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## Peculiarities of content and language integrated learning technology usage in physics

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### Abstract

**Relevance.** The research relevance is predefined by the fact that the problem of interculturalism and ethnic diversity in Kazakhstan requires the usage of different language education programs for science education. Currently, the importance of trilingual education in Kazakhstan has increased significantly. In this sense, most programs are based on the methodology known as content and language integrated learning (CLIL).

**Purpose.** The research aims to analyze the possibilities and characteristics of the implementation of context- and language-integrated education for teaching the discipline "Physics" in universities in Kazakhstan.

**Methodology.** The following methods were used: generalization, induction, and comparative.

**Results.** The results established that by using a language other than their native language, students expand their professional competence, where foreign speech gradually becomes part of their everyday reality and cultural context. In doing so, it is possible not only to develop communicative skills but also to integrate the content of physical science in a more meaningful aspect for the student. In Kazakhstan, most educational institutions choose English for the development of multilingual education. The most important factor in considering a language part of the student's communicative universe is its contextualization in a world of interests and motivations. The relationship between language learning and content definition should be based on real and meaningful experiences. In this way, the student organically integrates and internalizes the knowledge presented.

**Conclusions.** The practical significance lies in the use and effective implementation of the results of the study by researchers and teachers of physics in higher education institutions in the Republic of Kazakhstan.

**Keywords:** contextual language education; multilingual education; foreign language; communication skills; culture.

### Introduction

Content and language integrated learning (CLIL) is an educational approach aimed at developing students' language competence in a foreign language. Researchers W. Admiraal *et al.* [1] and T.M. Fajardo Dack *et al.* [2] consider several principles that give change teaching and learning foreign language methods, giving them the role of a guide in this process.

Research-based education is part of a constructivist pedagogy that provides students with the development of tools, knowledge, and skills with benefits that go beyond traditional educational strategies. The development of multilingual competence involves students' ability to apply knowledge and skills, establishing different levels of communicative components: linguistic, sociolinguistic, and pragmatic.

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The ability to use language goes beyond an extensive vocabulary or knowledge of some grammatical rules, as well as pronunciation and the ability to correctly articulate learned phrases. The introduction of trilingual approaches, such as CLIL, is becoming increasingly common in physics classes. However, the authors have given little consideration to the specifics of implementing this methodology in the natural sciences.

One of the most significant aspects that language teaching in Central Asia has undergone in recent years, due to economic, social, and cultural influences, has been the introduction of trilingual programs in various regions. In Kazakhstan, to meet the need to learn a third language, elements of foreign speech and curriculum content are being combined to promote the communicative skills used in educational methods. O. Bespartochna *et al.* [3] and E. Akugizibwe & J.Y. Ahn [4] consider the impact of educational policy on trilingual education to identify its strengths and weaknesses that require action for improvement. The growing use of digital technology in learning is an existing reality in classrooms at any educational level, including the teaching of physics and foreign languages. The tool of trilingualism takes on a relevant role today, given that the socio-economic demands of the national environment are increasing. Globalization has brought new requirements to national education, which, in turn, reveal new problems for all participants in the educational system. The use of trilingualism as a tool to improve the status of students in Kazakhstan can meet the current and future requirements in terms of education to improve the competitiveness of the state. However, researchers have not considered the concepts of effective implementation of contextual-linguistic educational approach in the discipline of physics.

B. Czerkawski & M. Berti [5] and A. Bakker *et al.* [6] investigate the problems of the learning context of students in a bilingual education program, which is characterized by the emergence of new changes and demands that the student must face. This phenomenon poses numerous challenges that can affect the academic trajectory of analytical language acquisition in strengthening speech and cognitive skills and abilities. Implementing multilingual education requires a progressive perspective that adapts content to the cognitive evolution of students. As interest in learning a foreign language grows daily around the world, different areas of knowledge require foreign language proficiency. Therefore, speaking of the teaching role, adequate professional development is necessary, which must meet both national and international standards [7]. Learning a foreign language has become imperative in matters of communication due to the need to know and master an international means of communication. The concept of English and Russian languages in the Republic of Kazakhstan contributes to the growth of trilingual education in many regions, which is promoted from a dual vision: as a goal and as a means of the learning process [8]. However, the authors have little consideration of the aspects of the

interaction between language and disciplinary content in the context of educational programs that promote the study of a foreign language.

