MODERN VECTORS OF SCIENCE AND EDUCATION DEVELOPMENT IN CHINA AND UKRAINE

中国与乌克兰科学及教育前沿研究

Harbin Engineering University
State institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky"
Educational and Cultural Center "Confucius Institute"

Odesa, Ukraine

Harbin, the People's Republic of China

MODERN VECTORS OF SCIENCE AND EDUCATION DEVELOPMENT IN CHINA AND UKRAINE

中国与乌克兰科学及教育前沿研究

MODERN VECTORS OF SCIENCE AND EDUCATION DEVELOPMENT IN CHINA AND UKRAINE

中国与乌克兰科学及教育前沿研究

The State institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky"

Harbin Engineering University

2024
ISSUE № 10

Odesa, Ukraine

Harbin, the People's Republic of China

The ninth issue of the materials represented by the Ukrainian and Chinese scholars are dedicated to the relevent issues of General and Contrastive Linguistics within the Chinese, English, Ukrainian, Turkish and Korean languages; linguodidactic problems of teaching native and foreign languages within polycultural educational space; peculiarities of cross-cultural communication in geopolitical space alongside education-related aspects regarding profession-oriented training of future specialists under conditions of multicultural environment and military actions in Ukraine; post-COVID-19 pandemic chalanges.

The given articles may be of use to researchers, graduates, postgraduates and practising teachers who are interested in various aspects of Sinology, Cross-cultural Communication, Linguistics, Pedagogy and Psychology.

BA, MA, Harbin Engineering University, Harbin, China

Master of Translation and Interpretation, Student, Harbin Engineering University, Harbin, China

Master's Student of Linguistics and Applied Linguistics Harbin Engineering University, Harbin, China

Associate professor Harbin Engineering University, Harbin, China

Master of Arts, Associate Professor, School of Foreign Studies, Harbin Engineering University, Harbin, China

Postgraduate Student, School of Foreign Studies, Harbin Engineering University, Harbin, China

Master of Arts in English Language and Literature, Associate Professor, Master Supervisor, Harbin Engineering University, Harbin, China

Master Candidate of Translation and Interpretation, Harbin Engineering University, Harbin, China

Master, Associate professor, School of Foreign Studies, Harbin Engineering University, Harbin, China

Ph. D, Professor, School of Foreign Studies, Harbin Engineering University, Harbin, China

Master, Associate professor, School of Foreign Studies, Harbin Engineering University, Harbin, China

Postgraduate Harbin Engineering University, Harbin, China

Postgraduate Student, School of Foreign Studies, Harbin Engineering University, Harbin, China

Huan Gege

Master's Student of Linguistics and Applied Linguistics

Harbin Engineering University, Harbin, China

Zhou Weiwei

Associate professor

Harbin Engineering University, Harbin, China

AN ANALYSIS ON THE WAYS OF CHATGPT TO IMPROVE THE ACADEMIC WRITING ABILITY OF COLLEGE ENGLISH TEACHERS

Abstract: The emergence of artificial intelligence, led by ChatGPT, has subversively changed the way of production and use of human knowledge, which has a far-reaching impact on the field of academic writing, especially the main force of academic writing, college teachers. Therefore, this study explores the functions of ChatGpt in the field of academic writing, and analyzes the ways in which ChatGPT can improve the academic writing ability of college English teachers. It is found that ChatGPT, a new artificial intelligence, can help college English teachers with its powerful intelligent text generation and literature search functions. At the same time, college English teachers can improve their academic writing ability through the three ways empowered by ChatGPT: ubiquity of learning styles, visualization of potential information, and high efficiency of repetitive work. This study can provide some insights for college English teachers' use of ChatGPT.

