Chernyshov V. Flipped classroom: applying the method

The paper focuses on the flipped classroom methodology and the specifics of its application. The flipped classroom methodology is one of the newest approaches to learning and teaching. As an approach, flipped learning is based on anthropocentric and student-centred principles, and seeks to avoid the mechanisticism of the traditional approach, taking into account the needs of the particular participants in the educational process. As a methodology, the flipped classroom is based on the idea of key principles of learning organisation that combine a number of educational theories and approaches to learning. Orientationally, this methodology can be implemented within the context of objectivist or constructivist approaches. The objectivist approach is more rigorous and focuses on solving specific course objectives, while the constructivist approach focuses primarily on the overall goals of the course and is more oriented towards the humanistic needs of students and teachers. In terms of implementing the flipped classroom, the organisation of the learning process is achieved through the creation of a learning community and learning environment, as well as through the use of tools that allow for the successful resolution of current learning problems – a clear definition of learning goals and objectives, appropriate selection of learning material and its structuring through the division into small parts, and support provided by the teacher/lecturer to students throughout the course of study. The flipped classroom uses a triple scheme of the educational process, which includes pre-class/out-of-class (independent) work, class/class work and learning outcomes assessment procedures. The application of the flipped classroom can be both full and partial – when elements of the flipped classroom are used within the context of traditional learning. The methodology of the flipped classroom involves the extensive use of audio, video and other multimedia technologies and systems, the creation of online presentations – in general, there is a significant technologicalisation of the learning process.

Key words: education, education methods, flipped classroom, innovative approach to education, pedagogy, teaching.

UDC 378.147.34 DOI https://doi.org/10.31392/NPU-nc.series5.2023.92.2.19

Shvetsova I., Bondarenko V.

CONTENT AND LANGUAGE INTEGRATED LEARNING (CLIL) IN THE TEACHING OF MARITIME ENGLISH: IMPLICATIONS AND ADVANTAGES

In this research paper, a study of the teaching design and framework of CLIL modules taught in the course Maritime English for Maritime students. The authors argue that enhancing the educational value of English requires effective and efficient teaching methods and that the main goal of the higher education system is to develop the ability to perform communicative tasks in the field of future professional activity. Integrated content and language learning in the teaching of maritime English (CLIL) can effectively achieve this goal. Active learning is supported by the Moodle platform, which provides organized CLIL resources in the form of e-learning materials. Throughout each course, defined topics are developed, resources are presented, and an assessment system is developed that is directly linked to the resources. The paper presents the advantages of subject and language integrated learning in teaching maritime English (CLIL) through the modules «Tankers and their cargoes» and «Liquid bulk cargo handling». The researchers described the content of the modules for the first and fourth years of study. The paper provides examples of grammatical and communicative tasks and cognitive skills for teaching the modules: «Tankers and their cargoes» and «Liquid bulk cargo handling». The authors define CLIL as an alternative model of ESP teaching that has the potential to remove many of the drawbacks of traditional approaches. The article substantiates the main objectives of the course in accordance with the CLIL approach, including: improving students' performance in the relevant subjects, as well as in the target and source languages; introducing students to new ideas and concepts in academic subjects; strengthening the connection with the language education curriculum; increasing students' confidence in learning the target language; making the content area the main focus of teaching materials; providing students with access to the subject by modifying lesson plans

Key words: CLIL, Maritime English, higher education, professional training, foreign language, communicative tasks, teaching approach, maritime communication.

(статтю подано мовою оригіналу)

The Maritime English Language Standard is a requirement for all professionals involved in the maritime sector and is increasingly being recognized as an essential safety measure not only at sea but on shore, at port and in any seafaring industry. The connection between maritime safety and proper performance of duties is interconnected and requires a good command of English as a prerequisite for maritime safety, security, safe navigation and maritime business.

Improving the level of maritime English as a cornerstone of maritime safety is the subject of research by many scholars. It is important to focus on teaching practice to improve maritime communication. Shevchenko I. emphasises that the growing pressure of the globalisation is changing our perceptions of education, and good knowledge continue to ensure the employment of future graduates. That is why learning English for further professional

development is becoming extremely important. According to researchers, the reduction of classroom hours and the allocation of a large number of hours for independent work require teachers to change the traditional methodology of teaching English and turn to modern world experience [6].

Increasing the educational value of English requires effective and efficient teaching methods. The main goal of the higher education system is to develop the ability to perform communicative tasks in the field of future professional activity. Content and Language Integrated Learning in the teaching of Maritime English (CLIL) allows to achieve this goal effectively.

The **aim** of this article is to highlight the possibilities and advantages of CLIL and how it can be implemented and developed in a maritime English course for seafarers.

