

DOI <https://doi.org/10.37406/2521-6449/2025-2-10>

UDC 37.02:378:63

**Chaikovska O. V.**

*Candidate of Philological Sciences, Associate Professor,  
Head of the Foreign Languages Department  
Higher educational institution "Podillia State University"  
Kamianets-Podilskyi, Ukraine  
E-mail: [olgachaikovskaya@ukr.net](mailto:olgachaikovskaya@ukr.net)  
ORCID: 0000-0001-9161-4574*

## **CASE METHOD IN TEACHING ENGLISH FOR PROFESSIONAL PURPOSES: DEVELOPING CRITICAL THINKING AND PROFESSIONAL COMMUNICATION OF AGRONOMY STUDENTS**

### **Abstract**

*The article explores the use of the case method in teaching English for Specific Purposes (ESP) to 3rd-year agronomy students, with a focus on developing critical thinking, teamwork, and professional communication. In the context of globalisation and integration of Ukraine into the international scientific and educational space, English proficiency is essential for future agronomists, enabling access to global knowledge, participation in professional discussions, and effective problem-solving in professional settings.*

*The study implements professionally oriented case scenarios based on real agronomic challenges, including pest infestation in wheat fields, fertiliser shortages, and environmental issues such as water pollution. Students worked in pairs or small groups to analyse problems, evaluate alternative solutions, justify their decisions in English, and present recommendations. The cases combined language practice with practical professional competence, emphasising argumentation, analytical reasoning, and decision-making skills.*

*Teaching activities were structured in stages: preparation, introduction, group work, presentation, and reflection. Observations and student feedback demonstrated high engagement, motivation, and improvement in critical thinking, collaboration, and professional language skills. Students highlighted the relevance of tasks to real-life agricultural situations and the value of discussion, role-play, and debate in understanding the complexity of agronomic decision-making.*

*The article provides recommendations for implementing case-based ESP learning, including adapting cases to local agricultural contexts, integrating active learning methods, applying portfolio-based assessment, and developing interdisciplinary scenarios combining agronomy, ecology, and economics. The study concludes that the case method is an effective pedagogical tool for enhancing professional competence and critical thinking in agronomy students, while fostering motivation and practical language use in English.*

**Key words:** *ESP, agronomy students, case method, critical thinking, professional communication, problem-based learning, collaborative learning.*

**Introduction.** In the era of globalisation, proficiency in English has become essential for future agronomists. It enables access to international scientific resources, supports academic mobility, and allows participation in professional discussions at the global level.

A crucial skill in professional education is critical thinking, which helps students analyse complex problems, evaluate alternatives, and make informed decisions. In the ESP (English for Specific Purposes) classroom, critical thinking is closely linked with professional communication, especially in technical and agronomic contexts.

This study focuses on the case method as an effective tool for developing both critical thinking and professional communication. Unlike traditional approaches, the case method engages students with real-life agronomic challenges, such as pest management, fertiliser shortages, and ecological considerations. Students are required to analyse situations, propose solutions, and justify their decisions in English, fostering practical skills and professional reasoning.

**The aim of the present study** is to explore the effectiveness of the case method in teaching English to agronomy students, focusing on the development of critical thinking, teamwork, and professional communication through real-life production scenarios.

Literature analysis (reviewing studies on critical thinking, argumentation, and ESP teaching methods); implementation of cases (introducing professionally oriented case scenarios into ESP classes for 3rd-year agronomy students); observation and analysis (monitoring student activity, teamwork, problem-solving, and argumentation in English); student feedback (collecting reflections on the effectiveness of the method) were used as research methods for our study.

The novelty of this study lies in using real agronomic cases as a teaching tool. Students analyse production challenges, develop solutions collaboratively, and communicate their reasoning in English. This approach strengthens professional language skills, enhances critical thinking, and provides a practically valuable learning experience.

In modern pedagogical research, critical thinking is considered one of the key competencies necessary for successful professional activity. The works of Ukrainian and foreign scholars trace the gradual integration of methods for developing critical thinking into the process of learning English for professional purposes.

In particular, V. Lukianenko, S. Vadas'ka and O. Korbut [5] emphasise the importance of project-based learning as a means of developing analysis, synthesis, and argumentation skills. B. Kalyniak and N. Morska [3] showed that in technical universities, the development of critical thinking is advisable through active methods of working with text, discussions, and problem-solving tasks. O. Makarova [6] considers critical thinking as an active method of teaching English in maritime institutions, emphasising the role of practical tasks that simulate real professional situations.

