THE ROLE OF ENGLISH IN THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE AND INFORMATION TECHNOLOGY

Sidiqjonovna D., Erkinova M.

Fergana state university. Fergana state university student.

Abstract. This article explores the pivotal role of English in the advancement of Artificial Intelligence (AI) and Information Technology (IT) within the context of global digital transformation. As the dominant language of science, programming, and international communication, English functions as a fundamental medium for research dissemination, technical documentation, online learning platforms, and cross-border collaboration. The study analyzes how English proficiency enables access to AI research publications, coding frameworks, open-source communities, and international conferences. Furthermore, it examines the impact of English on professional development, innovation, and participation in emerging technological fields such as cybersecurity, blockchain, and the Internet of Things. The findings indicate that English is not merely a linguistic tool but a strategic asset that significantly contributes to knowledge exchange, technological progress, and global competitiveness in the IT sector.

Keywords: English proficiency, Artificial Intelligence (AI), Information Technology (IT), digital transformation, research dissemination, technological innovation, global competitiveness

In today's rapidly evolving world, English has become the universal language of communication, science, and technology. From programming languages like Python and Java to international research publications, English plays a central role in shaping the modern digital landscape. In fact, over 90% of programming languages use English keywords, making it essential for every aspiring IT specialist.

According to David Crystal[1] - English has become the main language of international communication, science, technology and business.

In particular, Artificial Intelligence (AI) and Information Technology (IT) heavily rely on English, not only for coding and documentation but also for sharing ideas and innovations globally. Most AI research papers, tutorials, and online courses are predominantly in English, which allows professionals from different countries to collaborate and stay updated with the latest breakthroughs. Without English, many IT

[1] David Crystal "Why a global language?" "Cambridge University Press" 2003 (2nd ed.)

specialists would find it challenging to access the newest research, communicate in global teams, or participate in international conferences.

English has become the primary language in the IT industry worldwide. Most programming languages, including Python, Java, C++, and JavaScript, are based on English keywords. This means that anyone learning to code must have at least a basic understanding of English. The global spread of English can also be explained through the model proposed by Braj B. Kachru[2], who introduced the concept of the three circles of English: the inner circle, outer circle and expanding circle. Furthermore, global IT companies such as Google, Microsoft, and Apple conduct their documentation, manuals, and tutorials in English, which allows software developers and engineers from different countries to collaborate efficiently.

Even online resources, forums like Stack Overflow and GitHub mainly use English, enabling tech enthusiasts to solve problems, share knowledge, and stay updated with the latest trends in technology. In this context, the role of English becomes especially important in the digital age. David Graddol[3] notes that English is increasingly becoming the dominant language of globalization and international communication. This explains why English functions as a common platform for IT professionals around the world to share knowledge and innovations.

Artificial Intelligence (AI) is one of the fastest-growing fields in technology today, and English plays a central role in its development. Most AI research papers, scientific journals, and tutorials are written in English, which allows researchers and developers worldwide to share discoveries and collaborate effectively.

For example, Natural Language Processing (NLP), a key area of AI, often uses English datasets to train algorithms, making English essential for understanding and creating AI models. AI platforms like OpenAI, Google AI, and DeepMind predominantly use English for code, documentation, and research papers. Without

[2] Braj B. Kachru “The three circles of English” “University of Illinois press’’ 1992
[3] David Graddol “The future of English” “British Council’’ 2006

English, many aspiring AI specialists would struggle to access state-of-the-art tools, research, and coding frameworks.

Moreover, AI conferences such as NeurIPS, ICML, and CVPR are mostly conducted in English. Attending these conferences without English proficiency would be extremely challenging, limiting knowledge sharing and professional networking. In short, English is not only a means of communication but also a gateway to innovation and advancement in AI.

Knowing English provides numerous advantages for IT specialists, some scholars, such as Robert Phillipson[4], describe he global spread of English as "linguistic imperialism", emphasizing its strong influence on other languages and cultures. This highlights the importance of considering the broader social and linguistic impacts of English in the digital and technological world. First, it allows access to the latest research, tutorials, and online courses from top universities and tech platforms like MIT, Stanford, Coursera, and Udemy. Many of these resources are only available in English, so understanding the language ensures that IT professionals stay up-to-date with cutting-edge technology.

Second, English enables international collaboration. IT specialists often work in global teams, communicate with clients abroad, or participate in international projects. Proficiency in English allows them to share ideas clearly, solve problems efficiently, and build professional networks

Finally, knowing English enhances career growth. Many multinational tech companies require employees to understand English, and job postings often include English-language technical documentation. Thus, mastering English not only improves technical skills but also opens doors to global career opportunities.

According to recent surveys, 80% of IT professionals report that English proficiency significantly improves their career prospects, highlighting the language's importance in a globalized tech world.

[4] Robert Phillipson "English Linguistic Imperialism" "Oxford University Press" 1992.

