An Investigation of Higher Vocational Education EFL Teachers: Experiences and Challenges in Using AI for English Grammar Teaching and Learning

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Abstract

The emergence of large language models like Ernie Bot presents a promising opportunity to revolutionize the teaching and learning of English as a Foreign Language (EFL), particularly in the area of grammar. This study explores the perspectives of EFL instructors on integrating Ernie Bot into English grammar instruction. The research focused on experienced EFL teachers at Zhengzhou Institute of Technology, Henan, China, who have incorporated Ernie Bot into their writing courses. To gain a comprehensive understanding of their experiences, the study employed a mixed-methods approach. Online surveys provided quantitative data on teachers' overall impressions of Ernie Bot's usefulness, while structured interviews offered qualitative insights into their thoughts on integrating the tool into their writing lessons. The findings reveal a strong enthusiasm among EFL instructors at Zhengzhou Institute of rechnology tegarding the potential of Ernie Bot to enhance grammar instruction. However, the research also highlights the critical need for professional development programs to equip educators with the necessary knowledge and skills. By providing teachers with a thorough understanding of Ernie Bot's capabilities, limitations, and potential pitfalls, we can ensure its successful implementation and maximize its impact on student learning outcomes.

Keywords: English Grammar Teaching and Learning, Ernie Bot, Experiences and Challenges, Higher Vocational Education EFL Teachers, Using AI.

Introduction

Problem Statement

The study aims to explore the impact of higher vocational English teachers' use of AI to assist grammar teaching on the overall higher vocational English teaching area. It plays a crucial role in spurring the innovation of teaching concepts and methods. Educators can gain inspiration from the unique ways AI applies to grammar teaching. For instance, by leveraging multimedia resources, AI can present lively and appealing grammar interpretations, which is quite different from the old-fashioned and dull way of just explaining grammar rules. When other teachers learn from and put these new strategies into practice, they can diversify their teaching methods and make the teaching process more attractive and productive. Moreover, the valuable insights provided by this practice can aid in the reasonable allocation of educational resources. Educational institutions can make wiser decisions regarding the distribution of teaching materials, professional development opportunities, and technological equipment. This enables them to optimize resource utilization and boost the overall teaching quality across the higher vocational English teaching field. All these efforts contribute to the public education interest by raising the standard of English education in the vocational education sector and nurturing more competent English language users, thus having a beneficial effect on the advancement of vocational education and the cultivation of talents.

Introduction

For the last century or so, technological innovations have changed the way languages are learned and taught (Nguyen, 2021). In recent years, the inclusion of artificial intelligence (AI) systems into the educational practice has gained momentum. Studies in this area include the implementation of AI among the learners

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with promising outcomes. For instance, Ghali et al. (2018), Park (2019) focused on AI-based tutors and grammar correction tools providing the positive outcome. Ghali et al. (2018) showed that the grammar contents delivered by the AI tutors resulted in the students improving their grammatical understanding significantly. In the same manner, Park (2019) asserts that AI grammar checkers are effective tools for correcting grammatical mistakes in pieces of written text (Ahmed et al., 2015; Park J, 2019).

Dewi et al. (2021) also support these findings, stressing however the additional advantages of artificial intelligence in improving language skills. Fitria (2021) notes one essential practical benefit of language learning assisted by AI, the regular practice of students (Dewi HK, 2021; Fitria TN, 2021). The learners' sustaining such exposure reinforces learning and enhances understanding of the second language. In understanding and functional use of the target grammatical instruction and usage tools, learners rely on AI tutors and grammar checkers.ersations, thus allowing learners to hone their language abilities in a practical and engaging setting.ERNIE Bot, a state-of-the-art innovation within the realm of artificial intelligence, has lately come to the fore as a potentially valuable tool for enriching language learning experiences (Zhao Guangli et al.,2023; Zhao Yiru,2023). Similar to ChatGPT, it harnesses the capabilities of natural language processing and deep learning to engage learners in a more interactive and individualized manner (SaifonS. Et al., 2023; Jin X & Tong L, 2022). This technology is crafted with the aim of mimicking human conv.

English grammar writing is an important ability since it is one of the skills that are needed in higher vocational education and other fields (Klimova, B. F. ,2012).. Nevertheless, writing in a foreign language remains one of the most difficult aspects of learning a language for the students. Writing is different from speaking in that it is a higher order activity comprising many stages namely, generating ideas, organizing them into an outline, writing the first draft, and doing the editing afterwards (Oshima A & Hogue A, 2007). Because of this, it is very essential for the teachers in that they have a central position in the whole process of writing by giving instructions and continuous feedback on a periodic basis (Vu, L. U., et al., 2022; Graham S, et al. 2012; Reid JM, 1993). Good teacher feedback stimulates a fruitful interaction with each of the students in the class (Dung PT, 2020). The researcher's experience teaching writing at Zhengzhou Institute of Technology, Henan, China, highlights a common challenge: limited interaction between instructors and students in large classes (over 40 students). This reality creates a barrier to providing individualized feedback and timely responses to student questions. Furthermore, crafting diverse instructional materials and offering extensive feedback add considerably to teacher workload. To address these challenges, the researcher proposes the exploration of AI assistants, specifically Ernie Bot, as potential solutions. An ideal teaching assistant would engage in personalized conversations with students, address their queries, and offer immediate assistance – all qualities that Ernie Bot, as a virtual assistant, seems well-positioned to provide (Ranoliya BR, 2017). Research suggests these AI assistants can foster a safe learning environment for students, free from judgment for mistakes while offering immediate support (Mikheeva NF, 2021). Additionally, AI assistants can lessen teacher workload by generating customized learning materials and aiding in the assessment process, contributing to a more streamlined educational system (Okonkwo CW, 2020; Durall E, Kapros E., 2020). While research exists on the effectiveness and usability of AI assistants in general language learning, there is a dearth of studies specifically examining how teachers perceive their use in EFL writing classrooms (Ranoliya BR, 2017).

