

The role of English in Vietnam's digital transformation

¹TS. Đỗ Thị Ngọc Tú

¹Khoa Ngoại ngữ, Trường Đại học Hải Dương

Email: Uhdudo.edu@gmail.com

Ngày nhận bài: 10/11/2025

Ngày chấp nhận đăng: 22/12/2025

Abstract - The Fourth Industrial Revolution and digital transformation have become inevitable trends in socio-economic development, exerting profound impacts on all aspects of life. In this context, the English language, with its position as the international lingua franca and the language of global science, technology, and commerce, plays a crucial role in fostering deeper international integration, developing a digital workforce, and facilitating access to new knowledge and technologies. This paper analyzes the theoretical foundations, current situation, and international experiences from countries in the region (Singapore and the Philippines), thereby proposing directions to enhance the role of English in the digital transformation process in Vietnam.

Keywords - English language, digital transformation, digital competence, international integration, digital workforce.

Tóm tắt - Cuộc cách mạng công nghiệp 4.0 và chuyển đổi số (CDS) đang trở thành xu thế tất yếu trong phát triển kinh tế - xã hội, tác động sâu rộng đến mọi lĩnh vực của cuộc sống. Trong bối cảnh đó, tiếng Anh, với vị thế là ngôn ngữ chung quốc tế, ngôn ngữ của khoa học, công nghệ và thương mại toàn cầu, giữ vai trò quan trọng trong thúc đẩy hội nhập sâu rộng thế giới, phát triển nguồn nhân lực số, tiếp cận tri thức và công nghệ mới. Bài báo phân tích cơ sở lý luận, thực trạng và kinh nghiệm quốc tế của các nước trong khu vực (Singapore, Philippines), từ đó đề xuất định hướng phát huy vai trò của tiếng Anh trong tiến trình CDS ở Việt Nam.

Từ khóa - Tiếng Anh, chuyển đổi số, năng lực số, hội nhập quốc tế, nhân lực số.

1. INTRODUCTION

Digital transformation is a key objective of sustainable development and serves as a core driver and one of the crucial pillars for achieving sustainable growth, improving productivity, and enhancing national competitiveness. Alongside technological infrastructure, human resources with digital skills and language competence play a central role. In this developmental process, English, as the global lingua franca, functions as the “soft infrastructure” of digital transformation - a tool for connecting knowledge, facilitating communication, trade, and cross-border collaboration. It constitutes an essential pillar for Vietnam's deeper integration into the global digital economy.

2. THEORETICAL BACKGROUND

Language is the medium through which knowledge is acquired and transmitted, particularly in science and technology. English, as an internationally standardized and widely disseminated language, currently accounts for over 80% of global scientific, technological, and digital content. In the context of digital transformation, English

proficiency becomes a critical form of “human capital,” determining the ability of workers and global citizens to master emerging technologies.

According to the *Global Information Infrastructure (GII) theory*, the operation of digital technologies requires a “common language” for standardization, programming, technical documentation, and communication protocols. English has become the default language of the Internet, programming, and scientific data, enabling cross-border connectivity and interaction, thereby bringing the world closer together. Consequently, English functions as the “foundational language” of digital transformation, comparable to the role of electricity in industrialization.

Based on *The theory of language globalization* (Crystal, 2003), a globally dominant language serves as a medium of exchange in international trade. In e-commerce, cross-border services, electronic contracts, and digital transactions, English plays an intermediary role that ensures transparency, negotiation efficiency, and market expansion. OECD studies have shown that countries with a higher proportion of English-speaking workers tend to experience faster growth in digital trade and foreign direct investment (FDI) attraction. Digital transformation in education, training, and research and development (R&D) is closely linked to the global pool of open knowledge. Approximately 90% of scientific publications, digital technical documentation, and ISO/IEC standards are written in English. English thus becomes an indispensable tool for online learning, interdisciplinary research (e.g., AI, Big Data, Blockchain), and participation in the international scientific community.

According to *Human Capital Theory* (Becker, 1964), investment in language proficiency (particularly English) enhances the capacity to acquire knowledge, thereby improving labor productivity and performance in digital environments. Within the *European Digital Competence Framework* (DigComp 2.2), proficiency in international languages, especially English, is considered an integral component of digital competence, encompassing information access, evaluation, creation, and communication in the digital space.

3. THE ROLE OF ENGLISH IN DIGITAL TRANSFORMATION

English occupies a foundational position in the digital era, serving as the “default language” for programming, the Internet, technical documentation, and international standards. It constitutes an essential prerequisite for accessing, operating, and developing modern digital

technology platforms. In the digital economy, English functions as the global language of commerce, acting as an intermediary in e-commerce, cross-border digital value chains, and technology investment. Enterprises, organizations, and workers seeking to participate in the global market are required to use English as a tool for communication and international integration.

