.

Research methods include: analysis of the requirements of the state educational standards, scientific sources on integrated foreign languages and professional disciplines teaching; modelling a concept of the English language textbook.

The purpose of the present paper is to introduce a concept of the textbook according to the model of integrated foreign languages teaching as part of the methodology of integrated foreign languages and professional disciplines teaching. In this relation, the author clarifies the difference between the Russian methodology of integrated foreign languages and professional disciplines teaching and the European technology of Content and Language Integrated Learning (CLIL). The author describes features of three models of integrated teaching in Russia and gives grounds for choosing the "golden mean" – integrated foreign language teaching as the basis for creating professionally oriented textbooks of English.

The research results include also the author's introducing the notion of zones of near and further integration which are characterized by a different degree of content and competence integration into students' learning professional disciplines and acquiring professional competences. The zones of integration help to differentiate the textbook for teaching professionally oriented General English and the textbook for teaching courses of professional English. The concept contributes to disclosing the previously proposed idea of the developing of the integrated foreign language professional communicative competence because it introduces principles for creating English language textbooks and their key components. Although the concept is worked out for creating textbooks of English for students of automobile engineering, but it may as well be applied for all engineering majors. The concept will be detailed as the textbooks are being created and piloted at the same time.

Keywords: integrated foreign languages teaching, CLIL, English language textbook, automobile engineering, professional disciplines, cross-cultural engineering communication, zones of near and further integration, content and competence integration

For Reference:

Bazhutina, M. M. (2021). Integrated foreign languages teaching: a concept of the English language textbook for engineering majors. *Perspektivy nauki i obrazovania – Perspectives of Science and Education*, 50 (2), 232-242. doi: 10.32744/pse.2021.2.16

Introduction

Russian universities are currently implementing new state educational standards. A distinguishing feature from the previous standards is the introduction of universal competences (UC), which are standardized in their formulation for all non-linguistics majors. As for foreign languages teaching to students for the bachelor's degree, the state educational standard points out that the fourth universal competence (UC-4) is the ability to conduct business communication in oral and written forms in a foreign language(s) [1]. Obviously, it is necessary to define the notion "business communication". We stick to the point of view that business communication is not only telephone talks, business correspondence, taking minutes and the like. This vision is supported by a thorough analysis of linguistic sources, carried out by D. S. Khrumchenko, where two major points of view are singled out. According to the first point of view, the term professional communication is used as a synonym for business communication [2, p. 10]. According to the second vision, the term "the notion of business discourse is broader and comprises professional discourse, it being a limited constituent" [2, p. 10]. Prof. E. N. Malyuga highlights the fact that professional speech functions in such spheres as law, politics, industry, trade, administration, social work, international affairs [3]. So, we draw the conclusion that business communication at least equals professional communication. Consequently, a type of business communication in industry is engineering communication, and its content is determined by technical issues and solving engineering problems. This approach meets the requirements of the state educational standard and motivates to single out types of cross-cultural engineering communication situations.

Currently, there are a number of pedagogical studies that have sought to establish the forms and content of cross-cultural engineering communication. The following types were singled out: *a business meeting, a workshop, a training seminar, a presentation of an engineering design / report, an interview, negotiations, and a conference* [4, p. 28]. It is obvious that those who teach foreign languages to students of non-linguistic majors need to comprehend the scope and content of engineering activity in a particular sphere, to consider possible prospects for international careers of graduates [5, p. 75]. Principles for foreign language education at university, outlined out by Prof. T. Y. Polyakova, include professional congruity, integration, differentiation and some others [6]. In this respect, researchers point out to the necessity to put objectives and build the content of the whole process of teaching foreign languages at all education levels in compliance with the demands for an engineer's mastering a foreign language and being able to fulfill professional tasks in a particular engineering sphere [5; 7].

Since the new state educational standards for engineering majors have been introduced over the past few years and engineering majors are short of modern professionally oriented textbooks of English, there is a need for creating English language textbooks based on the integrated teaching of foreign languages as part of the methodology of foreign languages and professional disciplines integrated teaching. The purpose of the present paper is to introduce a concept of the English language textbook based on the methodology of integrated foreign languages teaching. The concept is worked out for automobile engineering majors, but it may as well be applied for all engineering majors.

