МЕТОДОЛОГИЯ И ТЕХНОЛОГИЯ ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ / METHODOLOGY AND TECHNOLOGY OF VOCATIONAL EDUCATION

ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

Research article

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Abstract

Nowadays, introduction of artificial intelligence (AI) technologies offers an opportunity to reconsider AI application in English as a Foreign Language education (EFL) [1]. AI is claimed to be a facilitator of a broad range of education approaches. However, the crucial question of how to use AI in a classroom to advantage, avoiding plagiarism and making students understand its potential remains unanswered. There is an opinion that AI is capable of stimulating creative work [2] going beyond its main capacity to generate texts based on a specific topic [3].

This paper suggests deliberate integration of AI in a postgraduate English course in order to develop critical thinking skills. The aim of this instruction is to make students think if they can create a better version of a written text or explain why they would prefer different tailored passages from AI. As a result, AI involvement facilitates students' ability to compare, evaluate and differentiate texts created by their peers and a Chatbot system. The assignments include editing the Chatbot produced text, discussing and analyzing improvements. These activities seem to contribute to students' better understanding what plagiarism is, since they are supposed to highlight the difference between machine and human outcomes through comparative analysis.

Keywords: AI, ChatGPT, critical thinking, EFL Teaching.

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ПРЕПОДАВАНИИ АНГЛИЙСКОГО ЯЗЫКА КАК ИНОСТРАННОГО

Научная статья

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Аннотация

В настоящее время внедрение технологий искусственного интеллекта (ИИ) в разные сферы жизни дает возможность пересмотреть применение ИИ в обучении английскому языку как иностранному (EFL) [1]. ИИ способствует реализации широкого спектра образовательных подходов. Однако вопрос о том, как использовать искусственный интеллект в аудитории, избежать плагиата и помочь студентам осознать его потенциал, остается открытым. Существует мнение, что искусственный интеллект способен стимулировать творческую работу [2], выходя за рамки своей основной функции генерировать тексты на определенную тему [3].

В данной статье предлагается целенаправленная интеграция искусственного интеллекта в курс английского языка для аспирантов с целью развития у них навыков критического мышления. Цель данной методики – помочь студентам задуматься, способны ли они создать улучшенную версию письменного текста или объяснить, почему они предпочли бы тексты, сгенерированные искусственным интеллектом. В результате использование искусственного интеллекта способствует развитию способности сравнивать, оценивать и дифференцировать тексты, созданные студентами или чат-ботами. Задания включают в себя редактирование текста, созданного чат-ботом, обсуждение и анализ корректировок. Эта методика также способствует лучшему пониманию студентами того, что такое плагиат, поскольку предполагается, что они должны подчеркнуть разницу между результатами работы машины и человека с помощью сравнительного анализа.

Ключевые слова: искусственный интеллект, общение в чате, критическое мышление, обучение английскому языку как иностранному.

Introduction

A lot of research in EFL has been devoted to development of critical thinking skills regarding the two highest levels of Bloom's taxonomy, namely synthesis and evaluation or evaluating and creating according to Anderson and Krathwohl (2001) [4]. The feedback on applying thought-provoking assignments was not always positive. For example, the problem might stem from the fact that exploring and managing complexity and ambiguity traditionally is not popular with students [5]. According to traditional approaches, students are taught what to think, therefore being taught how to think may appear to be a challenge and cause resentment [6]. However, the idea of 'competing' with AI in terms of creating something new might empower students to brainstorm ideas and solicit feedback or think critically.

Critical thinking being an organized mental process for processing the information serves as a kind of filter based on a skeptical approach. Mason (2008) describes critical thinking as a method of thinking dominated by logic and involving

comparison and analysis of different ideas for problem-solving [7]. The techniques used to develop critical thinking skills usually employ questioning techniques [8], and methodology includes intelligence games and Science, Technology, Engineering and Mathematics (STEM) applications. According to [6, P. 7] critical thinking classroom activities should be based on four elements: "ill-structured problems or debatable issues, criteria for assessing thinking, student assessment of thinking, and improvement of thinking" [9].

AI may serve as a trigger for students' critical judgment, facilitated by asking them to evaluate comparable discourses, produced by a human or a machine. This logical reasoning requires them to think about the content, format and peculiarities of written texts.

Main Part

The Chatbot system is known as one of the commonly employed technologies for supporting teaching and learning activities. Comparative methodology may contribute to critical thinking development with ChatGPT tool used for analysis and evaluation. The first stage of the process starts from raw data; further developing a substantive theory through constant comparisons [10]. In this study, the comparative method was carried out in four steps:

1) examining the first selected discourse;
2) noting its focus and properties;
3) reading the second discourse;
4) comparing it to the first example, making conclusions.

