



ENGLISH LOANWORDS IN DIGITAL COMMUNICATION: A STUDY OF COMPUTER TERMINOLOGY AMONG MULTILINGUAL STUDENTS

Gulnora Rahmatulloeva

Candidate of Philological Sciences

*Department of Foreign Languages and Intercultural Communication
International University of Tourism and Entrepreneurship of Tajikistan
Dushanbe, Tajikistan*

gulnora.rakhmatulloeva@mail.ru

<https://orcid.org/0009-0006-1650-2875>

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Abstract. This study examines the use of English loanwords in computer- and technology-related communication among multilingual students. It focuses on how English technological terms are adopted and integrated into everyday language use across academic, home, and digital environments. The research employs a mixed-methods approach and involves 20 students who identified commonly used English terms related to hardware, software, networking, programming, security, and social media. The analysis reveals stable patterns of lexical borrowing and shows that English terminology is deeply embedded in students' daily communication. These loanwords enhance clarity, simplify complex concepts, and reduce the need for translation, thereby improving communication in technology-oriented contexts. The study also highlights the strong influence of English as the global language of technology. However, it notes that increasing reliance on borrowed terms may contribute to the decline of native technical vocabulary. Overall, the research outlines both the practical benefits and linguistic implications of widespread lexical borrowing.

Keywords: Borrowed words; loanwords; English terminology; digital communication; multilingual students; computer vocabulary.

RAQAMLI KOMMUNIKATSIYADA INGLIZ TILIDAN O‘ZLASHGAN SO‘ZLAR: KO‘P TILLI TALABALAR ORASIDA KOMPYUTER TERMINOLOGIYASINING QO‘LLANILISHI TADQIQI

Gulnora Rahmatulloeva

Filologiya fanlari nomzodi

*Chet tillari va madaniyatlararo muloqot kafedrasi
Tojikiston Xalqaro turizm va tadbirkorlik universiteti
Dushanbe, Tojikiston*

Annotatsiya. Ushbu tadqiqot ko'p tilli talabalarning kompyuter va texnologiyaga oid muloqot jarayonida inglizcha o'zlashma so'zlardan foydalanish xususiyatlarini o'rganadi. Unda ingliz tilidagi texnologik terminlarning akademik, uy va raqamli muhitda qanday o'zlashtirilishi hamda kundalik til iste'moliga integratsiyalashuviga e'tibor qaratilgan. Tadqiqot aralash usullar (mixed-methods) yondashuvi asosida olib borildi va unda apparat ta'minoti (hardware), dasturiy ta'minot (software), tarmoqlar (networking), dasturlash (programming), xavfsizlik (security) hamda ijtimoiy media (social media) sohalariga oid keng qo'llaniladigan inglizcha terminlarni aniqlagan 20 nafar talaba ishtirok etdi. Tahlillar leksik o'zlashuvning barqaror qonuniyatlarini ko'rsatib, inglizcha terminologiya talabalarning kundalik muloqotiga chuqur singib ketganini namoyon etadi. Ushbu o'zlashma so'zlar muloqotning aniqligini oshiradi, murakkab tushunchalarni soddalashtiradi va tarjimaga bo'lgan ehtiyojni kamaytiradi, bu esa texnologiyaga yo'naltirilgan kontekstlarda o'zaro aloqalarni yaxshilaydi. Tadqiqot, shuningdek, ingliz tilining global texnologiya tili sifatidagi kuchli ta'sirini ham ta'kidlaydi. Biroq, o'zlashgan terminlarga qaramlikning ortib borishi milliy texnik leksikaning cheklanib qolishiga olib kelishi mumkinligi qayd etilgan. Umuman olganda, mazkur ish keng tarqalgan leksik o'zlashuvlarning amaliy foydalari va lingvistik oqibatlarini har tomonlama ochib beradi.

Kalit so'zlar: o'zlashgan leksika; ingliz tili terminologiyasi; raqamli kommunikatsiya; ko'p tillilik; kompyuter terminologiyasi.

Introduction

Borrowed words, also referred to as loanwords, are lexical items adopted from one language into another, typically without translation. In the context of globalisation and rapid technological development, languages increasingly incorporate English-derived terminology, particularly in domains such as science, education, and digital technology (Crystal 2001; Hock & Joseph, 2009). In contemporary computing environments, English terms such as “keyboard,” “mouse,” “software,” and “download” are widely used across linguistic boundaries, including in non-native language contexts. Despite their global распространение, relatively limited research has examined how these computer-related English loanwords are adopted and function within multilingual and bilingual communities, especially among students.

