

OFFLINE STRATEGIES AND APPLICATIONS FOR LEARNING ENGLISH IN THE ABSENCE OF ELECTRICITY AND INTERNET

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Abstract.

This paper highlights the importance of resourcefulness and self-directed learning, offering practical solutions to ensure educational continuity in resource-constrained settings. Future research directions include the development of more robust offline solutions and the assessment of their impact on language learning outcomes. The reliance on technology in modern education often poses challenges for learners in environments with limited access to electricity and internet connectivity. This study explores offline strategies and applications that support English language acquisition under such constraints, with a focus on their practical application in technical universities. Key offline tools, including Duolingo, Anki, and LingQ, are analysed alongside non-digital methods such as printed resources, peer learning, and manual flashcards. The integration of these strategies into English curricula is discussed, emphasizing their relevance for technical students who require English proficiency for academic and professional success.

Key words: offline learning, English language acquisition, resource-constrained environments, technical university education, self-directed learning.

Анотація

Ця стаття підкреслює важливість винахідливості та самостійного навчання, пропонуючи практичні рішення для забезпечення безперервності освіти в умовах обмежених ресурсів. Майбутні напрямки дослідження включають розробку більш надійних офлайн-рішень та оцінку їхнього впливу на результати вивчення мови. Використання технологій у сучасній освіті часто створює проблеми для учнів в умовах обмеженого доступу до електрики та інтернету. У цьому дослідженні розглядаються офлайн-стратегії та додатки, які підтримують вивчення англійської мови в таких умовах, з акцентом на їхньому практичному застосуванні в технічних університетах. Ключові офлайн-інструменти, зокрема Duolingo, Anki та LingQ, аналізуються разом із нецифровими методами, такими як друковані ресурси, взаємне навчання та флеш-картки. Обговорюється інтеграція цих стратегій у навчальні програми з англійської мови, підкреслюється їхня актуальність для студентів технічних спеціальностей, яким знання англійської мови необхідне для академічного та професійного успіху.

Ключові слова: офлайн-навчання, вивчення англійської мови, середовище з обмеженими ресурсами, технічна університетська освіта, самостійне навчання.

In the modern world, technology plays a pivotal role in education, especially in language learning. However, challenges such as limited access to electricity and internet connectivity – particularly during crises or in remote regions – necessitate alternative strategies for effective English language acquisition. This paper explores offline methods and applications that can empower learners in resource-constrained environments, with practical examples relevant to a technical university context.

Offline learning strategies are crucial [1] for ensuring educational continuity when digital tools are inaccessible. By utilizing offline applications and traditional methods, learners can maintain progress in acquiring essential language skills. These strategies promote autonomy and adaptability, encouraging students to become active participants in their learning process. In technical universities, where English proficiency is essential for accessing global research and career opportunities, these methods hold [2] particular significance. Offline tools such as flashcards, printed resources, and downloadable applications provide flexible learning options that do not depend on internet connectivity. Collaborative activities like group discussions and peer teaching further enhance [3] language skills while fostering teamwork and critical thinking. This approach demonstrates that effective English language learning is achievable even in resource-limited settings.

English, as a universal language, is critical for technical students, offering access to global resources, research, and professional opportunities. Offline learning ensures [4] continuity of education when digital infrastructure is unavailable. These strategies encourage resourcefulness and self-directed learning while mitigating the reliance on continuous internet access.

Offline-capable applications provide versatile tools for enhancing English proficiency. Key functionalities include downloadable content, self-paced exercises, and interactive features. Below are examples of practical tools.

Table 1.