In the fields of digital education, training, and research and development, over 90% of scientific publications, research papers, and studies in technology, artificial intelligence, big data, and the Internet of Things are written in English. Consequently, English has become the key to accessing global knowledge, engaging in online learning, and participating in the international scientific community.

From a human resource perspective, English is not merely a foreign language but a fundamental component of digital competence, closely linked to digital skills that together form the capability to work effectively in a global environment. Workers with strong English proficiency combined with technological literacy demonstrate higher adaptability, competitiveness, and mobility within the digital labor market.

Within the implementation of *Vietnam's National Digital Transformation Strategy*, English represents both

an opportunity and a challenge. It provides access to global technology, knowledge, and international partnerships, yet disparities in language proficiency among regions, industries, and sectors as well as the shortage of English for specific purposes pose significant barriers. Therefore, the development of English competence in conjunction with digital skills is considered a prerequisite for Vietnam to build a modern digital economy, digital government, and digital society, while simultaneously enhancing the competitiveness of its human resources in the globalized 4.0 era.

4. CURRENT SITUATION IN VIETNAM

According to the *EF English Proficiency Index (EF EPI), 2024*, Vietnam achieved a score of 498, ranking 63rd out of 116 countries and 8th in Asia, placing the country in the “*low proficiency*” group. This level is significantly lower than that of Singapore (609), the Philippines (570), and Malaysia (566). Among these, Singapore belongs to the “*very high proficiency*” category and holds the highest position in Asia, while the Philippines and Malaysia are both classified under the “*high proficiency*” group. Indonesia, with a score of 468, ranks below Vietnam within the region.

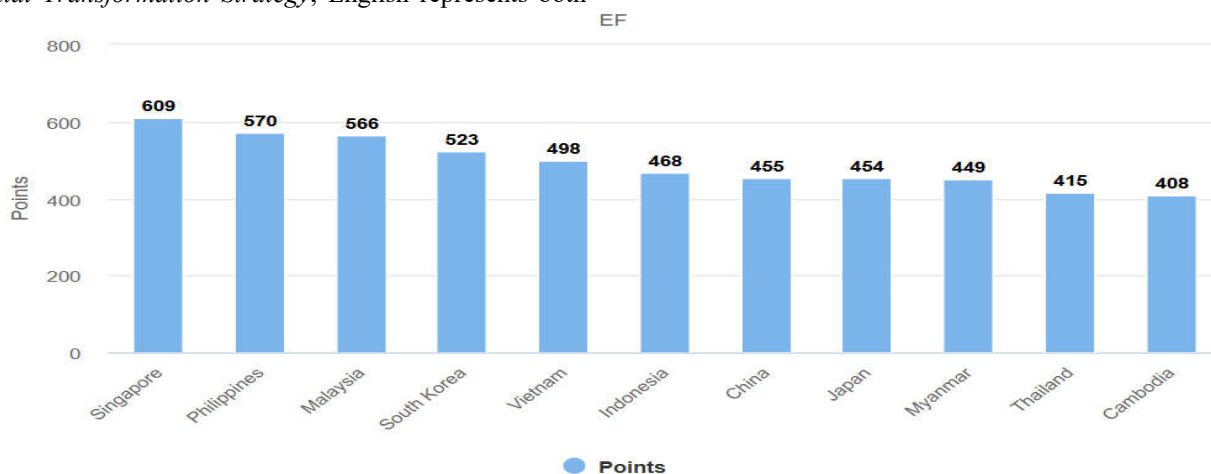


Figure 1. English Proficiency Index of certain Asian countries in 2024

Source: EF Education First (2024)

This indicates a considerable gap between Vietnam and high-performing countries, suggesting that there remains substantial potential for improving English proficiency in alignment with the objectives of the national digital transformation agenda.

* **Strengths:** Vietnam has expanded access to English learning by introducing English as a compulsory subject in general education and in many higher education institutions. Private English centers have proliferated in major urban areas, reflecting growing public demand. The labor market's high demand, particularly from foreign direct investment (FDI) enterprises, the technology sector, export-oriented industries, and outsourcing companies - requires English communication skills, thereby motivating individuals to learn and apply English in their professional

contexts. In addition, a vast range of online learning resources, such as Massive Open Online Courses (MOOCs), technical documentation, and professional tutorials, primarily available in English, provides rich opportunities for self-directed learning.