This study investigates the use of English loanwords in computer- and technology-related communication among multilingual speakers, with a particular focus on Tajik-speaking and other minority-language contexts. It also considers learners of English as a Second Language (ESL), who are frequently exposed to English terminology through digital interfaces, software environments, and online platforms. The dominance of English in

technological innovation has resulted in the widespread dissemination of English-based terminology, as most software, hardware, and internet-related concepts are originally developed and labelled in English. Within Linguistics, borrowing is understood as the process through which one language incorporates elements from another, often preserving meaning while adapting to local usage conventions (Mammadova 2026).

The primary aim of this research is to identify commonly used English computer loanwords and examine how they are integrated into the everyday language practices of non-native speakers. The study is based on data collected from a survey of 20 students, who were asked to list English computer-related terms they frequently use in academic and daily contexts. Through the analysis of these lexical items, the study explores patterns of usage, frequency, and functional integration, highlighting how students engage with English-based technological vocabulary in real-world communication. For instance, learners may initially have difficulty interpreting terms such as “mouse” in a technical context, illustrating the practical challenges of borrowed terminology in digital environments.

This research contributes to a broader understanding of language use in digital contexts, a key concern within Web Science. By examining the role of English loanwords in technology-mediated communication, the study provides insight into how global digital practices influence local language use. It further emphasizes the importance of borrowed terminology as a tool for communication, learning, and participation in increasingly interconnected technological environments.

Literature Review

Previous research on lexical borrowing has primarily focused on language contact and the transfer of vocabulary between languages. Early synchronic studies on borrowing, such as Salverda de Grave (1906), concentrated mainly on lexical lists of borrowed items accompanied by historical explanations. These studies typically examined a single language pair and often analysed borrowing in only one direction.

In many early works, loanwords were categorised into semantic groups, and attention was given to their phonological adaptation within the borrowing language. However, other linguistic dimensions, such as syntactic and morphological integration, were often overlooked. In addition, pragmatic and psycholinguistic aspects of borrowing received limited attention, resulting in a predominantly descriptive rather than explanatory approach.

Despite these limitations, early studies made an important contribution by demonstrating the significance of lexical borrowing in language

development. They also highlighted that borrowed vocabulary plays a crucial role in language change. Nevertheless, as Romaine (1995) notes, such approaches were restricted in scope, particularly because it is difficult to predict which lexical items will be borrowed across languages.

More recent research has expanded the scope of borrowing studies through large-scale and cross-linguistic approaches. Resources such as the World Loanword Database (Haspelmath & Tadmor 2009), provide systematic insights into borrowing patterns across multiple languages and domains. Furthermore, the field of language contact has been significantly shaped by foundational scholars such as Bloomfield (1933), Haugen (1950), and Weinreich (1953), who emphasized that lexical borrowing is one of the most common outcomes of language contact.

Weinreich (1953) particularly highlights that vocabulary is more flexible than grammatical structure, making it the primary level at which linguistic borrowing occurs. This perspective is especially relevant in contemporary digital environments, where English terminology spreads rapidly through global communication systems, software interfaces, and online platforms, contributing to widespread lexical convergence in technological discourse.

Definition of Borrowed Words

In linguistics, borrowing refers to the process through which a language adopts lexical items from another language without translation. These adopted words, commonly known as loanwords, are integrated into the recipient language to facilitate communication, particularly in cases where no direct equivalent exists in the native vocabulary.

Borrowed words play an important role in language development and lexical expansion. They are often introduced through sustained contact between languages and are especially common in domains where rapid innovation occurs, such as science, education, and digital technology. In contemporary contexts, English has become the dominant source language for many borrowings due to its global influence in academic, scientific, and technological fields (Crystal, 2003).

In the field of computer science and digital communication, English loanwords are widely used across different linguistic communities. Terms such as “software,” “download,” “keyboard,” and “network” are frequently adopted in their original form, as they represent standardized global terminology used in hardware, software, and internet technologies. This phenomenon reflects the increasing role of English as a global lingua franca in technology-mediated communication.

From a sociolinguistic perspective, the adoption of borrowed words is influenced by factors such as frequency of exposure, technological necessity, and ease of communication. Within multilingual environments, especially among students and English as a Second Language (ESL) learners, borrowed terminology becomes an essential linguistic resource that supports comprehension and interaction in digital settings.

