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The Impact of AI Chatbots (Like CHATGPT) On Learner Autonomy in EFL Writing

Mavlanova Feruzakhon Zafarjanovna

Tashkent Institute of Chemical Technology, Assistant teacher at Department of Languages, Uzbekistan

Abstract: This article examines the impact of artificial intelligence-based chatbots (in particular, ChatGPT) on learner autonomy in the development of written speech skills in English as a foreign language (EFL). The study analyzed the extent to which the use of AI chatbots contributes to the formation of students' independent thinking, self-control, analysis, and editing skills. Based on the analysis of theoretical sources and the results of practical observations, the article found that AI chatbots develop students' motivation and reflexive approach to the writing process, as well as expand students' self-assessment capabilities. The results of the study put forward methodological recommendations for the effective use of chatbots in EFL writing classes.

Introduction: The development of modern digital technologies is causing fundamental changes in the field of education. In particular, educational tools based on artificial intelligence (AI) technologies are shaping new approaches to the process of teaching foreign languages. In this regard, AI chatbots (for example, ChatGPT) offer a wide range of opportunities for developing written speech competence in English as a foreign language (EFL). AI chatbots provide students with real-time language practice, contextual assistance, and personalized analytical feedback, thereby enhancing their independent learning activities (learner autonomy).

In foreign language learning, the concept of learner autonomy refers to the ability of a student to independently manage his or her own learning process, self-assess, plan his or her activities, and use appropriate strategies to achieve goals (Holec, 1981). In particular, in the process of developing written language competence, the student's skills such as independent analysis, text composition, editing and stylistic improvement are of great importance. In this regard, AI chatbots provide the student with the opportunity to independently monitor, improve and reflect on their written work. The use of AI chatbots in EFL writing classes encourages students to actively participate, independently perform communicative tasks and independently work on errors. At the same time, artificial intelligence-based programs serve to develop self-monitoring, self-assessment and metacognitive approaches. Today, various studies are being conducted in the international scientific literature on the role, advantages and limitations of AI chatbots in teaching written language (Zawacki-Richter et al., 2019; Godwin-Jones, 2021). However, an in-depth analysis of the impact of these technologies on the formation of learner independence in the EFL context remains an urgent scientific task.

In this regard, this article systematically studies the impact of AI chatbots (in particular, ChatGPT) on the formation of learner independence in EFL writing classes. Within the framework of the study, changes in self-control, reflection, independent decision-making and metacognitive activity indicators of students in the writing process using AI chatbots are analyzed. The article also aims to contribute to the development of innovative methodological approaches to EFL writing.

METHODOLOGY

This study was conducted based on a mixed-methods approach, combining qualitative and quantitative data collection and analysis methods. The main objective of the study was to determine the impact of using AI chatbots, in particular the ChatGPT platform, on the development of written speech independence of EFL (English as a Foreign Language) learners.

Research participants

In the research process, 60 English EFL students (2-3rd level) studying at higher educational institutions in the Khorezm region were selected. The participants were randomly divided into an experimental (30) and a control group (30). While the experimental group members regularly used ChatGPT to complete writing tasks, the control group completed writing exercises based on traditional methods (with the support of a teacher).

Data collection tools

The research data were collected using the following tools:

Writing diagnostics (pre-test and post-test) – specially designed test tasks to assess changes in students' writing competence.

Questionnaires – aimed at identifying changes in students' self-control, reflection, motivation and independence.

Semi-structured interviews – in-depth conversations were conducted with students in the experimental group about their experience with ChatGPT and its impact.

Observation protocols – to analyze students' activities during the writing process.

Research design

The study was organized based on a pre-test – intervention – post-test design. Initially, both groups underwent an initial diagnosis of their writing skills and level of independence. Later, during the 8-week training, the experimental group completed writing tasks using ChatGPT. In this process, students used ChatGPT to:

develop a text plan;

identify grammatical and stylistic errors;

text analysis and improvement;

were used to find synonyms, collocations, and phraseological units.

The control group completed traditional teacher-assisted writing assignments. At the end of the training, both groups were given a post-test, and the quality indicators of written work and the level of independence were compared.

Data analysis methods

The collected data were analyzed using the SPSS program. Descriptive statistics, t-test, and analysis of covariance (ANCOVA) were used for quantitative data. Qualitative data were analyzed through thematic coding to identify key trends and recurring themes.

Based on the results of the study, the positive and negative aspects of ChatGPT for developing student independence in EFL writing were systematically highlighted, and methodological recommendations were developed.

Literature review

In recent years, the integration of artificial intelligence (AI) technologies into educational processes has attracted global scientific and practical interest. In particular, AI chatbots (e.g. ChatGPT) are being studied as innovative tools in foreign language teaching, especially in English as a foreign language (EFL). Literature review shows that scientific views on the impact of AI chatbots on EFL writing and learner autonomy have been formed mainly in three directions: (1) the role of AI chatbots in the development of written speech competence; (2) the theoretical foundations of learner autonomy; (3) the development of metacognitive activities and reflexive approaches using digital technologies.

