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THE FORMATION OF COMMUNICATIVE COMPETENCIES IN TECHNICAL HIGHER EDUCATION STUDENTS IN THE PROCESS OF LEARNING FOREIGN LANGUAGES

ФОРМУВАННЯ КОМУНІКАТИВНИХ КОМПЕТЕНТНОСТЕЙ ЗДОБУВАЧІВ ТЕХНІЧНОЇ ВИЩОЇ ОСВІТИ ПРИ ВИВЧЕННІ ІНОЗЕМНИХ МОВ

This article is devoted to the problem of developing communicative competences among students of technical specialties when learning a foreign language, which is extremely important in the modern globalized world. The authors consider the key aspects of communicative competence, namely: grammatical, sociolinguistic, discursive, and strategic, offering a variety of practical tasks and tools for their development.

The article defines the main concepts, emphasizing the importance of not only having grammatical knowledge but also the ability to use a foreign language in various social and professional contexts for students. Subsequently, some methods and exercises for improving grammatical competence are considered, including gap-filling tasks, using conditional sentences, describing technical processes, debates and translation.

The authors pay special attention to the development of sociolinguistic competence. They offer tasks that simulate real situations of professional communication, such as negotiations with international colleagues, culturally conditioned presentations, and analysis of speech acts, and the development of business correspondence.

The article also covers aspects of the development of discursive competence. It offers exercises on creating coherent and logical texts, describing technical processes, and writing instructions and technical reports. The importance of the ability to build clear arguments and propose solutions through group discussions is especially emphasized.

Finally, strategic competence is considered and tools are proposed for developing the ability to compensate for language deficiencies, such as: paraphrasing games, clarification tasks, situational exercises, role-plays, and the use of visual aids.

In general, the authors provide a comprehensive approach to the development of communicative competences when learning a foreign language, offering a wide range of practical tasks aimed at forming the skills necessary for successful professional activity in the technical field. It emphasizes the need to integrate grammatical knowledge, social awareness, logical thinking and strategic communication skills.

Key words: professional communication, integration into the international community, globalization, communicative competence, foreign language.

Дану статтю присвячено проблемі розвитку комунікативних компетентностей у студентів технічних спеціальностей при вивченні іноземної мови, що є вкрай важливим в умовах сучасного глобалізованого світу. Автори розглядають ключові аспекти комунікативної компетентності, а саме: граматичну, соціолінгвістичну, дискурсивну та стратегічну, пропонуючи різноманітні практичні завдання та інструменти для їх розвитку.

Стаття визначає основні поняття, підкреслюючи важливість володіння студентами не тільки граматичними знаннями, але і вмінням використовувати іноземну мову в різних соціальних та професійних контекстах. Розглядаються методи та вправи для покращення граматичної компетенції, включаючи завдання на заповнення пропусків, використання умовних речень, опис технічних процесів, дебати та переклад.

Особлива увага авторами приділяється розвитку соціолінгвістичної компетенції. Пропонуються завдання, які моделюють реальні ситуації професійного спілкування, такі як переговори з міжнародними колегами, культурно-обумовлені презентації, аналіз мовленнєвих актів та розробка ділового листування.

Стаття також охоплює аспекти розвитку дискурсивної компетенції. Пропонуються вправи на створення зв'язних та логічних текстів, опис технічних процесів, написання інструкцій та технічних звітів. Особливо підкреслюється важливість вміння будувати чіткі аргументи та пропонувати рішення в рамках групових дискусій.

Насамкінець, розглянуто стратегічну компетенцію та запропоновано інструменти для розвитку вміння компенсувати мовні недоліки, такі як: ігри з перефразування, завдання з уточнення, ситуаційні вправи, рольові ігри та використання візуальних засобів.

Загалом, автори надають комплексний підхід до розвитку комунікативних компетентностей при вивченні іноземної мови, пропонуючи широкий спектр практичних завдань, спрямованих на формування навичок, необхідних для успішної професійної діяльності в технічній сфері. Він акцентує увагу на необхідності інтеграції граматичних знань, соціальної обізнаності, логічного мислення та стратегічних комунікативних навичок.

Ключові слова: професійна комунікація, інтеграція в міжнародну спільноту, глобалізація, комунікативна компетенція, іноземна мова.

Problem statement. The formation of communicative competencies in the process of learning foreign languages among students of technical universities is a complex task that requires the implementation of effective pedagogical technologies and approaches. Despite the considerable number of studies dedicated to this topic, significant differences exist in the methods and approaches used by Ukrainian and international educators. This raises the need for the systematization and analysis of existing research to identify the most effective methods and approaches for developing communicative competencies.

