AI APPROACHES FOR VOCABULARY EXPANSION

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Expanding vocabulary is a crucial aspect of language learning. The integration of artificial intelligence (AI) technologies has significantly improved learning processes, making them more efficient and personalized. This article explores various AI methods that contribute to increasing the vocabulary of language learners.

AI Methods for Vocabulary Expansion

1. **Natural Language Processing (NLP)**

NLP technologies enable the analysis of texts, identification of new words, and their presentation in context, making memorization easier.

2. **Recurrent Neural Networks (RNN) and Transformers**

These models help recognize lexical structures, suggest new words, and contextually adapt them to the user's proficiency level.

3. **Generative Text Models**

AI can generate meaningful texts containing new words, aiding learners in mastering them through context.

4. **Chatbots and Voice Assistants**

Interactive learning through AI-driven conversations allows users to acquire new vocabulary in natural communication.

5. **Personalized Learning Systems**

AI algorithms analyze user progress and adapt training by selecting the most effective exercises for vocabulary expansion.

The application of AI in language learning significantly accelerates the process of vocabulary expansion. Modern technologies, such as NLP, neural networks, and chatbots, ensure personalized and effective learning. Further development of AI methods will lead to the creation of even more interactive and intelligent language-learning platforms.

LITERATURE USED:

1. Ekman, P. (1999). *Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life*. New York: Henry Holt and Company.

2. Wierzbicka, A. (1999). *Emotions Across Languages and Cultures: Diversity and Universals*. Cambridge: Cambridge University Press.

3. Ganieva, H. (2014). *The Uzbek Cultural Code: Understanding and Expressing Emotions*. Tashkent: Uzbekistan Publishing House.

4. Kagan, J. (2007). *What is Emotion? History, Measures, and Meanings*. New Haven: Yale University Press.

5. Kornilov, O. (2010). *The Russian Soul: A Study in Cultural Psychology*. Moscow: Russian Academy of Sciences.

6. Азимбаева, Д. А. (2018). The problems of translating of words and word combinations of national coloring used in fairy tales. *Молодой ученый*, (3), 225-227.

7. Muratkhodjaeva, F. X. (2022). Cognitive-semantic analysis of the meanings of words and phrases in English and Uzbek and their translation problems. Galaxy International Interdisciplinary Research Journal, 10(6), 385-387.

8. Muratkhodjaeva, F. X. (2022). Linguistic definition of conversion as a method of formation of words and phrases in English linguistics. Confrencea, 2(2), 61-64.

9. Азимбаева, Д. А. (2019). Важность использования аутентичного материала при обучении чтению. *NovaInfo. Ru*, *1*(96), 183-186.

10. Азимбаева, Д. А. (2019). Инновации и перспективы в изучении языка в современной системе образования. *NovaInfo. Ru*, (109), 73-74.

11. Usmonovich, R., Gulyamovich, S., Coals, K., & Kurbonova, R. Sh. (2024). Analysis of the operating logic of an educational simulator based on virtual laboratory. *European Science*, *(1)69*, 37–41. ООО «Олимп».

12. Jalilova, D., Kurbonova, R., Erejepov, M., & Nematov, L. (2023). Development and analysis of logical scenario design in virtual reality laboratories for higher education institutions. In *E3S Web of Conferences* (Vol. 461, p. 01097). EDP Sciences.

13. Niyozov, N., Bijanov, A., Ganiyev, S., & Kurbonova, R. (2023). The pedagogical principles and effectiveness of utilizing ChatGPT for language learning. In *E3S Web of Conferences* (Vol. 461, p. 01093). EDP Sciences.

14. Usmonovich, R., Kurbonova. R. Sh., Tursunboyeva, S. Z., & Rajabovich, G. S. (2024). Reprocessing simulation elements in the rendering section for the fundamentals of power supply. *Наука, образование и культура*, *(1)67*, 21–23. ООО «Олимп».

15. Usmonovich, R., Kurbonova. R. Sh., Tursunboyeva, S. Z., & Rajabovich, G. S. (2024). Optimizing the coding approach for educational simulators in electrical power supply basics. *Наука, образование и культура*, *(1)67*, 24–26. ООО «Олимп».

16. Rakhmonov, I., & Kurbonova, R. (2024). Integrating simulators for language learning in technical higher education: Insights from developed nations and guidelines for Central Asian countries including Uzbekistan. *Modern Science and Research*, 3(1), 1–4.

17. Kurbonova, R. Sh. (2021). Pros and cons of online language learning in Uzbekistan. *Academic Research in Educational Sciences*, 2(CSPI conference 2), 445–451. ООО «Academic Research».

18. Murodkhodjaeva, F. (2022). Cognitive-semantic analysis of words and word combinations and their expression in translated texts. *Asian Journal of Research in Social Sciences and Humanities*, *12*(7), 55-58.

19. Муратходжаева, Ф. Х. (2019). Трудности перевода английских фразеологических единиц на узбекский язык. *NovaInfo. Ru*, (109), 39-41.

20. Мурадходжаева, Ф. Х. (2018). Specific features of conveying social issues in American and Uzbek short stories. *Молодой ученый*, (3), 234-236.

21. Xotamovna, M. F. (2024). PROBLEMS IN SIMULTANEOUS TRANSLATION AND THEIR SOLUTIONS. SCIENTIFIC APPROACH TO THE MODERN EDUCATION SYSTEM, 3(28), 72-74.
22. Xotamovna, M. F. (2024). PHENOMENOLOGY AND THINKING OF THE HUMAN PSYCHE. IMRAS, 7(9), 193-195.