* **Weaknesses:** English proficiency remains uneven across regions, with significant disparities between urban centers (such as Hanoi, Ho Chi Minh City, and Hai Phong) and rural or remote areas. This regional division reflects substantial local differences in educational quality and access; Many English programs are still heavily theory-oriented, emphasizing grammar and reading rather than communicative or professional English skills (e.g., English for IT, English for Business). The lack of practical language environments and limited opportunities to use

English in real-world contexts further hinder learners' ability to develop functional proficiency; Another major constraint lies in the shortage of qualified English teachers, especially in rural and mountainous areas, where teacher training and professional development remain inconsistent nationwide. Psychological and social barriers also persist, as many workers are reluctant to speak English due to fear of making mistakes, which inhibits their ability to use the language effectively in daily work and communication.

*** Implications for digital transformation and the workforce:**

Limited English proficiency has produced significant implications for Vietnam's digital transformation process and the overall quality of its workforce. First, the lack of adequate English skills restricts students, training institutions, and policymakers from accessing international knowledge and technical materials, particularly in emerging fields such as Artificial Intelligence (AI), Big Data, and software development, where the majority of resources are published in English.

Moreover, this limitation weakens the competitiveness of Vietnamese workers compared to those in regional peers such as the Philippines, Malaysia, and Singapore, where English-speaking labor forces can readily engage in technical or business communication within international environments. Consequently, Vietnamese workers face challenges in integrating deeply into global value chains amid rapid digital transformation.

In addition, domestic enterprises incur increasing retraining costs, as they must invest in specialized English training programs to improve employees' professional communication and digital readiness. This extends the adaptation period and reduces the overall efficiency of the digital transformation process.

5. INTERNATIONAL EXPERIENCES AND LESSONS FOR VIETNAM

TABLE 1. COMPARISON OF THE ROLE AND POLICY DEVELOPMENT OF ENGLISH IN DIGITAL TRANSFORMATION IN SINGAPORE, THE PHILIPPINES, VIETNAM, AND LESSONS LEARNED

Criteria	Singapore	The Philippines	Vietnam	Lessons learned
1. Status of English	Official language; serves as a national governance tool and a medium for social communication.	Second official language; widely used in administration, commerce, and education.	Popular foreign language but not an official one; level of use varies across regions.	Elevate English to a national competency and recognize it as a key instrument for governance, communication, and digital integration.
2. National policies and strategies	"Smart nation" and "Digital readiness blueprint" integrate English into the entire digital infrastructure and public services.	"Digital Jobs PH" and the "Digital Workforce Competitiveness Act (2022)" combine English and digital skills training.	The National Digital Transformation Strategy (2020-2030) has not emphasized English as a key digital competency.	Integrate English proficiency development into the National Digital Transformation Strategy, particularly in education, administration, and enterprises.
3. Education and	100% of	English is the main	Most programs are	Develop bilingual or

International experience demonstrates that the development of English proficiency within the context of digital transformation is closely tied to each country's strategic vision, educational policies, and technological capacity. In many nation, particularly Singapore and the Philippines, English is not only regarded as a means of international communication but also as a foundational element for building and advancing the digital workforce.

Singapore has implemented an integrated model combining its national language policy with the "Smart Nation" strategy, thereby promoting English teaching and learning through digital platforms, smart education systems, and learning analytics to enhance instructional quality. By embedding English education within its broader digital ecosystem, Singapore ensures that language learning supports technological innovation and human capital development.

In contrast, the Philippines has adopted a socio-economic approach, positioning English as a national competitive advantage in online services and distance education. The country has simultaneously advanced digital transformation in the education sector to expand access to global learning and employment opportunities. Through this strategy, English proficiency becomes both a cultural asset and an economic resource in the digital economy.

These two models illustrate that the integration of language policy, technological infrastructure, and socio-economic development orientation is a core determinant of the effectiveness of English teaching and learning in the digital age. The following table summarizes key characteristics of English's role and related policy initiatives in relation to digital transformation in Singapore, the Philippines, and Vietnam, offering a comprehensive view of current trends in English development in the digital era and lessons applicable to Vietnam.

Digital workforce training	undergraduate and postgraduate programs are delivered in English; education is linked with digital skills and innovation.	medium of instruction; strong focus on English for IT, business, and digital services.	taught in Vietnamese; English-based materials and teaching in emerging technology fields remain limited.	English-medium programs in digital technology disciplines; strengthen English for Specific Purposes (ESP) in higher and vocational education.
4. Labor market and digital competitiveness	Workforce proficient in English → high productivity, strong FDI attraction, global tech hub status.	English-speaking workforce → rapid growth in BPO, software outsourcing, and digital service exports.	Lower English proficiency limits participation in global digital value chains.	Invest in English and digital skills training to enhance international labor competitiveness.
5. Use of English in E-Government and digital economy	Fully bilingual e-government; public service portals, data systems, AI, and blockchain platforms all support English.	Government operates bilingually (English - Filipino); many digital administrative services available in English.	Public portals and national data systems are mostly in Vietnamese, limiting international cooperation and system integration.	Develop a bilingual digital government; expand public services and national datasets in English to facilitate global collaboration.
6. Effectiveness and impact	Among the world's top 5 in English proficiency (EF EPI) and digital competitiveness (IMD).	Top 20 globally in English; top 2 worldwide in the BPO industry.	Ranked 58/113 in English proficiency (EF EPI 2023); average digital competitiveness in ASEAN.	Consider English proficiency development a prerequisite for improving the national digital transformation index.