While there is a growing the body of research to show that integration of AI has positive impact on language learning, little research has been done to investigate on how EFL teachers go about embodying such a tool like Ernie Bot in their writing class (Mansoor et al., 2022). This is even more so given that there is often very little contact between teachers and students and that workloads are even larger in large EFL classes including in higher VOC education. I acknowledge that the possibility of adopting Ernie Bot in writing courses have not been investigated before, especially from the teachers of EFL, and therefore the present study seeks to play this gap. Screams that have arisen to potential benefits and drawbacks of introducing Ernie Bot in writing lessons as per the opinions of teachers. Thus, based on this article, it is possible to identify the approaches that the teachers consider would improve students' learning with the help of Ernie Bot while lessening the teachers' workload.

Literature Review

The integration of Artificial Intelligence in education presents novel possibilities, prospects, and hurdles in pedagogical methodologies (Karsenti N., 2019). In simpler terms, it involves the creation of intelligent machines capable of performing human-like tasks (Cheng SM & Day MY., 2024;, Mehrotra, D., 2019). Researchers also highlight Artificial Intelligence's ability to simulate human activities and cognitive processes (Campesato O., 2020). Kaur and Gill (2019) describe AI as a digital effort to achieve human-level intelligence through computer technologies (Kaur J,& Gill NS). The application of Artificial Intelligence in education opens up new possibilities, opportunities, and challenges in teaching practices (Ouyang F& Jiao P., 2021).

The Application of Artificial Intelligence in the Field of Education

Research has explored various applications of Artificial Intelligence, with language learning being a prominent area. Studies have shown positive outcomes when using AI tools in language learning. For instance, Ghali et al. (2018) demonstrated that an AI-powered Intelligent Tutoring System improved students' grammar comprehension through personalized training and rapid feedback. Similarly, Dewi et al. (2021) examined popular AI services like Duolingo, Google Translate, and Grammarly, concluding that AI has a beneficial impact on English language learning and should be integrated into classrooms. Fitria (2021) proposed using Grammarly, an AI-based program, to enhance students' writing skills. The study found that the tool helped students by analyzing their work, identifying errors, and suggesting improvements in vocabulary, grammar, and style. This reinforces the idea of Artificial Intelligence as a virtual assistant that empowers students to refine their writing (Karyuatry L, 2018). Toncic (2020) further highlights the benefits for teachers, as AI grammar checkers can reduce workload and allow for more focused feedback on content and organization.

An analysis of the studies done reveals that teachers have a positive attitude toward Artificial Intelligence (Bii PK et al., 2018; Chuah KM & Kabilan M). They consider it as interactive tools which presents class lessons in appealing and provoking manner and thus help students get deeper understanding. Moreover, teachers are concerned with the facile use of AI application and the possibility it offers to increase the interest in acquisition. However, as Yang and Chen (2023) pointed out, there is a difficulty which can be seen as rather crucial: some pre-service teachers may not be very familiar with the applications, which can make them less likely to embrace the use of technology. Surveys also show that learners' interactions with the language learning AI applications are typically positive (Underwood J, 2017). The students like the fact that these tools help motivate and engage them in learning and also help in the creation of a favorable learning climate. These interactions can improve the level of students 'engagement and also motivation. In contrast, a study by Cakmak (2022) offers an opposite conclusion to the acceptability of AI tools as conversational agents among students; some of the students may not be open to employing certain AI tools for this purpose. And they pay less attention to what is happening in their organization in an effort to lessen their workload.

Currently, ERNIE Bot, an advanced deep learning model which has been created by Baidu (Zhao Guangli, 2023), seems to become an effective solution to improve language learning (Wu X & Zhang Y, 2024; Zhao Yiru, 2023). Like the OpenAI's ChatGPT (OpenAI, n. d.), ERNIE Bot uses NLP and deep learning to make learning process more friendly and effective. It can mimic natural conversation and thus will be used to teach learners the required language in a real-life situation manner. ERNE Bot situates itself in the limelight of the current shifts in the strategy of teaching and the increased emphasis on the use of technology in the process. Within the framework of teaching English in a university, the major goals are to reach students' fluency, accuracy along with the presentation of a new culture; and in this respect, ERNIE Bot provides an exclusive approach (Zhang Y & Cheng H, 2024). By incorporating the use of ERNIE Bot into the class, the teachers can supplement the settings that the students use in the class to develop on their language as well as cultural understanding. This is a genre that is underrepresented in the current literature and which spurred this research undertaking because of the emerging challenges of restricted contact between teachers and students and expectation of immense workloads. Since teachers are the main

performers of HV educational innovations, it is essential to know their opinions about Ernie Bot in EFL grammar writing lessons (Ferreiro-Santamaria G, 2024). The purpose of this study will therefore be to examine EFL teachers' perceptions about Ernie Bot, their expectation regarding the possibility of using this teaching assistant as a support tool in their teaching and what strategies they believe can be employed when using this teaching assistant in teaching writing.