Research methods

The methodological basis of the study is the integrated teaching of foreign languages. Research methods include:

- analysis of the requirements of the state educational standards, scientific sources on the integrated teaching of foreign languages and professional disciplines;
- modelling a concept of the English language textbook.

In accordance with the purpose, we put forward the following objectives:

- 1) to show the need for creating professionally oriented textbooks of English for automobile engineering majors;
- 2) to show the difference between CLIL and the Russian methodology of the integrated teaching of foreign languages and professional disciplines;
- 3) to briefly describe three models of the integrated teaching of foreign languages and professional disciplines and to give grounds for choosing the model of integrated foreign language teaching as the basis for creating professionally oriented textbooks of English;
- 4) to model a concept of the textbook of English for automobile engineering majors, firstly, for teaching professionally oriented General English, and, secondly, for teaching courses of professional English.

Literature review

Over the past 20 years or so many Russian higher education institutions have been actively introducing the integrated approach for the formation of foreign language competence – the «alloy» of professional competence and soft skills – promoting further professional and personal growth, developing students' academic mobility and expanding their career opportunities. The choice of either the Russian methodology of integrated foreign languages and professional disciplines teaching or Content and Language Integrated Learning (CLIL) enables universities to implement their own model of foreign language education. The pioneering university was Kalashnikov Izhevsk State Technical University which introduced both bilingual and integrated teaching of engineering disciplines and foreign languages in 1993 [8]. The experience of Russian universities in implementing models of integrated foreign languages and professional disciplines teaching is given in the monograph edited by Prof. L. P. Khalyapina [9] who also presented current trends in teaching foreign languages on the basis of CLIL [10]. Various models of CLIL are also in the focus of researchers' attention [11]. The aspects of interdisciplinary foreign language teaching are viewed [12; 13]. At the same time the theoretical context of integrated foreign languages and professional disciplines teaching is still being detailed [14].

The analysis of scientific sources about existing models of integrated language teaching proves that **there is all the difference in the world between CLIL and the Russian methodology of integrated foreign languages and professional disciplines teaching**. The answer to the question about the differences between CLIL, which is a technology, and the Russian methodology of integrated teaching foreign languages and professional disciplines was discovered after a thorough analysis of scientific publications in Russia, mentioned above, and abroad [15; 16] to which we refer below.

First of all, it is the difference in the environment of implementing. CLIL was created in the European educational medium where English is used as a means of international communication and education, and there appeared the terms European English and Internationalization at Home (IaH). Hence, the targeted audience is teachers of professional disciplines and students – both with good command of English – which is not the case with the majority of Russian universities. Moreover, in European universities English is a medium of instruction which makes all the difference in the world. The other difference lies in the dual aim of CLIL – teaching a subject and teaching a foreign language at the same time and by one and the same teacher. This technology used for teaching professional subjects at university presupposes the dependence on university curricula and university teachers' readiness to teach CLIL courses. Typical examples of implementing CLIL in European and Taiwan universities are described in the works by E. Arnó-Macià, M. Aguilar [15] and W. Yang [16].

As for Russian models of integrated foreign languages and professional disciplines teaching, there exist at least three major models. The first one is bilingual integrated foreign languages and professional disciplines teaching, and it includes teaching a professionally oriented foreign language and teaching professional disciplines in a foreign language. This model has been successfully implemented over decades at Kalashnikov Izhevsk State Technical University [10]. The integrated teaching of a foreign language and a professional discipline is another model implemented at this university and also at Perm National Research Polytechnic University when professional disciplines are taught in Russian with didactic units in two languages. Both models are defined as “a didactic synthesis of linguistic and vocational components of training in content-, activity-, speech activity- and methodology-based aspects preserving autonomous status of the integrated disciplines” [17, p. 100]. The second model is based on the congruence of language and professional content of the discipline “Foreign Language” and professional disciplines [10].

