

4. Robnett R.D., Leaper C. Friendship groups, personal motivation, and gender in relation to high school students' STEM career interest // *Journal of Research on Adolescence*. – 2013. – Т. 23. – №. 4. – С. 652-664.
5. Else-Quest N.M., Hyde J.S., Linn M.C. Cross-national patterns of gender differences in mathematics: a meta-analysis // *Psychological bulletin*. – 2010. – Т. 136. – №. 1. – С. 103.
6. Byars-Winston A., Canetto S. S. Preface: Accomplishments and Challenges for a Diversity of Women in Science, Technology, Engineering, and Mathematics Education and Occupations // *Journal of Women and Minorities in Science and Engineering*. – 2011. – Т. 17. – №. 1.
7. Kier M.W. et al. The development of the STEM career interest survey (STEM-CIS) // *Research in Science Education*. – 2014. – Т. 44. – №. 3. – С. 461-481.
8. Stake J.E. The Critical Mediating Role of Social Encouragement for Science Motivation and Confidence Among High School Girls and Boys 1 // *Journal of Applied Social Psychology*. – 2006. – Т. 36. – №. 4. – С. 1017-1045.
9. Eccles J. S., Wigfield A. Motivational beliefs, values, and goals // *Annual review of psychology*. – 2002. – Т. 53. – №. 1. – С. 109-132.
10. Siani A., Dacin C. An Evaluation of Gender Bias and Pupils' Attitude towards STEM Disciplines in the Transition between Compulsory and Voluntary Schooling // *New Directions in the Teaching of Physical Sciences*. – 2018. – Т. 13. – №. 1. – С. n1.
11. Wang M. T., Degol J. Motivational pathways to STEM career choices: Using expectancy–value perspective to understand individual and gender differences in STEM fields // *Developmental review*. – 2013. – Т. 33. – №. 4. – С. 304-340.
12. Häussler P., Hoffmann L. An intervention study to enhance girls' interest, self-concept, and achievement in physics classes // *Journal of research in science teaching*. – 2002. – Т. 39. – №. 9. – С. 870-888.
13. Weisgram E. S., Bigler R. S. Girls and science careers: The role of altruistic values and attitudes about scientific tasks // *Journal of Applied Developmental Psychology*. – 2006. – Т. 27. – №. 4. – С. 326-348.
14. Simpkins S. D., Davis-Kean P. E., Eccles J. S. Math and science motivation: A longitudinal examination of the links between choices and beliefs // *Developmental psychology*. – 2006. – Т. 42. – №. 1. – С. 70.
15. Zakaria F. *The post-American world: Release 2.0 (international edition)* // New York. – 2011.

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CONTENT-LANGUAGE INTEGRATED LEARNING IN LEARNERS' FUNCTIONAL READING SKILLS DEVELOPMENT

Abstract

This article discusses the practical application of content-language integrated learning in the development of functional reading skills of high school students in an English lesson. As experience in preparing school for international exams shows, reading skill, along with other skills, is one of the labor-intensive stages of the educational process. Students do not always realize the complexity of the tasks that need to be performed in reading voluminous texts. Working on a text in order to search for information to solve a specific problem or perform a specific task in a foreign language determines the development of students' functional reading skills. The materials provided as reading in English cover different areas of study in the school. Consequently, the successful organization of work and the preparation of tasks for reading with non-linguistic subject knowledge demonstrate that today a promising precondition for the development of functional reading is integrated learning materials written in the target language and provided as social texts about Kazakhstan. Such texts are associated with the initial representation of the situations that students face when solving communicative, organizational and informational tasks.

Keywords: Content-Language Integrated Learning, Lesson Study, Case study, Bloom's Taxonomy.

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ОҚУШЫЛАРДЫҢ ФУНКЦИОНАЛДЫҚ ОҚУ DAҒДЫЛАРЫН ДАМУДА ПӘНДІК-ТІЛДІК КІРІКТІРІЛГЕН ОҚИТУ

Аңдатпа

Бұл мақалада ағылшын тілі сабағында жоғары сынып оқушыларының функционалдық оқу дағдыларын дамытуда пәндік-тілді кіріктірілген оқытудың практикалық қолданылуы қарастырылады. Оқушыларды халықаралық емтихандарға дайындау кезінде, оқу дағдысы, басқа дағдылармен қатар оқу процесінде еңбекті көп қажет ететін кезеңдерінің бірі болып табылады. Көлемді мәтіндерді оқу кезінде орындалатын тапсырмалардың күрделілігін оқушылар түсіне бермейді. Шетел тілінде белгілі бір мәселені шешу немесе белгілі бір тапсырманы орындау үшін ақпаратты іздеу мақсатында мәтінмен жұмыс істеу оқушылардың функционалдық оқу дағдыларын дамытуға әкеледі. Ағылшын тілінде оқуға ұсынылатын мәтіндер мектептегі оқудың әртүрлі салаларын қамтиды. Сондықтан, жұмысты сәтті ұйымдастыру және тілдік емес пәндік біліммен оқуға арналған тапсырмаларды дайындау бүгінгі таңда функционалдық оқуды дамытудың перспективті алғышарты, оқылатын тілде жазылған және Қазақстан туралы әлеуметтік мәтіндер ретінде ұсынылған кіріктірілген оқу материалдары болып табылатынын көрсетеді. Мұндай мәтіндер коммуникативті, ұйымдастырушылық және ақпараттық міндеттерді шешу кезінде оқушылар кездестіретін жағдайлардың бастапқы бейнелеуімен байланысты.

