

Отже, аналітична компетентність посідає важливе місце у структурі професійної підготовки майбутніх офіцерів ВМС, оскільки забезпечує здатність ефективно діяти в умовах складної та мінливої обстановки, обґрунтовано приймати рішення та організовувати діяльність підрозділів під час виконання службових і бойових завдань.

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### **USING ARTIFICIAL INTELLIGENCE TO ASSESS PRODUCTIVE ENGLISH LANGUAGE SKILLS**

The rapid development of digital technologies has significantly transformed modern education. One of the most influential innovations in recent years is artificial intelligence (AI), which is increasingly integrated into teaching and learning processes. In the field of foreign language education, AI offers new opportunities for enhancing both teaching methods and assessment practices.

Productive language skills, particularly speaking and writing, are essential components of communicative competence. However, assessing these skills has traditionally been a complex, time-consuming, and sometimes subjective process. Teachers must evaluate multiple aspects simultaneously, including grammar, vocabulary, coherence, fluency, and communicative effectiveness. Therefore, the integration of AI technologies into language assessment has become an important area of research and practical implementation.

Artificial intelligence can support teachers by providing automated analysis of learners' language production, generating detailed feedback, and ensuring more objective and consistent evaluation. AI-based tools are capable of analyzing linguistic

patterns, detecting grammatical errors, evaluating pronunciation, and assessing the structure and coherence of written texts. Consequently, the use of AI in assessing productive English language skills may improve the efficiency, reliability, and accessibility of language evaluation.

The purpose of this paper is to analyze the possibilities of using artificial intelligence to assess productive English language skills and to identify the advantages, limitations, and pedagogical implications of implementing AI-based assessment tools in language education.

Productive language skills include speaking and writing, which require learners to actively generate language in order to communicate ideas, opinions, and information. These skills play a crucial role in professional and academic communication, especially in international contexts.

Assessing productive skills is considerably more challenging than evaluating receptive skills such as reading and listening. While receptive skills can be tested using standardized formats like multiple-choice questions, productive skills require qualitative analysis of learners' language performance.

In speaking assessment, teachers usually evaluate pronunciation, fluency, grammatical accuracy, lexical range, coherence, and interactional competence. Writing assessment involves similar criteria, including grammatical correctness, vocabulary usage, organization, coherence, cohesion, and task achievement.

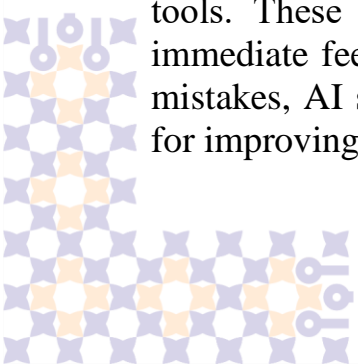
Traditional assessment methods often rely on human raters, which may lead to several challenges. First, the evaluation process can be highly time-consuming, especially in large groups of learners. Second, the subjectivity of human judgment may affect reliability and consistency. Even experienced teachers may interpret assessment criteria differently.

These challenges highlight the need for innovative approaches that can complement traditional assessment methods. Artificial intelligence technologies provide new opportunities to address these issues and support teachers in evaluating productive language skills more efficiently and objectively.

Artificial intelligence refers to computer systems that can perform tasks typically requiring human intelligence, such as recognizing patterns, understanding language, and making decisions. In language education, AI technologies are often based on natural language processing (NLP), machine learning, and speech recognition systems.

AI-based language assessment tools can analyze both written and spoken language. For example, natural language processing technologies allow systems to examine sentence structure, grammatical accuracy, lexical diversity, and coherence in written texts. At the same time, speech recognition technologies can evaluate pronunciation, fluency, intonation, and speech rate in spoken language.

Many modern educational platforms already incorporate AI-driven assessment tools. These systems can automatically analyze students' responses and provide immediate feedback on errors and areas for improvement. In addition to identifying mistakes, AI systems can suggest corrections, alternative expressions, and strategies for improving language performance.



One of the key advantages of AI-based assessment is its ability to process large amounts of data quickly and consistently. Unlike human raters, AI systems apply the same evaluation criteria to all learners, which increases the objectivity of assessment results.