The third type is integrated foreign languages teaching within and by means of foreign languages teaching, and it is the “golden mean” between the two models mentioned above. It was elaborated and piloted at Tomsk Polytechnic University by A. V. Tsepilova [7]. The researcher proposed a model of integrated foreign languages teaching that enables educators to avoid the dependence on university curricula and teachers' willingness to teach CLIL courses [7]. According to this model, professional English teaching integrates with the content of professional disciplines and the process of developing professional competences in learning professional disciplines to focus on the cross-cultural aspect of engineering communication. The aim is one – forming **the integrated foreign language professional communicative competence of an engineer**. The definition of this notion is the following: “The integration of professional and foreign language competences is a specially arranged education process within which **the unity of content of language teaching and professional disciplines is provided; a combination of methods, approaches, and work forms; simultaneous interrelated development of these competences**” (*translated by the author – M. B.*) [7, p. 60]. Figure 1 shows that all these models can be combined for the sake of aims and strategies of foreign language education at non-linguistic universities.

Analyzing all the three models, we come to the conclusion that they enable teachers of foreign languages and professional disciplines to pursue their specific aims, and this appears to be efficient and labour saving.

Figure 1 Models of the integrated teaching of foreign languages and professional disciplines

Results of the study

The review of scientific sources shows that English language textbooks based on CLIL technology or the Russian methodology of integrated foreign languages teaching are published by universities for a very limited number of majors. For example, the results of the creation of professionally oriented foreign language textbooks by the joint efforts of the linguistic and specialized departments in the process of interaction between the department of foreign languages and the specialized departments of a technical university have been presented recently by a group of authors from Peter the Great St. Petersburg Polytechnic University [18; 19]. In the meantime, according to P. V. Sysoyev, a great number of engineering majors lack textbooks and manuals based on the latest achievements in integrated teaching [20]. The analysis of existing textbooks of English for students of automobile engineering majors and the author's teaching experience prove that no modern textbook of professionally oriented English for students of automobile engineering meeting the demands for competences in cross-cultural engineering communication has yet been published over the past decade. A very profound textbook for college students, which has stood many editions since 2008, by V. A. Shlakhova [21], unfortunately, is out-of-date from the point of complying with the recent state educational standards for higher education. The well-known "English for the Automobile Industry" by Marie Kavanagh [22] is not aimed at instructing university students of Automobile Engineering as it is designed for short courses of English for workers in the automobile industry.

Taking into account the advantages of the Russian methodology of integrated foreign languages and professional disciplines teaching, we believe that the model representing the "golden mean" is the most appropriate model in our case due to the existing education conditions. **Thus, we propose a concept of creating textbooks for automobile engineering majors in accordance with the model of integrated foreign languages teaching.** Below principles for modelling such concept are listed:

- congruity with the state educational standard;
- professional context;
- integration;
- consistency;
- systematic approach.

As for the first principle – **congruity with the state educational standard** – it determines the content, strategies, and objectives of the textbook, which should reflect all the aspects of teaching business (in our case – engineering) communication: cognitive, linguistic, discursive, social and cultural. In other words, the content, strategies, and objectives of an English language textbook should be based on the material relating to foreign language business (professional) communication. The mentioned aspects are detailed in the works by A. V. Tsepilova [7], E. Al. Tsimerman and N. Iv. Almazova [18].

Being closely related to the previous principle, the principle of **professional context** is clearly outlined in the description of a common set of engineering activities made up by Prof. T. Yu. Polyakova. Firstly, it is the *research activity* of an engineer aimed to obtain new scientific data leading to discovery or inventions is related to writing scientific papers, theses, reviews of technical publications, patent applications, instructions; the engineer works with different genres of texts ranging from monographs to technical reports, reviews, and abstracts.

Secondly, it is *engineering design and development* that involve the development of technical proposals and technical designs and result in developing technical documentation.

Thirdly, *the production and technological activities* of an engineer encompassing most of the stages of the product life cycle – from introduction to deregistration. Here engineers participate in workshops, negotiations, and deal with implementation reports, manuals, instructions, schematic descriptions of processes.

Finally, *management activities* aimed at running the engineering work. The content of these activities includes requests, consultations, training, negotiations and business correspondence with customers, dealing with certificates, minutes, letters and contracts (*translated by the author* – M. B.) [6, p. 34–36].