A special contribution was made by O. Tyahlo [9] and S. Terno [8], who laid the theoretical foundations of critical thinking in the Ukrainian educational space, emphasising its gradual development from the reproductive to the creative level.

Special attention in modern research is paid to interactive forms of learning. O. Dubrova and T. Sakhniuk [2] turn to the theory of generations of Gove and Strauss, emphasising that for students of Generation Z, interactive methods and online education are the most effective, which activate key cognitive operations (analysis, evaluation, interpretation). M. Shepel and I. Novachenko [10], relying on their own pedagogical experience, demonstrate the effectiveness of using business games, brainstorming, the project method and the case method for developing critical thinking in students of economic and management specialities.

S. Mudra [7] proposes the integration of critical thinking into the teaching of students of non-philological faculties through the use of open-ended questions, discussions, debates and role-playing games. The researcher emphasises the importance of creating a favourable learning environment that stimulates argumentation, cooperation and gradual growth from basic skills to creative thinking skills.

In turn, N. Korotka and I. Pidkolesna [4] specify a number of technologies for the development of critical thinking in non-language institutions: "K-W-L" tables, interactive notes during reading, writing argumentative essays, discussions and conceptual tables for comparing aspects of scientific problems.

Thus, modern research confirms that critical thinking is formed most effectively under the conditions of using interactive and problem-oriented methods. However, most of the works are focused on technical, economic and humanitarian specialities, while the agronomic context remains understudied. It is this gap that determines the relevance of our study.

This study addresses this gap by adapting the case method to the agronomic context, focusing on issues such as pest management, fertiliser shortages, and ecological impacts, allowing students to practice critical thinking and professional communication simultaneously.

The pedagogical experiment contained the following stages:

*1. Design of case scenarios*

– Developed cases reflecting real agronomic challenges (e.g., crop pests, fertiliser allocation, sustainable farming practices).

– Cases designed to encourage discussion, problem-solving, and argumentation in English.

*2. Implementation in ESP classes*

– 3<sup>rd</sup>-year agronomy students worked in small teams to analyse cases during scheduled ESP lessons.

– Students identified problems, proposed solutions, and justified decisions using English.

*3. Observation and analysis*

– Teacher monitored team interactions, problem-solving strategies, and use of professional language.

– Focus on evidence of critical thinking, collaboration, and argumentation skills.

*4. Student feedback collection*

– Students provided reflections on case complexity, usefulness, and impact on language and reasoning skills.

– Feedback is used to evaluate the perceived effectiveness of the method.

**Results and Discussion.** In the ESP classes for 3<sup>rd</sup>-year agronomy students, professionally oriented case studies were implemented to develop analytical thinking, argumentation skills, and professional communication in English. The cases combined language practice with practical agronomic competence.

*Case Study 1: Pest Infestation in Wheat Fields*

– Situation: A local farm faces heavy damage to wheat fields from insects. Students had to consider chemical pesticides, biological methods, or crop rotation.

– Student Tasks: Read materials on pest control, discuss solutions in groups of 4–5, prepare a 5-minute presentation, and justify the recommended approach considering efficiency, cost, environmental impact, and long-term outcomes.

*Case Study 2: Fertiliser Shortage*

– Situation: Economic sanctions limit access to nitrogen fertilizers for a farming cooperative.

– Student Tasks: Analyse alternative fertilisation methods (green manure, composting, biofertilizers) in pairs, compare with traditional fertilisation in terms of yield, cost-effectiveness, and environmental safety, and write a short recommendation report (200–250 words).

*Case Study 3: Environmental Challenge – Water Pollution*

– Situation: An agricultural company is accused of contaminating a nearby river.

– Student Tasks: Study sustainable farming practices, assign roles (manager, environmentalist, farmer, government representative, scientist), conduct a 15-minute role-play debate, and create a joint action plan with at least three concrete measures.

Table 1

## Structuring the teaching process

Stage	Teacher Actions	Objective	Tools/Notes
Before class	Select a case, prepare English materials, introduce key terminology, and divide into groups	Prepare students for effective participation	Presentation, glossary, guiding questions
Beginning	Present case, explain tasks and criteria, ask clarifying questions	Focus attention on the problem	Slides, short video, discussion prompts
During activity	Moderate group discussions, ask Socratic questions, and ensure participation	Develop critical thinking and teamwork	Timer, note sheets
Presentation	Organise group presentations, assess argument logic, and ask follow-up questions	Evaluate analytical thinking and argumentation	Multimedia, evaluation rubric
After class	Summarise strengths and weaknesses, assign reflection tasks, and encourage self-assessment	Consolidate learning, foster metacognitive skills	Short essay, feedback questionnaire

The teaching process was structured in five stages, ensuring active student engagement and critical thinking (Table 1).

