

ChatGPT application in explaining the English articles to Ukrainian students

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Abstract: The article deals with the description of an experiment, a kind of empirical study, which was carried out in one of the Polytechnic Universities of Ukraine. It (the experiment) involved ChatGPT's participation in the process along with the teachers and students. The group included both humanitarian and engineering students. The goal of the article was as follows: to identify whether the ChatGPT system alone, without a teacher's participation, is capable of freely communicating with students, answering their possible questions, and satisfactorily explaining any grammatical material. The results demonstrated that in spite of some shortcomings that were evident in presenting outdated data and a lack of necessary details, ChatGPT's importance as an unlimited informational resource can hardly be overestimated. However, the experiment has proven another fact as well – it is the teacher who was a real promoter of the explanation strategy in the educational process, which manifested in close communication both with the students and ChatGPT, making him a real intermediate link between them.

Keywords: Grammar phenomenon, Informational resource, Teacher's strategy, Text interpretation, Three-party process.

1. Introduction

The issue of using AI (and the ChatGPT system, in particular) in educational process is currently widely discussed in modern information networks. According to the results of statistical analysis [1] performed to determine the main trends in the use of chatbots in educational practices, statistics has demonstrated that the three leading countries or regions that have been making the greatest contribution to the popularization of AI systems are the United States, Taiwan and Hong Kong.

As we can see, Ukraine is not in the list of such countries. However, digital technologies (multimedia, network teaching aids) have long been introduced into the educational process of this country, which allows for distance learning. Such technologies are very popular, since in the conditions of brutal military actions, classes are conducted in schools and universities most often outside the classroom. However, the ChatGPT system has not yet been reflected in the educational strategy of university and school curriculums, including the teaching of foreign languages, although students with their inherent curiosity for everything new are already using it for their own purposes.

Why does the ChatGPT system attract the attention of teachers-practitioners, and specifically the ones instructing the university students in a foreign (English) language?

Firstly, the extraordinary popularity of the idea of application of artificial intelligence in general and in the educational process – in particular, its huge informational resource, the ability to answer almost

any question clearly and in detail, have made it (ChatGPT) not only possible, but also a desirable element of the educational process.

Secondly, with the use of artificial intelligence, we can adapt the learning process to the individual characteristics and needs of each student, and provide immediate feedback [2].

Thirdly, ChatGPT gives teachers the opportunity to significantly facilitate and even eliminate the first stage of introducing theoretical material from the plans – this can be done much better by ChatGPT.

Fourthly, the presence of necessary exercises accompanying the introduction of theoretical grammar issues can also exclude the participation of a teacher not only at such an important stage as explanation, but also in the assimilation of new material.

All these advantages allow us to consider that the ChatGPT system is quite capable and should become a part of modern educational process.

2. Literature Review

Benefits of using Arts. Intelligence in teaching foreign languages (and specifically in the personalization of goals) have been proven experimentally and is most often based on the opinions of students who evaluate how effective and useful it is for them [2-5]. At the same time, researchers do not deny the emergence of new problems for society [5] as well as for the instructors themselves, who form the necessary teaching strategies [6]. The authors do not hide the fact that the role of teachers at the lessons is reduced to the formal presence by the use of AI, though they cannot disappear completely, since human control is often necessary [7-9]. One can even cite an example of this kind of control, which was demonstrated by New York City's Department of Education, which banned the use of ChatGPT in city schools in 2023 due to "negative impacts on student learning" [10]. According to the administration, "While the tool may be able to provide quick and easy answers to questions, it does not build critical-thinking and problem-solving skills, which are essential for academic and lifelong success." Nevertheless, the implementation of chatbots in school teacher communities continues to develop in other countries [11]. The literature also presents the results of studies aimed at forming exercises and assessing the complexity of elements in grammar exercises [12].

The investigators do not hide the certain shortcomings of artificial intelligence in general and ChatGPT in particular. Mainly, this is that the system is only able to generate text based on the input data provided to it and does not have access to external information or the ability to browse the Internet. This means that it cannot provide accurate or relevant information on a wide range of topics and may not be able to generate answers to complex or unconventional questions [13].

With all the variety of problems that are covered in the scientific literature, the results of empirical studies are presented rather modestly. Therefore, it seems that the description of an attempt to practically apply the ChatGPT system in the educational process may be of some interest.

The purpose of the article is the following – to identify whether the ChatGPT system alone, without the participation of a teacher, is capable of freely communicating with students, answering possible questions, and satisfactorily explaining any grammatical material.

3. Methodology

As a grammatical material a rather complex phenomenon of English grammar – "English article" – was chosen. The experiment was carried out in one of the Technical universities of Ukraine "Odessa Polytechnic" (Odessa).