Research Model

ERNIE Bot leverages a powerful combination of Natural Language Processing (NLP) and Deep Learning to revolutionize language learning. NLP serves as the foundation, enabling ERNIE Bot to understand and generate human-like language, fostering natural and engaging interactions. Techniques like word embedding, part-of-speech tagging, parsing, and semantic understanding equip ERNIE Bot to decipher the intent, syntax, and context within user queries with remarkable accuracy (Wangsa K et al., 2024).

Deep Learning, the other key technology, empowers the intricate model structures behind the ERNIE Bot. By utilizing deep neural networks, the ERNIE Bot learns hierarchical representations of language, uncovering complex patterns and relationships within vast datasets. Techniques like recurrent neural networks (RNNs), long short-term memory (LSTM), and transformer models like ERNIE itself are employed for effective sequential data processing (Wang H et al., 2022). This enables ERNIE Bot to generate responses that are not only relevant but also maintain contextual coherence. ERNIE Bot's technical framework boasts high modularity and scalability. The model structure, typically based on a transformer architecture like ERNIE Bot, is trained on massive amounts of language data to capture the subtleties of human language. Supervised learning with large-scale, conversationally annotated datasets fuels this training process, allowing the model to grasp the patterns and statistics of natural language. Additionally, reinforcement learning techniques can be used to refine ERNIE Bot's responses based on user feedback and interactive learning experiences (Wu T et al., 2023).

The true potential of ERNIE Bot in English language teaching lies in its ability to create an immersive and interactive learning environment. By simulating real-world conversations, ERNIE Bot engages students in meaningful language practice, fostering development in fluency, accuracy, and cultural awareness. Its adaptive nature allows ERNIE Bot to learn and adjust to individual student needs and preferences, making it a powerful tool for personalized learning (Tan S, et al., 2024). Furthermore, the scalable and modular framework facilitates easy integration into existing teaching platforms and customization to align with specific teaching objectives.

In essence, ERNIE Bot offers a unique blend of cutting-edge AI technologies, creating a personalized and engaging learning experience for students, and paving the way for a more effective and dynamic approach to language acquisition.

Research Questions

To achieve the above purposes, the study focuses on these research notions:

How do higher vocational EFL teachers at Zhengzhou Institute of Technology, Henan, China utilizes Ernie Bot in their language teaching practices?

What benefits have higher vocational education EFL teachers observed in students' grammar learning as a result of using Ernie Bot?

What recommendations do higher vocational EFL teachers at Zhengzhou Institute of Technology, Henan, China offer regarding the effective application of Ernie Bot in writing Grammar classes

Research Methods

This research explored the use of Ernie Bot in EFL (English as a Foreign Language) writing instruction by experienced instructors at Higher Vocational Education. The researchers employed purposive sampling to select 20 Higher Vocational Education EFL instructors with grammar writing expertise and experience using the Ernie Bot. An online questionnaire was administered to all 20 participants [Tongco MD,2007; Van Selm M & Jankowski NW, 2006]. Following this, ten instructors were chosen for further in-depth exploration through structured interviews. These ten instructors used Ernie Bot in various teaching contexts, including grammar writing classes , research methodology classes and translation classes . The interviews focused on the instructors' experiences with Chat bot, their views on its suitability for writing courses, and suggestions for its optimal implementation. The researchers ensured participant anonymity and data confidentiality throughout the study.

Research Design

This research employed a mixed-method approach to comprehensively study instructor experiences with Ernie Bot in Higher vocation education EFL grammar writing classes. The study combined quantitative data collection (online questionnaires) from a large sample size with qualitative data collection (structured interviews) to gain deeper insights. This approach, as highlighted by Spratt et al. (2004), leverages the strengths of both methods to provide a more complete understanding of the topic.

Data Collection

The study used a 24-question online questionnaire to gather data from 20 Higher vocational educational EFL instructors with experience using the Ernie Bot. The questionnaire covered instructor demographics, experiences with Ernie bot, their views on its use in writing classes, and suggestions for successful implementation. The data was collected anonymously and analyzed using SPSS 26 software to identify trends and measure reliability.

Results and Discussion

Data Analysis

These quantitative consequences from the web questionnaire have been analyzed in SPSS 26 the usage of descriptive data. The imply, minimum, maximum, frequency, percentages, and preferred deviation have all been calculated. The results were organized into classes inclusive of demographic information, participant practices, participant evaluations, and participant thoughts.

