**ҚАЗАҚСТАН РЕСПУБЛИКАСЫ ҒЫЛЫМ ЖӘНЕ ЖОҒАРЫ БІЛІМ МИНИСТРЛІГІ**
**«Л.Н. Гумилев атындағы Еуразия ұлттық университеті» КеАҚ**
**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РЕСПУБЛИКИ КАЗАХСТАН**
**НАО «Евразийский национальный университет им. Л.Н. Гумилева»**
**MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE REPUBLIC OF KAZAKHSTAN**
**NJSC "The L.N. Gumilyov Eurasian National University"**

«Тіл оқытудың инновациялық тәсілдері: теория мен практиканы ұштастыру» атты I Көктемгі Халықаралық ғылыми-практикалық конференция материалдары
2025 ж. 4 сәуір

«Инновационные подходы преподавания языков: слияние теории и практики»» Материалы I Весенней Международной научно-практической онлайн конференции
4 апреля 2025 г.

"Innovative Approaches of Language Teaching: Bridging Theory and Practice"" Proceedings of the I Spring International Scientific and Practical Online Conference
April 4, 2025

**Астана, 2025 ж.**

УДК 80/81
ББК 81.2
В18



**I Spring International Scientific and Practical Online Conference "INNOVATIVE APPROACHES OF LANGUAGE TEACHING: BRIDGING THEORY AND PRACTICE":** Proceedings of the online conference (Astana, April, 2025). – Astana: NJSC "The L.N. Gumilyov ENU", 2025. – 220p.

The proceedings of the annual conference include scientific articles of participants of the I Spring International Scientific and Practical Online Conference "Innovative Approaches of Language Teaching: Bridging Theory and Practice", which was held at the Foreign Languages Department on April 4, 2025 in an online format. Materials in these proceedings can be of interest to young and experienced researchers, university and school teachers, different level students who are involved in pursuing research into modern approaches to developing foreign language skills; competence-based modeling in foreign language teaching; interaction of multicultural communication, linguistics, translation with foreign language teaching; the use of information technologies in foreign language teaching.

Authors are fully responsible for the content of their scientific articles and the truthfulness of the facts indicated.

ISBN 978-601-385-060-3

**Table of Contents**

**SECTION 1**
**ТЕХНОЛОГИЯЛАР АРҚЫЛЫ ТІЛ ҮЙРЕНУ**

**ОБУЧЕНИЕ ЯЗЫКАМ С ИСПОЛЬЗОВАНИЕМ ТЕХНОЛОГИЙ**

**TECHNOLOGY-ENHANCED LANGUAGE LEARNING**

educators? *International Journal of Educational Technology in Higher Education, 16*, https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-019-0171-0

7. P. Sasikala, R. Ravichandran (2024). Study on the Impact of Artificial Intelligence on Student Learning Outcomes. *Journal of Digital Learning and Education 4(2):145-155.* https://www.researchgate.net/publication/383451820_Study_on_the_Impact_of_Artificial_Intelligence_on_Student_Learning_Outcomes

8. Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., ... & Liang, P. (2021). On the opportunities and risks of foundation models. arXiv preprint arXiv:2109.07958. https://doi.org/10.48550/arXiv.2109.07958

9. Bubeck, S., Chandrasekaran, V., Eldan, R., Gehrke, J., Horvitz, E., Kamar, E., ... & Zhang, Y. (2023). Sparks of artificial general intelligence: Early experiments with GPT-4. arXiv preprint arXiv:2302.12313. https://doi.org/10.48550/arXiv.2302.12313

10. Eden, C. A., Chisom, O. N., & Adeniyi, I. S. (2024). Integrating AI in education: Opportunities, challenges,and ethical considerations.Magna Scientia Advanced Research and Reviews, 10(2), 006-013. https://doi.org/10.30574/msarr.2024.10.2.0039

11. Lin, S., Hilton, J., & Evans, O. (2021). TruthfulQA: Measuring how models mimic human falsehoods. arXiv preprint arXiv:2109.07958. https://doi.org/10.48550/arXiv.2109.07958

**********

## FOOD WASTE IN EDUCATIONAL INSTITUTIONS: THE ROLE OF ARTIFICIAL INTELLIGENCE IN MITIGATION

***Khaidar Ademy, Zhumadi Kamila***
***1st year-students, Faculty of Economics***
***L.Gumilyov Eurasian National University***
***scientific supervisor Otyzbayeva K.Zh.***

**Abstract**

Food waste in educational institutions is a significant global concern, contributing to environmental, economic, and social issues. Schools and universities generate considerable amounts of food waste due to overproduction, improper portioning, and lack of awareness among students and staff. Artificial Intelligence (AI) is emerging as a promising solution to mitigate food waste by optimizing food supply chains, enhancing waste monitoring, and promoting sustainable consumption behaviors. This paper explores the causes of food waste in educational settings and examines AI-based technologies that can help minimize waste. Through AI-driven forecasting, automated waste sorting, and data analytics, institutions can significantly reduce their food waste footprint.