As for **the principle of integration**, in addition to what has been said about integration, there are two levels of integration: intra-subject (interrelationship between all types of speech activity) and interdisciplinary (didactic synthesis of language and engineering disciplines). Both levels are employed in the concept of a textbook of English. Here we need to be more specific about the interdisciplinary integration, and that is why we introduce two new notions: **the zone of near integration and the zone of further integration of foreign languages teaching into students' gaining professional (engineering) competences**. Both zones are aimed at developing the integrated foreign language professional communicative competence of an engineer. The near interdisciplinary integration:

- is a way of teaching the discipline “Foreign Language” (to the 1st and 2nd year students) using the content of such professional disciplines as “Introduction into Automobile Engineering” (“Vvedenie v professiu”), and basics of mechanics (chemistry, materials science, electrical engineering, etc. in case of other engineering majors);
- includes some didactic units typical of teaching General English (e.g. role-playing of everyday communication situations, writing essays, etc.) without duplicating secondary school curricula.

Further content and competence integration:

- is a way of teaching the discipline “Professional English” in the 3rd year (if it is compulsory or if it is part of the curriculum formed by the stakeholders of the education process) using the content and objectives of professional disciplines, e.g. “Design of Automobiles”;
- is additive to the content of professional disciplines and expanding their content to some extent, and focusing on the formation of cross-cultural communication skills – integrated foreign language professional communicative competence of an engineer.

Consistency presupposes the realization of integration mechanisms singled out by A. V. Tsepilova: integration of notions, terms, their Russian equivalents, involving students' professional knowledge and skills, combining the foreign language and professional competences to fulfill communicative tasks [7, p. 84].

Systematic approach is revealed in the criteria for selection of topics, grammar, vocabulary, speech patterns in the content of textbooks for both zones of integration. The criteria include: 1) correlation between the new material and students' professional knowledge and skills; 2) novelty; 3) gradual complication; 4) frequency of usage; 5) congruity with professional communicative tasks to be fulfilled in situations of cross-cultural engineering communication. The list of criteria may be continued as the concept is getting more detailed while being implemented in teaching practice.

Taking the example of the major "Designing and Operation of Hybrid Powertrain Vehicles" (part of Power Engineering) and other majors in automobile engineering, we propose key components of English language textbooks for both zones of integration. Table 1 presents some topics from the textbook for the zone of near integration. Its title is "English for Students of Mechanical Engineering", and it is designed for teaching professionally-oriented General English.

Table 1

Topic and skills components of the textbook for the zone of near integration

Topic	Professional context	Language focus	Soft skills relevant for engineering communication
Types of Car	From the discipline "Introduction into Automobile Engineering": types of car and their features	Vocabulary for types of car, car features including professional terms, buying factors; special questions in the Present Simple; speech patterns for presentation	Presentation skills, skills for grounding one's opinion and choice of a particular type of car
Understanding Your Car	From the discipline "Introduction into Automobile Engineering": automobile maintenance, students' knowledge about car maintenance	Car exterior and car maintenance vocabulary including professional terms; imperatives, speech patterns for oral instructions	Skills for giving oral instructions
The World of Mechanics	From the discipline "Mechanics"	Mechanics terms and speech patterns; Present Simple Passive Voice and other verbal patterns typical of doing problems in mechanics	Skills for grounding one's method of doing a problem

Table 2 gives some glimpses of the second textbook which is entitled "English in Automobile Engineering" and intended for the zone of further integration, i.e. for teaching courses of professional English.

The difference between the two textbooks is in the degree of the content and competence integration into the professional context: the more students learn about the design of automobiles, the deeper is the zone of integration. The unifying feature is that the integration of content and competence is realized through the following stages of working with the material of the textbooks: 1) bringing out linguistic and professional knowledge, 2) the speech drills stage, 3) the professional discourse stage. Levels and mechanisms of integration are realized in the content and structure of the textbooks for both zones of integration.