The research aims to consider the problems faced by teachers and students in the use of the CLIL methodology in universities in Kazakhstan in the process of teaching physics.

## Materials and Methods

The following methods were used to achieve the research aims: generalization, induction, and comparative. The generalization method at the stage of determining the main regularities of language-integrated learning of physics allowed to accurately and reliably describe the explanations and interpretations of CLIL technologies, reflecting the educational and social threats from competing theories and hypotheses concerning the natural sciences. The synthesis provided an opportunity to analyze the interpretive and theoretical validity of beliefs regarding the implementation of CLIL in the educational system of educational institutions. This method helped to comprehend the logic of the learning world of physics, as well as to determine the features of the empirical reality of higher education institutions by constructing possible configurations of the use of contextual-language integrated education in Kazakhstan. The so-called paradigmatic and prototypical aspects of the used method allowed to consider the linguistic modality of students, which demonstrated certain characteristics and attributes of the considered group, which was not limited by common features and characteristics with other cases of the same class within the study of physics subject.

The induction method at the stage of analysis of the contextual-linguistic education implementation peculiarities allowed to form reasoning by which the transition from the knowledge of a lesser degree of generality of CLIL technologies to the new knowledge of greater generality, considering the modern and global problems of society as a whole was carried out. Through it, in forming a hypothesis, it was possible to establish scientific evidence based on the fact of understanding education in educational institutions and society as a system governed by laws and principles. This method helped to emphasize the main elements that make up the subject-language integrated education in the study of the discipline of physics. Forms of inductive elements allowed to the presentation of the generalized knowledge that belongs to each of the mechanisms of implementation of CLIL technologies in the learning process. This method contributed to the isolation of communicative and innovative learning attributes, which established the relationship between the phenomena that are integrative and disciplinary in the study of the discipline of physics. Induction mechanisms also made it possible to determine the causal relationships of fundamental language technology in the context of teaching physics in higher education institutions.

The comparative method at the stage of implementation of CLIL technology in the sciences

allowed extrapolating hypotheses to describe the fundamental role of multilingual education in shaping the concepts of context- and language-integrated learning. Focusing on the considered similarities and differences between the cases of implementation of this approach in higher education institutions, the comparative method helped to test and confirm the authors' hypotheses, which, in turn, contributed to the formation of subsequent theories. In establishing informational overlap, the comparison allowed to emphasize CLIL the characteristics denoting the CLIL methodology. The correlation of hypotheses made it possible to form the main elements of the trilingual educational approach, considering different areas of material culture and knowledge. The comparative method also allowed to highlight the strong influence on the development of linguistics at Korkyt Ata Kyzylorda University, considering the transition from the fact of external coincidence of the ideological and cultural forms of the author's reflections to unravelling the conditioning and material learning relationships in the consideration and study of natural sciences.

## **Results**

Contextual-linguistic integrated learning is an academic term that is increasingly being used to refer to the situation of language immersion of students in educational institutions. This process consists of using an additional language (a second or foreign language) to teach and learn general subjects that are not related to the linguistic field [9]. Language and content are studied holistically, and at the end of the didactic unit, the student's progress is assessed in terms of both linguistic goals and curriculum content. When applying CLIL in trilingual teaching Korkyt Ata Kyzylorda University often uses active and interactive methodologies (cooperative learning, gamification), which encourages students to interact with their peers and speak the new language fluently. Text and audio-visual materials, as well as information and communication technologies, are usually used to perform these activities. To use the CLIL methodology, the teaching team must have a high level of linguistic and communicative training. In addition to mastering the subject matter of physics, the teacher must also know how to combine instruction in the new language with curriculum content and, of course, be up to date with the tools he or she will need to teach and assess students.

In implementing CLIL, teachers should insist on both content and language instruction, avoiding two extremes: an emphasis on teaching language and ignoring content instruction, or an emphasis on teaching content and downplaying language instruction. The implementation of the methodological approach that CLIL proposes can vary depending on the age of the students targeted, their sociological environment, and the goals pursued. It can consist of either introducing one or two foreign languages in a monolingual educational system or treating languages in bilingual or trilingual systems to enhance students' multilingual abilities and highlight their linguistic

diversity. Participating students do not need a high level of proficiency in the second or third language while learning physics. Given the contextual-linguistic model of integrated education used for instructional content, teachers should consider professional development as a fundamental part of their teaching process [10]. Professional development is not a short-term overarching activity, but rather a long-term process that seeks to facilitate a teacher's reflection and growth over time [11]. Professional development helps teachers self-reflect and reflect on their teaching practice, which facilitates the active implementation of CLIL technology. In other words, through professional development, teachers can improve their knowledge and pedagogical skills.