In this study, data from 20 students indicate that English computer-related loanwords are widely used in both academic and everyday communication. The findings demonstrate that such terms are not translated into local languages but are instead used directly, highlighting their functional integration into students' linguistic practices. This suggests that borrowed terminology has become an established component of digital communication among multilingual users.

Methodology

This study adopted a mixed-methods research design, combining both quantitative and qualitative approaches to examine the use of computer-related English loanwords among students in multilingual contexts. This approach enabled a more comprehensive analysis of both the frequency and functional usage of borrowed terminology in digital communication.

A total of 20 students participated in the study. The participants were organised into small collaborative groups and assigned a task focused on identifying and collecting English loanwords related to computer and technology domains. The selected lexical items primarily involved English as the donor language and the participants' native language as the recipient language.

Participants were instructed to compile lists of commonly used computer-related and technological terms based on their personal academic and daily experiences. In addition, they were asked to reflect on the meanings and usage of these terms in everyday communication, particularly in educational and digital environments.

Data were collected as student-generated word lists. These data sets were then systematically analysed to identify patterns of lexical borrowing. The analysis focused on three main aspects: frequency of occurrence, semantic categories (e.g., hardware, software, internet-related terms), and functional usage of English-derived technological vocabulary.

Results and Findings

The analysis of data collected from 20 students revealed a high frequency of English loanwords in computer-related communication. The borrowed

vocabulary was categorised into three main groups: basic computer terminology, software-related terms, and internet-related vocabulary.

Basic computer terms such as “keyboard,” “mouse,” and “monitor” were commonly used by all participants in both academic and daily contexts. Software-related terms, including “software,” “program,” “application,” “update,” and “install,” were also frequently reported, indicating strong familiarity with digital systems. In addition, internet-related vocabulary such as “internet,” “Wi-Fi,” and “browser” appeared consistently across participants’ responses. These terms were among the most frequently used items, suggesting their full integration into students’ everyday communication.

Overall, the findings indicate that English-based computer terminology is widely adopted among multilingual students and is regularly used in both formal and informal digital contexts.

Discussion

The findings of this study indicate that English-based computer-related loanwords are highly prevalent in students’ everyday communication. This widespread use can largely be explained by the global dominance of English in technological and digital domains. In both ESL and multilingual contexts, learners are frequently exposed to English terminology through computers, mobile applications, the internet, and software interfaces. This continuous exposure leads to the normalization and habitual use of English lexical items in daily communication.

The preference for English technological terms is also influenced by their simplicity, international recognition, and communicative efficiency. In many cases, equivalent terms in the native language are either unavailable, less commonly used, or not well established in technological contexts. As a result, English terms often function as the primary lexical choice when discussing digital concepts, ensuring clearer and more standardized communication.

Technology plays a significant role in shaping language use by continuously introducing new vocabulary into everyday life. English terminology is embedded in operating systems, applications, and digital platforms, covering both basic and advanced functions. This continuous exposure facilitates the gradual integration of borrowed words into students’ active vocabulary.

The results suggest that ESL learners use English loanwords as both cognitive and communicative tools. These terms help bridge linguistic gaps between the native language and English, making it easier for students to

understand and express technological concepts. In this way, borrowed vocabulary supports both language acquisition and functional communication in digital environments.

The study demonstrates that English computer-related loanwords have become an integral component of students' linguistic practices, reflecting the strong influence of technology on language use in contemporary educational and digital contexts.

Daily Use of Borrowed Words

The daily use of borrowed words is particularly significant among students in information technology and other technology-related fields. These learners not only acquire such terminology in academic settings but also actively apply it in classroom activities, on digital communication platforms. English-derived terms frequently appear in mobile messaging, social media interaction, and software applications, where they form part of routine communicative practices.

In many instances, students use these borrowed lexical items in a highly naturalized manner, integrating them as stable components of their linguistic repertoire. They also engage in code-switching, combining English technical vocabulary with their native language. This practice contributes to more efficient communication, particularly in contexts involving technical explanation and digital interaction.

The use of borrowed words can be observed across multiple communicative domains, including:

- **In the classroom:** during lessons, discussions, and presentations related to technology.
- **At home:** while studying, completing assignments, or interacting with peers and family members.
- **Online:** within social media platforms, messaging applications, chat systems, and gaming environments.

English-derived technological terminology has become deeply embedded in students' everyday language use, reflecting the pervasive role of digital technology in communication practices and the functional necessity of English in contemporary academic and online environments.