Analysis of recent research and publications. The studies of Ukrainian and international scholars such as N.Aristova [7], A.Ptushka [9], H.Troian [10], N.Lukianchuk [8], John M. Swales [5], Esther Usó-Juan [6], and Ken Hyland [3] emphasize the importance of developing communicative competence in technical university students while learning foreign languages. Ukrainian researchers focus on fostering professional communication skills within the context of technical disciplines and preparing students for work in international environments. International scholars, particularly Swales and Hyland, highlight academic and scientific writing as well as genre analysis, which are crucial for communication in technical fields. According to their works, integrating linguistic and content-based skills proves to be an effective method for achieving a high level of communicative competence.

The aim of the article. The aim of this article is to analyse scientific publications by Ukrainian and international educators on the development of communicative competencies in technical university students during foreign language learning, as well as to identify effective methods and approaches to enhance this process.

Presenting main material. Modern society has very high demands for the level of communicative competencies of specialists, including graduates of technical universities. In the context of globalization and integration into the international professional community, knowledge of a foreign language has become one of the obligatory requirements for professional training. This situation is complicated by the fact that students of technical specialties face problems with foreign languages, mainly due to a lack of time and motivation and the peculiarities of their educational activities.

Thus, the importance of this research is triggered by the requirement for a detailed review of scientific publications on this subject to find out best practices and developments applicable to educational practices in technical universities.

An American linguist Dell Hymes first introduced the concept of communicative competence in 1966 in response to the limitation of the traditional approach to language study that focused exclusively on grammatical competence [8]. According to Hymes, successful communication requires knowledge of how and when to use certain structures in the language on appropriate social occasions. He presented an idea that would highlight effective usage considering the cultural and social aspects.

Jürgen Habermas, a European scholar, helped a lot in making the idea of communicative competence [2]. Habermas saw communicative competence as part of a bigger picture in his theory of talking actions, where it is key for getting to know each other and working together in society.

John M. Swales discusses the possibility of developing communicative skills through a study of genres of academic and scientific writing in English for students of technical disciplines [5].

Esther Usó-Juan and Alicia Martínez-Flor discuss modern approaches to developing the four language skills and communicative competence for students of varied disciplines and more specifically for those in technical fields [6].

Ken Hyland analyses the strategies for teaching English for academic purposes that can greatly assist technical university students in improving their communicative competence [3].

Ukrainian scholars have also explored this subject considerably. Natalia Lukianchuk and Natalia Klymova concentrated on pedagogical aspects of fostering communicative competence among students and schoolchildren [8]. N. O. Aristova examined the conformation of communicative competencies in future specialists of different fields [7].

Multitudinous studies specifically address the development of communicative competence among technical university students during foreign language literacy.

G. V. Troian highlights the significance of fostering professional competence among technical students to meet modern labour market demands and ameliorate proficiency in both native and foreign languages for effective transnational communication [10].

A. S. Ptushka examines modern tutoring styles and tools designed to enhance the effectiveness of forming foreign language communicative competence among technical university students [9]. The study emphasizes maintaining situations of cognitive interest during students' independent work on foreign languages.

These studies give precious perceptivity and methodological recommendations for developing communicative competencies among technical university students during foreign language literacy.

The results of these studies are a precious base for the development of effective styles of learning a foreign language for students of technical specialties, which contribute to the development of their communicative competence. For a better understanding of this conception, let us turn to the model proposed by Michael Canale and Merrill Swain, which distinguishes grammatical, sociolinguistic, discursive and strategic factors of communicative competence [1]. Grounded on these factors, we propose to consider a number of practical tasks related to the development of communicative competence when learning a foreign language in the conditions of a technical university.

Using our experience of tutoring foreign languages in a technical university, we would like to propose a series of practical task exemplifications for developing each of these competencies.

Grammatical competence is knowledge of grammar, vocabulary, phonology, and spelling of the language. Effective tasks for developing this competence include:

1. Filling in the gaps in specialized text: Propose students a specialized text (e.g., instructions, equipment descriptions, specialized reports) with gaps that need to be filled using the correct grammatical forms, for illustration:
• If – clauses for describing equipment operating conditions: If the pressure exceeds the limit, the system, (to shut down) automatically.

2. Describing specialized processes: Ask students to describe a production process or how a machine works, using the passive voice, for illustration:
• The metal is heated to a specific temperature, and then it is melded into the required shape.

3. Grammatical debates: Organize a discussion on topics similar to: If we apply new technologies, what will be to the environment? or What would be if renewable energy sources were used in all industries?

4. Translating technical sentences from the native language into English: Give students sentences containing technical terms, for example:
• Divagation from norms leads to system malfunctions.

5. Role-playing. Specialized Presentation
• Ask students to prepare a presentation where they describe a new specialized device, using Present Perfect for describing achievements (e.g., We've improved the effectiveness by 20%) and Future Simple for predictions (e.g., This device will reduce energy consumption.)