Gender					
		Frequency	Percent	Valid	Cumulative
				Percent	Percent
Valid	Female	13	65	65	65
	Male	7	35	35	100
-	Total	20	100	100	

Table 1. Demographic Information by Gender

Table 2. Demographic Information by Age

Age						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	26-30	7	35	35	35	
-	31-35	5	25	25	60	
-	36-40	4	20	20	80	
-	40-above	4	20	20	100	

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 Total	20	100	100

Above table 1 displayed the participants were usually girl, with 65% (thirteen instructors) identifying as lady and 35% (7 teachers) as male (discern 1). In terms of age, table 2 shows a tremendous portion (55%) were over 30, with instructors elderly 31-35 representing the biggest institution (35%). Age agencies 26-30, 36-40, and over forty all comprised 20% of the contributors (four teachers every). significantly, there had been no instructors younger than 26.

Table 3 Demographic Information by Experience

Experi	ence				
		Frequency	Percent	Valid	Cumulative
		<u> </u>		Percent	Percent
Valid	5-10	3	15%	15%	35%
-	10-15	10	50%	50%	65%
-	15-above	7	35%	35%	100%
-	total	20	100	100	

Table 3 explores the contributors' enjoyment of English language teaching. A huge component (50%) boasted over 10 years of experience. This institution became similarly divided, with 25% having 11-15 years of revel in and the last 25% having over 15 years. The following largest organization (35%) had five-10 years of revel in, even as 15% had less than 5 years.

Table 4. Descriptive Statistics of Language Courses That Applied

Item	Questionnaire	Courses	Percentages
	In what courses have you employed Ernie bot as a	Writing	28%
1	teaching tool?	Reading	16%
		Research	20%
		Methodology	
		Translation	20%
		Grammar	16%

In above table shows the teachers used Ernie bot in diverse guides: reading (16%), grammar (16%), research methodology (20%), translation (20%) and writing (28%).

Items	s Questionnaire	1(TD)	2(D)	3(N)	4(A)	5(TA)	Mean
2	Ernie Bot was employed to aid in the development of my lesson plans.	5	15	20	40	20	3.55
3	Ernie Bot was utilized to help generate learning materials for my students.	5	10	30	30	25	3.6
4	Ernie Bot was used as a teaching assistant by evaluating students' papers and providing constructive feedback on their work.	5	30	20	45	0	3.05
5	Ernie Bot was utilized to devise exercises and assignments for the students.	5	15	35	40	5	3.25

Table 5. Participants' Purposes for Using the Ernie Bot

The above table shows that instructors determined Ernie bot most helpful for creating learning substances (Avg: three.6, 60% agreed). They were much less passionate about the use of it for grading (Avg: three.05) or developing exercises (Avg: three.25).

Table 6. The Participants' Perspectives on the Advantages of Ernie Bot in Writing Classes

Items	Questionnaire	1	2	3	4 (A)	5 (TA)	Mean
		(TD)	(D)	(N)		. ,	
6	Teachers can save time on grading and	0	15	45	35	5	3.3
	providing feedback with the help of the Ernie						
	bot.						
7	Ernie Bot offers significant support to	0	0	5	35	60	4.55
	teachers in their lesson-planning endeavors.						
8	The diverse learning sources suggested by	0	0	10	35	55	4.45
	Ernie bot assist teachers in creating engaging						
	learning materials for a Grammar writing class						
9	The use of Ernie bot in writing classes has	5	5	5	60	25	3.95
	the potential to enhance students' writing skills.						
10	Ernie bot proves useful by suggesting	0	0	5	30	65	4.6
	reading resources to students, which can						
	inspire ideas for Grammar writing tasks.						
11	In my opinion, the Erne bot can provide	0	0	5	40	55	4.5
	immediate responses to any questions posed by						
	students.						
12	By providing accurate feedback and	5	15	30	30	20	3.45
	valuable suggestions for revisions, Erne bot						
	aids students in improving their grammar and						
	vocabulary in Grammar writing performance.						
13	Integrating Ernie bot in writing classes can	5	5	30	40	20	3.65
	boost students' learning motivation.						
14	In my view, Ernie bot can serve as an	0	0	25	35	40	4.15
	effective tutor in Grammar writing classes.						

Within the Above table 6, nstructors saw strong benefits of Ernie bot for each teachers and students in grammar writing instructions. They valued its assist with lesson plans (4.55e) and getting to know substances (4.45), however have been impartial on grading (3.3). Ernie Bot seemed to enhance college students' writing (3.95), grammar (3.45), and motivation (3.65). Teachers agreed it turned into a valuable writing assistant (75% agreed).