**Keywords:** Food waste, Educational institutions, Artificial Intelligence, Waste reduction, Sustainability

Food waste is a pressing issue worldwide, with educational institutions being significant contributors. Schools, colleges, and universities serve thousands of meals daily, often leading to substantial food losses due to inefficient meal planning, excessive portions, and limited awareness

of sustainability practices. The Food and Agriculture Organization (FAO) estimates that nearly one-third of all food produced globally is wasted (FAO, 2019). Addressing food waste in educational institutions is crucial not only for cost reduction but also for environmental sustainability and social responsibility. Artificial Intelligence (AI) presents innovative solutions for tackling this issue by improving waste management, optimizing meal planning, and engaging students in sustainable practices.

**The Problem of Food Waste in Educational Institutions**

Educational institutions generate food waste due to various factors, including:

- *Overproduction:* Institutions often prepare more meals than needed, leading to excess food disposal.
- *Lack of Predictive Planning:* Traditional food preparation methods rely on estimations rather than data-driven insights.
- *Student Consumption Patterns:* Many students discard uneaten food due to oversized portions or menu preferences.
- *Inefficient Inventory Management:* Poor monitoring of food supplies results in spoilage and unnecessary waste.
- *Limited Awareness:* Students and staff often lack knowledge about the environmental impact of food waste.

To effectively address these issues, AI-based technologies offer practical solutions that can enhance food management systems in educational institutions.

**AI Solutions for Reducing Food Waste**

Several AI-driven strategies can help educational institutions minimize food waste:

*1.Predictive Analytics for Meal Planning*

AI-powered systems analyze historical consumption data, seasonal trends, and student preferences to predict meal demand accurately. Platforms like **Winnow** use AI-driven cameras to track food waste, helping institutions optimize meal production and portion sizes. By implementing AI-driven demand forecasting, schools can reduce overproduction and minimize surplus food.

*2.Smart Inventory Management*

AI-based inventory management systems track food supplies in real time, alerting staff when items are nearing expiration. These systems help reduce spoilage by suggesting usage plans based on expiration dates. AI-powered solutions, such as **Freshbyte**, assist in maintaining an optimized stock level, preventing excessive food purchases.

*3. Automated Food Waste Monitoring and Sorting*

AI and computer vision technologies enable automatic waste classification, ensuring proper disposal and composting. Systems like **Bin-e** and **TrashBot** use AI to scan and categorize waste, directing food scraps toward composting or redistribution programs. This automation reduces human error and improves recycling efficiency.

*4. AI-Powered Chatbots and Gamification*

AI-driven chatbots educate students on food waste reduction by providing real-time information about sustainable eating habits. Additionally, gamification strategies incentivize students to reduce waste by rewarding sustainable choices. AI applications like **Too Good To Go** encourage students to participate in food-saving initiatives by offering surplus meals at discounted prices.

*5. Smart Composting with AI*

Institutions can implement AI-driven composting systems that monitor temperature, moisture, and microbial activity to accelerate organic waste breakdown. AI-powered composters, such as **Lomi**, optimize composting conditions, converting food waste into nutrient-rich soil efficiently.

**Benefits of AI in Food Waste Reduction**

Implementing AI in food waste management offers several benefits:

- *Environmental Impact:* Reducing waste decreases methane emissions from landfills and conserves natural resources.
- *Cost Savings:* AI-driven food management helps institutions save money by optimizing food purchases and reducing disposal costs.
- *Improved Awareness:* AI tools educate students and staff about the importance of sustainable food consumption.
- *Enhanced Efficiency:* Automated sorting and inventory tracking streamline operations, reducing manual labor.

