

the human designer remains the key figure in creating meaningful and expressive visual communication.

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AI-DRIVEN OPTIMIZATION OF SUPPLY CHAIN PROCESSES AND ORDER DELIVERY PERFORMANCE

The rise of artificial intelligence (AI) altogether affects work commercialization. The improvement of AI over the most recent years has enabled systems and technologies to take on tasks in the labor force that were previously performed exclusively by humans. The development of AI has transformed many industries, including production, healthcare, transportation, finance, and increasingly logistics and supply chain management.

The implementation of artificial intelligence has led to significant changes in various sectors of the economy. It has created new opportunities for automation and efficiency improvements, while at the same time it has also contributed to disruptions in labor markets. Algorithms and intelligent systems are increasingly replacing human involvement in routine and analytical tasks, and this tendency is expected to grow further in the future (Zvierieva & Kugai, 2024, 120-122).

Within this context, the application of artificial intelligence becomes especially important in supply chain management and logistics systems. In particular, AI-driven optimization of supply chain processes and order delivery performance represents a key direction of modern digital transformation. AI technologies improve forecasting accuracy, optimize logistics operations, and enhance delivery efficiency, which increases the overall competitiveness of companies in global markets.

To analyze the role of artificial intelligence in supply chain management (SCM), it is necessary to consider the main techniques used in this field. Research shows that a wide range of AI techniques is applied in SCM, with several approaches being particularly dominant due to their effectiveness in handling complex data-driven decision-making. Among the most widely used are artificial neural networks (ANNs), fuzzy logic systems, and agent-based approaches. ANNs are especially effective in identifying complex patterns in large datasets and are widely applied in forecasting, classification, and decision-making tasks such as demand prediction, production planning, and supplier selection. Fuzzy logic models, introduced by Zadeh (1965), are widely used to manage uncertainty in supply chain decisions, while agent-based systems support the modelling of distributed logistics environments and complex interactions within supply networks (Toorajipour et al., 2021, 502-517).

Recent studies highlight that artificial intelligence is increasingly shifting supply chain management from static planning toward dynamic, real-time coordination of interconnected processes. Instead of focusing only on forecasting or isolated optimization tasks, modern AI-driven systems integrate continuous data streams from suppliers, logistics networks, and market conditions to support adaptive decision-making across the entire supply chain. This enables organizations to respond more effectively to disruptions, adjust delivery routes and inventory allocation in real time, and improve end-to-end order fulfillment reliability. As emphasized in recent research, such AI-enabled coordination transforms supply chains into adaptive networks where

decisions are continuously updated based on changing operational conditions and external risks, rather than fixed planning cycles (Zheng, 2024, 657-662).

Beyond these core approaches, data-driven techniques such as data mining play an important role in supply chain optimization by extracting valuable insights from large datasets to improve operational efficiency, warehouse management, and logistics performance. These methods are widely used to enhance decision-making accuracy and support more efficient coordination across supply chain processes. In addition, AI-based decision-support systems contribute to better integration of planning, monitoring, and execution activities within logistics and supply chain networks.

From a functional perspective, Artificial intelligence applications are already significantly improving key areas of SCM, particularly logistics and order delivery systems. In logistics, AI is applied to routing optimization, warehouse automation, and transport management, enabling faster and more efficient delivery processes. In supply chain management, AI supports demand forecasting, supplier selection, and inventory optimization, thereby improving overall system performance. In this context, AI-driven solutions directly contribute to enhancing order delivery performance, reducing delays, and increasing reliability in supply chain operations (Toorajipour et al., 2021, 502-517).

Finally, supply chain systems represent a highly suitable environment for artificial intelligence implementation due to their complexity, large-scale data flows, and need for real-time decision-making. AI enables a shift from reactive to proactive management strategies, improving efficiency, responsiveness, and competitiveness. However, despite significant progress, further research is needed to improve real-world implementation and to better integrate AI models into practical supply chain and logistics operations.

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СУБ'ЄКТНІСТЬ ЯК ЧИННИК ФОРМУВАННЯ СТРАТЕГІЙ ЗАСВОЄННЯ АНГЛОМОВНОЇ ЛЕКСИКИ В УМОВАХ ЦИФРОВІЗАЦІЇ ОСВІТИ

Умови глобалізації та цифрової трансформації освіти актуалізують проблему ефективного засвоєння англійської мови як інструменту професійної комунікації, зокрема для студентів економічних спеціальностей. Лексична компетентність у цьому контексті виступає ключовим чинником академічної та професійної успішності, оскільки «засвоєння лексики є не лише фундаментальним компонентом вивчення мови, а й фактором, що впливає на академічний і професійний успіх студентів» (Vyshnevskaya, 2024, 83).

Разом із тим, сучасне цифрове освітнє середовище характеризується високим рівнем доступності ресурсів (мобільні застосунки, онлайн-платформи, мультимедіа), що створює умови для індивідуалізації навчання. Однак наявність інструментів не гарантує ефективності: студенти продовжують стикатися з труднощами запам'ятовування та використання лексики (Vyshnevskaya, 2024, 84). Це зумовлює необхідність звернення до категорії суб'єктності як пояснювального механізму навчальної ефективності.

У сучасній психолого-педагогічній науці суб'єктність трактується як інтегративна характеристика особистості, що відображає її здатність до активної, автономної та усвідомленої діяльності. Зокрема, вона визначається як якість, що «виражається мірою володіння активністю і свободою у виборі і здійсненні