6. Rephrasing sentences:
• Give students a specialized text containing sentences that they need to rewrite in different words, using indispensable grammatical structures, for example:
The machine cannot operate without regular conservation. → Regular maintenance is necessary for the machine to operate.

7. Writing instructions
• Students are to write a manual for operating equipment, for example: Turn on the power. Ensure the settings are correct. You must not open the panel during operation.

8. Grammatical quests: Create a quest, where each stage requires a grammatical answer, for example:
• Find the error in the judgment. The data was reused precisely and the results have been verified.
• Transform the sentence: We are developing a new prototype (Passive voice).

II. Sociolinguistic competence is the competence to use and understand language in different social surroundings, taking into account social morals, cultural traditions, and the specifics of the

communication situation. Tools for developing sociolinguistic competence may include:

1. Role Play:

• Communication with international colleagues. One student plays the part of an engineer agitating a specialized design with a co-worker at an international conference. Another student plays the part of a director with whom the design budget needs to be discussed. In the first case, formal language should be used, while in the alternate, semi-formal language is needed.

2. Culturally – Driven Presentations:

• Ask students to prepare a presentation on the topic: Business Communication Practices in Different Countries (e.g., Communication in Germany, Japan, or the USA). During the discussion, punctuate how cultural factors affect communication strategies.

3. Speech Act Analysis. Provide students with a set of situations:

• Write a polite request to a professor (formal style).

• Discuss a problem with a co-worker (neutral style).

• Ask for help from a friend (informal style).

• Ask students to compare their responses and identify the verbal structures used in each case.

4. Business Negotiation Simulation

• Divide students into two groups: suppliers and customers of technical equipment. Their task is to conduct negotiations, using applicable speech formulas (e.g., We appreciate your offer, but, could you clarify the delivery terms?). Encourage students to concentrate on using polite language, applicable formal expressions, and negotiating strategies in both written and oral forms.

5. Case Study: Resolving a Conflict Situation

• Provide students with a case, for example: on an international project, a specialized error has passed, and both parties are condemning each other. Their task is to discuss the issue in groups and produce an action plan for peaceful resolution, using polite expressions (e.g., Let's find a result together…, We need to address this issue constructively…). Focus on tutoring students on how to handle conflict in a professional and culturally sensitive manner while maintaining effective communication.

6. Business Correspondence Writing

• Write an official email request to a partner company. Students are assigned to compose a formal email to request information or explanation from a partner company.

• Write an internal memo to colleagues reminding them about a design deadline. Students will produce a short internal memo emphasizing the urgency of meeting the design deadline.

• Discussion: After completing the tasks, students should discuss how the style and tone of the communication change depending on the recipient. They should dissect the differences in formality, wording, and approach when writing to external business partners versus internal colleagues.

7. Group Discussion

• Environmental inventions. Ask students to imagine they are part of a team of international experts agitating for a new technology aimed at reducing emigration. Each group should propose a result, taking into account different perspectives and artistic approaches to addressing environmental issues. After the discussion, students should reflect on how cultural differences affect their approaches to problem solving and how these differences could affect the perpetration of the proposed technology in different regions.

III. Discourse Competence is the competence to make speech coherently and logically, icing its consonance and cohesion. To ameliorate this skill, the following tools can be used:

1. Description of a Technical Process or Equipment Operation

• Choose a technical process (e.g., the operation of a solar panel or a 3D printer). Ask students to explain how this process works, using logical connectors (e.g., first, also, next, eventually). This task can be performed either orally or in writing.

2. Writing Instructions

• Ask students to produce instructions for setting up software or operating a specialized device. Focus on the sequence of way and the use of applicable connectors (e.g., make sure to, in case of, as soon as).

3. Creating a Technical Report

• Ask students to write a report on the results of testing new equipment or technology. The text should include an introduction, problem description, methods, results, and conclusions. Encourage the use of expressions for text structuring, similar as: This report aims to…, The results indicate that….

4. Discussion: Solving a Technical Problem:

• Imagine a situation: a specialized problem has arisen in the product process (e.g., equipment overheating). Students are to discuss possible causes, suggest results, and justify their choices.

The task encourages the use of constructions similar as: One possible reason could be..., To address this…, We propose….

5. Comparing Alternative Technologies

• Ask students to compare two technologies (e.g., traditional machines vs. electric motors). They should

punctuate the advantages, and disadvantages, and draw a conclusion, using connectors similar to: on the one hand, on the other hand, thus.

6. Text Analysis and Summary Creation

• Provide students with an article on a technical issue. Ask them to produce a brief summary, pressing the crucial points. Discuss which expressions help structure the text, similar as: the main point is., the author suggests that.

7. Creating a Project Presentation

• Ask students to prepare a presentation on the content of enforcing a new technology in their field. Pay attention to the structure preface, main body, and conclusion. Recommend using expressions like: Let's start by, The coming step is., In conclusion.