Offline applications for English learning

	Offline applications	Description	Offline utility
1.	Duolingo (Offline Mode)	Offers gamified language learning with vocabulary, grammar, and pronunciation exercises	Users can download lessons for practice in areas with no connectivity, focusing on core skills like reading and listening
2.	Anki	A flashcard application based on spaced repetition for vocabulary building	Learners can create or download decks tailored to technical English, enabling systematic review of terms and concepts
3.	LingQ	Provides reading and listening materials with an integrated dictionary	Learners can download texts and audio tracks for offline study, focusing on context-based vocabulary acquisition
4.	eBooks and PDFs	Digital books and resources such as technical manuals or graded readers	Students can store these materials on devices or USB drives for consistent access to reading materials, even without power
5.	HelloTalk and Tandem (limited offline use)	Language exchange platforms connecting learners with native speakers	While primarily online, conversations and notes can be saved for review offline, enabling practice of previously acquired phrases

Source: compiled by the author.

Non-digital offline strategies

In scenarios where electronic devices are inaccessible, traditional methods prove invaluable. As for printed resources such as textbooks, technical dictionaries, and phrasebooks specific to engineering and technology, they provide focused learning material. Group discussions and role-plays simulate [5] real-life scenarios and encourage active use of technical English. This is called peer learning. Handwritten flashcards for technical terms and phrases support memory retention. For pronunciation practice learners can record their voice using battery-powered recorders for self-evaluation or peer feedback.

Additionally, creating personalized notebooks or glossaries helps students consolidate their knowledge of technical vocabulary and phrases. These notebooks can serve as quick references during practical tasks or study sessions. Teachers can also design offline quizzes or problem-solving activities to test students' understanding of technical English in context. Using physical models or diagrams during lessons enables [6] students to associate visual aids with corresponding technical terms, enhancing comprehension. Pairing students for conversational exercises encourages language practice and builds confidence in using English in professional scenarios. Incorporating storytelling techniques, where students narrate technical processes or concepts, can [7] further improve fluency and critical thinking. These traditional methods, though simple, remain highly effective in fostering a comprehensive understanding of technical English, even in environments with limited resources.

In Ukraine, the challenges of offline English learning have become particularly acute due to the full-scale military aggression by Russia, which has severely disrupted the country's energy infrastructure. Frequent power outages caused by bombings have necessitated innovative offline learning approaches to ensure continuity in education. Teachers and students have adapted by relying on printed materials, such as textbooks and manuals, which can be easily accessed without electricity. Group learning sessions in bomb shelters or community centres have become a common practice, fostering both resilience and collaboration among learners. These circumstances highlight the importance of integrating offline strategies into education systems, ensuring that learning remains accessible even in the face of adversity and war.

Integration in technical university settings

Offline learning strategies can be integrated into English courses for technical students through structured lesson plans that combine downloadable materials, print resources, and collaborative activities. For example,

students could prepare presentations using technical English terms from pre-downloaded resources and present them during group discussions, fostering peer-to-peer interaction and critical thinking.

Offline strategies also encourage [8] the use of hands-on activities, such as role-plays and problem-solving tasks, to simulate real-world scenarios where technical English is required. These activities can be tailored to the students' fields of study, making the learning process more relevant and engaging.

Moreover, self-paced offline tools, such as vocabulary flashcards or pronunciation guides, allow students to practice at their own convenience, accommodating different learning speeds and styles. Printed resources, like manuals and technical glossaries, remain invaluable for reinforcing specific terminology used in technical fields. Incorporating peer evaluation during offline group projects enhances communication skills and fosters a sense of collaboration. Teachers can also guide students in creating personal learning logs or journals, documenting their progress and areas for improvement. By combining [9] these elements, offline learning not only supports language acquisition but also helps technical students develop soft skills essential for their professional growth.

Conclusion

The absence of electricity and internet due to Russia's full-scale military aggression against Ukraine should not hinder the advancement of English language proficiency, particularly for students in technical universities where English is essential for career success. By leveraging offline applications and traditional learning strategies, educators can ensure continuity of education and foster a resilient, self-directed approach to learning.

This study advocates for the incorporation of offline tools and methods into English curricula, emphasizing their practicality and adaptability in diverse learning environments. Future research should focus on developing more robust offline solutions and exploring their effectiveness in different educational contexts.

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