

The Comparison of Different Artificial Intelligence Software in Assisting Teacher's Teaching Ability of Junior Middle School English Writing

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Abstract: Nowadays, the process of English teaching is significantly affected by various technological advancements. Artificial Intelligence (AI) has been applied in various aspects of people's lives. Not only can some AI models help people to produce some ideas, but they can also be helpful in English learning. In this study, two different AI authoring tools are adopted, ZECOPA and ERINE, which are used to explore the function of AI in assisting in the teaching of junior middle school English writing. The author took Shanghai high school English composition for the past three years as an example, letting two AI models generate model essays. By comparing the model essays in vocabulary, special sentence patterns, the variety of conjunctions and other aspects of the difference, to draw a conclusion, on which software can better assist the teaching of junior high school English composition. So that teachers can realize which AI technology can assist them better in writing compositions and can be applied to classrooms better.

Keywords: AI, English writing, teaching ability.

1. Introduction

In the context of globalization, the importance of English as an international language has become increasingly prominent [1]. In recent years, with the rapid development and iterative update of artificial intelligence technology, Artificial Intelligence(AI) has penetrated various aspects of people's jobs and lives. People's attention to teaching support tools like intelligent teaching systems has spread throughout the entire educational environment as the usage of AI and other technology in education has developed [2]. In the field of education, AI can assist teachers in evaluating students' academic performance and help teachers prepare lessons, which have been very common in Shanghai. Iwrite, based on artificial intelligence, is an English writing teaching and evaluation system that includes writing teaching, intelligent correction and automatic grading, which can play a great role in English writing teaching [3]. Nowadays, the potential of chatbots in education, especially in simulating human interactions and generating human-like texts, has been widely highlighted [4]. In reviewing previous studies, the author found that ChatGPT is used in most of the literature. Preparing lessons for teachers is a core part of the daily work of educators, which requires a lot of time and energy. ChatGPT, as a language processing tool, has been widely used in teaching plan design [5]. As Lotze argues, AI diagnostic systems still need to meet some key criteria (i.e., spontaneity,

creativity, and shared knowledge) before they can serve as a real-life language teacher. Although AI has great potential to facilitate English as a Foreign Language (EFL), the integration of new technologies into classroom teaching generally requires teachers to overcome multilayer barriers [6]. Hence, along with providing more technical support to upgrade diagnostic systems of AI chatbots, future work is required to empirically investigate their adaptability to different language proficiency levels and various instructional contexts [7]. In order to explore whether AI-based iWrite assisted English writing teaching mode can effectively improve students' English writing ability, the study adopts two different teaching methods to compare. In this paper, the author pays attention to ERNIE Bot 4.0 and ZECOB A to AI chat, trying to find out whose writing ability is better. The author sets Shanghai high school entrance examination English composition in 2022, 2023, 2024 as an example, letting two AI intelligent software generate relevant model essays, through the form of tables to compare them in words, grammar, special sentence patterns and etc., in order to find which software can better assist teachers in the teaching of writing. With AI technology tools and teacher coaching, students can make significant progress in their English learning experiences [8].

2. Research Design

2.1. AI Model Selection

In terms of software selection, the author chose two AI intelligence software developed by Chinese developers, because when looking up a lot of literature, the author found that there was little research on AI software in China.

However, the author wants to compare the intelligent software independently developed by Chinese developers, so as to see the continuous progress and strength of China's independent research capacity.

ERINE Bot is a generative dialogue product launched by Baidu based on ERINE big model technology. It can talk with people, interact with them, answer questions, assist creation, and help people get information efficiently and conveniently.

Although ZECOB A chat is not well known at present, it is an intelligent software independently developed and established by Shanghai Technology Company. In this topic, the author takes the English composition for the Senior high School entrance examination in Shanghai in the past two years as an example, so it may have a better understanding of some local English learning modes in Shanghai and generate more intelligent essay models.

2.2. Evaluation Criteria

1. Vocabulary sources. How many advanced words are beyond the scope of the exam syllabus? In this way, the advanced character of AI-generated model words is judged.
2. Will be judged by the emphasis sentence, inversion sentence, special clause, and several aspects.
3. Precision. Evaluate whether the model essay meets the standards and requirements, and whether the writing is coherent and smooth.

