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THE USE OF DIGITAL TECHNOLOGIES IN ENGLISH LANGUAGE INSTRUCTION AT NON-LINGUISTIC SPECIALTIES OF STUDY: A CASE STUDY OF ALFRAGANUS UNIVERSITY

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Abstract : *This article examines the implementation of digital technologies in English language instruction at non-linguistic Specialties of Study, focusing on Alfraganus University as a case study. The purpose of the study is to analyze how digital tools such as interactive platforms, mobile apps, online collaboration, and multimedia content influence language acquisition, student engagement, and academic outcomes. The findings suggest that digital tools significantly enhance learner motivation, provide personalized learning experiences, and improve language proficiency when effectively integrated into pedagogical strategies.*

Keywords:*Digital technologies, English as a foreign language (EFL), non-linguistic universities, higher education, Alfraganus University, blended learning, interactive platforms, online tools.*

Introduction

In the 21st century, digital technologies have transformed the landscape of education, including foreign language teaching. The integration of digital tools has reshaped traditional teaching approaches, making learning more interactive, personalized, and accessible. This transformation is particularly relevant in non-linguistic Specialties of Study, where English is taught as a supplementary subject but plays a crucial role in professional development and global communication.

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Alfraganus University, a multidisciplinary institution in Uzbekistan, has been actively incorporating digital technologies into its English language curriculum to meet the demands of modern education. The article explores the impact of these digital innovations on the effectiveness of English language instruction in a non-linguistic context.

The main research questions are:

1. What digital technologies are used in English teaching at Alfraganus University?
2. How do these tools affect student motivation and performance?
3. What challenges do instructors face when integrating digital tools into EFL instruction?

The use of digital tools in language education has been extensively studied by researchers such as Richard E. Mayer (2009), who emphasized the effectiveness of multimedia in enhancing comprehension, and Mark Warschauer (2004), who discussed the socio-cultural benefits of online collaboration. According to Dudeney and Hockly (2007), digital technologies promote learner autonomy and interactivity, which are essential for language acquisition, as they empower students to take control of their learning and participate actively in meaningful communication.

In the post-pandemic era, blended and remote learning models have become mainstream in higher education. Scholars like Hubbard (2009), Levy and Stockwell (2013), and Godwin-Jones (2018) highlight the pedagogical implications of computer-assisted language learning (CALL). In non-linguistic contexts, digital tools help overcome limited classroom time and offer practice opportunities beyond institutional settings (Beatty, 2010; Pegrum, 2014).

However, some challenges persist. Lack of technical infrastructure, insufficient teacher training, and resistance to change are cited as barriers to effective digital integration (Reinders & White, 2016). Thus, context-specific studies such as the one conducted at Alfraganus University are needed to explore both the opportunities and limitations of digital language education.

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Methodology and Materials

The use of multiple data sources allows for triangulation and increased validity of findings. The research was conducted over a **three-month period (January–March 2025)** at Alfraganus University in Tashkent, Uzbekistan. The selection of this university was based on its active efforts to integrate digital tools in general education disciplines.

Participants were selected using stratified sampling to include a representative group across faculties and proficiency levels. A total of **128 individuals** participated:

- **120 undergraduate students** (aged 18–23) from the faculties of Economics, Finance, and Banking audition who studied English as a general university subject.
- **5 English language instructors**, all with at least a master's degree in teaching English and with 2 to 10 years of teaching experience.

Survey Questionnaires.

An online survey was administered to students using Google Forms. It included:

- 20 Likert-scale questions (1–5 rating) on motivation, digital access, learning outcomes, and preferences.
- 5 open-ended questions about perceived benefits and drawbacks of digital tools.

Google Forms automatically aggregated quantitative data into charts and allowed easy export to Google Sheets for further analysis. Responses helped identify which tools students found most effective and why.