A few preliminary remarks concerning the peculiarities of presentation of the grammar question "English article" in the Ukrainian university, i.e. for Slavic students. It is known that understanding such a grammatical phenomenon as the article is accompanied by significant difficulties for native speakers of Slavic languages. Thus, if in Romance and Germanic languages the article is included in the grammatical system and is perceived naturally, then for peoples who use Slavic languages for

communication, this Grammar unit is quite difficult to understand and is not accepted as a necessary element, since it is absent in the grammatical systems of Slavic languages.

Thus, for native speakers of Slavic languages, the article is rather an abstract grammar phenomenon, having nothing in common with the grammatical units found in their native languages. That is why it seemed that the introduction of the ChatGPT system would successfully remove the difficulties in understanding the English article by Slavic students for the purpose of its further use in colloquial speech.

However, despite the confidence in the future undoubted success of using ChatGPT, it was decided to conduct a three-party procedure involving English teachers, university students, and the ChatGPT system. This was done because of the alarming evidence presented in the research literature on ChatGPT analysis, which indicates the possible presence of outdated and inaccurate facts stored in the system's memory.

We should note that the teachers who participated in the experiment did not have a specific plan. Everything depended on the answers of the ChatGPT system and the reaction that the students could show after receiving answers to the questions they asked.

For performing an experiment to explain this grammar problem, a group of 42 students learning English, which is a compulsory subject of the university curriculum, was formed. The group included students of the following specialties: humanities (office work, archival work, journalism) – 22 students; engineering specialties (electrical engineering, radio electronics) – 20 students. Thus, statistically, the students of humanities and technical specialties had almost equal shares in the total number.

The students were not selected according to any specific criteria. The groups included all those who simply expressed a desire to participate in this experiment. All of them had to answer some preliminary questions.

Question 1. Why did you decide to participate in the experiment? The majority of students (35 people, i.e. more than 83% of participants) answered that they hoped to improve their level of English, which could be useful to them in their future careers. Seven students, i.e. 17%, hoped that participation in the experiment would, of course, help them improve their level of English, but simply to get higher grades in this subject.

Question 2. Did you communicate with the ChatGPT system before? The majority (40 people, i.e. 95%) of them answered affirmatively and only 2 people (5%) answered negatively and said that they heard about this system for the first time. This served as a signal for the rest of the students to immediately demonstrate to their comrades the principle of communication with ChatGPT, and even show by an example how easy it can be done.

Then, lexical and grammar testing was done. It should be noted that students of these specialties are not considered to have good knowledge of English at Odessa Polytechnic University. And this was confirmed by the results of the preliminary testing. The level of knowledge of English was A1, maximum A2. The students of humanitarian specialties showed slightly better results in vocabulary, but the ones of engineering professions were stronger in grammar.

The experiment provided a certain amount of freedom for the participants. For example, since all the students knew each other's (low) language level, there was no need to observe disciplinary conditions or take action against those who resorted to prompting. Furthermore, both groups of students were not strictly isolated, but were placed in the same auditorium. According to the researchers, such a method of combined meetings facilitates a fairly rapid determination of not only differential, but also integral characteristics of thinking, logic, i.e. the cognitive components of mind. The students sat in a certain order chosen by themselves: separately – the humanities students, separately – the students of technical specialties.

The entire procedure of the experiment was divided into stages according to the questions that the students asked ChatGPT. The structure of each stage (with some variations) was as follows:

- a/ a question from the students to ChatGPT;
- b/ an answer-explanation of the ChatGPT system;

c/ explanation from the teachers in the cases of misunderstanding of the definitions provided by ChatGPT

d/ performing exercises offered by ChatGPT for a better understanding of the theory, as well as the same exercises with explanations of why this or that article is used in a sentence;

d/ discussion of errors.

The time period for the experiment was supposed to be 2-2.5 hours.

4. Analysis and Discussion

Stage 1. The students, without the teacher's help, ask the question "What is an article?" to the ChatGPT system. Here is an answer from the ChatGPT system (it was translated from Ukrainian into English for this article).

"An article is a word that is used in some languages (for example, English and German) before a noun and indicates its definiteness or indefiniteness. There are no articles in Slavic, but in other languages they play an important role in grammar.

In English, for example, there are two types of articles:

1. The definite article – 'the' (indicates a specific object that is already known to the interlocutors).

Example: *the book* (*this book*).

2. The indefinite article – 'a' or 'an' (indicates any object from a whole class of objects that has not yet been mentioned). Example: *a book* (*some book*).

The articles can change depending on the number, gender or beginning of the word, as, for example, in German or French.