2.3. Text Sources

This paper takes the English composition questions of the 2022-2024 Shanghai high School Entrance exam as an example and lets AI generate model essays.

2022: Your school will add a student activity room, there are six ideas about the use of the activity room. You need to choose one of them and give your reasons. The situation is: The school is trying to find out the students' intentions through the school newspaper. Suppose you are Li Hua, please write an email to Miss Zhang in the school newspaper, indicating that you like it best one of the ideas,

and explain why. The six ideas about the use of the activity room include: readers' home, labor workshop, art and sports world, charity bazaar, science and innovation hut and spiritual station. Candidates need to choose one of the ideas, explain why they chose the idea, and how it will benefit students.

2023: Your community plans to hold a training program called "time management" and is asking for comments on the training program. If you are Li Hua, a junior student, please read the following training program and write an email to Mr. Wang, the community leader. The email should contain the following content:

- (1) Whether you will attend the training and give a brief explanation of the reasons
- (2) Suggest changes to one item in the program and how it will benefit students.

Training Plan

Purpose	Teach the ways to manage time
participant	Students from 13-17
Way of training	Reading
Time	7-10 am. on every Saturday in July
Place	Community plaza

2024: Suppose you are Li Feng and you are going to say goodbye to Frank, a foreign student you met at the school International Exchange Festival. You have given him a gift with Chinese elements. Please write down what you say to him on the gift card. This essay question requires the examinee to use his imagination to create a practical essay based on the specific situation. The examinee should consider the name, features and functions of the gift, as well as the reasons for choosing the gift.

3. Result & Conclusion

3.1. Compositions Produced by Two AI Models

Table 1 is the English compositions completed by ZECOB 4o Chat according to the writing topic of 2022-2024.

Table 1: English compositions from 2022-2024 completed by ZECOB 4o Chat

Year	ZECOB 4o Chat
2022	<p>Dear Ms. Zhang,</p> <p>I am Li Hua from Class 3. I am writing to express my preference for the "High-tech lab" as the purpose of the new student activity room. In my opinion, a High-tech lab would provide us with valuable opportunities to explore and learn about the latest technologies, such as robotics, coding, and 3D printing. This would not only enhance our practical skills but also inspire creativity and innovation, which are essential in today's world. Moreover, it would be a great platform for students interested in science and technology to collaborate and share ideas.</p> <p>Thank you for considering my suggestion.</p> <p>Best regards,</p> <p>Li Hua</p>

Table 1: (continued).

2023	<p>Dear Mr. Wang,</p> <p>I hope this email finds you well. I would like to share my thoughts regarding the upcoming "Time Management" training program.</p> <p>First, I would like to confirm that I will attend this training. As a ninth-grade student, I have a heavy workload, and managing my time effectively is crucial for my academic success. I believe this training will help me learn valuable time management skills to improve my efficiency.</p> <p>Additionally, I have a suggestion regarding one part of the training program. I noticed that the program emphasizes the importance of creating a daily schedule. While this is very useful, I suggest adding an interactive component, such as having participants create their own daily schedules during the session, followed by feedback from the instructor. This would not only help us better understand how to plan our time but also make the training more practical and engaging.</p> <p>I look forward to your response.</p> <p>Best regards, Li Hua</p>
2024	<p>Dear Frank,</p> <p>It was a pleasure to meet you during our school's International Exchange Festival. I hope you enjoyed your time here in China and made many unforgettable memories.</p> <p>As a small token of our friendship, I am giving you this Chinese calligraphy set. Calligraphy is a significant part of Chinese culture, representing the beauty of our language and art. I hope that whenever you use it, you will think of the wonderful moments we shared together.</p> <p>Wishing you all the best in your future endeavors. May our friendship last across borders and time!</p> <p>Best regards, Li Feng</p>

Table 2 is the English compositions completed by ERINE 4.0 Bot according to the writing topic of 2022-2024.