Semi-Structured Interviews

All 5 instructors participated in individual interviews lasting 15–20 minutes each. The interviews covered:

- Pedagogical strategies involving digital tools
- Student response and engagement

- Assessment techniques
- Institutional support and challenges

Interviews were conducted in English and Uzbek (depending on participant preference). These interviews were transcribed and coded for thematic analysis using **Miro**, a collaborative whiteboard platform. Miro allowed the research team to visually organize emerging themes, link instructor comments to pedagogical models, and annotate findings collaboratively in real time.

Classroom Observations

Researchers conducted seven non-intrusive classroom observations during in-person English lessons. A standardized observation checklist—adapted from Dudeney and Hockly's (2007) framework for technology-enhanced instruction—was used to record:

- Student participation
- Integration of digital tools
- Interaction patterns
- Technical issues

Observations were supplemented with photographs of whiteboards, learning apps, and student activities (with consent), which were later uploaded to **Padlet**, an interactive visual board. Padlet helped categorize visual and textual evidence for triangulation with other data sources.

Platform and Content Analysis

The study involved an in-depth analysis of the content and functionalities of the most commonly used digital tools, which included:

1. **Kahoot** – A gamified quiz platform used during class for formative assessments. Teachers created quizzes aligned with current lessons (e.g., verb tenses, academic vocabulary), and students competed in real time using mobile phones.
2. **Bamboozle** – A game-show style learning tool for vocabulary revision and speaking drills. Custom sets were created to match each faculty's course topics (e.g., banking terms).

3. **Quizlet** – A flashcard-based tool for autonomous vocabulary learning. Students used teacher-assigned sets or created their own decks, which helped track individual progress on specific word groups.

4. **Memrise** – A spaced-repetition vocabulary tool with AI-generated pronunciation feedback. It was particularly used for listening and pronunciation practice.

5. **YouTube** – A rich source for authentic video content. Teachers assigned specific videos such as TED-Ed clips, grammar explainer videos, or interviews. Comprehension questions followed each video to encourage critical listening.

6. **Wordwall** – Used to create interactive drag-and-drop, matching, and quiz activities. Instructors used Wordwall for topic review (e.g., adjective/adverb distinction, phrasal verbs).

7. **Padlet** – Functioned as a digital bulletin board for classroom reflections, peer reviews, and project submissions. For example, students posted audio recordings of role-plays, and peers provided feedback.

8. **Miro** – Used by both instructors and researchers for collaborative brainstorming and lesson planning. It was also instrumental during the coding of interview responses and grouping qualitative data for analysis.

This analysis included content types (videos, quizzes, discussion forums), student activity logs, and assignment completion rates. Data were anonymized and used in aggregate form.

The study found that the most commonly used digital tools at Alfraganus University include:

- **Gamified apps**: Kahoot and Bamboozle used for formative assessment and revision.
- **Flashcard and vocabulary tools**: Quizlet and Memrise for lexical enrichment.
- **Video platforms**: YouTube and TED-Ed for listening practice and cultural exposure.

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Results

Student Feedback

Student feedback indicated:

- **Engagement**: 85% felt digital tools made learning more enjoyable and interactive.
- **Accessibility**: 70% appreciated the flexibility of accessing materials from home.
- **Skill improvement**: 65% noted increased vocabulary and listening comprehension.
- **Barriers**: 40% reported issues with internet access or hardware limitations.

Teacher Perspectives

Interviews with instructors revealed the following insights:

- **Pedagogical benefits**: Teachers noted increased student participation, especially from introverted learners.
- **Workload**: Initial setup of digital content was time-consuming but eventually facilitated better classroom management.
- **Assessment**: Digital quizzes and assignments allowed more frequent and objective assessment.
- **Professional development needs**: All teachers expressed the need for continuous training in digital pedagogy.