A scoring rubric was used to assess students' performance across six criteria: problem analysis, solution development, argumentation, teamwork, English communication, and presentation quality. Total scores indicated overall high engagement and skill development, with levels classified as Excellent (25–30), Good (19–24), Satisfactory (13–18), and Needs Improvement ( $\leq 12$ ).

#### Student Feedback

At the end of the semester, students reflected on their experiences:

– Andriy: “It was not like a regular class at all. I liked that we were looking for a solution ourselves, not just listening to a lecture.”

– Oksana: “Role-playing as an ecologist was challenging but interesting and made me think critically”.

– Igor: “The fertiliser shortage case helped me see the link between economics and agronomy – it felt real”.

– Maria: “Hearing different opinions showed me there is no perfect solution; risks and benefits must be weighed”.

– Dmytro: “These tasks motivate me to study English more to express my ideas clearly and convincingly”.

1. Effectiveness of Cases: Case studies simulating real agronomic challenges proved highly effective in fostering critical thinking. Students learned to evaluate solutions considering economic feasibility, ecological impact, and long-term outcomes.

2. Motivation and Engagement: Cases tied to professional contexts increased student interest and motivation to use English for authentic problem-solving.

3. Development of Professional Communication: Presentations, debates, and written reports strengthened argumentation skills, structured reasoning, and English communication relevant to agronomy.

4. Collaborative Skills: Working in pairs and small groups promoted teamwork, leadership, and collective decision-making.

5. Role of Critical Questions: Students practised asking clarifying questions, challenging assumptions, and analysing consequences – core components of critical thinking.

#### Recommendations

1. Contextual Adaptation: Cases should reflect typical challenges in Ukrainian agriculture, e.g., crop pests, organic farming, fertiliser efficiency, and EU ecological standards.

2. Method Integration: Combine cases with brainstorming, clustering, role-plays, and discussions for deeper critical thinking development.

3. Assessment Strategies: Use portfolios (essays, reports, presentations) to track progress in critical thinking beyond traditional tests.

4. Interdisciplinary Approach: Develop cases integrating agronomy, ecology, economics, and management to mirror the complexity of real-world problems.

5. Future Research: Quantitative and qualitative evaluation of case method impact is needed, including comparisons with traditional teaching methods.

In summary, the case method in ESP classes for agronomy students enhances professional competence, critical and creative thinking, communication skills, and decision-making abilities in complex production scenarios.

#### Bibliography

1. Дмитренко Н., Франчук Н. Розвиток навичок критичного мислення учнів ЗЗСО на уроках англійської мови. *Modern Information Technologies and Innovation Methodologies of Education in Professional Training: Methodology Theory Experience Problems*. 2024. № 73. С. 79–86.

2. Дуброва О. М., Сахнюк Т. В. Розвиток навичок критичного мислення сучасних студентів – представників покоління Z: інтерактивні практики. *Інноваційна педагогіка*. 2024. Вип. 72. С. 61–66. <https://doi.org/10.32843/2663-6085-2024-72-12>.

3. Калиняк Б., Морська Н. Розвиток критичного мислення на заняттях англійської мови за професійним спрямуванням у закладах вищої освіти технічного профілю. *Наукові записки. Серія «Філологічні науки»*. 2020. Вип. 187. С. 660–665. URL: <https://journals.indexcopernicus.com/api/file/viewById/1246980.pdf>.

