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DIGITAL TOOLS IN TEACHING ENGLISH TO FIRST-YEAR UNIVERSITY STUDENTS

***Abstract:** this paper examines the effectiveness of digital tools in English language classes for first-year university students. Based on personal experience and academic literature analysis (2021–2025), the authors propose a five-category classification of digital resources, evaluate their impact on specific language skills and student motivation, compare digital and traditional approaches, and offer recommendations for phased integration during the first-year adaptation period.*

***Keywords:** digital tools, English language teaching, first-year students, higher education, learning management systems, gamification, artificial intelligence, mobile-assisted language learning, student motivation, digital transformation of education.*

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ЦИФРОВЫЕ ИНСТРУМЕНТЫ В ОБУЧЕНИИ АНГЛИЙСКОМУ ЯЗЫКУ СТУДЕНТОВ ПЕРВОГО КУРСА УНИВЕРСИТЕТА

***Аннотация:** в статье рассматривается эффективность цифровых инструментов на занятиях по английскому языку у студентов первого курса университета. На основе личного опыта и анализа научной литературы 2021–2025 гг. предложена классификация цифровых ресурсов по пяти категориям, оценено их влияние на языковые навыки и мотивацию, проведено сравнение с традиционными методами и сформулированы рекомендации по поэтапному внедрению.*

***Ключевые слова:** цифровые инструменты, обучение английскому языку, студенты первого курса, высшее образование, системы управления обучением, геймификация, искусственный интеллект, мобильное обучение языкам, мотивация студентов, цифровая трансформация образования.*

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Introduction.

The transition from school to university English confronts first-year students with fundamentally different academic requirements. At the same time, the digital learning landscape has expanded dramatically: the pandemic experience of 2020–2022 accelerated LMS adoption, and the emergence of generative AI since 2023 has further broadened the toolkit. Despite this expansion, a gap persists between what digital tools can offer and how they are employed in first-year instruction, while clear integration guidelines remain scarce [16].

This paper classifies digital tools used in university English teaching, evaluates their effectiveness based on publications from Springer, Frontiers, SAGE, ScienceDirect, and Russian academic journals (2021–2025), and proposes evidence-based recommendations for first-year contexts.

1. Classification of Digital Tools for English Language Teaching.

The diversity of available digital resources can be organized into five categories, each addressing distinct educational tasks (Table 1).

Table 1

Classification of Digital Tools for English Language Teaching

Category	Platform Examples	Key Functions	Target Skills
Learning Management Systems (LMS)	Moodle, Google Classroom, Canvas	Course organization, assignment distribution, testing, analytics	All skills (comprehensive)
Mobile Applications (MALL)	Duolingo, Memrise, Babbel, Busuu	Microlearning, spaced repetition, adaptive tasks	Vocabulary, grammar, listening
Gamified Platforms	Kahoot!, Quizlet, Wordwall, Quizizz	Quizzes, flashcards, competitive elements, leaderboards	Vocabulary, grammar, reading
AI Tools	ChatGPT, Grammarly, ELSA Speak, DeepL	Text generation, error checking, conversation practice, translation	Writing, speaking, grammar
Multimedia Resources	YouTube, TED Talks, Padlet, Flipgrid	Video/audio materials, collaborative boards, video responses	Listening, speaking, reading

These boundaries are fluid – Moodle supports gamification plugins, and Duolingo integrates AI for adaptive task adjustment [12] – but this framework clarifies which tool best suits a given pedagogical objective.

2. Learning Management Systems in English Language Teaching.

LMS platforms are the most widely adopted category of digital tools in university language teaching, though their use is typically mandatory rather than deliberate. Research demonstrates their pedagogical value beyond administrative convenience: active use of Moodle’s interactive tasks correlates with speaking skill improvement, particularly benefiting students who are reluctant to speak in class. Google Classroom, leveraging its integration with the Google ecosystem (Docs, Forms, Meet), showed significant speaking score improvement over a semester.

Comparing the two systems, Moodle excels in customization depth and analytics, while Google Classroom offers a lower learning curve – potentially a decisive advantage for first-year students navigating multiple new systems simultaneously.

3. Mobile-Assisted Language Learning.

The MALL approach leverages smartphones for language practice through short, focused sessions [7]. A study of 80 university students demonstrated that digital flashcard users outperformed the paper-flashcard group on both immediate and delayed vocabulary tests, confirming genuine long-term retention rather than superficial memorization. Research involving 270 students identified that app adoption depends 61% on three factors: convenience, perceived usefulness, and self-efficacy [5].