Түйін сөздер: пәндік-тілдік кіріктірілген оқыту, Lesson Study, кейс-стади, Блум таксономиясы.

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ПРЕДМЕТНО-ЯЗЫКОВОЕ ИНТЕГРИРОВАННОЕ ОБУЧЕНИЕ В РАЗВИТИИ ФУНКЦИОНАЛЬНЫХ НАВЫКОВ ЧТЕНИЯ УЧАЩИХСЯ

Аннотация

В данной статье рассматривается практическое применение предметно-языкового интегрированного обучения в развитии функциональных навыков чтения учащихся старших классов на уроке английского языка. Как показывает опыт по подготовке учащихся к международным экзаменам, навык чтения, наряду с остальными навыками, является одним из трудоемких этапов учебного процесса. Учащиеся не всегда осознают сложность задач, которых нужно выполнить по чтению объемных текстов. Работа над текстом с целью поиска информации для решения конкретной задачи или выполнения определенного задания на иностранном языке обуславливает развитие навыка функционального чтения учащихся. Материалы, предоставляемые в качестве чтения на английском языке, охватывает разные области изучаемых предметов в школе. Следовательно, успешная организация работы и составления заданий по чтению с неязыковыми предметными знаниями демонстрирует, что на сегодняшний день перспективным предположением для развития функционального чтения является интегрированные учебные материалы, написанные на целевом языке и представленные как социальные тексты о Казахстане. Такие тексты ассоциируются исходным представлением ситуаций, с которой сталкиваются учащиеся, решая коммуникативные, организационные и информационные задачи.

Ключевые слова: предметно-языковое интегрированное обучение, Lesson Study, Кейс-стади, таксономия Блума.

Introduction. Interest in the study of the English lesson with the use of elements of subject-language integrated learning in high school arose after a series of studies of the lesson on the Lesson study methodology. Since the integrated curriculum of the Nazarbayev Intellectual Schools implies the fusion of common themes and skills of different subjects, but in a different language of instruction [1], the main stages of the study of the practical application of the Subject-Language Integrated Learning [2] in the English class were carried out during the period of research practice at the Nazarbayev Intellectual School of Chemistry and Biology of the city of Shymkent as a Lesson study together with teachers of other subjects.

Content-language integrated learning is an additional module of the TKT examination, which tests the knowledge necessary for a teacher to teach one or more academic subjects using English, as well as the ability to plan and lead a lesson, use certain techniques and types of learning activities during the lesson and exercise control over the assimilation of the subject. With this approach, the language is acquired more intensively, because students pass through a larger amount of language material. This module is designed for subject teachers who are ready to teach English through their subject, as well as for English teachers who teach other subjects within the curriculum [3, p. 4].

The prerequisites for deriving the results of the study referred to the fact that the learning outcomes could not fully reveal the functional reading skills of students in the lesson “Kazakhstan in the modern world”, and at this stage of the study, the emphasis is on developing the functional skills of students in English language lesson.

Functional literacy is the ability of a person to use reading and writing skills in the context of his interaction with society, that is, this is the level of literacy that gives a person the opportunity to enter into relations with the external environment and adapt and function in it as quickly as possible. In particular, this includes the ability to freely use reading and writing skills in order to obtain information from a text, and in order to convey such information in real communication, communication through texts and other messages [4, p. 4].

Materials and methods. A jointly developed plan with colleagues for the study of the lesson provided for the organization of this task in pairs through a collective teaching method based on the principle of strong-weak and strong-medium pairing, taking into account different levels of motivation and abilities. Collective mutual learning was carried out through the inclusion of each student in the active teaching of other students [5, p. 62].

As an experimental group, students from grade 10 were selected, since at this stage, students study natural subjects in depth in English and upon completion of grade 10, students take an external summative assessment and in grade 11 they will begin to take the IELTS and subsequently SAT.

Lesson planning was based on the development of behavioral and cognitive learning outcomes of students and in order to develop the functional-search skills of students, the main stages of the lesson are planned to be carried out through three levels of Bloom’s taxonomy. The first, functional reading of the text for *understanding* of authentic material, the second, preparation and protection of the presentation using Internet resources in the team - *application*, third, the development of the ability to *analyze* consequences through high-order questions.