Research objectives

The objectives of this study are as follows:

- 1. To analyse the benefits of subject and language integrated learning in teaching maritime English (CLIL) within the modules Tankers and their cargoes and Liquid bulk handling.
 - 2. To describe the content of the training modules for the first and fourth modules.
- 3. To provide examples of grammatical and communicative tasks and cognitive skills for teaching the modules: Tankers and their cargoes and liquid bulk handling.

Literature review

In the shipping industry, English is referred to as Maritime English and the teaching of this subject in all maritime colleges, institutes and universities worldwide is regulated by IMO Model Course 3.17 (Maritime English) [2]. This regulation has therefore set a standard for the teaching and learning of English, as has the STCW Convention (Trenkner, 2002; Pritchard, 2005; Takagi et al., 2007).

CLIL is an approach at teaching and learning that developed when subjects are taught and learnt in a non-native language [9]. The basis of CLIL is that subjects are taught and learnt in a language other than the learners' first language, i.e. studying another (content) subject, such as a Ship's construction, Geography, Navigation, through a foreign language, as well as learning a foreign language through studying a content-based subject. The participant is able to communicate in a wider language range while acquiring knowledge and skills in different areas of the curriculum.

The researchers that studied the issue of integrated content and language integrated learning were mentioned by the authors: Shevchenko I. [6], Simbolon, N. [7]. CLIL is seen as a merger of subject-specific didactics that leads to an innovation that has emerged as education for the modern age [1]. The researchers have identified a number of positive statements regarding the implementation of this methodology [5].

Thus, it is reasonable to emphasize the significant advantages of this methodology:

- 1. Knowledge of the language becomes a means of learning the content and the language is integrated into the curriculum [5; 9].
- 2. Learning is improved by increasing motivation and learning natural language in context. When learners are interested in a subject, they are motivated to learn the language [5].
- 3. CLIL is based on learning a language in real-life situations. Educational applicants develop fluency in English by using it to communicate for various purposes. Therefore, it is an effective approach to developing communication skills [5; 9].
 - 4. CLIL leads to greater linguistic proficiency.
 - 5. Improves academic cognitive processes [9].
 - 6. Promotes intercultural understanding and social values [5; 9].
 - 7. CLIL contributes to the improvement of ESP teaching [5; 7].

The global necessity to learn languages, particularly English, has created a demand for new ways of teaching languages. CLIL is a flexible and effective approach used to meet this need. Numerous foreign language teachers have found that they can develop professionally by adding CLIL to their skillset [3; 8; 4; 9]. The CLIL approach is considered an effective way of teaching a second or foreign language by integrating content and language learning, and requires collaboration between English and subject teachers [7].

CLIL as an alternative model of ESP teaching has the potential to remove many of the drawbacks of traditional approaches.

The CLIL approach determines the main objectives of the course:

- introduce students to new ideas and concepts in academic subjects improve students' performance in the relevant subjects, as well as in the target and source languages
 - strengthen the link with the language education curriculum
 - increase learners' confidence in learning the target language
 - make the content area the main focus of the learning materials
- provide learners with access to the subject matter by modifying lesson plans to take into account the developmental characteristics of a student's ability to learn the target language
 - provide cognitively stimulating materials from the very beginning
 - create a platform to support content acquisition and language acquisition.

In this article, an overview of two Maritime English modules for first and fourth year students of the Faculty of Navigation is introduced. The topic of these modules is tankers, but the content of the modules differs. The first year students are only acquainted with different types of tankers, their structure and equipment for loading and unloading cargo (Tankers and Their Cargoes), while the fourth year students study the specifics of working on this type of transport (Liquid bulk cargo handling).

The content of the module context is developed has been developed in accordance with the STCW convention and IMO Model Course 3.17 [2]. The Essential Competencies to be acquired upon completion of the module include: recognise tankers focusing on their design, cargo and cargo handling equipment (for the first year); speak about safe working operations on tankers (for the fourth year).

The modules are structured in the following contexts: *Module: TANKERS AND THEIR CARGOES (first year of study):*

- 1. Liquid Bulk Cargo
- 2. Types of Tankers
- 3. Oil Tanker Design
- 4. Liquid Cargo Handling Equipment
- 5. Gas Tankers.

Module: LIQUID BULK CARGO HANDLING (fourth year of study):

Part 1. Safe Working Practice:

- 1. Approaching a Port
- 2. Loading and Discharging Procedure
- 3. Tank Cleaning Procedures
- 4. Liquid Bulk Cargo Contamination
- 5. Liquid Cargo Shortage
- 6. Cargo Blending

Part 2. Safety Guidelines for Tankers

- 1. Hazards on Tanker
- 2. Causes of Tanker Accidents

The students achieve proficiency in all four skills of listening, speaking, reading and writing. Content and Language Integrated Learning in the teaching of Maritime English (CLIL) involves the selection of grammar that can be used in the professional activities of future seafarers. The development of the training modules also involved the selection of grammatical constructions according to the subject matter, i.e. appropriate to use when students describe tankers focusing on their design, cargo and cargo handling equipment and talk about safe working operations on tankers. The following are the task examples:

Table 1

Grammar knowledge applicable to the professional activities of future seafarers

1. At the Language Study stage, Grammar Spot is learnt: «Unless». The main requirements for developing learning resources are to simplify the explanation of grammatical structures and provide examples and exercises relevant to the topic.