Students should view the content of the physics discipline in CLIL terms as complex, involving the study of both subject matter topics and language strategies. This task means using content concepts that attempt to categorize, organize, and analyze subject matter through language as a channel of communication. In addition, students need to present content information in a clear, precise, and organized way that encourages formal awareness of language use [12]. Thus, it is possible to speak of a meta-linguistic awareness of language, which includes the recognition of the main purposes of supporting ideas, connectors, and media. The active participation of students acts as an important tool to stimulate their linguistic production and communicative skills since learning physics and language requires effort and time. In turn, educators who wish to work with a meaningful contextual-linguistic integrated approach have a choice of one or more models that should have a professional development component as their central axis, where the teacher or group of teachers can reflect, contextualize, and discuss academic elements that contribute to student learning [13]. Finally, educational institutions should not only support this method of teaching physics but also provide resources and time for participants in the learning process to apply it through a reflective model of professional development.

When using this methodology in the study of physics, teachers should include in their teaching practice a variety of language activities derived from the content of the subject. These activities must practice the four skills of listening, speaking, reading, and writing, with the central axis being the content topic at hand [14]. For example, if a subject or physical phenomenon is going to be covered in biology, some previous questions about the subject can be articulated for students to express their thoughts about it. Then a short video on the subject can be shown followed by a teacher-led discussion of what they have seen. The written text can be analyzed and reflected upon to reinforce the content. Finally, it is important to emphasize the collaborative work that should exist between language teachers and subject teachers as a desirable goal because it is directly related to professional development [15]. This collaborative work has a positive impact because there is a collegial

discussion between the participants, which benefits not only their professional satisfaction but also the improvement of students' academic and motivational achievement. Through this collaborative work, teachers can discuss content elements related to

language mechanisms, which leads to long-term reflections on foundations, methods, and concepts that empower participants in the learning process and are related to the implementation of this approach (Table 1).

**Table 1.** The main concepts that are associated with the implementation of CLIL technology in the study of natural sciences

Main principles of CLIL implementation	Description
Language is used not only to explore the content area but also to understand and communicate holistically	The use of language is important since it is not the sole purpose of instruction, but rather a dual purpose. This means that the instructor must consider both the goals of the course and the required language
The subject being studied defines the discourse of the language to be studied	In environmental knowledge and science, students learn the specific language of these subjects and work with the types of discourse typical of science – language vocabulary and structure
Fluency is more important than general grammatical and linguistic accuracy	This is necessary for confident learning of both content and language, given the use of new opportunities to focus on the language form of learning, as this can affect the understanding and production of subject content

Source: compiled by the author

The curve of CLIL implementation goes “from superficial to deep”, as in many teaching methods. Simpler content is provided first, and then, as complexity gradually increases, the teacher should guide and provide all necessary assistance (verbal or linguistic) and encourage interaction with peers so that students feel more secure. Much linguistic information from English or Russian physics texts deepens students' impressions of words and sentences, unknowingly increasing their vocabulary, which solves the problem of traditional lexical memory based on mechanical memorization. In addition, when students answer questions and have group discussions in English, they receive feedback from teachers and responses from classmates, increasing their oral foreign language level by doing so [16]. During a physics course, students can have the opportunity to compare similarities and differences between grammatical and lexical bases, as well as conduct in-depth reflection and analysis of different cultural features and reasons for their formation. Such a thought process can increase students' attention to methods of communicative and professional competence, as well as awaken students' understanding of intercultural thinking and gradually build social skills for integration into society. Universities, including Korzyt Ata Kyzylorda University, are expected to wisely choose the scope of courses in CLIL teaching methods according to their learning environment, teaching staff, and learning conditions.