Role of borrowed words in technology

Most computer-related terms are expressed in English due to the historical and global dominance of English in science, technology, and digital

communication (Crystal 2003; Graddol 2006). A wide range of software applications, programming environments, and user interfaces are developed in English, and their accompanying instructions, documentation, and system commands are predominantly produced in the same language. Consequently, English has become the principal source language for technological terminology.

Borrowed words play an essential role in facilitating global communication within technological contexts. The use of standardized English terminology enables users from diverse linguistic backgrounds to access, understand, and operate digital systems more effectively. This shared lexical framework reduces ambiguity and enhances clarity, thereby supporting smoother interaction in both international and online environments (Warschauer 2004).

In the absence of a unified technological vocabulary, global digital communication would become considerably more complex. If individual countries developed entirely separate sets of technical terminology, users would face significant challenges in understanding software interfaces, system instructions, and online platforms. Such fragmentation would likely hinder effective communication, collaboration, and accessibility in digital spaces.

The dominance of English-based technological vocabulary, therefore, contributes to linguistic consistency in global communication. It provides users worldwide with a common set of terms that are widely recognised, functionally efficient, and essential for participation in contemporary digital environments.

Computer Hardware Words

Computer hardware refers to the physical components of a computer system that are visible and tangible. These components function together to ensure the operation of computer systems and to support the execution of software applications (Tanenbaum & Bos 2015).

Common hardware components include the system unit, laptop, keyboard, mouse, and monitor. Each device serves a specific function within the computer system. The system unit acts as the central processing component, responsible for executing instructions, performing calculations, and managing data processing tasks. The keyboard functions as an input device used for entering text and commands, while the mouse enables users to interact with graphical user interfaces through pointing and selection. The monitor serves as an output device that displays visual information generated by the system.

These terms are typically used in their original English form without translation, as English remains the dominant language in computer science and information technology. Most hardware manufacturers, technical manuals, and digital interfaces adopt English terminology as a global standard (Crystal, 2003 2001). As a result, users from different linguistic backgrounds become familiar with these terms in their original form, which promotes consistency and reduces ambiguity in technical communication (Graddol 2006).

The use of standardised hardware terminology also enhances international compatibility and interoperability. These terms are widely recognised across educational, professional, and technical contexts, contributing to more efficient communication and a shared understanding of computer systems in global environments.

Software & System Words

Software refers to the set of programs, instructions, and data that enable a computer system to perform specific tasks. Unlike hardware, software is intangible and operates through coded instructions executed by the computer system (Sommerville, 2016).

The distinction between hardware and software lies in their function: hardware represents the physical components of a computer system, such as the keyboard, mouse, and monitor, while software refers to the logical components that control and manage these physical devices. In this sense, hardware can be understood as the “body” of the computer, whereas software functions as its “mind,” directing its operations (Tanenbaum & Bos 2015).

An operating system is a fundamental type of system software that manages computer hardware and provides essential services for application programs. It serves as an interface between the user and the hardware, ensuring that multiple applications can run efficiently and simultaneously (Silberschatz, Galvin & Gagne 2018). Common examples of operating systems include Windows, Android, Linux, and macOS, which are widely used across personal computers and mobile devices.

Software-related actions such as “install” and “update” are also essential in computer usage. “Install” refers to the process of setting up software on a computer system for use, while “update” refers to modifying existing software to improve performance, fix errors, or add new features (Pressman & Maxim 2019).

These terms are predominantly used in English because most software development, documentation, and digital interfaces are produced in English,

which has become the global standard in computing and information technology (Crystal 2003).

Internet & Networking Words

The internet is a global system of interconnected computer networks that enables the exchange of information and communication worldwide. It allows users to access and share data through services such as email, websites, and online applications (Kurose & Ross 2021).

A website is a collection of related web pages accessed through the internet, while a browser is a software application used to retrieve, display, and navigate web content. Common examples include Google Chrome, Mozilla Firefox, and Microsoft Edge. These tools function as essential interfaces between users and digital information systems.

Wi-Fi refers to a wireless networking technology that enables devices to connect to the internet without physical cables. A network is a system that connects multiple computers or devices to facilitate communication and resource sharing. Networks may be local (LAN) or global, depending on their scale and function (Forouzan 2013).

The distinction between online and offline states is based on connectivity. Being online indicates that a device is connected to a network or the internet, allowing real-time communication and access to digital services. In contrast, offline refers to a disconnected state in which access to internet-based resources is limited or unavailable.