4. Коротка Н., Підколесна Л. Формування технологій критичного мислення при навчанні англійської мови в немовному виші. *Наукові записки Національного університету «Острозька академія». Серія «Філологія»*. 2022. Т. 16, № 84. С. 99–102. URL: <https://journals.oa.edu.ua/Philology/article/view/3770>.
5. Лук'яненко В. В., Вадська С. В., Корбут О. Г. Розвиток навичок критичного мислення студентів засобами проєктного навчання на заняттях з англійської мови професійного спрямування. *Європейські орієнтири розвитку України в умовах війни та глобальних викликів XXI століття: синергія наукових, освітніх та технологічних рішень* : матеріали Міжнар. наук.-практ. конф. / за ред. С. В. Ківалова. Одеса : Юридика, 2023. Т. 1. С. 691–693. URL: <https://hdl.handle.net/11300/27685>.
6. Макарова О. Розвиток критичного мислення як активний метод навчання англійської мови (на прикладі підготовки студентів закладів вищої освіти морського спрямування). *Молодий вчений*. 2020. № 2(78). С. 127–130.
7. Мудра С. В. Я. Інтеграція елементів критичного мислення в навчання англійської мови студентів нефілологічних факультетів. *Педагогічна академія: наукові записки*. 2025. № 17.
8. Терно С. О. Теорія розвитку критичного мислення (на прикладі вивчення історії). Запоріжжя : Запорізький національний університет, 2011. 356 с.
9. Тягло О. В. Критичне мислення : навчальний посібник. Харків : Видавнича група «Основа»: «Тріада+», 2008. 240 с.
10. Шепель М. Є., Новаченко І. Г. Розвиток навичок критичного мислення у здобувачів економіко-управлінських спеціальностей на заняттях з іноземної мови. *Наукові записки. Серія «Педагогічні науки»*. 2024. № 213. С. 255–260. <https://doi.org/10.36550/2415-7988-2024-1-213-255-260>.

**Чайковська О. В.**

кандидат філологічних наук, доцент,  
завідувач кафедри іноземних мов  
Заклад вищої освіти «Подільський державний університет»  
Кам'янець-Подільський, Україна  
E-mail: [olgachaikovskaya@ukr.net](mailto:olgachaikovskaya@ukr.net)  
ORCID: 0000-0001-9161-4574

## КЕЙС-МЕТОД У НАВЧАННІ АНГЛІЙСЬКОЇ МОВИ ЗА ПРОФЕСІЙНИМ СПРЯМУВАННЯМ: РОЗВИТОК КРИТИЧНОГО МИСЛЕННЯ ТА ПРОФЕСІЙНОЇ КОМУНІКАЦІЇ У СТУДЕНТІВ СПЕЦІАЛЬНОСТІ «АГРОНОМІЯ»

### Анотація

У статті досліджується використання кейс-методу в навчанні англійської мови за професійним спрямуванням (ESP) для студентів 3 курсу спеціальності «Агрономія» з акцентом на розвиток критичного мислення, командної роботи й професійної комунікації. В умовах глобалізації й інтеграції України в міжнародний науково-освітній простір володіння англійською мовою стає необхідним для майбутніх агрономів, оскільки забезпечує доступ до світових знань, участь у професійних дискусіях та ефективне розв'язання виробничих завдань.

У дослідженні впроваджено професійно орієнтовані кейс-сценарії, що відображають реальні агрономічні проблеми: пошкодження пшениці шкідниками, дефіцит мінеральних добрив та екологічні виклики, зокрема забруднення води. Студенти працювали в парах або малих групах, аналізували проблеми, оцінювали альтернативні рішення, аргументували свої пропозиції англійською мовою та презентували результати. Кейс-завдання поєднали мовну підготовку з розвитком професійної компетентності, сприяючи формуванню аргументаційних, аналітичних і комунікативних умінь.

Навчальний процес структуровано за етапами: підготовка, ознайомлення з кейсом, групова робота, презентація результатів і рефлексія. Спостереження й відгуки студентів засвідчили високий рівень залученості, мотивації та зростання навичок критичного мислення, співпраці й професійної англомовної комунікації. Студенти відзначили актуальність завдань для реальних виробничих ситуацій і цінність дискусій, ролевих ігор і дебатів для розуміння комплексності агрономічних рішень.

У статті подано рекомендації щодо впровадження кейс-методу в навчанні ESP: адаптація кейсів до місцевого аграрного контексту, інтеграція активних методів навчання, використання портфоліо для оцінювання результатів і розроблення міждисциплінарних завдань, що поєднують агрономію, екологію й економіку. Зроблено висновок, що кейс-метод є ефективним педагогічним інструментом для формування професійної компетентності та критичного мислення студентів-агрономів, а також для підвищення мотивації й розвитку практичних мовних умінь англійською.

**Ключові слова:** ESP, студенти-агрономи, кейс-метод, критичне мислення, професійна комунікація, проблемно-орієнтоване навчання, колаборативне навчання.