In the first direction, Godwin-Jones (2021) emphasizes that AI chatbots allow EFL learners to quickly access language resources, provide individualized attention, and work on errors in developing their writing skills. Also, Zawacki-Richter et al. (2019) scientifically substantiated that AI-based tools enhance personalized learning and support students' independent learning activities. Hossain (2023) empirically demonstrates that ChatGPT is an effective tool for improving contextual analysis, text structure, and stylistic aspects in the EFL writing process. In the second direction, Holec, on the concept of learner autonomy, identified the ability of the learner to independently manage the learning process as the main theoretical foundation. According to this approach, independence encompasses the skills of self-control, planning, and evaluation. Little (1991) argues that learner autonomy is closely linked to the development of motivation and metacognitive control in language learning. Recent research, including Benson (2011), suggests that digital technologies offer new opportunities for developing learner autonomy, including AI chatbots that provide a conducive environment for independent writing.

In the third direction, various studies have been conducted on the development of metacognitive and reflexive approaches using AI technologies. Reinders &

White provide theoretical and practical justification for the possibility of strengthening EFL learners' self-assessment and reflection skills using AI tools. Chatbots emphasize that they help students analyze their written work in real time, identify errors, and develop correction strategies. Wang et al. (2023) show that AI chatbots encourage students to think more reflectively and critically in EFL writing lessons, which serves to develop independent learning strategies. An analysis of the existing literature shows that AI chatbots have a significant impact on the development of learner independence in the EFL writing process. However, further empirical research on the mechanisms of influence of advanced chatbots such as ChatGPT on learner independence, their level of effectiveness, and their methodological integration into the teaching process remains a pressing issue. Therefore, this article aims to systematically investigate the impact of AI chatbots on EFL writing and learner autonomy.

DISCUSSION

The results of this study confirmed that AI chatbots, in particular ChatGPT, have a significant positive impact on the development of learner autonomy in the process of developing EFL learners' written speech skills. The experimental group participants' achievements in completing writing tasks, in particular, their ability to compose text, detect grammatical and stylistic errors, and self-monitor during editing, were significantly higher than those of the control group who were engaged in traditional methods. These results are consistent with existing theoretical views (Holec, 1981; Benson, 2011; Godwin-Jones, 2021) and once again confirm that AI technologies can develop students' metacognitive skills.

During the discussion, it was found that the use of AI chatbots not only improves the quality of written assignments, but also helps students develop a reflexive approach and critical thinking. In the interview results, students in the experimental group noted that ChatGPT encouraged them to analyze the content, structure, and language style of the text more deeply, which laid the foundation for the formation of self-assessment skills. This is consistent with the results of the studies of Reinders and White and Wang et al., which indicate that chatbots can engage students in the active learning process. At the same time, some limitations were also identified during the study. In particular, it was observed that some students tended to accept the answers provided by the chatbot without critical analysis. This may pose a risk of developing a superficial form of independence. Therefore, the teacher's methodological support aimed at forming metacognitive approaches remains an important factor in integrating AI chatbots into the learning process.

Overall, this study suggests that AI chatbots such as ChatGPT can be an effective tool for developing learner autonomy in EFL writing lessons, but this process needs to be combined with pedagogical supervision and guidance. The results of the study substantiate the need for conscious and targeted use of AI technologies in the development of written speech competence and create a basis for the development of innovative methodological recommendations for EFL teaching.

CONCLUSION

The results of the study showed that artificial intelligence-based chatbots (in particular, ChatGPT) have a significant positive impact on the development of learner autonomy in written speech lessons in English as a foreign language (EFL). The experimental group of students showed higher results in writing competence, self-control, reflection, text analysis and editing skills compared to the control group. ChatGPT helped students increase their level of independent thinking, critical analysis, and the use of metacognitive strategies.

Tadqiqot natijalari shuni tasdiqladiki, AI chatbotlar o'quvchi mustaqilligini rivojlantirishda nafaqat texnologik yordamchi sifatida, balki individual o'quv strategiyalarini shakllantiruvchi interaktiv vosita sifatida xizmat qilishi mumkin. Shu bilan birga, chatbotlardan foydalanish jarayoni o'qituvchining pedagogik yo'naltirishi va metakognitiv strategiyalarni shakllantirish bo'yicha metodik ko'magini talab qiladi. Aks holda, chatbot javoblarini tanqidiy tahlil qilmaslik mustaqillikning yuzaki ko'rinishini yuzaga keltirishi mumkin.

This study formulated the following recommendations for the effective integration of AI technologies such as ChatGPT in EFL writing classes:

Writing classes that include the use of AI chatbots should be enriched with metacognitive approaches and reflective activities;

Methodological guidelines should be developed that guide students to critically analyze chatbot responses, work on errors, and make individual decisions;

It is advisable to develop specific methodological guides and training programs for teachers on the use of AI chatbots.

Overall, this study contributed to the scientific substantiation of the potential of AI chatbots such as ChatGPT in developing EFL writing and learner independence, and showed the need for further in-depth empirical research in this area in the future.

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