Grammar Spot Unless

You can use *unless* in conditional sentences as a synonym to *if...not*.

Charterer will not accept the cleanliness of the tank unless internal visual inspection is provided.

You always use the present simple to refer to the future after *unless*.

There will be a threat to the marine environment unless the COW method is used.

You always use positive form of verbs after unless.

You cannot load fresh cargo unless peculiar cleaning procedure is conducted.

Tasks to practice this grammar:

Task 1. Match the sentence parts about chemical tanker cleaning procedure.

1	1 No cleaning can be carried out unless		unless the temperature of sea water is monitored.	
2	The main wash cleaning isn't efficient	b	mandatory pre-wash is conducted.	
3	The chemicals and cleaning agents can contaminate the cargo unless	С	unless ventilation is stopped.	
4	Do not check the gas contents in the tanks	d	the tanks are completely dried.	
5	Do not start cargo operations unless	e	rinsing with fresh water is provided.	

2. Rewrite the statements to receive the guidelines on COW method using unless.

Model: The amount of ROB can be reduced by using COW method.

- The amount of ROB cannot be reduced <u>unless</u> COW method is used.
- 1. COW method should be used to reduce significant financial loss and marine pollution.

Exploring the topic: Liquid Bulk Cargo Contamination. The author proposed the next framework:

Table 1 (continuance)

Language Study					
Grammar Spot Passive Voice with Modals: Revision					
You can use modals <i>can, could, may, might, must and should</i> in passive forms to express possibility, ability, duty, permission or advisability. The pipelines and valves onboard should be regularly inspected and tested. The structure is: modal + be + the past participle. The manifolds must be clearly labelled.					
This grammar is developed in the following tasks: 1 a) Tick the causes of cargo contamination.					
incorrect cargo cleaningfailure to close valves after tank cleaning operationcargo overflow	no proper draining of old cargono proper loading plan addressing which lines to be usedpoor sampling procedureno proper loading plan addressingdature of bridge equipmentflammability of cargoaccess of oxygenmixing of cargonot maintaining required cargo temperature				
b) Write down the instructions to avoid cargo contamination using the causes you've ticked in					

Communication skills are of utmost significance when teaching Maritime English. The teaching materials for the modules are designed to develop these skills: suggesting changes; agreeing or disagreeing; asking questions; comparing and contrasting; describing cause and effect / diagrams / images; a process; expressing ideas; giving examples / information / reasons / interpreting data; hypothesising; persuading; predicting; presenting work / presenting solutions; stating facts and opinions; justifying answers or opinions; instructing / briefing.

The following are examples of tasks that we have offered in these courses.

Table 2 Communication skills for the Modules: Tankers and their cargoes and Liquid bulk cargo handling

Communication skills	Task	Content					
Comparing and contrasting	Compare solid bulk edible and non-edible cargoes.						
	Compare two methods using the plan.	 more efficient method; less environmentally friendly method; lower risk to seafarers' lives; time saving method. 					
	Ask two groupmates about oil tanker arrangment and complete the table.				student A	student B	
			Inne	r space			
			On the deck				
Presenting solutions; presenting work	Role-play.	Student A. You are Responsible Officer. Conduct a briefing with the crewmembers on how to avoid cargo shortage. Students B, C, and D. You are crewmembers. Attend the briefing and ask questions.					
Describing cause and effect; diagrams; images; a process	Read the text again and list the procedures in correct order.		A	loading			
	Group A: order the procedure of loading. Group B: order the procedure of discharging.						
			В	discharging			
Expressing ideas	Tick the correct statements. Justify your choice.					nks.	

Table 2 (continuance)

		, , , ,
Asking questions	Discuss the questions.	1. What are the different types of tankers? 2. What categories can oil tankers be divided into? 3. What are the differences between tankers in the pictures? 4. Which of the four tankers would you like to work on?
Instructing/ briefing	a) List the pre-arrival information. b) Instruct each other using your lists.	Student A: from your ship to the terminal. Student B: you expect to receive from the terminal.
	Conduct a briefing with the crew using the plan.	 actions prior to arrival to port; (un)loading procedures; tank cleaning methods and/or standards of cleaning; avoidance of cargo contamination, shortage or blending; safety of crew and ship.

Empowering students to master different types of cognitive thinking is crucial to their success – and to the professional development of Maritime professionals. The main cognitive processes are listed below with associated verbs and examples of activities which develop these thinking skills.