Both Singapore and the Philippines have demonstrated that English serves as a form of “soft infrastructure” for digital transformation, fostering the development of a high-quality workforce, enhancing international integration, and accelerating the growth of the digital economy. For Vietnam, integrating English language development policies with the national digital transformation strategy will be a crucial driver in building a globally competent workforce, narrowing the digital divide, and strengthening national competitiveness.

6. IMPLICATIONS FOR VIETNAM

English today is not only a tool for international communication but also the language of knowledge, technology, and digital transformation. In the context of globalization and the knowledge-based economy, English proficiency is considered a form of digital soft skill, playing a vital role in accessing global knowledge, expanding international cooperation, and fostering innovation.

To promote English as a foundational pillar for digital transformation, Vietnam should focus on the following orientations:

National policy: It is essential to formulate and refine a national strategy for developing English proficiency in the digital era, integrated with key initiatives such as the National Digital Transformation Strategy to 2030, the Digital Workforce Development Strategy, and the Higher Education Development Strategy for 2021-2030. The

government should introduce mechanisms that encourage lifelong learning, promote a digital learning society, and enable citizens to effectively utilize open online platforms (MOOCs), international digital resources, and artificial intelligence technologies for language learning.

Education and training: English curricula and teaching methodologies should be renewed toward digital application, with an emphasis on Digital English for Specific Purposes in fields such as information technology, data science, e-commerce, and artificial intelligence.

Teacher development: Implement online professional development programs combined with mentoring between native-speaking and local teachers, particularly in remote and disadvantaged areas. This approach not only leverages digital technology but also reduces disparities in training quality among regions, while fostering continuous learning networks and professional support systems for English teachers.

Building a digitalized English environment: Encourage the use of English within government agencies, enterprises, and educational institutions through bilingual management and data systems. Develop training programs that integrate English for Specific Purposes with digital skills to create a workforce capable of global integration and active participation in the digital economy and international collaboration.

Management and monitoring of proficiency progress: Establish a national system for monitoring and periodically assessing English proficiency based on standardized indicators such as the EF EPI or a representative national survey. Continuous data tracking will enable policymakers to identify priority areas for investment, evaluate policy effectiveness, and benchmark Vietnam's progress against other ASEAN countries.

International cooperation: Strengthen partnerships with international educational and technological organizations to standardize the framework for digital English competency, share open learning resources, and transfer technologies for AI- and big data-based language education.

7. CONCLUSION

English plays a pivotal role in connecting Vietnam to the global knowledge, science, and technology ecosystem. In the context of rapid digital transformation, English proficiency is not only essential for communication but also serves as a key tool for accessing knowledge, utilizing digital data, and fostering innovation across all sectors. Analysis of international experiences indicates that countries that have successfully implemented digital transformation consider the development of English proficiency an integral component of their digital workforce strategy and integration policies.

For Vietnam, enhancing English proficiency requires a coordinated approach, encompassing policy refinement, educational innovation, teacher development, and the creation of a digitalized environment where English is widely used. This approach will not only strengthen the competitiveness of the workforce but also enable Vietnam to participate more deeply in global value chains, contributing to sustainable development and effective international integration in the digital era.

REFERENCES

- [1] Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis*. University of Chicago Press.
- [2] Crystal, D. (2003). *English as a Global Language*. Cambridge University Press.
- [3] European Commission (2022). *The Digital Competence Framework for Citizens (DigComp 2.2)*.
- [4] OECD (2023). *Skills for the Digital Transformation*. Paris: OECD Publishing.
- [5] EF Education First. (2024). *EF English Proficiency Index 2024*. <https://www.ef.com/epi/>
- [6] Ministry of Information and Communications (2020). *National Digital Transformation Strategy to 2030, with a Vision to 2045*.
- [7] Government of Singapore (2023). *Smart Nation and Digital Government Blueprint*.
- [8] Republic of the Philippines (2022). *Digital Jobs PH Program and Digital Workforce Competitiveness Act*.