In other languages, articles can be used differently, but the essence is always the same – they help clarify what kind of a noun is being discussed."

When the teacher asked if there was anything unclear in the first sentences of this definition, the answer was affirmative. The students, unaccustomed to grammatical terms and philosophical, logical categories, could not immediately perceive the expression "stands before the noun and indicates its definiteness or indefiniteness." They only knew that in English there are definite and indefinite articles, but they could not understand the category of "definiteness/indefiniteness" itself, which for some reason indicates a "noun."

The teachers suggested that the students should look further at the ChatGPT explanation, and perhaps such questions would disappear. Indeed, the definitions with specific examples of the use of the definite and indefinite articles made the basic definition of the ChatGPT article more understandable.

However, the teachers decided to ask the students to formulate their own definition of the articles in a way that would be more understandable to them. The students of technical specialties suggested using the following formulation: instead of "stands before a noun," to use the combination "before a word that indicates an object." The students of the humanities continued with "and distinguishes or does not distinguish this object from all similar objects."

The students responded best to the explanations for the definite "(indicates a specific object that is already known to the interlocutors)" and indefinite "(indicates any object from a whole class of objects that has not yet been mentioned)" articles. As one student (who obviously had some abstract thinking) aptly put it, the definite article brings the object closer to the speaker to some extent, while the indefinite article moves the object away.

Stage 2. The next question to ChatGPT was asked by the students at the teachers' initiative: "Do articles exist in Slavic languages?" ChatGPT's answer:

"No, the articles are not used in Slavic languages, including Russian, Ukrainian, Polish and others. The Slavic languages do not have such a grammatical category as an article, which would be obligatory for nouns, as in English or German.

Instead of articles, Slavic languages can use other grammatical means to express the definiteness or indefiniteness of nouns, such as context or pronouns. For example, in Ukrainian we simply use a noun in the context: '*book*' (indefinite) or '*this book*' (definite)."

Having carefully read the above definition, the students saw an obvious contradiction between the first and second paragraphs. The first one categorically denies the use of articles in the Slavic languages, which is what they usually had heard from their teachers earlier in school when theoretically explaining the article. The second paragraph nevertheless acknowledges that to express the main characteristic of the article (indicating the definiteness or indefiniteness of a noun) in Slavic languages “other grammatical means, such as context or pronouns, can be used.”

Here are some statements from students who expressed a common opinion when discussing the definition presented above:

“What is more important – the name of an element or its function? Is the name of an element really that important? Perhaps the information it carries plays a much more important role.”

“What is the difference how a particular grammatical element is expressed in reality – with a single word (a, the), a combination of words (this book), or a whole utterance (context). The main thing is to understand that we can find parallel elements in our native language and in English, and it does not matter how they are expressed.”

“Perhaps only now we are beginning to understand that absolutely all elements of all grammars are common (or similar) in all languages of the world, they are just expressed differently.”

“We need to explain not what separates languages, but what unites them.”

And so on and so forth. Many more statements can be cited, but from the point of view of the authors, those presented above are the most interesting and profound.

In Stage 2, the exercises were introduced that provided practical skills in using the articles. The exercises were also presented by the ChatGPT system, and after this, ChatGPT fixed the correct answers with appropriate explanations.

Exercise 1: Choose the correct article

Fill in the blanks with the correct article (a, an, the or no article):

1. I saw ___ interesting movie last night.
2. She wants to become ___ engineer.
3. ___ apple a day keeps the doctor away.
4. They visited ___ Eiffel Tower during their trip to Paris.
5. Can you pass me ___ pen, please?
6. ___ dogs are loyal animals.
7. I have ___ good idea for a project.
8. He is ___ most talented player on the team.

Exercise 1: Choose the correct article (with justification for choosing one or another article)

1. I saw an interesting movie last night.

Correct: “interesting” begins with a vowel sound, so we use the article ‘an’.

2. She wants to become an engineer.

Correct: “engineer” begins with the vowel sound ‘e’, so we use ‘an’.

3. An apple a day keeps the doctor away.

Correct: “apple” begins with a vowel sound, so we use ‘an’.

4. They visited the Eiffel Tower during their trip to Paris.

Correct: “Eiffel Tower” is a unique object, so we use the definite article ‘the’.

5. Can you pass me a pen, please?

Correct: This is an unspecified object, so we use ‘a’.

6. The dogs are loyal animals.

Correct: We talk about all dogs in general, as a type of animal, so we use ‘the’.

7. I have a good idea for a project.

Correct: “idea” is a vague idea, so we use ‘a’.

8. He is the most talented player on the team.

Correct: “the most talented player” is a specific player who stands out from the rest, so we use ‘the’.