Table 3

Cognitive skills across the curriculum

remembering: recognise, recall (activities: identify, label, list, tell, match, recite, spell, name, state facts)

- Match the words with their definitions.
- Label the tanker structural parts.

understanding: explain, interpret (activities: classify, predict, define, compare, describe, draw, give examples, order, sequence)

- Describe each stage of cargo shortage prevention using key words.
- Compare the systems on oil and chemical tankers.
- Read the text again and complete your column in the table.

Student A: cargo-handling equipment and their function.

Student B: place for loading and unloading cargo and reasons

applying: carry out (activities: find out, experiment, interview, prepare, present, research)

• Suggest criteria for tankers classification.

analysing: examine, reason (activities: give reasons, analyse, choose, decide, deduce, examine, justify, show the difference between, solve)

- Write down pieces of advice on how to avert accidents.
- Read the case and highlight the misdoings.
- Determine the criteria for tankers classification and write S (size), D (design) or C (cargo type).
- Give your reasons for and against single and double hull designs.
- Tick the items that characterize liquid bulk cargo. Justify your choice.
- Tick the true facts about oil tankers. Justify your choice.
- Tick pieces of information which are included in the pre-arrival information exchange.

evaluating: evaluate, assess (activities: conclude, consider, give an opinion, judge, prove, rate, recommend)

- Summarize the information about both tank-cleaning procedures.
 Explain the peculiarities of design in terms of hull construction.
- Model: As long as a tanker has double hull the risk of water ingress or flooding is reduced.
- A greater harm may be caused to people's health and nature as long as a tanker has single hull

creating: make, produce (activities: change, build, compose, create, design, invent)

• Design a poster on one of oil tanker types using the plan.

Possible cargo to transport.

Available sizes.

Design peculiarities.

- Design a poster on liquid cargo handling equipment.
- Develop true-false statements on either oil or gas tanker sizes.
- Take turns quizzing your group-mates.
- Write down the instructions to avoid cargo contamination using the causes you've ticked.
- Write a memo on the necessary actions for the bridge team to ensure safety for ship, her cargo and crew.

Conclusions. Thus, the modern CLIL methodology motivates students to learn, activates their cognitive activity, promotes meaningful mastery of maritime English, aims to improve foreign language competence and acquire knowledge for practical application in future professional activities. This is the key point at which CLIL lessons can help participants effectively reproduce interlanguage communication and contribute to their language growth. CLIL has proven to offer a wide range of opportunities for subject teachers interested in combining content and language in their courses.

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Швецова І. В., Бондаренко В. В. Предметно-мовне інтегроване навчання у викладанні «морської» англійської мови: можливості та переваги

У цій науковій статті представлено дослідження навчального процесу та концепції модулів СLIL, що викладаються в курсі «Морська англійська мова» для студентів морських спеціальностей. Автори аргументують, що підвищення освітньої цінності англійської мови вимагає ефективних та дієвих методів викладання і що основною метою системи вищої освіти є розвиток здатності виконувати комунікативні завдання у сфері майбутньої професійної діяльності. Інтегроване навчання змісту та мови у викладанні морської англійської мови (CLIL) дозволяє ефективно реалізувати цю мету. Активне навчання підтримується платформою Moodle, яка надає організовані ресурси CLIL у вигляді електронних навчальних матеріалів. У кожному курсі розроблені визначені теми, представлені ресурси та розроблена система оцінювання, яка безпосередньо пов'язана з ресурсами. У статті представлено переваги предметно-мовного інтегрованого навчання у викладанні морської англійської мови (CLIL) на прикладі модулів «Танкери та їхні вантажі»

та «Обробка наливних вантажів». Дослідники описали зміст модулів для першого та четвертого років навчання. У статті наведено приклади граматичних і комунікативних завдань та когнітивних навичок для викладання модулів: «Танкери та їхні вантажі» та «Обробка рідких наливних вантажів». Автори визначають СLIL як альтернативну модель викладання англійської мови професійного спрямування, яка має потенціал для усунення багатьох недоліків традиційних підходів. У статті обґрунтовано основні завдання курсу відповідно до підходу СLIL, серед яких: покращення успішності студентів з відповідних предметів, а також з цільової та вихідної мов; ознайомлення студентів з новими ідеями та концепціями в навчальних предметах; посилення зв'язку з навчальною програмою з мовної освіти; підвищення впевненості студентів у вивченні цільової мови; надання предметній області основного фокусу навчальних матеріалів; забезпечення студентам доступу до предмету шляхом модифікації програм занять відповідно до їхніх потреб та здібностей.

Ключові слова: CLIL, морська англійська, вища освіта, професійна підготовка, іноземна мова, комунікативні завдання, підхід до навчання, морське спілкування.