Keywords: academic writing; ChatGPT; college English teachers; artificial intelligence

1. Introduction

As the main force of scientific research and teaching students, the academic ability

of college teachers is crucial, and their writing ability is especially concerned, not only about their personal professional learning and scientific research ability, but also closely related to the quality of English teaching and the enhancement of the level of talent cultivation. Therefore, research on academic writing of college English teachers can to a certain extent promote the professional development of college English teachers and enhance the influence of college English teachers in the academic world. At present, international studies on academic writing of college English teachers focus on the significance of academic writing for teachers' personal growth and professional development. For example, academic writing provides teachers with opportunities to express themselves, gain the satisfaction of academic recognition, and improve their credibility and authority (Whitney et al., 2012); academic writing is an important way for teachers to reflect on their own professional practice ability (Rathert & Okan, 2015). In China, relevant studies mainly focus on analyzing and exploring the factors affecting college English teachers' participation in academic writing, such as: the requirements for promotion and scientific research, the difference between teachers' academic training background and accumulation of practical experience (Meng Chunguo, Chen Liping, and Zheng Xinmin, 2018), and insufficient time for scientific research due to heavy teaching tasks (Ren Wei, 2018); based on a variety of influencing factors, some studies have proposed that enhancing the strategies to enhance the academic writing engagement of college teachers, for example, formulating diversified criteria for teacher evaluation and title promotion (Wen Qiufang, Zhang Hong, 2017), emphasizing the cultivation of research methodology (Zhang Hui, Zhang Songsong, 2018), and other various ways. In order to promote the improvement of teachers' academic writing ability, scholars have combined their efforts to propose a variety of ways, however, the development and progress of the times also affects teachers' academic writing ability in the same way.

A large-scale language model called ChatGPT (Chat Generative Pre-trained Transformer) released by the American artificial intelligence company OpenAI in November 2022 has led to the unprecedented development of generative artificial intelligence technology, which marks the beginning of a new era of human-machine

co-existence. Because the text generated by ChatGPT is able to achieve the existence of a near real person in terms of content arrangement, logical structure, and emotional expression, it will undoubtedly have a great impact on the academic research of English teachers in colleges and universities. For this reason, this article analyzes the functions of ChatGPT in participating in academic writing from the perspective of artificial intelligence, represented by ChatGPT, and explores the paths for artificial intelligence to improve the academic writing ability of college English teachers. It provides certain suggestions for how college English teachers can better move towards a new era of human-machine interaction in their academic research.

2. The functions of ChatGpt in participating in academic writing

In academic writing, compared with the traditional artificial intelligence technology, the help provided by the new artificial intelligence ChatGPT mainly lies in the intelligent text generation function and literature search function, the emergence of these two functions has given energy to the academic circle.

2.1 Text generation function

ChatGPT's powerful text generation function not only makes a comprehensive breakthrough in terms of content, logic, integrity and emotional value, but also makes people feel that it is no longer a machine, but an existence that is very close to real people from the way of thinking to the habit of expression (Wang Jianlei, Cao Huimeng, 2023). For a chatbot to generate text that resembles human expression "from the inside out," it needs to have natural and fluent language reorganization and integration capabilities. ChatGPT's ability to reach new heights in text generation lies in the unique mechanism behind it. The natural language generative model relied on by ChatGPT is a language model with powerful computing power based on Transformer architecture. Compared with the previous Recurrent Neural Network (RNN) algorithm for natural language processing, Transformer can call hundreds of billions of parameters. An efficient design architecture understands and interprets the depth of the user's needs to generate "highly complex response text" in a manner close to human natural language (Brady D. Lund & Ting Wang, 2023). Therefore, the text generated by ChatGPT can not only be close to the existence of real people in expression, but also can generate

highly condensed and thoughtful text after reading a wide range of data in a short time. For college English teachers engaged in scientific research, ChatGPT's intelligent text generation function can undoubtedly greatly improve their academic writing efficiency, which can reorganize fragmented information into natural, smooth and coherent knowledge. This is of great benefit to English teachers in the pre-writing stage to determine the topic, the drafting stage to draw up the outline, and the revision stage to give opinions.