Excerpt from Short-term plan

10.2.B(L) Possible benefits of space tourism	Grade 10
Learning objectives(s) that this lesson is contributing to	<p>10.C6 organise and present information clearly to others</p> <p>10.R2 understand specific information and detail in extended texts on a growing range of familiar general and curricular topics, and some unfamiliar topics</p> <p>10.R8 use a wide range of familiar and unfamiliar paper and digital reference resources to check meaning and extend understanding</p> <p>10.S5 interact with peers to make hypotheses about a wide range of general and curricular topics</p>
Lesson objectives	<p>All learners will be able to:</p> <ul style="list-style-type: none"> -understand the meaning of topical words of the lesson; -interact with peers about possible benefits of space tourism; -make presentation clearly to other group members; -understand specific information and detail in extended texts about space tourism; -create 3 comprehension questions while listening to presentations of other groups

	-compare and contrast positive and negative sides of space tourism.	
Assessment criteria	<ul style="list-style-type: none"> ✓ Learners have met 10.C6 learning objective if they organise and present information clearly to other students on their topic segment. ✓ Learners have met 10.R2 learning objective if they understand specific information and detail in their text segment about space tourism and answer at least 5 questions ✓ Learners have met 10.S5 learning objective if they interact with peers to make hypotheses about possible benefits of space tourism and contribute to create a teaching plan. 	
Value links	Creativity, Life-long learning	
Cross curricular links	Kazakhstan in Modern World, History, Geography, Physics	
ICT skills	Search Engines, Databases, MS PowerPoint, Smart Board	
Previous learning	Investigating a NASA mission or Space Weather	
Plan		
Planned timings	Planned activities	Behavioral and cognitive learning outcomes
Beginning 1-8	<p>Warm up. Brainstorm the questions below with students.</p> <ol style="list-style-type: none"> 1. How many planets are there in our solar system? Do you know any of the English names of our planets? Which ones? 2. Do you think there is life on other planets? Why? / Why not? 3. Have you ever looked through a telescope? If ‘yes’, when? What did you see? 4. Would you like to live on the moon/on Mars? Why? / Why not? 5. Why did people first travel to the moon in 1969? 6. Do you like to read about space? Why? / Why not? 7. Do you like to watch movies about space? Why? / Why not? 8. Is travelling in space safe or dangerous? Why? / Why not? 9. Should the government spend more money to explore space? Why? / Why not? <p>Introduce students with the learning objectives, success criteria of the lesson and assessment rubric.</p>	<p><i>Bloom’s taxonomy – Remember - Recall facts and basic concepts – define, list, memorize, repeat, state</i></p>
Middle 9-18	<p>Focus on Reading. LO 10.R2. Pair work. Students read the text in pairs about Kazakhstan’s plans to the space tourism development.</p> <p>Differentiation (by task) Kazakhstan Hopes to Draw Space Tourism to Once-Secret Star City <i>By Michelle Witte</i></p> <p>Once one of the most secret 5,000 square miles in the world, Kazakhstan’s Baikonur Space Complex is now actively seeking more visitors. The oldest and now most active space port in the world has been open, to some extent, to the public for some time now, but not many foreign tourists have made the trek to the small city in Kazakhstan’s Kyzylorda oblast. Now, with a \$1 million investment from Kazakh company Diamond Technology, the country is hoping to draw crowds to a new “Space Harbor” being built in Baikonur, a visitor’s complex with a platform for visitors to watch launches from and other tourist infrastructure.</p> <p>A Cold War Boom</p> <p>Baikonur was born as a top secret space center: a great Soviet head start in its race against the U.S. for technological supremacy. In those early days of the Cold War, it took two years for the U.S. to discover the massive space center on the steppe, which was first captured by a U2 spy plane in 1957.</p> <p>By then, the Soviets were well on their way to the stars. Baikonur was the site of many firsts in the space race: it launched Sputnik, the first artificial satellite to reach orbit, in 1957; Yuri Gagarin, the first man to orbit the Earth, began his pioneering trip there in 1961, as did Valentina Tereshkova, the first woman to reach space, in 1963. In 1965, Alexei Leonov took off from Baikonur to become the first person to take a spacewalk.</p>	<p><i>Bloom’s taxonomy – Understand – Explain ideas or concepts - describe, identify, locate, recognize</i></p>

The town was built around the expanding space center, and grew to include apartments, kindergartens, schools, markets and all the other infrastructure of a small city - and indeed, was named “Star City” for a time. As the Cold War rolled on without losing **steam**, the town and the center grew, reaching nearly 100,000 people in its mid-1980s **heyday**.

Since the collapse of the Soviet Union, however, the town of Baikonur has been on something of a long **decline**. Once a mini-Russian city in Kazakh territory, the town is now mostly Kazakh. Russia rents the Baikonur Cosmodrome for \$115 million a year through **a lease** that runs through 2050. It puts about \$27.6 million from its federal budget into the town every year, according to Astrowatch.net. Despite this, however, even President Vladimir Putin of Russia once called Baikonur “physically aged.” Industry and development is still **catching up** after the early 1990s collapse all of Kazakhstan faced, and with little industry outside the space center, it’s still foreign engineers who tend to have the best jobs.