Studying everyday phenomena of physics involves observing them, and therefore requires learning activities aimed at focusing attention, abstracting characteristics of the observed, transforming them into an image or mental representation, and relating said image to schemata and knowledge that the individual

possesses as a result of his or her life experience and culture [17-20]. The ability to generate hypotheses or ideas can be greatly developed through query sequences that affect the content of physics. In formulating hypotheses, students also apply linking, reasoning, idea generation, induction, deduction, comparison, and prediction skills. By creating word cards with situational word elements, students can reinforce and use new expressions for the benefit of the subject class. At the same time, interdisciplinary knowledge can be mixed to experience a combination of disciplines. CLIL technology is different from traditional foreign language instruction [21]. Trilingual education requires comprehensive and dynamic assessment of students. Clarification of assessment content promotes goal setting, which is the element of language-integrated learning of physics in higher education. A key feature of CLIL implementation is the dual language approach to learning, which can make learning more realistic and relevant, as well as allow students to experience meaningful language communication [22].

From a linguistic point of view, the CLIL approach is closest to the context of language immersion, but without the need to move the student to the country of the language of instruction. There are many advantages that this approach presents in the classroom, among which are a broader exposure to language, and new perspectives on social learning. CLIL technology is based on the theories of functionalism and cognitive linguistics that aim to develop communicative competence. The content defines the language being learned, so grammar and vocabulary role is used [23]. This approach requires working on basic interpersonal communication skills and cognitive mastery of academic language. Content, cognition, communication, and culture are the four basic elements of

implementing CLIL in the study of physics. This method argues that error is part of the learning process, and interaction and feedback determine students' interlingual development. Consequently, it requires considerable anticipatory work and language support. But it requires not only teacher training but also

student training to compensate for the difficulties associated with learning content in a foreign language. For all of these reasons, eclecticism is necessary for this approach, in which all activities can be considered useful and serve a function throughout the process (Table 2).

**Table 2.** Advantages and disadvantages of using CLIL technology in the teaching of physics in higher education institutions

<b>Advantages of the CLIL methodology</b>	<b>Disadvantages of the CLIL methodology</b>
Development of interpersonal communication	Grammar complexity
Deep language and culture learning	Large amounts of new vocabulary
Development of communication skills	Usage of many lingual skills
Development of pragmatic competency	Restricted lingual-content communication
Employment of social and cultural context	The insufficient interest in an educational institution

**Source:** compiled by the author

Thus, the educational programs of Korkyt Ata Kyzylorda University focus too much on the study of the third language, not realizing that in many cases they forget about the development of content, abilities, skills, or subject competencies studied [24]. In physics, this subject involves an intentional process of diagnosing problems, critiquing experiments and identifying alternatives, searching for information, building models, discussing with peers, and constructing coherent arguments, all of which, in one way or another, contribute to students' active role in the learning process [25]. To apply this methodology in the context of physics, situations involving the occasional use of a third language must be created. In this context, the teacher's role is to create the greatest number of communicative situations where language is used naturally as a means of communication.

CLIL methodology should integrate what in trilingual education is called the four pillars of multilingual education (content, communication, cognition, and culture). What matters in this communication process is not the correct or incorrect use of a second language, but that students understand the content of the physics discipline to be able to interact effectively using English or Russian. In addition, the casual communicative situation triggers the creation of authentic learning contexts in which language use has a real communicative function, where the student shows a need to communicate using the second language to convey his or her ideas, knowledge, and feelings. This results in students improving their confidence, motivation, and skills in both their native and foreign languages.

## **Discussion**

In recent years, the language-integrated education regime in Kazakhstan has gradually developed and achieved fruitful results in the field of science. From the point of view of J. Santangelo *et al.* [26], CLIL technology focuses on both language and content, which are intertwined in the learning process. The authors consider foreign language as a means of teaching non-linguistic subjects, due to which the development of a learning model combining foreign language and various subject knowledge is realized. The CLIL

methodology uses foreign language as a tool for learning subject content and provides students with a real-world context for learning a second language while increasing their enthusiasm for learning. In the process of implementing a subject-language integrated education, student communication is more intentional, which facilitates the rapid completion of real-world tasks. Successful teaching and implementation of a foreign language must consider students' final application of the subject matter. Combining speech content and subject matter removes the factors that separate language and context, guaranteeing theoretical introduction, progression, and analysis [27]. Thus, teachers must determine whether students have mastered the linguistic abilities to learn content and language together and whether they can use the target language to express their views and express their opinions. Cultivating these pragmatic abilities should occur simultaneously with the introduction of contextual-linguistic integration in the sciences, such as physics. This situation underscores the importance of educators' professional competence in advancing the technology in question.