2.2 Literature search function

Any research cannot be carried out without the reading of literature. Researchers need to read a large number of literatures in their field, and a large number of literatures will emerge every period of time, which requires researchers to timely read literatures and grasp the key points, so as to keep pace with the progress of the discipline frontier. The reading, digesting and understanding of a large number of literatures have put a certain pressure on college English teachers who have their own teaching tasks. However, the emergence of artificial intelligence led by ChatGPT will greatly alleviate this situation, and one of the reasons why it has become a "wave darling" is that it uses the AIGC large model. Previous small models only learn application data for specific scenarios, so their capabilities are limited. However, the large AIGC model used by ChatGPT has a huge amount of training data. In order to make ChatGPT more anthropomorphic, OpenAI trained it with 45TB of data and nearly 1 trillion words. That's about 13.51 million Oxford Dictionaries (Yuanchuan Science and Technology Review, 2023). Therefore, with the support of large models, ChatGPT can help scholars quickly search relevant literature on a specific topic, extract abstracts and sort them into literature reviews, which greatly improves researchers' productivity.

College English teachers can input keywords in ChatGPT while obtaining literature materials, and ChatGPT can use its document crawling function to search the massive document library, helping researchers scan and summarize thousands of articles and abstracts in a few seconds, so as to carry out a comprehensive literature review. This can save English teachers a lot of time and efforts when doing academic writing, freeing them from repetitive labor and allowing them to focus on more

pressing research tasks.

3. The ways of ChatGpt to enhance the academic writing ability of college English teachers

The creation and development of a new technology does not happen overnight, but gradually, ChatGPT as an emerging technology, although there may be some shortcomings, but we should look at the problem from the perspective of development, and positively treat and use ChatGPT and other artificial intelligence, give full play to its strengths, and reasonably avoid its shortcomings. For English teachers in colleges and universities, artificial intelligence represented by ChatGPT will push teachers to go further in academic writing and improve their academic writing ability, which is manifested in the following three paths:

3.1 Generalization of learning mode

The research related to literary disciplines cannot be separated from the input of knowledge. Learning can broaden our horizons, extend the width and thickness of life, and draw inspiration from it; In addition, learning can also improve our thinking ability, reading requires the brain to work constantly, so that they have judgment, imagination and cognitive abilities that "algorithms" do not have. In conclusion, in the era of rapid development of science and technology, with the development of artificial intelligence, big data and other technologies, a lot of repetitive work will be replaced by technology, while reading and learning is always the foundation and guarantee of liberal arts research, so college English teachers should establish the concept of lifelong learning and improve their awareness of academic writing.

The emergence of artificial intelligence has greatly influenced and changed our daily life, replacing simple and repetitive labor while changing people's work and learning mode from fixed to ubiquitous, which helps college English teachers realize the state of learning everywhere and all the time, and promotes them to make full use of fragmented time for reading and learning. The digital and intelligent revolution has contributed to the ubiquity of learning modes, which do not have to be bound by time and space in the traditional sense. For example, English teachers in colleges and universities can use electronic devices to read classic literary works such as novels and

essays, as well as read and analyze articles from domestic and international academic journals, and use online platforms to access a variety of information resources to build up their knowledge. Lifelong learning is a prerequisite for the improvement of writing ability, and massive reading is a way to realize this prerequisite, and the advent of the artificial intelligence era has made people's reading and learning methods free and convenient. As for foreign language teachers in universities with heavy teaching tasks, reading and learning can be integrated into their daily lives in various ways, which can to some extent improve their academic writing abilities.