Table 2

Topic and skills components of the textbook for the zone of further integration

Topic	Professional context	Language focus	Specific engineering communication skills
Formula Student: Combustion, Electric, Driverless	Formula Student (an international engineering competition), the discipline "Design of Automobiles"	FS and racing car terms, the Present Simple Passive Voice with verb patterns from Formula Student Rules; special questions in the Passive Voice, degrees of comparison; speech patterns for engineers' communication about FS racing cars built by Togliatti Racing Team	Skills for describing technical features of FS racing cars
Internal Combustion Engine	the discipline "Design of Automobiles"	ICE terms; the Present Simple Passive Voice with ICE verbs; speech patterns for describing the operation of an IC engine	Skills for describing the operation of an IC engine, skills for presenting technical solutions
Automotive Engineers At Work	Apprenticeship programmes, international engineering projects (e.g. Formula Student)	Terms and speech patterns for testing automobiles, engineering communication situations (phone talks, business correspondence, etc.), delivering reports, reading graphs, formulas	Skills for delivering a technical report, a report at a practical scientific conference, reading graphs, formulas

In the presented concept both textbooks are aimed at developing certain foreign language professional communication skills. Since the degree of the content and competence integration is different, we single out:

- *soft skills relevant for any sphere of business communication: presentation skills, talking on the phone, writing business letters and the like;*
- *specific engineering communication skills in accordance with the spheres of engineering activity: presentation of results of designing and development, describing technologies and processes, reading graphs and formulas, delivering reports at meetings, conferences, etc.*

Discussion

Having shown the difference between the methodology of the integrated teaching of foreign languages and professional disciplines and CLIL technology, we managed to highlight the direction of the present research. Moreover, we have used the model of integrated foreign languages teaching – the “golden mean” of the three models of the Russian integrated teaching of foreign languages and professional disciplines – as the foundation for the concept of English language textbooks for automobile engineering majors. The concept contributes to disclosing the idea of the developing of the integrated foreign language professional communicative competence of an engineer proposed previously by A. V. Tsepilova because it introduces principles for creating English language textbooks and their key components. The two textbooks, which are being created according to this concept, are supposed to meet the requirements of the state educational standards because they are aimed at developing soft skills and specific engineering communication skills relevant for cross-cultural engineering communication.

Conclusion

Integration of the foreign language and professional competences has been shown in our research through the notions of the zone of near integration and the zone of further integration of foreign languages teaching – the zones of the content and competence integration. Being based on the methodology of integrated teaching and these zones, the concept of the English language textbook for automobile engineering majors shows the ways for elaboration of the adequate content of textbooks for all engineering majors and meets the requirements of the state educational standard for teaching foreign languages in higher education institutions. The textbooks are being created and piloted at the same time, so the concept needs to be detailed in further research.

REFERENCES

1. Federal State Educational Standard for Higher Education for major 13.03.03 «Power Engineering» (Bachelor's Degree). Available at: http://fgosvo.ru/uploadfiles/FGOS%20VO%203++/Bak/130303_B_3_26032018.pdf (accessed 13 December 2020).
2. Khranchenko D.S. Functional-linguistic parameters of English professional discourse. *Professional Discourse & Communication*, 2019, vol. 1, issue 1, pp. 9-20.
3. Malyuga E.N. Individual-oriented training in professional communication teaching. *ICERI 2015 Proceedings. 8th International Conference of Education, Research and Innovation*. Seville, Spain, IATED, pp. 4807-4811.
4. Serova T.S., Maletina L.V. Teaching foreign language speaking in the interconnection with informative reading. *Problemy Yazykoznaniya i Pedagogiki – Problems of linguistics and pedagogy*, PNIPU, 2010, issue 1, pp. 22-32.
5. Inozemtseva K.M. Analysis of modern requirements for the level of foreign language proficiency of engineering specialists. *Obrazovanie i nauka – The Education and Science Journal*, 2017, vol. 19, issue 6, pp. 71–90. DOI: 10.17853/1994-5639-2017-6-71-90.
6. Polyakova T.Y. Diversification of engineers' continuous professional foreign language training in engineering education. Moscow, Publishing House MADI, 2010. 384 p.
7. Tsepilova A.V. Integration of professional and foreign language communication competences of future engineers in higher education institution: Cand. Sci. Thesis (Pedagogy), Tomsk, 2020, 161 p.
8. Krylov E.G. Bilingual teaching of engineering disciplines and foreign languages in higher education institution. Moscow, Izhevsk, Computer Sciences Institute Publ., 2015. 148 p.
9. Khalyapina L.P. (Ed.). Integrated foreign languages and professional disciplines teaching. The experience of Russian universities. St. Petersburg: Polytechnic University Publ., 2018. 380 p. DOI: 10.18720/SPBPU/2/id18-83.
10. Khalyapina L.P. Current trends in teaching foreign languages on the basis of CLIL. *Voprosy metodiki prepodavaniya v vuze – Teaching Methodology in Higher Education*, 2017, vol. 6, issue 20, pp. 56–52. DOI: 10.18720/HUM/ISSN2227-8591.20.5.
11. Sirotova A.A. Choosing the model of content and language integrated learning in a non-linguistic university. *Nauchno-metodicheskiy zhurnal «Koncept» – Scientific Methodological Koncept Journal*, 2019, issue 2 (February), pp. 101-114. Available at: URL: <http://e-koncept.ru/2019/191017.htm> (accessed 18 September 2020).
12. Popova N.V., Kogan M.S., Vdovina E.K. Content and language integrated learning (CLIL) as actualization methodology of interdisciplinary links in technical university. *Vestnik Tambovskogo universiteta. Seriya Gumanitarnye nauki – Tambov University Review. Series: Humanities*, 2018, vol. 23, issue 173, pp. 29-42. DOI: 10.20310/1810-0201-2018-23-173-29-42.
13. Shishmolina E.P. Interdisciplinary foreign language teaching as means of self-organization ability building by new generation specialists. *Perspektivy nauki i obrazovaniya – Perspectives of Science and Education*, 2020, issue 45 (3), pp. 182-194. DOI: 10.32744/pse.2020.3.14.
14. Gural S.K., Komarova E.P., Baklenova S.A., Fetisov A.S. The theoretical context of integrated subject and language teaching at the university. *Jazyk i kul'tura – Language and Culture*, 2020, issue 49, pp. 138-147. DOI: 10.17223/19996195/49/8.
15. Arnó-Macià E., Aguilar M. ESP, EMI and interculturality: how internationalised are university curricula in Catalonia?