Table 2: English compositions from 2022-2024 completed by ERINE 4.0 Bot

Year	ERINE 4.0 Bot
2022	<p>Dear Ms. Zhang,</p> <p>Hello! I'm Li Hua, and I wanted to write to you about the new student activity room our school is planning. Out of all the ideas like a Reading corner, Mini workshop, Arts and sports center, and the rest, I really like the idea of a Heart-to-heart room.</p> <p>I think it would be great to have a place where we can talk to each other and share how we feel. Sometimes school can be stressful, and it would be nice to have a safe space where we can just relax and talk about our problems. The Heart-to-heart room could be like a secret garden where we can be ourselves and get support from our friends.</p> <p>Also, it would be cool to learn how to listen to each other and help each other out. I think that's an important skill to have, not just in school but in life too. If we have a Heart-to-heart room, we could learn how to be better friends and support each other through good times and bad.</p> <p>Best regards, Li Hua</p>

Table 2: (continued).

2023	<p>Dear Mr. Wang, Hello! I'm Li Hua from our community. Thank you for organizing the "Time Management" training. I think it's really helpful for us students. I want to take part in this training because I want to learn how to manage my time better. With exams coming up, I feel like there's so much to do and not enough time. Also, I think it would be more fun if we could do some activities together during the training. Like, maybe we can share our own tips on how we manage our time, or do some small games that teach us about time management. That way, it won't just be listening to lectures, but also doing something hands-on. Best regards, Li Hua</p>
2024	<p>Dear Frank, Hi, I'm Li Feng. I'm giving you a gift as you're leaving. It's a Chinese fan with beautiful paintings on it. The fan can keep you cool in hot weather and also looks very pretty. I picked this fan for you because I know you like Chinese art. The paintings show traditional Chinese scenery and animals. I hope when you use the fan, you'll think of our time together at the International Exchange Festival. I hope you have a great trip back home and don't forget us! Best wishes, Li Feng</p>

3.2. Data Analysis

Table 3 is based on Table1 and Table2, comparing the compositions produced by ERINE 4.0 Bot and ZECOA 4.0 in the following aspects.

Table 3: Comparison of the results

Year	2022		2023		2024	
Name	ZECOBA	ERINE	ZECOBA	ERINE	ZECOBA	ERINE
Words Out of syllabus	10	0	13	2	4	1
Special Sentence Patterns	Non-restrictive attributive clause;	Adverbial clause	Object clause; Adverbial clause	Object Clause; Attribute clause	Object Clause; Adverbial clause	Object Clause; Adverbial clause
Conjunctions	Not only...but also... Moreover	Also; So	First; Additionally; While	Also; Like	As; Whenever	/
Number of words	106	191	158	128	98	94

First, ZECOBA has more words out of the syllables, like “preference”, “enhance”, “practical”, “innovation”, “collaborate”, “management”, “effectively”, “components”, “engaging”, “unforgettable”, “calligraphy”, “significant”, “endeavors”, etc. (see Table 3).

Second, seeing from the special sentence patterns, ZECOBAs has non-restrictive attributive clause, an objective clause and some adverbial clauses while ERINE has an adverbial clause and objective clause, too (see Table 3).

Third, ZECOBAs uses more diversified conjunctions like “not only... but also...” “moreover”, “additionally”, and “whenever”, while ERINE just uses “also”, “so”, and “like” (see Table 3).

4. Conclusion

According to the data shown in the table above, the following conclusions can be drawn:

First, ZECOBAs is more advanced and uses more words other than the syllabus. The words of ERINE are relatively simple, most of them belong to the scope of the exam, which belongs to the standard words.

Secondly, from the point of view of special sentence patterns, both use attributive clauses, adverbial clauses, object clauses and other basic clauses, and there is no big difference in special sentence patterns.

Thirdly, in terms of textual connectives, the connectives of ZECOBAs are more diversified and advanced, while the conjunctions of ERINE are more simple.

Fourth, in terms of the number of words, the number of words is generally more than the specified number of words required by the test.

Overall, ERINE's ability in the generation of junior high school essay model is more unstable, and its words and sentences are more regular, which can not be used as a good middle school exam model to be used as a reference; The generative ability of ZECOBAs is relatively stable, and its words and sentences, including the fluency of writing. It has a good reference value. Therefore, the author thinks it can be better used as an auxiliary tool for junior middle school English teachers in Shanghai to generate compositions.

However, this study also has some limitations, it can't know whether the two AI tools have a better teaching aid role in English essay writing in higher education, and it remains to be explored in this aspect.

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