Differentiated tasks

Task 1.

Student A gives definitions for the words in bold

Student B writes down the synonyms of the words in bold

Student C writes down the translations of the words in bold

- 1 seeking
- 2 trek
- 3 to draw
- crowds
- 4 supremacy
- 5 captured
- 6 firsts
- 7 to orbit
- 8 pioneering
- trip
- 9 spacewalk
- 1 steam
- 0
- 1 heyday
- 1 decline
- 2
- 1 a lease
- 3
- 1 catch up
- 4

Task 2. Read the text and say whether the statements true /false or not given. For the ‘falses’ write down the reason.

- 1. Michelle Witte states that the once unpopular cosmodrome is now gaining popularity T/F/NG_____
- 2. There is a big probability of the space tourism development in Kazakhstan T/F/NG_____
- 3. The secret space complex has been spotted out by the UN spy plane T/F/NG_____
- 4. According to the author, the Cold War was the reason of many industrial revolutions T/F/NG_____
- 5. 1980s are considered the beginning of the space complex collapse T/F/NG_____
- 6. The Russians will stop paying interest to Kazakhstan by 2050 T/F/NG_____

	<p>7. Yuri Gagarin was launched inside the Sputnik, the Soviets space machine T/F/NG _____</p> <p>Answer keys: Task 1</p> <p>1 seeking searching for 2 trek way, travel 3 to draw gather crowds crowds 4 supremacy outnumbering, dominance 5 captured seized, thrilled 6 firsts the ones who are the first to do smth. 7 to orbit go into orbit 8 pioneering first, opening trip trip 9 spacewalk go into outer space 1 steam development 0 1 heyday blossoming, bloom 1 decline decrease 2 1 a lease rent 3 1 catch up trying to stay alive 4</p> <p>Task 2</p> <p>1. F (not unpopular, but secret) 2. T 3. F (US spy plane) 4. T 5. F (it was the peak of it's popularity) 6. NG 7. F (The Sputnik was the first satellite in the space)</p>	
19-34	<p>Mini-research. LO 10.C6, 10.R8 Group work. Provide learners with laptops with mouse and available to access the Internet, divide them into three groups (including the following role functions in each group - analyst, informant and designer) presenting their data on the following cases:</p> <p>Group 1. Many people dream of flying into orbit, to the moon, or even further. But those who actually go into space face a number of health hazards. Reveal the Case on the consequences of flying to the stars.</p> <p>1. What is a space tourism? 2. Is it a good idea? 3. Would you like to become this kind of tourist?</p> <p>Group 2. Baikonur is the largest and practically the only space harbor from which manned launches are carried out in the world. The cosmodrome is leased, and as a result, Kazakhstan is not able to carry out independent space launches, but our country may well take part in certain programs and receive economic benefits from commercial launches. Reveal the Case about Kazakhstan's ability to succeed in the space industry on a par with world powers.</p> <p>1. Is space tourism applicable for Kazakhstan? 2. Name three reasons for developing it. 3. Will our country ever be able to develop it?</p> <p>Group 3. While the majority of people think it is a good idea to explore space, there are also opponents of space travel who claim that space exploration may potentially wipe out humanity in the long run. Reveal the Case about Space</p>	<p><i>Bloom's taxonomy – Apply – Use information in new situations – execute, implement, solve, demonstrate, interpret</i></p>

	<p>exploration and space travel.</p> <ol style="list-style-type: none"> 1. What is the difference between space travel and a space exploration? 2. Possible benefits of space travel/exploration. 3. Possible hazards of space travel/exploration. <p>Students should make presentations using the questions above as guide.</p> <p>Preparing the presentation. LO 10.S5. Set 3 minutes time for each group to present their information equally participating in the group presentation. Ask the other students to create at least 3 questions to later ask presenters.</p> <p>Peer Evaluation Form for Presentations Title of Presentation _____ Presenter's Name _____</p> <table border="0"> <thead> <tr> <th></th> <th style="text-align: center;">Strongly Disagree</th> <th style="text-align: center;">2</th> <th style="text-align: center;">Strongly Agree</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. The slides were well designed</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>2. The presentation was well delivered</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>3. The student spoke clearly</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>4. Case solutions were complete</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>5. Overall, the presentation was interesting and engaging</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> </tbody> </table> <p>Comments and suggestions for improvement: _____ _____</p> <p>Alternative (Unless laptops are provided) Role play. Team work. “What are the possible benefits of space tourism for Kazakhstan?” (G)T: Divide the group into two teams. One team is a Space tourism company (assign a name). Another group is a group of billionaires who would like to travel into the space as tourists. Give about 5 min for both teams: for the company to think what they can offer and for the tourists what they can require from the company. The teams then present and discuss their offers and requirements. The teams switch in further.</p>		Strongly Disagree	2	Strongly Agree		1. The slides were well designed	1	2	3	4	2. The presentation was well delivered	1	2	3	4	3. The student spoke clearly	1	2	3	4	4. Case solutions were complete	1	2	3	4	5. Overall, the presentation was interesting and engaging	1	2	3	4	
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<p>End 35-40</p>	<p>At the end of the lesson, learners reflect on their learning according to the 5-3-1 strategy: 5 answers or facts related to the question stated at the beginning of the lesson; 3 ideas / answers he or she would like to share with another student; 1 most important thing they would like to share out to the class.</p>																															
Additional information																																
<p>Differentiation – how do you plan to give more support? How do you plan to challenge the more able learners?</p>	<p>Assessment – how are you planning to check learners’ learning?</p>	<p>Health and safety check: ICT links</p>																														
<ul style="list-style-type: none"> ● Students will work in groups and support each other. ● More capable students will be given more challenging material to work with in order to allow them to be more challenged. ● The students will be supported by the teacher during independent work. 	<p>The teacher and students will give brief feedback.</p> <p>Assessment Suggestions: - A learner finds it difficult to explain and justify their own and others’ point of view on a range of general and curricular topics - A learner occasionally demonstrates ability to explain and justify their own and others’ point of view on a range of general and curricular topics - A learner confidently demonstrates ability to explain and justify their own</p>	<ul style="list-style-type: none"> ● ICT ● Be Responsible For Your Own Actions and Words ● Be Respectful to Teachers and Other Students ● Listen Carefully to Instructions ● Tell an adult If You Feel Unsafe <p>Adapted from https://classroom.synonym.com/safety-rules-classroom-</p>																														