Item	s Questionnaire	1 (TD)	2 (D)	3 (N)	4 (A)	5 (TA)	Mean
15	Teachers should be aware of the limitations of Ernie bot and consistently evaluate the quality of its responses to their questions or requirements.	f 0 f	10	35	40	15	3.6
16	It is crucial for teachers to know how to provide specific prompts that work well with Ernie bot	o 0 1	5	15	55	25	4.0
17	Teachers should recognize that Ernie bo serves as a supplementary tool for their instruction	t 5 r	15	30	30	20	3.45
18	Teachers should provide guidance to students on how to properly utilize Ernie bot	s 0	25	25	25	25	3.5
19	Teachers should allow students to Utilize Ernie bot duringclassroom activities.	e 15	15	60	10	0	2.65

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20	In my viewpoint, teachers should actively	10	20	25	20	25	3.3
	encourage students to utilize Ernie bot during the						
	revision and editing phases.						
21	Teachers should mandate students to submit	15	15	35	25	10	3.0
	rough drafts or outlines alongside their final						
	papers to maintain academic integrity.						
22	Teachers should notify students that AI	5	30	20	45	0	3.05
	content detectors such as GPT Zero, Percent						
	Human, and Originality AI will be used to review						
	their submitted work.						
23	Teachers should construct activities that	0	10	35	40	15	3.6
	necessitate the utilization of critical thinking and						
	problem-solving abilities by students.						
24	I am optimistic that I will be able to teach	0	15	15	50	20	3.0
	students how to use Ernie bot effectively in						
	language acquisition.						

Table 7 suggests highlights instructor schooling and student use of the Ernie bot. Teachers emphasized the need for specific instructions for Ernie bot (suggest 4.0) and information its limitations (mean 3.6) as a coaching tool (suggest 3.45). 1/2 agreed on teaching students proper Ernie bot use (mean three.5). Reviews had been neutral on the usage of Ernie bot in class (imply 2.65) and for revision (imply 3.3). Methods to academic integrity had been blended (imply 3.0 for draft submissions and AI detectors). Sooner or later, teachers valued vital questioning activities (suggest three.6) however felt much less assured coaching students to apply Ernie for writing (imply three.0).

Structured Interview Results

How do you employ Ernie Bot in your teaching?

In our study, Ernie Bot capacities were mostly enlisted to prepare course materials and plan creative tasks by instructors. Eight teachers praised this tool, as it allows to create a wide variety of learning resources suitable for different kind of learners and levels. This saved them significant time in finding right resources. Half of these also managed to use Ernie for designing exercises and tasks. In the instructor-mediated arm, instructors were able to "give the bots ideas of what to give back" in order to receive practice that best matched their lesson objectives, student skill levels and assessment criteria . While Ernie bot was the one tool that instructors felt could technically grade student work, only two instructors used it for grading and both declined to accept data produced as part of this research due to concerns about the potential bias in the sample. But they recognized it in doing something like grading assignments according to some number of rating scales. Generally, the ability for instructors to access Ernie Bot and streamline resources was favored by instructors who gained activity suggestions while students benefited from a collection of writing samples.

In your opinion, how could Ernie Bot benefit teachers in teaching English grammar writing?

Ernie Bot claimed to reduce the time instructors traditionally spend planning English grammar writing lessons (80% of respondents). Detailed prompts exposed them to a wide variety of learning resources and exemplary writing that focused on lesson objectives and student needs. This saved them a lot of the time they had otherwise spent looking for the right things to use. Few instructors used the Ernie Bot for assessment, but they felt it has potential to reduce workload. It had the potential to generate adaptive writing assignments, highlight student errors and even offer individual feedback -although instructors noted the necessity of comprehensive rubrics for meaningful assessments. We also covered fewer situations where the kinds of in-class activities that can be performed (2 instructors). Ernie Bot could suggest appropriate activities to do based on them receiving specific prompts like goals for activity and student level.

What are the merits of using Ernie bot in learning grammar writing?

Teachers pointed out several ways through which the Ernie Bot was helpful for student. Two-thirds (70%) appreciated its ability to offer a variety of learning materials such as reading resources and standardized writing samples. This assisted students with generation of ideas, identification of writing structures and flexibility to accommodate format specific criteria. A further use-case that five lecturers highlighted was Ernie Bot for proof-reading or editing. This enabled students the ability to review on grammar, spelling, and delivery of the final material. Not all instructors considered it such a boon, with only 2 mentioning vocabulary expansion and 4 mentioning motivation augmentation, but most of them agreed that the variety in materials that Ernie Bot provided as well as swift reactions and individual feedback could alleviate the learning curve and turn writing into something more exciting. But ten instructors suggested that students required at least intermediate English to use Ernie Bot effectively. This way they can properly review and select the most suitable suggestions from the tool.

What may be potential concerns over the use of Ernie Bot in grammar writing classes?

Ernie Bot was recognized by educators to be beneficial in grammar writing classrooms educators also spoke of concerns about using Ernie Bot. For example, 50% of the participants were quite worried about students coming to depend on it. They were afraid students would start to depend on that form of automaton response and thereby lose their ability to think critically and learn how to solve problems. It could drive students to copy answers instead of thinking by themselves. About 40 percent of instructors also worried about academic integrity. One of the biggest fears students had was that Ernie Bot will be able to generate writing samples and hence would make an easy job for plagiarism. Instructors expressed concerns the AI would formulate pieces that students could potentially submit as their own. Initially, there was also a 30% concern from professors that students might be deceived by their Ernie Bot answers sneaking through the cracks of critical evaluation.

What are practical solutions to the potential concerns with the application of Ernie Bot in Grammar writing classes?