The explanation of the first three sentences seemed somewhat illogical to the students. After all, the goal of this exercise is to choose the correct article in terms of the “definiteness/indefiniteness” of a noun that denotes the object, and not at all the type of article ‘a’ (for which a separate exercise could have been made). In addition, the explanation in sentence No. 6 did not seem entirely logical. If we are talking here ‘about dogs in general, as a species of animals’, why not to add that in this case such a species is simply distinguished from all species of animals.

Next, why not to use the words ‘one’, ‘ones’ (not as a numeral, but the equivalent of ‘some’ in the Slavic language) in the explanations for sentences 1, 3, 7 for a better understanding of the use of the indefinite article.

However, it can be said that, in general, the students took into account the explanations offered by the ChatGPT system.

Exercise 2: Are the articles used correctly? Look at the sentences and choose whether the articles are used correctly. Correct the mistakes if necessary.

1. He is the best teacher in the school.
2. She has a knowledge of several languages.
3. I saw an accident yesterday.
4. Mount Everest is the highest mountain in the world.
5. She is reading an interesting book.
6. They live in a house near the sea.

Exercise 2 was done by the students themselves, without any explanations from ChatGPT or help from the teachers. The first and fourth sentences (both cases of the use of the article) were done correctly by all the students, since Exercise 1 already had similar examples explained by ChatGPT. The third and fifth sentences were also done correctly by all the students, since they were about the forms of the indefinite article. Sentence 2 was done incorrectly and required additional explanations from ChatGPT.

Exercise 2: Are the articles used correctly? (with the explanation of the use of articles)

1. He is the best teacher in the school.

Correct: “best teacher” implies that this is a specific best teacher among all.

2. She has a knowledge of several languages.

Incorrect: “knowledge” is an uncountable noun, so the article ‘a’ is not needed. Correct: She has knowledge of several languages.

3. I saw an accident yesterday.

Correct: “accident” begins with a vowel sound, so ‘an’ is used.

4. The Mount Everest is the highest mountain in the world.

Correct: It is a unique mountain, so ‘the’ is used.

5. She is reading an interesting book.

Correct: “interesting” begins with a vowel sound, so ‘an’ is used.

6. They live in a house near the sea.

Correct: “house” is an indefinite object, so ‘a’ is used.

The first comment from the students: “Why does not the definition of the article by ChatGPT, presented at this Stage, mention that the indefinite article is not used with uncountable nouns?” The teachers explained that, most likely, ChatGPT provides the basic concepts that are characteristic of the English article, and, unfortunately, cannot take into account all the nuances of its use. But then it would be possible not to offer in the exercises those cases that are not mentioned in the definitions. The teachers suggested adding this point to the explanation independently.

As for sentences 3 and 5, instead of the indefinite article forms, the students would like to receive a logical explanation of why these sentences refer to indefinite objects.

Furthermore, exercise 3 demonstrated that the students already had some skills in using the articles.

Exercise 3: Fill in the blanks with the articles

1. ____ book on the table is mine.
2. We have ____ lot of work to do.
3. She gave me ____ wonderful gift for my birthday.
4. I live in ____ United States.
5. I would like to be ____ astronaut.
6. It's a small village, but it has ____ unique charm.

All students wrote the first sentence correctly, as they remembered the example “this book” in the definite article explanation. The second sentence, taking into account the use of the phrase “a lot of”, also did not raise any questions. Sentences 3 and 6, similar in exercise 2 to “I saw an accident yesterday”, “She is reading an interesting book”, “They live in a house near the sea” were written correctly. Sentence 5 was also written correctly. Sentence 4 was written incorrectly, without the article ‘the’.

Exercise 3: Fill in the blanks with articles

1. The book on the table is mine.

Correct: We are talking about a specific book that can be specified, so we use ‘the’.

2. We have a lot of work to do.

Correct: ‘lot’ is a countable noun in this context, so we use ‘a’.

3. She gave me a wonderful gift for my birthday.

Correct: This is an indefinite gift, so we use ‘a’.

4. I live in the United States.

Correct: ‘The’ is often used for country names that consist of several words.

5. I would like to be an astronaut.

Correct: “astronaut” begins with a vowel sound, so we use ‘an’.

6. It's a small village, but it has a unique charm.

Correct: “unique” begins with “u”, which is considered a consonant sound, so we use ‘a’.

Once again, the students made a mistake in using the article because ChatGPT did not explain the use of the definite article ‘the’ in the names of some countries (sentence 4). The teachers explained that some elements of the English language (as in all languages) should simply be memorized, since there are countries with complex names that do not have a definite article, e.g. Great Britain, etc.