This algorithm reflects a known constant comparative methodology, which incorporates four stages:

1) comparing incidents applicable to each category;
2) integrating categories and their properties;
3) delimiting the theory;
4) writing the theory.

The Turing test may be used to detect Chatbots through examples of conversation as a hook for this instruction. With the help of original transcripts, a student is asked to identify machine communication among the humans and explain the reasons for this choice. This critical and philosophical exercise can provide a starting point for further discussion whether machines can produce human-like communicative patterns and what should be done to approximate these examples to human speech. The examples of entities for comparison and evaluating come further:

Entity 1. (a machine)
Judge: A car stopped with a jerk… guess what happened next?
No suggestions. Tell me the answer. Could you tell me what are you? I mean your profession.
Judge: The Jerk got out of course. I am a comedian. Can't you tell?
My favourite type is comedy. I like the 'Naked Gun' series best. Heck, any movie with Leslie Nielsen it is tops in my book.
Entity 2. (a human)
If there is a correlation between increase sales in ice cream and increase in drownings, what is the cause?
Proximity to waves?
Proximity is correct – are you a statistician.
Not recently.
Are you an artist?
Of sorts.

The next step of developing critical thinking skills is paraphrasing, which is the rephrasing of sentences while essentially keeping their meaning the same as they were originally [11]. The four strategies traditionally recommended for paraphrasing are: using synonyms; substituting phrases with single words; distinguishing examples; and leaving out irrelevant details. Providing the students with the sentences for paraphrasing has been criticized for being not teaching but testing [12]. AI may be helpful as a solution of this problem. A fairly simple method of teaching paraphrasing has been suggested by the authors of this article which includes careful reading and understanding of the original material, identification of the salient features, comparing these features with the output produced by the paraphrasing tool and ChatGPT, choosing the most appropriate options and finally rewriting the original to the best advantage. The further examples vividly show the differences in using synonyms and give an idea of the possible syntactic structure transformation:

Original:

One day, while Doug was out walking, he felt **light-headed** and then lost **consciousness** and fell to the ground. He was **brought** to the Emergency Department of a major **hospital** by ambulance for **assessment** and **investigation**.

Post paraphrasing tool:

While one day on his walk Doug he felt **bleary eyed** and lost **awareness** and fell onto the ground. He was **conveyed** to the Emergency Department of the **healing facility** for significant **appraisals and tests**.

GPT:

Doug, while taking a walk, suddenly experienced **dizziness** and subsequently **passed out**, causing him to collapse. An ambulance was called, and he was **transported** to the Emergency Department of a **prominent hospital** for thorough **evaluation and examination**.

Conclusion

If critical thinking is a process of hunting assumptions: discovering and checking their accuracy [13] the open-ended logic of questioning may be regarded as a process of critical thinking [14]. When users ask ChatGPT questions, most of them are intended to get the machine to say something controversial, which contributes to initiating a discussion. It could prove to be more efficient with AI than with a human being since human judgment is traditionally influenced by social judgment, but for a machine it is hard to copy this process. The open-ended questions helpful for working out the most ethically appropriate way to

make an ethical choice: to kill a bear or distribute a limited supply of transplant organs may appear thought-provoking for developing analytical skills.

For example, ChatGPT when asked a question 'Is it good to kill a bear?' as a starting point for discussion is going to give a vague answer:

As an AI language model, I don't have personal opinions or beliefs, but I can provide some ethical considerations on this matter. ….. Ultimately, the ethics of this scenario can vary depending on one's personal beliefs and values.

The arguments generated by AI may be analyzed, criticized and finally improved by students. Deliberate challenging students' assumptions enhances creativity in comparison with conventional approaches, and therefore work well for critical thinking skills' development.

Progress made in Natural Language Processing (NLP) and Artificial Intelligence (AI) in recent years has resulted in these tools becoming more accessible for different purposes. Although current AI systems are limited for instructional approaches, great potential for AI to support a broad range of pedagogical approaches can still be seen.

The purpose of this paper is to demonstrate and discuss examples of how Open AI's chatbot, ChatGPT, can be utilized for language education and the impact the technology may have on students' engagement.

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Не указан.	None declared.
Рецензия	**Review**
Все статьи проходят рецензирование. Но рецензент или автор статьи предпочли не публиковать рецензию к этой статье в открытом доступе. Рецензия может быть предоставлена компетентным органам по запросу.	All articles are peer-reviewed. But the reviewer or the author of the article chose not to publish a review of this article in the public domain. The review can be provided to the competent authorities upon request.

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