Sixty percent of educators reported concern that students might rely too heavily on Ernie Bot, but they said Ernie Bot could prevent this with appropriate instruction. The Ernie Bot should be thought of as a resource and learning aide, not a method/actions-part-of-our-critical-thinking. Teachers can help students use prompts well and train them to work on improving their grammar writing rather than copy-pasting samples. An alternative solution (40%) used Ernie bot to provide students with samples of writing for them to analyze and evaluate aspects concerning the way language was used, structure, and idea development. This critical engagement would teach students about how to use Ernie Bot as a tool in the writing process. To combat plagiarism (60%), teachers proposed integrated formative and summative assessments. So, all students would take multiple in-class writing tests without any connection to Ernie Bot, they were really truly writing their own good or bad selves. In addition, a few faculty members suggested retaining drafts and outlines along with the final papers to show development. Instructors who did not mention that instructor feedback- Image Description available was representative of 70% responses in this category and 20% responses in this category indicated that if students were told about using AI to detect content, it might prevent plagiarism. Students would be less likely to use Ernie Bot to cheat in tests, because they know their work will be checked for AI-generated content. Students with more limited experience may lack in the ability to analyze the admonitions from Ernie Bot, and are the best suited with a more experienced instructor. Nearly all thought that at some point some professional development on embedding Ernie Bot into writing classes would be welcomed. A few had the idea of workshops, seminars or symposiums to learn about best practices and discuss ideas with peers. The other instructors all agreed that the support of one's peers in processes concerning effective writing practices and use of Ernie Bot, respectively, would not be an unwelcome tool.

Discussion

Have a look at Zhengzhou Institute of Technology, Henan, China observed that EFL teachers specially used the Ernie Bot to create learning resources and lesson plans in writing, research methodology, translation,

studying, and grammar courses. Instructors reported that Ernie Bot helped them shop effort and time. But, they were impartial on the use of it for grading and integrating it into mastering activities. EFL teachers from Zhengzhou Institute of Technology, Henan, China saw benefits to the use of Ernie Bot in writing classes. They felt it helped them keep time developing lesson plans and materials (average ratings of 4.45 and 4.fifty five). It became also visible as beneficial for college kids (common rating four five to 3 forty five) due to the fact it may answer questions, advise reading materials, and enhance language use. instructors additionally noticed it as a tutor who should provide feedback and hints for revision (common score 4.15). However, instructors also had concerns. They involved that students could grow to be reliant on Ernie Bot and lose vital thinking capabilities (common rating three sixty five). They had been additionally worried approximately plagiarism (common score three five) and a few felt unsure about how to use Ernie Bot efficaciously. There have been blended opinions at the future role of Ernie bot. A few noticed it as a complementary tool (30%), whilst others have been impartial (50%) or disagreed (20%). There were similar critiques on whether Ernie bot would replace teachers (25% agreed, 30% were impartial, 45% disagreed). It can be observed that teachers saw expert education on the use of the Ernie Bot as critical (70 agreed). Additionally they desired schooling on giving activates to get the first-rate outcomes (average rating 4.zero). Instructors additionally thought it changed into critical for customers to be privy to Ernie Bot obstacles (average rating 3.6) and for college students to gain knowledge of a way to use it correctly (average score three five). Finally, teachers counseled the use of a combination of tests and in-elegance sports to evaluate writing and prevent plagiarism.

Conclusion

Have a look at Zhengzhou Institute of Technology, Henan, China, investigated how English teachers perceived the use of Ernie Bot in English grammar writing training. The studies employed both surveys and interviews to collect statistics. The results discovered that instructors used Ernie Bot for writing and studies publications, finding it useful in creating numerous studying substances and lesson plans, which saved them effort and time. instructors also considered Ernie Bot as a valuable coach for students, as it spoke back questions, advised reading substances, and supplied comments. However, there were worries about students becoming overly reliant on Ernie Bot and potential problems with plagiarism. The study also explored instructors' perspectives at the destiny use of Ernie Bot in language getting to know. Reviews numerous, with a few seeing it as a everlasting coaching device, others considering it a ability alternative for sure responsibilities, and some remaining uncertain because of worries approximately implementation. The study offered 3 recommendations for the a success use of Ernie Bot: professional training for teachers, raising user cognizance of its boundaries, and using a combination of evaluation strategies to make certain fair assessment and reduce plagiarism. Normally, the observe located that even as teachers have a high quality outlook on Ernie Bot's capacity to benefit writing classes, they caution that capacity drawbacks need to be addressed.

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References

- Abu Ghali MJ, Abu Ayyad A, Abu-Naser SS, Abu Laban M. (2018). An intelligent tutoring system for teaching English grammar. International Journal of Academic Engineering Research, 2(2): 1-6.
- Bii PK, Too JK, Mukwa CW. (2018). Teacher attitude towards use of chatbots in routine teaching. Universal Journal of Educational Research, 6(7):1586-97. https://eric.ed.gov/?id=EJ1183982
- Çakmak F. (2022). Chatbot-Human Interaction and Its Effects on EFL Students' L2 Speaking Performance and Anxiety. Novitas-ROYAL (Research on Youth and Language), 16(2):113-31. https://eric.ed.gov/?id=EJ1365002

Campesato O. (2020). Artificial intelligence, machine learning, and deep learning. Mercury Learning and Information.