	and others' point of view on a range of general and curricular topics	6544223.html
Reflection Were the lesson objectives/learning objectives realistic? Did all learners achieve the LO? If not, why? Did my planned differentiation work well? Did I stick to timings? What changes did I make from my plan and why?	Use the space below to reflect on your lesson. Answer the most relevant questions from the box on the left about your lesson.	

The theme of the lesson from the Lesson study's cycle "Advantages of space tourism" does not deviate from the course program and is aimed at gaining knowledge about Baikonur.

Lesson study is a pedagogical approach that characterizes a special form of research in action in the classroom, aimed at improving knowledge in the field of teaching practice. The approach was founded in Japan in the 70s of the 19th century, anticipating, by about 70 years, the "Research in Action" approach used in the West. The lesson stage accepts teams of teachers who work together to plan, observe, analyze learning and teaching, and document their findings [6, p. 85].

To introduce the topic at the beginning of the lesson, a brainstorming session on the topic "Space" is planned, which will lead to the actualization of the knowledge of the previous lesson and will provide an opportunity to effectively start the lesson. In order to achieve the learning objective of "10.R8 use a wide range of familiar and unfamiliar paper and digital reference resources to check meaning and extend understanding", student activities will focus on reading a text about Kazakhstan in English, a primary source by a foreign author, and provide students with the ability to quickly extract the necessary information. After completing the task according to the vocabulary, students begin to complete tasks with the definitions of 'True / False / Not given', also students must give specific reasons for incorrect answers. To analyze the degree of achievement of students, prepared in advance criteria for assessing the reliability of statements will be applied.

Further, in order to consolidate functional skills, students' activities will be directed to a mini-research, where it is proposed to search for information from the Internet on the proposed cases in English, in order to develop an independent search for alternative solutions. To create a favorable environment and meet the individual needs of students, the group will be divided into three mini-groups, as well as observation will be focused on three students of a class, where student A - with a high level of motivation, B - with an average level of motivation, C - with a low level of motivation in the language. In order to increase interest in joint work, the following role-playing functions will be applied - an analyst, an informant and a designer.

Table 1. List of students with input indicators by language and subject knowledge

Student's code	Gender	*CEFR level	Subject knowledge
0003F	Fe male	C1	Physics
0005F - Student A	Fe male	C1	Physics
0006F	Fe male	C1	Chemistry
0007M	Mal e	B2	Biology
00010F	Fe male	B2	Biology
0002M	Mal e	B2	Physics
0001F - Student B	Fe	B2	Chemistry

	male		
0009F	Fe male	B2	Chemistry
0004F - Student C	Fe male	B1	Biology
0008F	Fe male	B1	Biology

*CEFR - Common European Framework of Reference for Languages [7].

Since the lesson study will focus on less motivated students, students A and B will be observed by observation, noting their ability and pace of responses and for level C students by analyzing the joint activity of students in search of information. The result of achieving the goal “10.C6 organize and present information clearly to others” will be a group presentation of case solutions in the form of three-minute presentations based on meta-subject skills to transform a learning situation into a life situation. Peer assessment is planned to be carried out on the basis of pre-developed descriptors adapted according to the principles of “slow journalism”, where students’ comments are based on observation and personalization of educational material, which is no less important in the development of students’ giftedness [8].

To determine the achievement of the goal of the lesson and the motivation of students to continue studying the topic in subsequent lessons, reflection on the strategy 5-3-1 will be applied to consolidate the lesson passed, giving 5 answers or facts related to the topic or question posed at the beginning of the lesson; 3 ideas/answers that he or she would like to share with another student; 1 most important thing they would like to share with the class.