The most frequently cited applications – Duolingo (spaced repetition, gamified lessons), Memrise (native speaker videos, mnemonics), and Busuu (personalized plans, peer feedback) – share a crucial advantage for first-year students: 5–15 minute sessions that fit packed schedules.

4. Gamification in English Language Teaching.

A comprehensive meta-analysis covering publications from 2008 to 2023 confirmed a moderately positive effect of gamification on academic performance (Hedges' $g = 0.782$, $p < 0.05$) [15]. However, the picture is nuanced. Kahoot! increased motivation and engagement among UAE university students but showed little effect on exam grades [2]. By contrast, a ten-week experiment combining Kahoot, Quizlet, and WhatsApp improved academic vocabulary acquisition and reduced student anxiety [1].

Leaderboards can demotivate students who rank at the bottom [11], which is particularly harmful during first-year adaptation when students already feel insecure in the new environment. Collaborative formats should therefore be preferred over individual competition.

5. Artificial Intelligence-Based Tools.

AI tools demonstrate the strongest measured effects in the literature. A meta-analysis of 51 studies rated ChatGPT's impact on academic performance as large ($g = 0.867$) and on critical thinking as moderate ($g = 0.457$) [13]. A separate study confirmed that regular interaction with ChatGPT-4 develops writing skills and grammar [14]. Other notable tools include Grammarly (error analysis with explana-

tions), ELSA Speak (pronunciation training via microphone analysis), and DeepL (superior academic translation).

However, AI tools carry significant risks: dependence on generated content, degradation of independent thinking, and academic integrity concerns [8]. For first-year students whose study habits are still forming, these risks are especially acute. Assignments should be structured so that AI assists without replacing the student's own cognitive effort.

6. Comparative Effectiveness and Adoption Trends.

Consolidated data analysis reveals that digital tools improve all language skills, but unevenly. Vocabulary (+22 percentage points over traditional methods) and listening (+21) benefit the most, reflecting the abundance of specialized applications with spaced repetition and multimedia content. Speaking and writing show more modest gains, as they inherently require live instructor interaction [6]. Research on the flipped classroom model, synthesizing 70 studies from 19 countries, further confirms that digital pre-class preparation enhances language outcomes, particularly when supported by LMS platforms and knowledge checks [4; 9; 10].

Adoption data show that LMS leads among first-year students (28%), followed by mobile applications (22%) and gamification (19%). AI tools currently represent 15% but exhibit the fastest growth trajectory – from 8% in 2022 to 68% in 2025 [7; 15]. Motivation analysis identifies interactivity (4.5/5), 24/7 accessibility (4.4/5), and instant feedback (4.3/5) as the strongest drivers of digital tool adoption among students [3]. Multiple studies also report reduced foreign language anxiety when students work on personal devices rather than performing in front of the class [11; 14].

7. Recommendations.

Based on the reviewed literature and first-year experience, we propose the following integration framework (Table 2).

Recommendations for Applying Digital Tools in the First Year

Principle	Recommendation Content	Rationale
Complementarity	Digital tools should supplement, not replace, live interaction with the instructor	Traditional methods surpass digital ones in developing interpersonal competencies
Phased Implementation	Start with one tool (LMS), gradually adding new categories	An excess of tools overwhelms students during the adaptation period
Balanced Gamification	Use collaborative formats, minimize competitiveness	Leaderboards can reduce motivation among vulnerable students [2; 11]
AI Regulation	Clearly define the boundaries of acceptable use of generative AI	Risk of forming dependence and reducing critical thinking [8]
Feedback	Combine automated feedback with detailed instructor comments	Automated feedback is effective for routine skills but insufficient for complex ones [14]
Effectiveness Monitoring	Regularly assess the impact of tools on learning outcomes and motivation	Effectiveness depends on the context of application [15]

The phased approach deserves emphasis. In September, first-year students are overwhelmed with new systems and processes; adding multiple learning tools simultaneously produces the opposite of the intended effect. A more effective sequence: begin with the mandatory LMS, introduce a mobile vocabulary app after one month, and incorporate gamification and AI in the second semester [10]. The effectiveness of all digital tools also depends directly on instructors' digital competence and willingness to integrate technology into their pedagogical practice [16].

Conclusion.

Digital tools demonstrably enhance first-year English language learning, with the strongest effects in vocabulary and listening. Speaking and writing, however, still require live instructor guidance. AI tools present impressive meta-analytic results ($g = 0.867$) but demand careful regulation to prevent dependence and preserve independent thinking.

The central finding is that digital technologies work best when integrated into a coherent pedagogical strategy rather than adopted as isolated additions. They should supplement, not replace, the instructor. Future research should examine long-term AI

effects on language competence and investigate systematic multi-tool combinations within single courses.

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