These concepts are essential for global communication, as they enable users to interact, exchange information, and collaborate across geographical boundaries. The widespread adoption of standardized English terminology in networking contributes to consistency and mutual understanding among users from diverse linguistic backgrounds (Crystal 2003).

Data & File Words

A file is a digital unit used to store information on a computer, including text, images, audio, video, or software data. A folder is a storage structure used to organize and group multiple files systematically, enabling efficient data management within a computer system (Silberschatz, Galvin, & Gagne 2018).

A document refers to a digital file containing written information, such as reports, essays, or assignments. A PDF (Portable Document Format) is a widely used file format designed to preserve the formatting, layout, and

content of a document across different devices and operating systems (Tanenbaum & Bos 2015).

Basic file operations such as copy, paste, save, and delete are fundamental functions in computer usage. “Copy” refers to creating a duplicate of a file or selected data, while “paste” involves placing the copied content into a new location. “Save” refers to storing data permanently on a storage device, and “delete” refers to the removal of files or data from the system (O’Brien & Marakas 2011).

These operations are essential in everyday computer use as they enable users to organize, manage, and control digital information effectively. They are widely applied in educational, professional, and personal contexts, making them key components of digital literacy and computer proficiency.

Programming & Technical Words

Coding refers to the process of writing instructions in a programming language that can be executed by a computer to perform specific tasks. It is a fundamental activity in software development and serves as the basis for creating applications, systems, and digital tools (Sebesta 2019).

An algorithm is a step-by-step procedure or set of rules designed to solve a specific problem or accomplish a task. Algorithms are independent of programming languages and represent the logical structure underlying computational problem-solving (Cormen et al. 2009).

A function in programming is a reusable block of code designed to perform a specific operation. Functions improve code efficiency and organization by reducing repetition and supporting modular software design (Deitel & Deitel 2012).

In programming, an error refers to a mistake in the code that prevents correct execution, while a bug is a flaw or defect in a program that leads to unexpected or incorrect behavior during execution (Pressman & Maxim 2019).

A computer virus is a type of malicious software (malware) designed to replicate itself and spread across systems, often causing damage, data loss, or system malfunction. Viruses typically require user interaction to activate and propagate (Stallings 2017).

These technical terms are essential in computing because they provide a standardized vocabulary for describing computational processes, software behavior, and problem-solving methods in programming environments.

Security & Login Words

A username and password are authentication credentials used to verify a user's identity when accessing a computer system or online service. The username identifies the user, while the password functions as a security key that prevents unauthorized access (Stallings 2017).

Login refers to the process of accessing a system or application by entering valid credentials, whereas logout refers to security exiting the system to prevent unauthorized use of the account (Whitman & Mattord 2018). An antivirus is software designed to detect, prevent, and remove malicious programs such as viruses, worms, and spyware. A firewall is a security system that monitors and controls incoming and outgoing network traffic based on predefined rules to prevent unauthorized access (Stallings 2017).

Hacking p 608. refers to unauthorized access or manipulation of computer systems, networks, or data. While ethical hacking exists in cybersecurity testing, the term is more commonly associated with malicious activities aimed at stealing or damaging information (Tanenbaum & Bos 2015).

Computer security is essential for protecting sensitive data, ensuring privacy, and maintaining system integrity in digital environments where reliance on technology continues to increase (Whitman & Mattord 2018).

Social Media & Modern Technology

Social media platforms are web-based or mobile applications that enable users to create, share, and interact with content in real time. These platforms support communication, information exchange, and community building across geographically distributed users (Kaplan & Haenlein 2010).

Common examples include Facebook, WhatsApp, Instagram, and X (formerly Twitter). These platforms allow communication through text, images, audio, and video, making digital interaction more dynamic and interactive.

Users typically engage in activities such as posting, liking, sharing, and commenting, which represent forms of digital participation that influence online communication patterns and information dissemination (Boyd & Ellison 2007).

The widespread use of these terms reflects their integration into everyday communication, particularly among younger users. Social media vocabulary has become part of daily language use, demonstrating the influence of digital platforms on contemporary communication practices and the normalization of English-based technological terminology.

Impact of Borrowed Words

Borrowed words play a significant role in facilitating communication in technology-related contexts. Since most digital tools and platforms are developed in English, the use of English terminology enables users from different linguistic backgrounds to understand and communicate technical concepts more efficiently. This shared vocabulary reduces the need for translation and minimizes misunderstandings in global communication (Crystal 2003).