As already mentioned, sentence 5 was written correctly by the students. However, the reason for the correct use of the indefinite article here was not the ChatGPT explanation for this sentence, but the fact that they remembered from school explanations that nouns denoting professions should be preceded by the indefinite article. They did the same in Exercise 1 (sentence 2). This point was also mentioned in the explanation of the material “Articles” independently, without using ChatGPT.

Stage 3. Students (themselves, without the teachers’ help) asked the following question to ChatGPT: “What context elements can form an article (the concept of definiteness/indefiniteness) in Slavic languages?” ChatGPT’s answer:

“In the Slavic languages, where there are no articles, the definiteness or indefiniteness of a noun is usually expressed through context and other elements of the language. Here are some of these elements:

1. Pronouns – both demonstrative and possessive, help clarify what object is being discussed.

o Demonstrative pronouns, for example, in Ukrainian: ‘this, that, these’. Example: *I like this book* – indicates a specific object.

o Possessive pronouns can also be used to define an object: my, your, his. Example: *My book is on the table* – indicates a specific book.

2. Word order – in some cases, the order of words in a sentence can play a role in defining a noun. For example, in Slavic, if a noun is at the beginning of a sentence, it is often perceived as more important or specific, although there is no article.

3. Repetition or clarification – if a noun is mentioned several times or is clarified in context, this can create the effect of specificity. Example: “*I bought a book. The book is very interesting.*” – here it is mentioned twice and the second time demonstrates that it is the same book, which makes it specific.

4. Prepositions and context – the use of prepositions can also add clarity. For example, the preposition ‘in’ in Ukrainian can indicate that a specific place or object is being discussed if the context leaves no doubt. Example: “*I go to the shop*” – indicates a specific shop that is known to the participants in the conversation.

5. Number and gender – sometimes indefiniteness or definiteness can depend on whether the singular or plural is being discussed. For example, a word in the plural can be perceived as less specific. Example: “*I bought books*” – may mean that the books are not specific, but simply the subject of discussion.

6. Context of previous mentions – if an object or character has already been mentioned in a conversation then the next reference to it can be perceived as specific. Example: *He opened the window. The window was fogged up* – here it is already clear which window is being discussed.

Thus, in Slavic languages, the article is often replaced by context, certain words and structures, which allows the necessary information about the essence of the noun to be conveyed.”

Having considered this explanation, the students noted that, for example, paragraphs 3 and 6 practically repeat each other. In paragraph 5, “Number and gender” are mentioned, but the explanation is given only in accordance with the number.

The teachers asked the students to present their own examples in which the context plays a decisive role and clearly indicates in which cases the object is definite and in which it is not (using the appropriate articles). One of them, in the opinion of the teachers, was the most successful (with a subsequent explanation) was suggested by the students of technical specialties: “I need a pen. I want to write down my phone number.” The context demonstrates that in this case any pen is needed, even a pencil, which can be used as a writing instrument. That is, attention is directed not to the object, but to the action, which forms such a context. Students of humanities specialties offered their own example of a context representing a definite object: “I need the pen that I gave you yesterday.” That is, in this context, with the help of additional words forming the situation, a definite object was indicated.

Stage 4. The students (at the teachers’ suggestion) asked the following question: “Can the article be used to interpret the text in their own way?” ChstGPT’s answer:

“Yes, the article can be used to influence the interpretation of the text, especially in the languages where articles play an important role, such as English, French or German. The articles (definite and indefinite) can give different shades of meaning depending on the context.

1. The indefinite article (a/an) can indicate something undefined, general, or introduce something for the first time. For example, in English: “*I saw a cat*” – we do not know which cat exactly, it could be any cat.

2. The definite article (the) refers to something specific, already mentioned or well known. For example, “*I saw the cat*” is a specific cat that we talked about or that was already mentioned.

Thus, the choice of the article can change how an object or event is perceived, giving a definite or indefinite characteristic.”

The following exercises demonstrate how one or another article can affect the context.

Exercise 4: Choose an article in context

Complete the sentence with the correct article:

1. I don’t have ___ time to meet today.
2. She gave me ___ advice I needed.
3. Have you ever been to ___ India?
4. ___ Earth revolves around ___ Sun.
5. Can you help me with ___ project?

Exercise 4: Choosing an article in context (with an explanation of the reasons why a particular article might be used)

1. I don’t have the time to meet today.

Correct: In this context, ‘the’ is used because it implies a specific time for the meeting, which is limited.

2. She gave me the advice I needed.

Correct: “advice” is an uncountable noun, and we are talking about specific advice that was needed, so ‘the’.

3. Have you ever been to India?

Correct: Names of countries do not need an article.