- Cheng SM, Day MY. (2014). Technologies and applications of artificial intelligence. InProceedings of 19th International Conference, 21-23. https://doi.org/10.1007/978-3-319-13987-6
- Chuah KM, Kabilan M. (2021). Teachers' views on the use of chatbots to support English language teaching in a mobile environment. International Journal of Emerging Technologies in Learning (iJET), 16(20):223-37. https://www.learntechlib.org/p/220550/
- Corpuz MJ. (2024). Digitized Teaching Strategy (DigiTS) in Improving the Language Performance on Basic Figures of Speech. Nusantara Science and Technology Proceedings, 69-96. https://doi.org/10.11594/nstp.2024.3807
- Dewi HK, Wardani TI, Rahim NA, Putri RE, Pandin MG. (2021). The use of AI (artificial intelligence) in English learning among university student: Case study in English Department, Universitas Airlangga. https://doi.org/10.31235/osf.io/x3qr6
- Dung PT. (2020). Teachers'written Feedback: How To Make It Work More Effectively In A Language Classroom?. VNU Journal of Foreign Studies, 36(3). https://doi.org/10.25073/2525-2445/vnufs.4554
- Durall E, Kapros E. (2020). Co-design for a competency self-assessment chatbot and survey in science education. In Learning and Collaboration Technologies. Human and Technology Ecosystems: 7th International Conference, LCT 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part II 22, 13-24. Springer International Publishing. https://doi.org/10.1007/978-3-030-50506-6_2
- Ferreiro-Santamaria G. (2024). Exploring the role of ChatGPT in English teaching within higher education settings. International Journal of Trends and Developments in Education, 4(1):44-58. https://jtade.com/index.php/jtade/article/view/244
- Fitria TN. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. Metathesis: Journal of English Language, Literature, and Teaching,, 5(1):65-78. https://doi.org/10.31002/metathesis.v5i1.3519
- Graham S, McKeown D, Kiuhara S, Harris KR. (2012). A meta-analysis of writing instruction for students in the elementary grades. Journal of educational psychology, 104(4):879. https://psycnet.apa.org/buy/2012-18075-001
- Haristiani N. (2019). Artificial Intelligence (AI) chatbot as language learning medium: An inquiry. InJournal of Physics: Conference Series , Vol. 1387, No. 1, 1-6.
- https://doi.org/10.1088/1742-6596/1387/1/012020
- Hiremath G, Hajare A, Bhosale P, Nanaware R, Wagh KS. (2018). Chatbot for education system. International Journal of Advance Research, Ideas and Innovations in Technology, 4(3):37-43. https://docs.metea.org.uk/lib/QS6AWFUA
- Jin X ,Tong L .Application of Multimodal NLP Instruction Combined with Speech Recognition in Oral English Practice. Mobile Information Systems, 2022, 2022
- Karsenti N. (2019). Privacy and Connected Objects. Canadian Journal of Law and Technology. 17(1):34. https://digitalcommons.schulichlaw.dal.ca/cjlt/vol17/iss1/2/
- Karyuatry L. (2018). Grammarly as a tool to improve students' writing quality: Free online-proofreader across the boundaries. JSSH (Jurnal Sains Sosial dan Humaniora), 2(1):83-89. https://doi.org/10.30595/jssh.v2i1.2297.
- Kaur J, Gill NS. (2019). Artificial Intelligence and deep learning for decision makers: a growth hacker's guide to cutting edge technologies. BPB Publications
- Klimova, B. F. (2012). The importance of writing. Paripex-Indian Journal Of Research, 2(1), 9-11. https://doi.org/10.36106/paripex
- Mansoor, M., & Paul, J. (2022). Impact of energy efficiency-based ICT adoptions on prosumers and consumers. Journal of Cleaner Production, 331, 130008.
- Mehrotra, D. (2019). Basics of artificial intelligence & machine learning. Notion Press.
- Mikheeva NF, Petrova MG. (2021). Artificial intelligence in academic writing teaching. SICONSEM, 37-47. https://www.openrepository.ru/article?id=764209
- Murad DF, Irsan M, Akhirianto PM, Fernando E, Murad SA, Wijaya MH. (2019). Learning support system using chatbot in" Kejar C Package" homeschooling program. In2019 international conference on information and communications technology (ICOIACT), 32-37 IEEE. https://doi.org/10.1109/ICOIACT46704.2019.8938479
- Nghi TT, Phuc TH, Thang NT.(2019) Applying AI chatbot for teaching a foreign language: An empirical research. International Journal of Scientific and Technology Research, 8(12):897-902. https://shorturl.at/4q5CP
- Nguyen TT. (2021). Implementing digital techniques to stimulate EFL students' engagement: A case study in Vietnam. International Journal of TESOL & Education, 1(3):105-29. http://eoi.citefactor.org/10.11250/ijte.01.03.007
- Okonkwo CW, Ade-Ibijola A. (2020). Python-bot: A chatbot for teaching python programming. Engineering Letters, 1;29(1):25-34.