Building on its global role in IT, English is essential for accessing online learning platforms and coding resources. Platforms like Coursera, Udemy, Khan Academy, and Codecademy provide millions of courses, tutorials, and coding exercises, with the vast majority in English. According to a 2023 report, over 85% of top-rated coding courses on Coursera and Udemy are conducted in English, highlighting its importance for learners worldwide.

Learning programming or IT skills without English can be challenging. For instance, Python, JavaScript, and Java tutorials are almost exclusively available in English, and students rely heavily on English-language documentation to understand libraries, frameworks, and tools. Even interactive platforms like Leet Code, Hacker Rank, and GitHub require English proficiency for reading problem statements, contributing to projects, and collaborating with global developers.

Moreover, English proficiency allows learners to participate in international online hackathons, coding competitions, and tech forums, where the latest innovations and solutions are often shared. Without English, students might miss out on opportunities to learn from top instructors, engage with global communities, or access cutting-edge technology courses.

Clearly, within online learning and coding platforms, English is not just a language—it is the key to acquiring knowledge, developing technical skills, and connecting with the global IT community.

English plays a critical role in international collaboration within the IT industry. IT specialists often work in global teams, contributing to projects with colleagues from different countries. Platforms like GitHub and Stack Overflow enable developers to share code, troubleshoot issues, and collaborate on open-source projects, almost entirely in English. According to a 2022 survey, over 70% of open-source contributors interact primarily in English, showing how vital the language is for global teamwork.

Moreover, multinational tech companies, including Microsoft, Google, and IBM, conduct meetings, workshops, and technical documentation in English. Employees with strong English skills can communicate ideas clearly, resolve technical

challenges faster, and actively participate in strategic discussions, giving them a competitive advantage.

English also allows IT professionals to participate in international conferences, webinars, and hackathons, which are crucial for networking and staying updated with global trends. For example, events like Neur IPS, ICML, and CES use English as the primary medium, enabling cross-border knowledge exchange.

In short, proficiency in English bridges geographical gaps, facilitates collaboration, and opens doors to global opportunities, making it indispensable for any IT specialist aiming to thrive in the modern technology landscape.

Looking ahead, English will continue to play a pivotal role in emerging technologies such as Artificial Intelligence, Internet of Things (IoT), Cybersecurity, Blockchain, and Quantum Computing. Most research papers, technical manuals, and tutorials in these cutting-edge fields are published in English, making it essential for anyone aiming to innovate or specialize in new technologies.

Emerging technologies are often developed by global teams spread across continents, where English serves as the common language for collaboration and knowledge sharing. For example, AI-driven robotics projects or blockchain research frequently require teams to read English-language documentation, access GitHub repositories, and communicate with international experts.

Moreover, English enables professionals to participate in global training programs, webinars, and certification courses. Platforms like edX, Coursera, and LinkedIn Learning offer advanced courses in emerging tech almost exclusively in English. According to recent statistics, over 80% of all high-level technology courses and research papers are available only in English, highlighting the language's continued dominance in the tech world.

In essence, as technology evolves, English will remain a key enabler, allowing professionals to access knowledge, collaborate internationally, and stay at the forefront of innovation. Those who master English today are better prepared to lead and shape the technological advancements of tomorrow.

In conclusion, English remains an indispensable tool in the world of Information Technology and Artificial Intelligence, connecting professionals, students, and innovators globally. From programming languages and online learning platforms to AI research, international collaboration, and emerging technologies, English allows access to knowledge, resources, and opportunities that would otherwise be out of reach.

Proficiency in English not only helps IT specialists understand technical documentation and coding frameworks, but also enables them to participate in global conferences, collaborate on international projects, and stay ahead in rapidly evolving fields. As technology continues to advance, English will remain a key enabler for innovation, professional growth, and global networking.

Ultimately, learning and mastering English is more than acquiring a language skill—it is gaining a gateway to the future of technology, allowing individuals to thrive in an increasingly interconnected, digital world. Those who embrace English today will be better prepared to shape and lead the innovations of tomorrow.

References:

1. David Graddol. The future of English. British Council. 2006.

2. Coleman, J. A. The English Language in the Global Context. Cambridge University Press. 2010

3. David Crystal. English as a Global Language. Cambridge University Press. 2003 (2nd ed.)

4. Internet World Stats. English Usage Statistics. Retrieved from https://www.internetworldstats.com. 2023

5. UNESCO. Global Education Monitoring Report. UNESCO Publishing. 2021

6. Kaplan, A. M., & Haenlein, M. Siri, Siri in my hand: Who's the fairest in the land? Business Horizons, 2019 (15–25).

7. Russell, S., & Norvig, P. Artificial Intelligence: A Modern Approach "Pearson" 2019 (4th ed.).

8. Floridi, L. The Fourth Revolution: How the Infosphere is Reshaping Human Reality. Oxford University Press. 2014

9. Bhatia, V. K. World Englishes and Globalization. Routledge. 2017

10. GitHub. The State of the Octoverse Report. Retrieved from https://github.com 2022

11. Brach B. Kachru. The tree circle of English. Universiy of Illinois press. 1992

12. Robert Phillipson. English Linguistic Imperialism. Oxford University Press. 1992