Borrowed terminology also supports faster learning of technology. Familiarity with English technical terms allows learners to adapt more quickly to software, applications, and digital systems. This reduces cognitive load and enables users to focus on understanding functionality rather than translating terminology into their native language (Warschauer 2004).

However, the widespread use of borrowed words may also contribute to challenges such as reduced use of native technical vocabulary and potential lexical shift. In some cases, excessive reliance on foreign terms may limit the development of equivalent terminology in local languages, which can affect linguistic diversity and cultural expression.

Borrowed words therefore have a dual impact, supporting technological communication and learning while also raising concerns about long-term effects on local language development.

Final Discussion

The findings of this study indicate that English-based borrowed words are extensively used in computer- and technology-related communication among students. These lexical items occur across multiple domains, including hardware, software, internet, networking, programming, security, and social media. Their frequent use in academic, home, and online environments demonstrates that they have become an integral component of students' everyday linguistic practices in technology-mediated communication.

Borrowed words play a central role in facilitating communication within digital environments. As most software systems, applications, and user interfaces are developed in English, standardized terminology provides a shared linguistic framework that enhances comprehension and reduces ambiguity. This common vocabulary contributes to more efficient interaction and improves accessibility to technological tools across different linguistic backgrounds.

The use of English-based technological terminology also supports more effective communication among ESL learners. It enables students to express

technical concepts without the need for direct translation into their native language, thereby reducing cognitive load and improving fluency in both academic and digital contexts. This effect is particularly evident in collaborative learning settings, online communication, and classroom-based technological activities, where rapid and accurate understanding of technical terms is required.

Conclusion

This study examined the use of English-based borrowed words in computer and technology-related communication among students in a multilingual context. The findings show that such lexical items are widely used across different technological domains, including hardware, software, internet, networking, programming, security, and social media. Their frequent use in academic, home, and online environments indicates that they have become a stable and functional part of students' everyday linguistic practices.

The dominance of English in global technology is a key factor influencing this widespread adoption. Since most digital systems, applications, and user interfaces are designed in English, borrowed terminology provides a shared linguistic framework that supports understanding and reduces communication barriers. This common vocabulary enhances clarity, efficiency, and accessibility in digital communication across different language backgrounds.

The study also highlights the importance of English loanwords in supporting learning among ESL and multilingual students. These terms reduce the need for translation, lower cognitive effort, and enable faster comprehension of technical concepts. As a result, students are able to participate more effectively in academic tasks, online communication, and collaborative learning activities involving technology.

At the same time, the findings suggest that the continued reliance on borrowed terminology may influence the development and use of native technical vocabulary. While borrowed words strengthen global communication and technological literacy, they may also contribute to a gradual reduction in the use of equivalent terms in local languages.

English-based computer-related loanwords therefore function as both linguistic and educational tools in modern digital environments. Their role in improving communication efficiency, supporting technological understanding, and enabling global interaction highlights their significance in contemporary education and technology use.

References

Boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>

Crystal, D. (2003). *English as a global language* (2nd ed.). Cambridge University Press.

Graddol, D. (2006). *English next: Why global English may mean the end of “English as a foreign language.”* British Council.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>

Mammadova, R. (2026). English terminology and its impact on information technology development. *EuroGlobal Journal of Linguistics and Language Education*, 3(2), 34–41. <https://doi.org/10.69760/egjlle.2602005>

O’Brien, J. A., & Marakas, G. M. (2011). *Management information systems* (10th ed.). McGraw-Hill/Irwin.

Pressman, R. S., & Maxim, B. R. (2019). *Software engineering: A practitioner’s approach* (9th ed.). McGraw-Hill Education.

Silberschatz, A., Galvin, P. B., & Gagne, G. (2018). *Operating system concepts* (10th ed.). Wiley.

Sommerville, I. (2016). *Software engineering* (10th ed.). Pearson.

Stallings, W., & Brown, L. (2018). *Computer security: Principles and practice* (4th ed.). Pearson.

Tanenbaum, A. S., & Bos, H. (2015). *Modern operating systems* (4th ed., Global ed.). Pearson.

Warschauer, M. (2004). *Technology and social inclusion: Rethinking the digital divide*. MIT Press.

Whitman, M. E., & Mattord, H. J. (2018). *Principles of information security* (6th ed.). Cengage.