https://openurl.ebsco.com/EPDB%3Agcd%3A7%3A18580343/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A148993113&crl=c

Oshima A, Hogue A. (2007). Introduction to academic writing. Pearson/Longman. https://shorturl.at/S4glf

- Ouyang F, Jiao P. (2021). Artificial intelligence in education: The three paradigms. Computers and Education: Artificial Intelligence, 1;2:100020. https://doi.org/10.1016/j.caeai.2021.100020
- Park J. (2019). 'Implications of AI-based grammar checker in EFL learning and testing: Korean high school students' writing. The Korea English Language Testing Association, 14(1):11-39. https://doi.org/10.37244/ela.2019.14.11
- Pham XL, Pham T, Nguyen QM, Nguyen TH, Cao TT. (2018). Chatbot as an intelligent personal assistant for mobile language learning. InProceedings of the 2018 2nd International Conference on Education and E-Learning, 16-21. https://doi.org/10.1145/3291078.3291115
- Vu, L. U, Tran, NM, Le, TKH, & Dao, HL (2022). Applying Writing Feedback Orientation and Self-Regulated Learning Writing Strategies to EFL Students at Van Lang University During COVID-19. International Journal of TESOL & Education. 2024 May 20;2(5):64-88. https://doi.org/10.54855/ijte.22255

- Ranoliya BR, Raghuwanshi N, Singh S. (2017). Chatbot for university related FAQs. In2017 International Conference on Advances in , Communications and Informatics (ICACCI), 1525-1530). IEEE. https://doi.org/10.110Computing9/ICACCI.2017.8126057
- SaifonS, On BS, WirotW. Leveraging Artificial Intelligence (AI): Chat GPT for Effective English Language Learning among. Thai Students. English Language Teaching, 2023, 16(11): 68-68.
- Toncic J. (2020). Teachers, AI grammar checkers, and the newest literacies: Emending writing pedagogy and assessment. Digital Culture & Education. 12(1):26. https://shorturl.at/aFavD
- Tang X, Yang X. (2024). Applying Large Language Models in Teaching Business English Writing: A Case Study of Business Proposal Writing. InSHS Web of Conferences, Vol. 181, p. 01052. EDP Sciences. https://doi.org/10.1051/shsconf/202418101052
- Tan S, Rudolph J, Tan S. (2024). Riding the Generative AI Tsunami: Addressing the Teaching and Learning Crisis in Higher Education. In The Palgrave Handbook of Crisis Leadership in Higher Education, 135-154. Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-54509-2_34
- Underwood J. (2017). Exploring AI language assistants with primary EFL students. CALL in a climate of change: adapting to turbulent global conditions—short papers from EUROCALL, 317-321. https://doi.org/10.14705/rpnet.2017.eurocall2017.733
- Van Selm M, Jankowski NW. (2006). Conducting online surveys. Quality and quantity, 40:435-456 https://doi.org/10.1007/s11135-005-8081-8
- Wangsa K, Karim S, Gide E, Elkhodr M. (2024). A Systematic Review and Comprehensive Analysis of Pioneering AI Chatbot Models from Education to Healthcare: ChatGPT, Bard, Llama, Ernie and Grok. Future Internet, 16(7):219. https://doi.org/10.3390/fi16070219
- Wang H, Li J, Wu H, Hovy E, Sun Y. (2022). Pre-trained language models and their applications Engineering, https://doi.org/10.1016/j.eng.2022.04.024
- Winkler R, Söllner M. (2018). Unleashing the potential of chatbots in education: A state-of-the-art analysis. InAcademy of Management Proceedings Vol. 2018, No. 1, p. 15903. Briarcliff Manor, NY 10510: Academy of Management. https://doi.org/10.5465/AMBPP.2018.15903abstract
- Wu T, He S, Liu J, Sun S, Liu K, Han QL, Tang Y. (2023). A brief overview of ChatGPT: The history, status quo and potential future development. IEEE/CAA Journal of Automatica Sinica. 10(5):1122-36. https://doi.org/10.1109/JAS.2023.123618
- Wu X, Zhang Y. (2024). Research on the Application of ERNIE Bot in College English Teaching. International Journal of Education and Humanities, 12(3):216-9. https://doi.org/10.54097/ynbb1n08
- Yang TC, Chen JH. (2023). Pre-service teachers' perceptions and intentions regarding the use of chatbots through statistical and lag sequential analysis. Computers and Education: Artificial Intelligence. 4:100119. https://doi.org/10.1016/j.caeai.2022.100119
- Zhao Guangli. Baidu CTO Wang Haifeng: 92023) 。 The Background and Quality of the Wen Xin Big Model. China Science Journal, 2023-10-19003, Comprehensive. https://doi: 10.28514/n.cnki.nkxsb.2023.002401
- Zhang Y, Cheng H. (2024). Research on the Innovative Path of College English Teaching Based on Deep Reinforcement Learning. Applied Mathematics and Nonlinear Sciences.9(1).
- Zhao Yiru. (2023). Baidu's ERNIE Bot New Growth Engine Has Initial Effect on China Business Daily 2023-08-29005, Market. doi: 10.38304/n.cnki.nzgsb.001276