Researcher F.S. Yildirim [28] believes that instructional design is one of the key factors in the application of CLIL technology in higher education institutions. Activity design emphasizes the language domain from students' learning interests, life experiences, and cognitive levels, advocating collaboration, research and communication methods, and task-based approaches to learning. Students' comprehension is at the figurative stage, and their thinking activities are carried out through representations, i.e., intuitive-imaginative elements. As such, object-language integrated instruction begins with giving students a sense of the image, where an appropriate connection will be established between the object of observation and the linguistic vocabulary, which will produce the verbalization of the visual experience [29]. Students' linguistic abilities are refined and developed in everyday life. This allows them to better understand and learn language through four main aspects: events, scenes, sounds, and emotions [30]. Providing a relaxed language environment for students is a must for every teacher.

Trilingual education based on the content-integrative way of education requires that teachers have a good command of the language, have a high level of foreign language and communication skills, as well as being experienced teachers in the subject area [31; 32]. When comparing the results of the work and the author's data, the main characteristics of a productive learning environment, where the motivation and competence of the subject teacher are fundamental elements for the effective construction and implementation of CLIL technology in the discipline of physics, are emphasized.

Following N.V. Soroko [33], creating certain learning situations in multilingual education is often limited in time and space, and therefore cannot be fully mapped. Multimedia learning in contextual-language integrated education just might solve this problem, where the relevant situation is transplanted using audio-visual teaching methods such as recording, video, and slides in multimedia, combining audio and video and combining images and texts. This context of technology and opportunity in the sciences can vividly reproduce a linguistic situation or phenomenon. The teacher guides students to make contact between the language and the subject, making them more active and ready for linguistic communicative and professional activities. Students abstract thinking is still in the process of formation, so their learning cannot be separated from the support of intuitive material [34]. Multimedia uses intuitive materials to make up for the lack of written materials in instruction, which not only matches the characteristics of students' thinking but also helps teachers solve niche and subject matter problems that are difficult to dictate in the educational process. The implementation of CLIL technology requires the use of a "developmental orientation" perspective to comprehensively propose learning objectives, then optimize the learning plan and choose how to create situations according to the objectives, characteristics, and personal qualities of educators [35]. The data analysis highlights the importance of versatile manifestation and the use of information and communication technology to support the CLIL methodology in the context of physics teaching.

M. Basterrechea & M.J. Leiser [36] believe that the standards for implementing contextual language-integrated instruction should include the following basics: students can engage in dialogues, provide and receive information, express emotions, and exchange opinions; students are able to understand and interpret written and oral usage of various science topics; students present information, concepts, and ideas on various topics to the audience. Interpersonal communication refers to continuous semantic negotiation through the target language [37]. Each message influences the next response, and the conversation continues to evolve through the exchange of ideas. Interpersonal communication takes the form of listening and speaking or writing and reading written documents [38]. In turn, presentational communication refers to one-way speech or writing by students in front of an audience. Students must strategically use the multilingual aspect to express

opinions, concepts, and information. Based on this standard of ability, appropriate learning activities and CLIL learning standards are derived. The goal of structured output activities is to allow students to pay attention to reinforcing their understanding of grammatical forms and subject terms that are subject to communicative barriers due to forms of instruction. Students, in turn, can demonstrate the relationship between language and the cultural practices and viewpoints they are learning. When comparing the data, it is noticed that communicative and linguistic tools act as important features of the implementation of CLIL technology in higher education physics teaching.

Thus, communicative and cultural competence are key roles in the implementation of contextual-linguistic integrated education, which reflects the close and inseparable link between language and culture. Language exists within a certain cultural content, so much knowledge is an intrinsic component of language proficiency [39]. The foreign speech opens channels for students to acquire a cultural worldview and perspective of the language being studied, Russian or English, including values, ideas, and attitudes. Teachers should consider the following conditions when choosing "connected" instructional materials: many nonverbal cues, pictures, maps, and other multimedia and audio-visual tools. Polylingual education is potentially part of the didactics of plurilingualism: teaching in several languages can lead to the learning of foreign languages and achieve integrated learning of subjects [40]. This potential cannot be fully realized on the one hand, when teaching is organized in such a way as to direct classroom work exclusively toward subject content. On the other hand, this context remains largely unexploited when the languages of instruction are separate and subject courses are taught without explicit pedagogical challenge. CLIL technology emphasizes that language integration goes beyond the simple articulation of two monolingual classes and is conditioned by the bilingual stance of teachers who prefer approaches that work with a multilingual repertoire and teach language contact when teaching natural disciplines. Similarly, learning languages and disciplines are articulated and integrated into the CLIL approach, which integrates work on language resources and the development of disciplinary and thematic content.