The findings of this case study strongly affirm previous research on the **positive impact of digital technologies in language learning**, particularly in non-linguistic educational settings. The high levels of engagement, increased student autonomy, and improved vocabulary and listening skills reported by participants are consistent with **Mayer's Cognitive Theory of Multimedia Learning.** This theory emphasizes that students learn better when both **visual and auditory channels** are activated simultaneously. In our study, tools like **YouTube, TED-Ed,** and **interactive visual games** (e.g., Wordwall, Bamboozle) supported this dual-channel

processing by combining spoken explanations with visual stimuli, which helped students retain information more effectively.

Moreover, the use of gamified and student-centered tools such as **Kahoot** and **Quizlet** aligns with **Deci and Ryan's Self-Determination Theory**, which highlights **autonomy, competence, and relatedness** as key motivators in learning. Students enjoyed the ability to **control their pace, challenge themselves competitively,** and **collaborate with peers**, which significantly boosted **intrinsic motivation**. It was particularly noticeable how these tools gave a voice to more introverted or hesitant students who may not otherwise participate in traditional settings.

However, while the integration of digital tools demonstrated many benefits, it also exposed several **challenges and limitations** that must not be overlooked. One of the most consistent barriers reported was **unstable internet access**, especially during in-class real-time quizzes or when accessing external platforms like Padlet or YouTube. Students with limited access to personal devices or mobile data struggled to fully benefit from the tools. This **digital divide,** though not unique to Alfraganus University, is especially problematic in Uzbekistan, where some students commute from rural areas and lack sufficient technological support at home.

Additionally, the lack of **comprehensive institutional support and teacher training** was another limiting factor. While some instructors embraced new digital tools enthusiastically, others lacked the digital literacy or time to explore and implement them effectively. For instance, not all instructors were confident using **Miro or Padlet**, even though these tools offer excellent opportunities for collaborative brainstorming and student reflection. Without **structured professional development programs**, the long-term sustainability of digital integration remains questionable.

From my own perspective as a researcher and educator, it became clear that **technology alone does not improve education**—rather, it is the thoughtful **pedagogical use** of technology that makes the difference. At Alfraganus University, digital tools were most effective when:

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- they were purposefully aligned with lesson objectives,
- instructors received guidance or prior experience using them,
- and students were given consistent access and support.

Moreover, the **context of a non-linguistic specialty of study** added another layer of complexity. English courses at Alfraganus are often limited to a few hours per week, and students from different faculties (Finance, Economics, Banking, Architecture and etc.) have diverse goals and proficiency levels. In such conditions, digital tools offer a practical way to **extend learning beyond the classroom**, enable **differentiated instruction**, and **address diverse learning needs**. For example, students from the Banking faculty used financial terminology sets on Quizlet, while those in Economics preferred TED-Ed videos on global trade or inflation, showing how tools can be adapted to academic interests.

Yet, to **maximize the potential of digital tools**, several critical steps must be taken:

- **Investment in infrastructure**: Universities must ensure reliable internet and access to devices across all student demographics.
- **Ongoing teacher training**: Professional development in digital pedagogy should be mandatory and practice-oriented, ideally led by teachers who have successfully integrated tools.
- **Curriculum redesign**: Digital elements should be embedded into syllabi, not treated as optional extras.

While this study focused primarily on the short-term effects of using digital technologies in English instruction, **future research** should adopt a **longitudinal approach** to assess:

- The **lasting impact** on specific language skills (e.g., writing fluency, speaking accuracy).
- The **comparison between synchronous and asynchronous learning** environments.
- The **role of student-created content** (e.g., using Miro boards or Padlet for portfolios or peer reviews).

- The **adaptability of digital tools** for students with special needs or lower proficiency levels.

In conclusion, **digital technologies, when strategically and thoughtfully implemented**, can significantly transform the teaching and learning of English in non-linguistic universities. The case of Alfraganus University shows promise, but also calls attention to the urgent need for a **cohesive institutional strategy** that combines pedagogy, training, and infrastructure to ensure equitable and effective learning outcomes.

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