4. The Earth revolves around the Sun.

Correct: We are talking about a specific planet and star, so we use ‘the’.

5. Can you help me with a project?

Correct: This is an undefined project that has not yet been defined, so ‘a’.

In this exercise we again see sentences (3, 4) that present a use/non-use of the article that is not captured by the basic rule mentioned in Stage 1. This refers to the absence of the article in the names of most countries. Thus, the teachers are forced to mention these grammatical phenomena themselves, without the ChatGPT’s help.

As for sentence 5, it can most likely be considered as an unsuccessful example. Students did not agree with the ChatGPT’s interpretation, since the definite article ‘the’ could well be used here, which replaces the pronoun “my” or “this” in this context. However, the teachers reminded that this is about interpreting the context, and this option is quite possible.

Exercise 5: Write sentences using the articles (a, an, the or no article). Try to choose the article depending on the context.

Example:

• (dog) ____ dog is barking.

• (earth) ____ Earth orbits around ____ Sun.

Exercise 5: Write sentences

1. (dog) The dog is barking.

Correct: It is a specific dog that is barking, so ‘the’ is used.

2. (earth) The Earth orbits around the Sun (with the explanation of exercise 5)

Correct: The names of planets and stars usually require ‘the’ because they are talking about specific objects.

Once again, the ChatGPT explanations above were not convincing enough for the students. And this is true for sentence 1. Here, the ChatGPT’s explanation can be considered quite questionable, since the context can be continued and “somewhere” can be added at the end.

The main question – how the article can interpret the text – was not explained. Moreover, the students got the impression that the authors of the rule of Stage 4 and the subsequent exercises illustrating this rule, as well as the explanations given in the exercises on the use of different types of the articles, do not quite understand themselves what exactly influences – the article on the interpretation of the context or the context on the use of this or that article.

Stage 5. The stage was included in the experiment solely at the request of the students, who believed that using only one sentence as a context could not be a sufficient example for understanding its (the context’s) role in forming a correct interpretation of the discourse (and the use of a correct article). Therefore, at their suggestion, a small excerpt of the text was introduced (humorous in nature, not very serious in content, so that the students would not perceive it too hard, and they would not have any negative reaction), in which it was necessary to fill in the gaps with the articles where necessary. The excerpt was taken from the textbook by Golitsynskiy [14] “Grammar”. Collection of tasks. 5 editions. Golitsynskiy [14] frequently used at the English lessons. Here it is.

“...group of ... farmers were sitting in ... village house and among ... other things they began talking about echoes. One of ... farmers said that there was ... wonderful echo in ... field near his farm where there was ... large group of ... trees. All ... other farmers said that they would like to hear ... echo, and ... farmer invited them to come ... next afternoon. But ... fact was that ... farmer did not really have ... echo he had told ... farmers about. So when he came ... home he sent for ... son of ... cook and told him to go to ... field, hide himself among ... trees and imitate everything that was said. ... next day ... other

farmers came, and ... farmer took them to ... field to listen to ... wonderful echo. When they were in ... field he shouted at ... top of his voice: "Are you there?" The answer came back: "Yes, I've been here for two hours!"

The students were asked to choose the context interpretation method that would be suitable for the given case. Moreover, the teachers emphasized that it is necessary to use not only the knowledge gained with the ChatGPT's help and logic, but also imagination. The latter requires a much more detailed description of events, and where only an article, i.e. a small grammatical element, is enough for English, the Slavic languages require clarifying details, as was done by the students in the examples at Stage 2.

The students did not write anything down, the description process was oral and spontaneous, without prior thinking. The sentences were considered separately one after another. The teachers monitored the logic and the correct direction of thinking, trying not to interfere.

So, the students are silently considering the text and specifically the first sentence "...group of ... farmers were sitting in ... village house and among ... other things they began talking about echoes." The teacher asks a leading question: "In what case can you see or imagine such a picture?" The description is started by one of the students-technicians.

"I am walking along the road and I see some village house. I go into and I see some group of some people. I see them for the first time in my life, they are completely unfamiliar to me, and they merge for me into one whole, one group, from which I do not single out anyone, i.e. in this case I would write 'a group of farmers' without the article in the word farmers', because, firstly, I do not know anything about them, so I think of them as some people unknown to me, secondly, according to the rule presented in the definition of ChatGPT, I cannot apply the indefinite article "a", since a plural noun is used here.

Now, what do I know about the combination 'village house'? Nothing, except that I had already seen the place when I was walking along the road and approaching it. The place resembles the ones that are often visited, often used by regulars, in our case – farmers, who perhaps come here every evening (as, for example, in the sentence 'I go to the shop', etc.). Therefore, 'the village house'.