## Conclusions

The research determined that increasing proficiency in English and Russian and the use of digital resources is an unavoidable problem for the context- and language-integrated educational system. Continuing professional development programs for higher education teachers who teach classes in a foreign language need to be reconsidered. This research collected information on the usefulness and extent of digital resources in teaching and learning languages through information and communication technologies.

The findings show that educators mostly use resources that encourage collaboration, information management, and product creation, valuing creativity

and motivation that generate innovative opportunities. Tools that facilitate verbal expression and interaction are underutilized, and it is observed that teachers adopt technology primarily to develop activities and obtain subject resources. Finally, some recommendations for those responsible for instructional plans and implementation of the CLIL methodology are presented. Based on the results aimed at solving existing problems, countermeasures for the development of teachers' professional skills, such as language and training in educational institutions, as well as reducing the anxiety of subject teachers when using language, were proposed.

It has also been determined that introducing instructional content can improve foreign language proficiency in science learning only if the teacher challenges students' cognition in the premise of understanding. Research has shown that there is a positive correlation between learning a native language and a foreign language, and proper use of the native language can help students overcome communication difficulties while learning physics, as well as establish peer trust. CLIL technology requires students to be able to process information in depth, and group or

cooperative learning can improve students' cognitive and language skills through interaction and commentary. To improve the bilingual atmosphere when teaching physics, the teacher's discursive input should be based on students' cognitive abilities, use the native language appropriately, and apply cooperative or group instruction to achieve integration of subject content and language. The use and implementation of CLIL methodology in instructional content should consider factors such as the level of foreign language proficiency, reflection of subject matter exchange, and the frequency with which communication is used in the educational process. Thus, it can be concluded that the research aim has been achieved. However, ways to quickly and effectively introduce and promote CLIL technology in the sciences require additional pedagogical research.

### **Acknowledgements**

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### **Conflict of Interest**

None.

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## **Особливості використання технології змістово-мовного інтегрованого навчання на уроках фізики**

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### **Анотація**

**Актуальність.** Актуальність дослідження зумовлена тим, що проблема міжкультурної взаємодії та етнічного розмаїття в Казахстані вимагає використання різних мовних освітніх програм для природничо-наукової освіти. В даний час важливість тримовної освіти в Казахстані значно зросла. У цьому сенсі більшість програм ґрунтується на методології, відомій як змістово-мовне інтегроване навчання.

**Мета.** Метою дослідження є аналіз можливостей та особливостей впровадження контекстно-мовно-інтегрованого навчання для викладання дисципліни «Фізика» в університетах Казахстану.

**Методологія.** Використано такі методи: узагальнення, індукції, порівняльний.

**Результати.** За результатами дослідження встановлено, що, використовуючи мову, відмінну від рідної, студенти розширюють свою професійну компетенцію, де іноземне мовлення поступово стає частиною їх повсякденної реальності та культурного контексту. При цьому вдається не тільки розвивати комунікативні навички, а й інтегрувати зміст фізичної науки в більш значущому для студента аспекті. У Казахстані більшість навчальних закладів обирають англійську мову для розвитку багатомовної освіти. Найважливішим фактором у розгляді мови як частини комунікативного всесвіту учня є її контекстуалізація у світі інтересів і мотивацій. Взаємозв'язок між вивченням мови та визначенням змісту має ґрунтуватися на реальному і значущому досвіді. Таким чином, студент органічно інтегрує та засвоює подані знання.

**Висновки.** Практична значущість полягає у використанні та ефективному впровадженні результатів дослідження науковцями та викладачами фізики у вищих навчальних закладах Республіки Казахстан.

**Ключові слова:** контекстна мовна освіта; багатомовна освіта; іноземна мова; комунікативні навички; культура.