### References

1. Dmytrenko, N., & Franchuk, N. (2024). Rozvytok navychok krytychnoho myslennia uchniv ZZSO na urokakh anhliiskoi movy [The development of critical thinking skills of secondary school students in English lessons]. *Modern Information Technologies and Innovation Methodologies of Education in Professional Training: Methodology Theory Experience Problems*, (73), 79–86 [in Ukrainian].
2. Dubrova, O. M., & Sakhniuk, T. V. (2024). Rozvytok navychok krytychnoho myslennia suchasnykh studentiv-predstavnykiv pokolinnia Z: interaktyvni praktyky [The development of critical thinking skills of modern Generation Z students: Interactive practices]. *Innovatsiina pedahohika*, 72, 61–66. <https://doi.org/10.32843/2663-6085-2024-72-12> [in Ukrainian].
3. Kalyniak, B., & Morska, N. (2020). Rozvytok krytychnoho myslennia na zaniattiakh anhliiskoi movy za profesiinym spriamuvanniam u zakladykh vyshchoi osvity tekhnichnoho profilu [The development of critical thinking in ESP classes in technical higher

education institutions]. *Naukovi zapysky: Filolohichni nauky*, (187), 660–665. Retrieved from: <https://journals.indexcopernicus.com/api/file/viewByFileId/1246980.pdf> [in Ukrainian].

4. Korotka, N., & Pidkolesna, L. (2022). Formuvannia tekhnolohii krytychnoho myslennia pry navchanni anhliiskoi movy v nemovnomu vuzi [The development of critical thinking technologies in teaching English at a non-linguistic university]. *Naukovi zapysky Natsionalnoho universytetu "Ostrozka akademiia": Seriia "Filolohiia"*, 16(84), 99–102. Retrieved from: <https://journals.oa.edu.ua/Philology/article/view/3770> [in Ukrainian].

5. Lukianenko, V. V., Vadas'ka, S. V., & Korbut, O. H. (2023). Rozvytok navychok krytychnoho myslennia studentiv zasobamy proiektnoho navchannia na zaniattiakh z anhliiskoi movy profesiinoho spriamuvannia [The development of students' critical thinking skills through project-based learning in ESP classes]. In S. V. Kivalov (Ed.), *Ievropeiski oriientyry rozvytku Ukrainy v umovakh viiny ta hlobalnykh vyklykiv XXI stolittia: synerhiia naukovykh, osvitykh ta tekhnolohichnykh rishen: materialy Mizhnar. nauk.-prakt. konf.* (Vol. 1, pp. 691–693). Odesa: Yurydyka. <https://hdl.handle.net/11300/27685> DSpace Repository. [in Ukrainian].

6. Makarova, O. (2020). Rozvytok krytychnoho myslennia yak aktyvnyi metod navchannia anhliiskoi movy (na prykladi pidhotovky studentiv zakladiv vyshchoi osvity morskoho spriamuvannia) [The development of critical thinking as an active method of teaching English (on the example of maritime university students)]. *Molodyi vchenyi*, 2(78), 127–130 [in Ukrainian].

7. Mudra, S. V. Ya. (2025). Intehratsiia elementiv krytychnoho myslennia v navchanni anhliiskoi movy studentiv nefilolohichnykh fakultetiv [Integration of critical thinking elements into English language teaching for non-philological students]. *Pedahohichna Akademiia: Naukovi zapysky*, (17) [in Ukrainian].

8. Terno, S. O. (2011). *Teoriia rozvytku krytychnoho myslennia (na prykladi vyvchennia istoriyi)* [The theory of development of critical thinking (examples on history teaching)]. Zaporizhzhya: Zaporizkyi Natsionalnyi Universytet [in Ukrainian].

9. Tyahlo, O. V. (2008). *Krytychne myslennia: Navchalnyi posibnyk* [Critical thinking: Textbook]. Kharkiv: Vydavnycha hrupa "Osnova": "Triada+" [in Ukrainian].

10. Shepel, M. Ye., & Novachenko, I. H. (2024). Rozvytok navychok krytychnoho myslennia u zdobuvachiv ekonomiko-upravlinskykh spetsialnostei na zaniattiakh z inozemnoi movy [The development of critical thinking skills of students of economics and management specialties in foreign language classes]. *Naukovi zapysky. Seriia: Pedahohichni nauky*, (213), 255–260. <https://doi.org/10.36550/2415-7988-2024-1-213-255-260> [in Ukrainian].

Отримано: 03.10.2025  
Рекомендовано: 30.10.2025  
Опубліковано: 28.11.2025