Research results and discussion. In the course of the lesson, the development of speech practice with an emphasis on competence-based learning was carried out through the organization of pair and group work, taking into account collective methods of solving problems, which made it possible for more active participation of students with weak reading skills in adapting the acquired knowledge, where their self-confidence was observed except minor weaknesses in functional reading. Therefore, the choice of the method of grouping students into language levels A, B, C reflected the ability of students to comprehensively achieve the goal [9, p. 540].

At the beginning of the lesson, brainstorming was successful due to the fact that at first the questions were asked by less motivated students, then more capable students supplemented their answers with detailed analysis on the principle “from simple to complex”.

Table 2. Evaluation of the quality of language abilities in argumentation

Student	Activity	Language competence	Quality of arguments out of 5 points
0006F	90%	Upper-intermediate	5
0005F – Student A	60%	Upper-intermediate	5
0003F	40%	Upper-intermediate	5
0002M	90%	Intermediate	5
0007M	60%	Intermediate	5
0009F	40%	Intermediate	5
0001F – Student B	40%	Intermediate	4
00010F	30%	Intermediate	4
0008F	30%	Pre-intermediate	4
0004F – Student C	20%	Pre-intermediate	4

The collective approach of organizing pair work on the text not only motivated students, but also led to self-regulation in the process of interaction with peers. The principle of forming paired activities with pairing by levels of motivation ensured the achievement of the goal by almost all pairs with observed students A and C, however, the observed student B, paired with a highly motivated student, could not cope with the answers completely and scored less than necessary. As a result, I had to ask conceptual checking questions that helped student B complete the task. Student B’s follow-up colleagues noted that the pair were unable to

jointly analyze and interpret the missing Not Given responses because they were not vigilant enough. First, because of the dominant position of the strong learner, the less capable partner was not motivated to fill their gaps by working together. Secondly, both missed the opportunity to apply their subject knowledge of the history of Kazakhstan in this assignment. Subsequently, we decided to group student B with a moderately motivated student on a gender basis and differentiate tasks for small groups. For example, weakly motivated learners will only need to define True/False statements other than Not Given [10, p. 1].

Table 3. Focus on reading. Pair work.

Student	Language knowledge	Correct answers for:		Status Achieved / working towards / not achieved
		Exercise 1 Score out of 14 points	Task 2 Score out of 7 points	
0005F – Student A	C1	14	7	Achieved
0008F	B1	14	7	Achieved
0006F	C1	13	7	Achieved
0001F – Student B	B2	13	7	Achieved
00010F	B2	13	6	Achieved
0004F – Student C	B1	13	6	Achieved
0002M	B2	14	6	Achieved
0003F	C1	13	6	Achieved
0007M	B2	11	6	Working towards
0009F	B2	10	6	Working towards

As previously stated, the role-sharing strategy inspired students to constructively work on the proposed tasks in mini-investigation, the solution of which required functional skills. Especially when students changed their roles in the course of work, they were able to get full information on the problems under study, understand the shared responsibilities of role functions and provided the opportunity to develop at their own pace, at the level of their possible maximum. This made it possible to activate previously acquired skills and its subsequent mobilization in solving vital problems. During the presentation process in mini-groups with student C, there were no difficulties, since the task took into account previously studied material and the students knew what materials to use for the presentation, while students A, B had to search for materials from different Internet resources. As a result of defending the presentation, students A, B were deeply interested in the ability of Kazakhstan to succeed in the space industry on a par with world powers, which led to deepening of the questions asked to the 3rd group with student C, which in turn required more time for discussion. As a result, I had to set additional time for summarizing the comments. Although the 3rd group with student C had some minor language difficulties in the discussion, they responded with great enthusiasm, which showed an improvement in the stimulus and self-esteem of the weakly motivated students, which was reflected in the results of the peer assessment.

Table 4. Mini-study. Peer review.

Student	Mini group's No.	Language level	Role of the student	Points for peer-review (out of 4 points)					Total points
				Slides	Presentation skills	Speech	Solution	Overall presentation	
F	0005	C1-Student A	Informer						
F	0003	C1	Designer						
F	0006	C1	Analyst	.	4	4	4	4	20
F	0008	B1	Informer						
F	0002	B2	Designer	.	3	3	4	4	19
		B1-Student C	Analyst						

M									
	0004								
F									
	00010	B2	Informer						
F		B2	Informer						
	0007	B2-Student B	Designer						
M		B2	Analyst						
	0001	3		4	4	4	4	19	
F									
	0009								
F									

The ability to analyze questions of a higher level of thinking was manifested in a joint discussion of information on the proposed cases for reasoning, which served to form functional skills in the team. Moreover, by discussing the information received with Kazakh content, the students were able to form weighty arguments on the given judgments in all groups.