The combination 'other things' causes controversy. The engineering students suggest not to use any article in this case, because there are many topics and this topic is one of many. However, the students of humanitarian specialties point out that precisely because many topics have apparently already been touched upon during the conversation, and this topic is one of them, therefore the definite article should be used here – 'the other things'.

The second sentence "One of ... farmers said that there was ... wonderful echo in ... field near his farm where there was ... large group of ... trees". The combination 'one of...', i.e. one of those who are in the village house, already fixed in memory. Everyone agrees that the definite article is needed here, so 'one of the farmers'.

The combination 'wonderful echo'. The teacher suggests recalling the explanations in ChatGPT about an object that is mentioned for the first time and does not yet have specific characteristics in the minds of the speakers. In this case, the rule requires the use of the indefinite article. The students put "a" in this part of the sentence "a wonderful echo".

Next, the combination 'in ... field near his farm'. The humanitarians believe that the definite article 'the' is necessary here, because they clearly imagine not just any field, but the one that is located just near the farm, and on which the farmer may have worked, i.e. a definite place of work ('in the field near his farm').

The sentence fragment 'where there was ...large group of ... trees'. The students cannot answer. The teacher suggests looking through the text again from the beginning and finding something similar to this combination. Indeed, the students recall almost the same combination "...group of ... farmers". By analogy, they arrange the indefinite article before 'a large group' of some trees, so 'a large group of trees'. However, such work does not satisfy them, since they imagine a situation where they may not have an analogue for such phrases. What can be used, what logic or a rule? The teachers report that, indeed, such a rule exists in English, namely, "after the construction there (be) (in our case, 'there was')

there must be an indefinite article. This is another grammar phenomenon that is used quite frequently in English and which unfortunately is not mentioned in ChatGPT.

The third sentence is “All ... other farmers said that they would like to hear ... echo, and ... the farmer invited them to come ... next afternoon”. The combination ‘All ... other farmers’ is considering which requires (or not) an article. The students are silent for now. The teacher asks: “Do you remember how one of you said that in his (her) imagination the indefinite article moves an object far away, and the definite article brings it closer?” Yes, some of the participants remembered that statement. And in this particular case, it can probably be used. For example, if all the other farmers in the world are meant, i.e., something so abstract and vague that it places somewhere on the periphery of consciousness, then in this context, of course, this is not what is meant. What is meant are these specific, rude and cheerful friends who were inspired by their comrade’s bragging. Therefore, of course, ‘All the other farmers’.

The combination ‘to hear ... echo’. This time, the students independently recall the ChatGPT rule about using the definite article when re-introducing an object whose parameters were already reflected in the memory of the participants of the story, i.e. that very echo about which the farmer told so many wonderful things. Therefore, it is decided to use the definite article – ‘to hear the echo’. The end of the sentence is ‘and ... the farmer invited them to come ... next afternoon’. Here, first of all, of course, ‘the farmer’, the one who, with a desire to brag about at least something interesting, touched on this topic himself and is now has to invite everyone to ‘the echo’, although he probably hopes that he will be able somehow to get out of it.

The last combination in this sentence is “... next afternoon”. The students remembered that in the textbooks on the theoretical description of English grammar there were very specific instructions that combinations with the word ‘next’ are used exclusively with the definite article. However, many have come across the word ‘next’ without an article in films or comics. So, it was decided not to put the definite article before ‘next’ just in case, in order to follow the up-date variant.

The fourth sentence is “But ... the fact was that ... the farmer did not really have ... echo he had told ... farmers about.” The students accept this as one of the easiest sentences in the text. The teachers did not even consider it necessary to interfere with the understanding process. At the beginning, ‘...fact was’ is an idiomatic combination that includes the definite article (the fact was). Then, the students absolutely safely apply the ChatGPT rule about repeated mention of an object, which makes it more specific and definite. Therefore, the entire sentence should be “But the fact was that the farmer did not really have the echo he had told the farmers about.” The students of the humanities noted that in this sentence, one can clearly feel how the frequent use of the definite article contributes to the increase in the dynamics of the narrative and even introduces some tension.

The fifth sentence is “So when he came ... home he sent for ... son of ... cook and told him to go to ... field, hide himself among ... trees and imitate everything that was said.” Of course, the students remembered the English standard of the combination ‘to go home’, in which no article is provided.

The combination ‘... son of ... cook’ also did not cause any controversy, since it was obvious that the farmer knew not only his cook, who had been working for him for a long time, but also his son, so this is not some kind of indefinite ‘son’, but a boy with whom he may have communicated, played or even given him some small gifts. Therefore, ‘the son of the cook’.