8. Writing an Email:

• Give a script where the student needs to write an email to his partner who's requesting information about the technical specifications of a product. Students should write a clear and logical text, using polite formulas and structure (introduction, main body, and conclusion).

9. Creating a Dialogue: Interview with a customer

• One student plays the part of a customer who wants to learn about the specialized details of a product, while the other plays the part of a technical consultant. The dialogue should be structured and use constructions similar to: Let me explain…, To clarify…, we offer….

10. Interactive Game: Problem Solving

• Students are given a case with a specialized problem (e.g., failure in the operation of an automated system). In groups, they must discuss and present a result, easily stating their arguments and conduct.

IV. Strategic competence is the competence to compensate for gaps in knowledge or misconstructions using communication strategies similar as: paraphrasing, explanation, and the use of non-verbal means.

1. Game: Explain Another Word (Rephrasing Game)

• Give students specialized terms or generalities (e.g., circuit breaker, solar panel). Ask them to explain these terms without using the exact word, by using antonyms, exemplifications, or descriptions (e.g., It's a device that stops the inflow of electricity when there's a problem…). The other students must guess which term it is.

2. Asking for explanation

• Prepare a dialogue between students, where one side describes a complex specialized process. The other side should ask clarifying questions (e.g., Could you explain that in simpler terms?, What exactly do you mean by…?). After the discussion, dissect the effectiveness of the strategies used.

3. Survival in a Technical Environment Game

• Give students a situation, similar to: You need to describe a machine malfunction to an engineer who is a native speaker, but you do not know all the words. They should use circumlocution strategies, similar to: describing, comparing, or demonstrating (e.g., It's the part of the machine that moves up and down).

4. Interactive Presentation

• Ask students to prepare a short presentation on specialized content. During the presentation, other students may ask questions or request explanations of unclear points. The presenter must snappily adapt, using strategic skills (e.g., providing exemplifications, simpler explanations, and circumlocutions).

5. Technical Problem Drawing Task

• One student is given a specialized problem (e.g., a broken conveyor belt). Their task is to explain this problem to another student using drawings and simple words, avoiding complex terms.

6. Limited Vocabulary Debate

• Choose a specialized content for discussion (e.g., the advantages of robotics).

Give each group a list of allowed words that includes introductory vocabulary, and enjoin the use of complex terms. Students must find indispensable ways to argue their positions.

7. Expert and Novice Role Play

• One student plays the part of a specialized expert explaining how a device works (e.g., a 3D printer). The other student is a novice who knows nothing about the technology. The expert must adapt their explanation, using simple words, exemplifications, and comparisons.

8. Word Replacement Challenge

• Give students a specialized text with stressed complex terms. Their task is to replace these words with antonyms, descriptions, or explanations. For illustration, rather than Automation, they can use – the process where machines do tasks automatically.

9. Incomplete Scenario Task

• Produce a script where some information is missing (e.g., part of the specialized specifications is unknown). Students must fill in the gaps using suppositions, questions, or suggestions. For illustration, they might say, I'm not sure…, but I suppose it might be….

10. Video Work: Reproducing the Explanation

• Show students a short video about a specialized process. Their task is to explain this process to their partner using their own words, drawings, or exemplifications if they do not know the specific terms.

Conclusions. Communicative competence is a multifaceted concept that encompasses not only language knowledge but also the competence to use it in different sociocultural surroundings. It remains pivotal for effective interpersonal and professional communication in the modern world.

The development of communicative competence among students of technical universities is a crucial task of modern advanced education, especially in the field of foreign language literacy.

In a world where globalization and technological progress demand international communication and collaboration, technical specialists must not only retain technical knowledge but also be able to communicate effectively both within their professional communities and beyond. Communicative competence ensures the competence to change ideas, unite effectively in international teams, present their own development, and achieve success in the professional field.

The development of communicative competences is particularly important in the study of foreign languages. Mastery of a foreign language not only expands access to scientific and specialized information but also promotes the development of intercultural communication skills, critical thinking, and flexibility. Language proficiency enables students in specialized fields to interact effectively with partners from other countries, and share in transnational conferences, externships, and research projects.

The process of developing communicative competences includes the improvement of factors similar to grammatical accuracy, lexical richness, sociolinguistic perceptivity, the competence to engage in dialogue, and the adaption of speech to different communicative situations. Practical foreign language assignments, discussions, role-playing games, and projects are effective methods for developing these skills. They allow students to use the language in real or nearly simulated situations, which helps consolidate the assimilation of language material and boosts their confidence in their communicative abilities.

Therefore, learning a foreign language becomes an important tool for forming communicative competence, which is a necessary condition for preparing competitive specialists in technical fields. The integration of communicative skills into professional training not only supports students' particular development but also facilitates their successful adaptation to the demands of the modern labour market.

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