Thanks to the involvement of students in joint work through the organization of integrated tasks, it was possible to improve the functional competence of students, as evidenced by the feedback of students in the reflection on the lesson. However, while teaching, I was warned that I would not be able to reach all students in the mini-group research process, since I only tested the role function for this purpose, but in the course of teaching this strategy gave positive results and proved to be successful, which will make it possible to use it in the future.

Although the brainstorming was judged on the principles of student learning as a whole, we further decided to apply a peer review stage, which can be used to obtain assessments of the problem based on the opinion of more competent students, which would take into account the level of giftedness in peer learning.

Evaluation using the criteria “True / False / Not given” had a differentiated feedback pattern for me. First, it identified factors to improve students’ ability to distinguish factual information (True) from false information (False) and to evaluate the meanings of certain words that could change the statements to some extent (Not given). Secondly, this type of assessment was proposed taking into account the capabilities of students, which served to make a predictive assumption. Thirdly, it showed the level of development of students’ critical thinking.

The use of role-playing during evaluating case presentations contributed to the development of students’ functional skills in collaborative learning, teamwork, and responsibility-sharing as a critic influencing the learner’s perspective. As a result, I was able to diagnose and channel learners' knowledge at the peer level, resulting in a more positive generalization without limiting less motivated learners to harsh criticisms. Since in this group, the student C was more sensitive to criticism from the teacher.

The descriptors for peer-evaluation of case solutions included assessment on a 4-point scale, where 1 point is a low degree, and 4 is the highest degree of an indicator of student achievement. Thus, students in the role of an analyst were able to assess the quality of the organization, the expressiveness and orderliness of the main arguments and answers; in the role of an informant - evaluate the use of arguments with reasons for supporting the resolution; in the role of a designer - evaluate the style of the presentation - tone of voice, clarity of expression, accuracy of arguments to keep the attention of the audience. The results of summarizing the achievements of students in the comments on the results of the performance of the teams gave a chance to objectively assess the ability of students by peers, which served as the development of mutual assessment.

Using questions of a higher level of thinking - the ability to analyze, we managed to rally students for self-development in a mini-group, which led to a unanimous hypothesis, referring to previously acquired knowledge, adapted to Kazakhstan.

Synthesizing the effectiveness of assessment tools, it should be said that it would be possible to change the assessment criteria for the “T / F / NG Statement”, taking into account the mixing of students of different levels, where weakly receptive students could analyze and synthesize new knowledge, establish cause-and-effect relationships when choosing answers for questions in the Not given format. In addition, during the joint summarization of student responses at the conclusion of the lesson, we found that students have sufficient vocabulary, and perhaps in the future I will switch to writing feedback on a similar strategy.

Conclusion. In conclusion, we can say that the use of content-language integrated learning in the development of functional reading skills of high school students in the English lesson will promote better

results in preparing students for international exams in the 10th grade. The test itself is carried out to confirm the ability of students to continue their education in foreign educational institutions. In the 10th grade, this is a mandatory test for all students of this parallel, so high school teachers use different approaches in studying the development of communication skills separately.

This practice demonstrates that today a promising precondition for the development of functional reading is integrated learning materials written in the target language and presented as social texts about Kazakhstan. Since such texts are associated with the initial representation of the situations that students face when solving communicative, organizational and informational tasks.

As a result, during the learning process, students discussed, compared, selected answers (True / False / Not given), and also made an interpretation to determine the missing elements to restore a complete information picture about space tourism. This is evidenced by the solutions of the cases in the students' presentations, which showed a fairly good level of proficiency in one of the functional reading skills - the combination of disparate facts into a single information picture. However, given the difficulty of weakly capable students, next time before reading, we need to conduct a preliminary mini-session to diagnose students' abilities, which will serve as a motivation for students to develop the ability to separate the factual component of the text from the interpretive one.

Considering the presented facts from a certain angle (role functions), each student in the group took on different roles of peers (analyst-informant-designer) in preparing presentations for solving cases, which served as a complement to the content of an individual approach to the problem and the development of the necessary conditions for the development of functional reading skills.

The reflective part of the lesson was successful, as the proposals by the 5-3-1 strategy ensured accessibility, variability of learning, increased the activity and mobility of students.

It must be admitted that most of the used approaches and methods of organizing group work with the variability of individual needs confirmed sufficient elaboration and gave positive results during the study of the lesson. The analysis of students' data based on the results of the external summative assessment in English proves that this practice actually has a positive effect on the quality of preparation for international exams.

Table 5. Results of externally summative assessment in English

Externally summative assessment in English					
Student	Reading (30 points)		Total		Mark for the term
0005F – Student A	21	A	34	C	5
0003F	21	A	34	C	5
0001F – Student B	19	A	34	C	5
0002M	19	A	39	B	4
0007M	19	A	35	B	5
0009F	18	B	36	B	5
00010F	17	B	32	C	5
0006F	17	B	31	C	5
0008F	15	C	27	D	4
0004F – Student C	14	D	25	D	4

Overall, in conclusion, the article disputes the fact that teachers of language subjects always refer to the fact that CLIL is not applicable in the English lesson. The authors came to the conclusion that the use of CLIL in language lessons is not limited by the generally accepted concepts, where it is assumed that the main attention is paid to the subject content. Such lesson study will undoubtedly contribute to the development of teaching and training of future teachers with a language bias and subject knowledge. Additionally, it will contribute to the development of teaching foreign languages and such subjects as 'Professionally-oriented foreign language' and 'English for specific purposes' at the higher schools of pedagogical directions. This can be considered as a promising direction for further investigation and practical integration of language and content knowledge for both: subject and language teachers.