In the combination ‘to go to ... field’, according to the students, the use of the definite article is required before the word ‘field’ (the field). The same field that demonstrates ‘an unusual echo’, which the boy knew well and probably ran along it more than once or simply brought lunch to the farmer. The same can be said about the combination ‘hide himself among ... trees’, those same ‘trees’ among which the boy may have hidden during his games, i.e. ‘the trees’.

The sixth sentence is “... next day ... other farmers came, and ... the farmer took them to ... field to listen to ... wonderful echo.” Once again, the students decided that all the empty spaces should be filled with the definite article except for ‘next’ (Next day the other farmers came, and the farmer took them to the field to listen to the wonderful echo). Once again, we would remind that the students have chosen more modern variant of use of ‘next’, i.e. without the definite article. The students’ imagination drew

them a picture of the farmer walking confidently and calmly across the field with his guests, having managed to insure himself, and probably already knowing that the boy was in the right place.

The last, seventh sentence: “When they were in ... field he shouted at ... top of his voice: “Are you there?” The answer came back: “Yes, I’ve been here for two hours!” Of course, the very field that the whole thing was about, i.e. ‘the field’. The only thing the farmer had “missed” was the spontaneity of the child, who didn’t care about the farmer and his guests, and who had been sitting sadly for two hours in the thicket of trees.

Of course, the end of the story made the participants of the experiment laugh. However, some students noted that the farmer could have insisted on the unusualness of his echo, which not only repeated words, but also formed a dialogue.

Using the presented short story as an example, the students noticed a striking relationship between the context and articles: the former provides facts, and the latter interpret them. In addition, the students were amazed by the huge subtext, which is provided with such a small and almost imperceptible element of the text as the article.

The entire procedure took 2 hours and 17 minutes.

5. Conclusions

So, in the opinion of the authors, the goal of the article, formulated at the beginning, can be considered achieved. In the process of explaining the grammar problem “English article”, the participation of three parties had its logical necessity.

The first party is the students, for whom the explanation was intended, demonstrated their participation in direct reactions to this or that step of the ChatGPT system and teachers, in the emotional statements given above, in attempts to understand this grammar problem more clearly.

The second side is the teachers taking part in the experimental procedure and implementing their own strategy of explanation. It is impossible not to pay attention, firstly, to the teachers’ understanding of the fact that despite the vast informational resource of ChatGPT, its capabilities are quite limited, which required additional explanations on their part, i.e. to play the role of a kind of “ChatGPT”; secondly, to their constant monitoring of the students’ logic and ChatGPT’s and attempts to understand and preserve the logic of both sides; thirdly, to the desire of the teachers to demonstrate to the students the fact that the English language has a vast subtext, which is usually hidden behind the almost abstract elements of grammar by its nature and which requires the application of a certain power of imagination and logic.

The third party – the participant of the experiment is the ChatGPT system. The participation of the ChatGPT system in the procedure of explaining the real grammar phenomena of the English language to the students of Slavic mentality certainly has a great, positive significance. Using the example of presenting the grammar material “English article”, it can be seen that the ChatGPT system has a clear logical structure: definition of the object (in our case – the article); sufficiently detailed answers to the posed clarifying questions; practical exercises that allow to clearly determine the degree of assimilation of the material. Exercises with explanations of possible errors are especially positively perceived by the students.

The teachers took into account the warnings about the possible presence of outdated or incomplete information on a particular issue. Therefore, the absence of some data on the grammatical characteristics of the English articles in the ChatGPT entry did not cause a negative reaction from the students and teachers, and the definitions were supplemented independently.

However, along with the obvious success of using ChatGPT in its practical use in the educational process, one cannot help but note some disadvantages.

1. Some overload of explanations with philosophical terms, which may be difficult to understand not only for students, but also for many people of older generation.
2. The unconditional influence of theoretical grammar, which is still practiced in many educational institutions. And in connection with this – the reluctance to draw linguistic parallels between English

and Slavic languages, as well as the categorical judgments about the impossibility of the existence of such parallels. The absence of descriptions of detailed situations that could contribute to the development of logic and imagination of students and a better understanding of this grammar problem.

3. A certain discrepancy between the explanations and the tasks set in the exercises, which necessitated the need to independently, without the system's support, turn to other sources in search of information.

All the above-mentioned shortcomings of the system made the presence of teachers one of the necessary elements for conducting the lessons in general and the experiments in particular. They had to constantly interfere with the process, supplement, help students ask ChatGPT the clarifying questions, which could contribute to a better understanding of the grammatical phenomenon "English article", i.e. practically implement the strategy of explanation. All of the above allows us to conclude that the ChatGPT system itself, with all its universality, is not yet capable of fully replacing a teacher in the classroom.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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