**Case Studies and Real-World Applications**

Several institutions have successfully implemented AI-driven food waste reduction programs:

- *University of California, Berkeley:* Uses AI-based meal planning software to optimize food portions, reducing waste by 30%.
- *Sodexo's AI-Powered Kitchens:* This global food service provider integrates AI analytics to minimize food loss in school cafeterias.
- *Winnow's AI System in Schools:* Various educational institutions have adopted Winnow's AI technology, cutting food waste by up to 50%.

These examples demonstrate the effectiveness of AI in promoting sustainable food consumption and waste reduction.

**Challenges and Limitations**

Despite its potential, AI adoption in food waste management faces several challenges:

- *Initial Implementation Costs:* AI solutions require significant investment in technology and training.
- *Data Privacy Concerns:* AI systems collect and analyze vast amounts of data, raising privacy and security issues.
- *Behavioral Barriers:* Institutional and student resistance to change can hinder AI adoption.

Addressing these challenges requires collaboration between policymakers, educational administrators, and technology developers.

**Conclusion**

AI-driven technologies provide innovative and effective solutions for addressing food waste in educational institutions. By implementing AI-powered predictive analytics, automated waste monitoring, and smart inventory management, schools and universities can significantly reduce their food waste footprint. While challenges exist, ongoing advancements in AI and growing awareness of sustainability will drive further adoption of these technologies. Future research should focus on expanding AI applications and assessing their long-term impact on food waste reduction in educational settings.

**References**


- Food and Agriculture Organization (FAO). (2019). *The State of Food and Agriculture: Moving Forward on Food Loss and Waste Reduction.* Rome: FAO.

- Winnow. (2023). *AI-driven Food Waste Solutions.* Retrieved from https://www.winnowsolutions.com/
- Bin-e. (2023). *Smart Waste Management with AI.* Retrieved from https://www.bin-e.com/
- Too Good To Go. (2023). *Fighting Food Waste with AI.* Retrieved from https://toogoodtogo.com/
- Sodexo. (2023). *AI and Sustainability in Food Services.* Retrieved from https://www.sodexo.com/


**********

**316.774**

# ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ОБУЧЕНИИ И ПРЕПОДАВАНИИ ИНОСТРАННЫХ ЯЗЫКОВ

***Мусабекова З.С.***
***Имангалиева М.К.***
**Евразийский национальный университет имени Л.Н. Гумилева, Астана, Казахстан**

**Аннотация:** статья направлена на критический анализ потенциала и вызовов, связанных с разработкой программного обеспечения CALL, основанного на технологиях искусственного интеллекта, для создания адаптивной, индивидуализированной и интеллектуальной среды практики в классе иностранного языка. В статье представлен обзор ключевых терминов, методов и наиболее распространенных типов узкоспециализированного ИИ, применяемых в процессах изучения иностранных языков.
**Ключевые слова:** искусственный интеллект, цифровые технологии, иностранные языки

В последние десятилетия цифровые технологии привлекли внимание как научного сообщества, так и практиков в сфере преподавания английского языка как иностранного (English Language Teaching, ELT). Вопрос о том, представляют ли цифровые технологии преимущественно поддержку традиционному образовательному процессу или, напротив, создают дополнительные сложности, остается предметом академических дискуссий. Одним из наиболее значительных технологических достижений, привлекающих растущий интерес исследователей и практиков, является искусственный интеллект (ИИ). В научной литературе встречается множество определений данного понятия, однако можно выделить общий знаменатель: «Искусственный интеллект (ИИ) представляет собой совокупность технологий, направленных на решение задач и выполнение определенных функций без непосредственного вмешательства человека»[1]. Развитие узкоспециализированных систем ИИ, предназначенных для решения конкретных задач (например, голосовые помощники Siri, автоматизированные образовательные платформы и роботизированные системы), демонстрирует, что искусственный интеллект вышел за рамки исключительно академического концепта и превратился в значимый инструмент образовательной практики. Возможности ИИ в анализе больших объемов данных в режиме реального времени, а также применение передовых методов обработки информации открывают новые перспективы в области персонализированного обучения и формативного оценивания, что подтверждается результатами современных исследований [2].

Цифровые технологии оказывают влияние не только на методику преподавания, но и на организацию образовательного процесса в целом. Они способствуют стиранию границ между формальным обучением в учебных заведениях и неформальными возможностями овладения языком в повседневной жизни [3]. Однако внедрение ИИ-ориентированных образовательных систем в процесс изучения иностранных языков требует принципиально нового подхода со стороны как преподавателей, так и обучающихся. В то же время