Reference:

1. Educational program of AEO "Nazarbayev Intellectual Schools" - NIS-Program. Approved by the decision of the Board of AEO "Nazarbayev Intellectual Schools" dated August 16, 2017, Minutes No. 41.
2. Soliman M. *From Integrating to Learning: Insights from Spanish L2 Multiple Documents Selection in Reading Tasks*, Vol. 14 No.1, 2021, <https://doi.org/10.5294/laclil.2021.14.1.6>
3. Kay Bentley *The Teaching Knowledge Test: Module CLIL (Content and language Integrated Learning)*. Cambridge University Press 2010. ISBN 978-0-521-15733-9 Paperback, Reprinted in 2016. - P.125
4. Logvina I., Rozhdestvenskaya L. *Formation of functional reading skills. The book for the teacher*. University of Tartu. Estonia, 2012. – P.56
5. Dyachenko V.K. *Cooperation in teaching: On the collective method of educational work: Book. for the teacher*. - M.: Enlightenment, 1991. – P.192
6. Dudley P. (2012), "Lesson Study development in England: from school networks to national policy", *International Journal for Lesson and Learning Studies*, Vol. 1 No. 1, P.100, <https://doi.org/10.1108/20468251211179722>
7. *The CEFR language levels from A1 to C2*: <https://languagetesting.com/cefr-scale>
8. Prasittichok P., Klaykaew K.K., *Meta-skills development needs assessment among undergraduate students*, Volume 8, Issue 1, January 2022, e08787, <https://doi.org/10.1016/j.heliyon.2022.e08787>
9. Nurhajati D., Nurhajati W. *Enhancing Students' Self-Confidence Through Teacher's Behavior Change on Lesson Study Program for TEYL*, World Associations of Lesson Studies, International Conference – *Becoming Reflective Educators and Professionals of Learning* November 25-28, 2014, Indonesia, P.1162
10. Boonstra F.G, Nieuwenhuizen W., Visser T., Mattijssen T., F.F. van der Zee, R.A. Smidt, N. Polman *Collective approach in progress: Interim evaluation of the agri-environment scheme in the Netherlands*, Rapport / Wageningen Environmental Research, No.3066, 2021, ISSN (Print) 1566-7197

Reference:

1. Educational program of AEO "Nazarbayev Intellectual Schools" - NIS-Program. Approved by the decision of the Board of AEO "Nazarbayev Intellectual Schools" dated August 16, 2017, Minutes No. 41.
11. Soliman M. *From Integrating to Learning: Insights from Spanish L2 Multiple Documents Selection in Reading Tasks*, Vol. 14 No.1, 2021, <https://doi.org/10.5294/laclil.2021.14.1.6>
12. Kay Bentley *The Teaching Knowledge Test: Module CLIL (Content and language Integrated Learning)*. Cambridge University Press 2010. ISBN 978-0-521-15733-9 Paperback, Reprinted in 2016. - P.125
13. Logvina I., Rozhdestvenskaya L. *Formation of functional reading skills. The book for the teacher*. University of Tartu. Estonia, 2012. – P.56
14. Dyachenko V.K. *Cooperation in teaching: On the collective method of educational work: Book. for the teacher*. - M.: Enlightenment, 1991. – P.192
15. Dudley, P. (2012), "Lesson Study development in England: from school networks to national policy", *International Journal for Lesson and Learning Studies*, Vol. 1 No. 1, P.100, <https://doi.org/10.1108/20468251211179722>
16. *The CEFR language levels from A1 to C2*: <https://languagetesting.com/cefr-scale>
17. Prasittichok P., Klaykaew K.K., *Meta-skills development needs assessment among undergraduate students*, Volume 8, Issue 1, January 2022, e08787, <https://doi.org/10.1016/j.heliyon.2022.e08787>
18. Nurhajati D., Nurhajati W. *Enhancing Students' Self-Confidence Through Teacher's Behavior Change on Lesson Study Program for TEYL*, World Associations of Lesson Studies, International Conference – *Becoming Reflective Educators and Professionals of Learning*, November 25-28, 2014, Indonesia, P.1162
19. F.G. Boonstra, W. Nieuwenhuizen, T. Visser, T. Mattijssen, F.F. van der Zee, R.A. Smidt, N. Polman *Collective approach in progress: Interim evaluation of the agri-environment scheme in the Netherlands*, Rapport / Wageningen Environmental Research, No.3066, 2021, ISSN (Print) 1566-7197