Furthermore, AI technologies enable continuous and formative assessment. Students can practice speaking or writing tasks multiple times and receive instant feedback, which supports autonomous learning and helps learners gradually improve their productive language skills.

Artificial intelligence technologies have significantly improved the possibilities for assessing speaking skills. Modern speech recognition systems can analyze various aspects of oral production, including pronunciation accuracy, fluency, rhythm, and speech clarity.

AI-based speaking assessment tools often use acoustic analysis and machine learning algorithms to compare learners' speech with native speaker models. These systems can detect pronunciation errors, measure speech rate, and evaluate pauses and intonation patterns.

Another important feature of AI speaking assessment tools is the ability to simulate interactive communication. Some platforms include virtual conversation partners or chatbots that allow learners to practice speaking in realistic scenarios. The system records and analyzes students' responses, providing feedback on pronunciation, grammar, and vocabulary usage.

Such technologies can be particularly beneficial in contexts where students have limited opportunities to practice speaking with teachers or native speakers. AI-based speaking assessment tools allow learners to practice independently and receive immediate feedback, which contributes to the development of oral communication skills.

However, despite these advantages, AI systems still face certain limitations. For example, they may struggle to accurately interpret complex discourse, humor, cultural references, or highly creative language use. Therefore, human teachers remain essential for evaluating communicative effectiveness and pragmatic aspects of speech.

Artificial intelligence is widely used in automated writing evaluation systems. These tools analyze written texts using natural language processing technologies and provide feedback on grammar, vocabulary, coherence, and writing style.

AI-based writing assessment systems can detect grammatical errors, spelling mistakes, and punctuation problems. In addition, they can evaluate lexical diversity, sentence complexity, and text organization. Some systems also provide suggestions for improving clarity, coherence, and academic style.

Automated writing evaluation tools can significantly reduce the workload of teachers by performing preliminary analysis of students' texts. Instead of correcting every grammatical error manually, teachers can focus on higher-level aspects of writing, such as argumentation, creativity, and content development.

Another important advantage of AI-based writing assessment is the possibility of continuous feedback. Students can revise their texts multiple times and observe how their writing improves based on automated suggestions. This process encourages reflective learning and helps learners develop editing and self-correction skills.

Nevertheless, automated writing evaluation systems also have certain limitations. AI tools may sometimes misinterpret complex sentence structures or fail to recognize context-specific meanings. Additionally, they cannot fully evaluate the originality, critical thinking, or creativity expressed in students' writing.

For this reason, AI tools should be considered as supportive instruments rather than replacements for human evaluation.

The integration of artificial intelligence into language assessment offers numerous advantages for both teachers and learners. One of the main benefits is increased efficiency. AI systems can analyze language performance quickly and provide immediate feedback, which significantly reduces the time required for evaluation. Another important advantage is the improvement of assessment objectivity. Automated systems apply consistent evaluation criteria, which helps minimize the influence of subjective judgments.

AI technologies also support personalized learning. By analyzing learners' performance over time, AI systems can identify individual strengths and weaknesses and provide targeted feedback for improvement.

At the same time, several limitations must be considered. First, AI systems may not fully understand the communicative context or cultural nuances of language use. Second, excessive reliance on automated evaluation may lead to a narrow focus on measurable linguistic features rather than communicative effectiveness.

In addition, ethical issues related to data privacy, transparency of algorithms, and fairness of automated assessment must be addressed when implementing AI technologies in education. Therefore, the most effective approach is the combination of AI-based tools with human expertise. Teachers should use artificial intelligence as a supportive instrument that enhances, rather than replaces, professional judgment.

Artificial intelligence is rapidly transforming the landscape of language education and assessment. AI-based technologies offer innovative solutions for evaluating productive English language skills, particularly speaking and writing. These tools can analyze linguistic features, provide immediate feedback, and support continuous learning.

The use of artificial intelligence in language assessment improves efficiency, consistency, and accessibility of evaluation processes. At the same time, AI technologies have certain limitations related to contextual understanding, creativity evaluation, and ethical considerations.

Consequently, the integration of AI in language assessment should be implemented thoughtfully and responsibly. The most effective approach involves combining automated analysis with human expertise in order to ensure comprehensive and meaningful evaluation of learners' communicative competence.

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