3.2 Visualization of potential information

From a traditional point of view, the speed of scientific research production can be described as "Iron pestle ground into a needle", that is, the speed of academic production and research is very slow. With the development of artificial intelligence and other new technologies in recent years, human knowledge production has undergone subversive changes, and the pace of updating and iteration has accelerated. Knowledge has a certain timeliness, its value will be weakened or reduced with the passage of time, for this reason, the "knowledge half-life" argument emerges. According to estimates, the half-life of knowledge before 1950 was 50 years, and the half-life of knowledge in the 21st century averaged 3.2 years, and only 1.8 years for IT senior engineers (People's Daily, 2018). It is clear that the rate of knowledge "fission" is very fast nowadays, and the increment of human knowledge is increasing exponentially, and we are in the era of "information explosion".

As a scientific researcher, we must constantly update our knowledge to keep pace with The Times, but in the face of ever-changing mass information, it is inevitable that we do not know where to start, and it is more difficult to achieve "all-inclusive". However, the "introduction" of artificial intelligence such as ChatGPT can effectively reduce this pressure on researchers, ChatGPT's algorithms and data analysis capabilities are extremely powerful, and can extract the hidden, unknown and effective information from the data ocean, and present well-organized and logical potential information to the eyes of the researchers, which can help them to visualize potential information. More importantly, extensive human-computer intelligence collaboration

will form innovation clusters, learning and abstracting laws from a large amount of raw data through the intrinsic structure of deep learning, helping researchers to understand more detailed professional knowledge in related fields, further digging into the potential theoretical mechanisms, expanding the innovation knowledge map, and then forming new knowledge forms (Zhu Shijiang, 2023).

Relying on the path of potential information visualization, AI can optimize the academic writing of English teachers in colleges and universities, which can focus on the following stages. In the pre-writing stage, English teachers can use ChatGPT to collect and analyze the content related to the writing topic, and through the powerful algorithmic function of ChatGPT, the main hotspots of the topic can be sorted out for the teachers, which can help the teachers to efficiently grasp the hotspots of the current research, find out the research gaps, and establish the research direction for their own academic writing; in the drafting stage, ChatGPT can be used to optimize the academic writing of college English teachers based on its In the drafting stage, ChatGPT, based on its trained data and huge database, can generate writing outlines for teachers, providing insights and opinions for academic writing; in the revision stage, teachers can send their completed papers to ChatGPT that will carry out intelligent evaluation and give certain modification suggestions, which can be carried out in multiple rounds until the teacher obtains a satisfactory paper. In this process, ChatGPT visualizes the potential information in the text and acts as a writing assistant, which not only assists the teacher in completing a satisfactory essay, but also helps to further improve the teacher's academic writing ability.

3.3 High efficiency of repetitive labor

General human labor can be divided into repetitive labor and creative labor. Repetitive labor to maintain the human economy and social development of simple reproduction and expansion of reproduction. Creative labor is to explore, discover, and use human knowledge, skills, means, materials, tools that have not been used to create a new product or a new mode of production, so as to engage in the production of goods with higher efficiency labor (Feng Li, 2008). In scientific research, the output of excellent results is mainly due to innovative labor, but repetitive labor is also

indispensable in the whole process and almost throughout the entire scientific research process. Due to the high proportion of repetitive labor, researchers often spend too much time and energy, compared with the final return, it can be said that the "cost-effective" is extremely low. Based on powerful algorithmic models and massive data training, ChatGPT can automatically complete tasks according to users' needs with a high processing speed. Compared with the previous human to complete these repetitive labour, ChatGPT will take less time, and the results produced will be more accurate. Therefore, for English teachers in colleges and universities, they can use ChatGPT to complete the basic repetitive labor such as data retrieval, literature collection and numerical calculations in academic writing, which not only saves unnecessary time, but also makes the results obtained through ChatGPT more accurate, which makes the "cost-effective" greatly improved. In the process of using ChatGPT, teachers only need to be responsible for conveying commands, and ChatGPT can provide immediate responses, which greatly reduces the labor costs of teachers. In this way, teachers can have more time and energy to focus on creative labor, as creative labor is the source of human knowledge, truly driving scientific progress and empowering the improvement of their academic writing abilities.