- ESP Today*, 2018, vol. 6 (1), pp. 184-207. DOI: 10.18485/esptoday.2018.6.2.3 2.
16. Yang W. ESP vs. CLIL: A coin of two sides or a continuum of two extremes? *ESP Today*, vol. 4 (1), 2016, pp. 43-68.
 17. Arkhipova E.I., Moshchanskaya T.V. Technology for the formation of a bilingual lexicon in integrative teaching foreign language and professional courses. *Obrazovanie i nauka – The Education and Science Journal*, 2007, issue 5 (47), pp. 100-110.
 18. Tsimerman E.A.I., Almazova N.I. CLIL elements in professionally-oriented textbook for students majoring in management. *Voprosy metodiki prepodavaniya v vuze – Teaching Methodology in Higher Education*, 2017, vol. 6, issue 20, pp. 72–79. DOI: 10.18720/HUM/ISSN 2227-8591.20.8.
 19. Popova N.V., Almazova N.I., Evtushenko T.G., Zinovieva O.V. Experience of intra-university cooperation in the process of creating professionally-oriented foreign language textbooks. *Vysshee obrazovanie v Rossii – Higher Education in Russia*, 2020, vol. 29, issue 7, pp. 32-42.
 20. Sysoyev P.V. Controversial issues of the introduction of content and language integrated learning approach to teaching foreign language professional communication in Russia. *Jazyk i kul'tura – Language and Culture*, 2019, no. 49, pp. 349-371. DOI: 10.17223/19996195/48/22.
 21. Shlakhova V.A. English for specialties in automobile transport. Textbook. St. Petersburg, Lan Publ., 2017. 120 p.
 22. Kavanagh M. English for the Automobile Industry. Oxford University Press, 2009. 79 p.

Информация об авторе

Бажутина Марина Михайловна
(Россия, Тольятти)

Кандидат филологических наук, доцент, доцент
кафедры теории и практики перевода
Тольяттинский государственный университет
E-mail: kurs-veka21@yandex.ru
ORCID ID: 0000-0001-8471-995X
Researcher ID: G-4929-2018

Information about the author

Marina M. Bazhutina
(Russia, Togliatti)

PhD in Philological Sciences, Associate Professor of the
Department of Theory and Practice of Translation
Togliatti State University
E-mail: kurs-veka21@yandex.ru
ORCID ID: 0000-0001-8471-995X
Researcher ID: G-4929-2018