4. Conclusion

ChatGPT subversively changes the way of human knowledge production and use, gradually penetrating into different industries and fields. As international academic exchanges become increasingly close, English, the universal language of the world, is the foundation and guarantee of academic exchanges, so English teachers in colleges and universities are increasingly responsible for their academic writing skills. At the same time, in response to the call of the state to promote Chinese culture to go global, college English teachers should play an exemplary leading role, constantly improve their academic writing ability, and dedicate themselves to promoting the construction of a community of human destiny. To this end, this study focuses on the academic writing ability of college English teachers in the new era of human-computer coexistence, studies the functions of ChatGPT in academic writing, and then analyzes that artificial intelligence can help college English teachers improve their academic

writing ability mainly through three ways: generalization of learning mode, visualization of potential information, and high efficiency of repetitive work.

REFERENCES

1. Whitney, A., K. Anderson, C. Dawson, S. Kang, E. Rios, N. Olcese & M. Ridgeman. Audience and authority in the professional writing of teacher-authors[J]. Research in the Teaching of English, 2012(4): 390-419.

2. Rathert, S. & Z. Okan. Writing for publication as a tool in teacher development[J]. ELT Journal, 2015(4): 363-372.

3. 孟春国, 陈莉萍, 郑新民. 高校英语教师学术写作与发表的调查研究[J]. 外语与外语教学, 2018(01): 110-119+150.

4. 任伟. 国际发表影响力——高校外语教师面临的新挑战[J]. 外语与外语教学, 2018(03): 22-28+143..

5. 文秋芳, 张虹. 我国高校非通用外语教师面临的挑战与困境: 一项质性研究[J]. 中国外语, 2017, 14(06): 96-100.

6. 张辉, 陈松松. 重视研究方法培养提高外语教师的国际发表意识[J]. 外语与外语教学, 2018(03): 13-21+142-143.

7. 王建磊, 曹卉萌. ChatGPT 的传播特质、逻辑、范式[J]. 深圳大学学报(人文社会科学版), 2023, 40(02): 144-152.

8. Lund, B.D. and Wang, T. "Chatting about ChatGPT: how may AI and GPT impact academia and libraries?" [J/OL]. (2023-05-16) [2023-07-05]. https://www.emerald.com/insight/content/doi/10.1108/LHTN-01-2023-0009/full/html.

9. 远川科技评论. "ChatGPT，背后的核心是什么？" [EB/OL]. (2023-01-31) [2023-07-05]. https://36kr.com/p/2111870770153858.

10. 本报评论部. 以知识见识锤炼真本领[N]. 人民日报, 2018-09-20(005).

11. 朱世强. 人工智能驱动未来教育变革[N]. 中国社会科学报, 2023-05-26(004).

12. 冯骊. 创造性劳动与劳动价值论——对马克思劳动价值公式的补充[J]. 河南师范大学学报(哲学社会科学版), 2008, No.132(05): 16-19.

郇格格

外国语言学及应用语言学硕士，哈尔滨工程大学，哈尔滨，中国

周薇薇

副教授，

哈尔滨工程大学，哈尔滨，中国

ChatGpt 提升高校英语教师学术写作能力的路径分析

摘要：以 ChatGPT 为首的人工智能的出现，颠覆性地改变了人类知识的生产和使用方式，这对学术写作领域产生了深远的影响，特别是学术写作的主力军——高校教师。因此，本研究对 ChatGpt 在学术写作领域发挥的功能进行探究，并分析 ChatGPT 提升高校英语教师学术写作能力的路径。研究发现，新型人工智能 ChatGPT 能够依托其强大的智能文本生成功能及文献搜索功能为高校英语教师提供帮助。同时，高校英语教师可以通过 ChatGPT 所赋能的学习方式泛在化、潜在信息可视化、重复劳动高效化三种途径来提升自己的学术写作能力。本研究能够为高校英语教师对 ChatGPT 的使用提供一定的思路和建议。

关键词：学术写作；ChatGPT；高校英语教师；人工智能