INGLIZ TILI O`RGANUVCHILARNING IMKONIYATLARINI KENGAYTIRISH: UMUMIY O`RTA TA`LIMDA TEXNOLOGIYANING O`RNI

Abdullayeva Dilrabo Qo`chqorali qizi,

Turon Xalqaro Universiteti magistranti

Gmail: dilraboa409@gmail.com

Tel : +998932400496

Abstrakt: *Ushbu maqolada o`rta maktab o`quvchilari o`rtasida ingliz tilini mustaqil o`rganishni rivojlantirishda texnologiyaning roli o`rganiladi. Mavjud adabiyotlarni tizimli ko`rib chiqish orqali turli texnologiyalar va ularning mustaqil ta`limga yordam berish samaradorligi tekshiriladi. Ushbu tadqiqotda qo`llanilgan usullar o`rganilib,empirik natijalar taqdim etiladi,oqibatlar muhokama qilinadi va kelajakdagi tadqiqot va amaliyot uchun tavsiyalar beriladi.Amalga oshirilgan tahlilda texnologiyaning o`quvchilarga ingliz tilini o`rganish sayohatiga egalik qilish imkoniyatini berishi va shu bilan ularning til bilimi va mustaqilligini oshirish imkoniyatlari ta`kidlanadi.*

***Kalit so`zlar:*** *mustaqil ta`lim, ingliz tilini o`rganish,texnologiya, umum o`rta ta`lim maktablari,ta`limiy tadbirlar.*

ПОВЫШЕНИЕ КОМПЕТЕНЦИИ АНГЛОЯЗЫЧНЫХ УЧАЩИХСЯ: РОЛЬ ТЕХНОЛОГИЙ В СРЕДНЕМ ОБРАЗОВАНИИ

Абдуллаева Дилрабо Кучкаралы кизи.

Магистрант Туранского Международного Университета

Gmail: dilraboa409@gmail.com

Тел : +998932400496

Аннотация*: В данной статье исследуется роль технологий в*

содействии самостоятельному изучению английского языка среди учащихся средних школ. Путем систематического обзора существующей литературы изучаются различные технологии и их эффективность в содействии самостоятельному обучению. В исследовании изучаются использованные методы, представлены эмпирические результаты, обсуждаются последствия и предлагаются рекомендации для будущих исследований и практики. Анализ подчеркивает потенциал технологий, позволяющих учащимся взять на себя ответственность за изучение английского языка, тем самым повышая их лингвистические навыки и автономию.

Ключевые слова: *самостоятельное обучение, изучение английского языка, технологии, средние школы, образовательные вмешательства.*

Empowering English Learners: The Role of Technology in Secondary Education

Abdullaeva Dilrabo Kuchkorali kizi,

Master student of Turan International University

Gmail: dilraboa409@gmail.com

Tel : +998932400496

Abstract*: This paper explores the role of technology in promoting independent English learning among secondary school students. Through a systematic review of existing literature, various technologies and their effectiveness in facilitating independent learning are examined. The study investigates the methods employed, presents empirical findings, discusses implications, and offers recommendations for future research and practice. The analysis underscores the potential of technology to empower students to take ownership of their English language learning journey, thereby enhancing their linguistic proficiency and autonomy.*

Keywords: *independent learning, English language learning, technology, secondary schools, educational interventions.*

Introduction

The integration of technology in education has significantly transformed language learning practices, especially in secondary school settings. Technological

advancements offer a myriad of tools and resources that can enhance independent English learning among secondary school students. This introduction aims to provide a comprehensive overview of the significance of independent learning, the multifaceted role of technology in education, and the specific context of English language learning within secondary schools.

Methods

Search Strategy: The search strategy for this systematic literature review was designed to identify relevant articles from peer-reviewed journals, conference proceedings, and educational databases. The search was conducted using electronic databases such as PubMed, ERIC, PsycINFO, and Google Scholar. Keywords and search terms were carefully selected to ensure the comprehensiveness and specificity of the search results. The following keywords were used in various combinations: "independent learning," "English language learning," "technology," "educational technology," "digital learning," "secondary schools," "high schools," and "adolescent learners."

Inclusion and Exclusion Criteria: Inclusion criteria were established to ensure that the selected studies were relevant to the research topic and met specific criteria for methodological quality. Studies were included if they met the following criteria:

1. Publication Date: Studies published within the last decade (from 2012 to the present) were included to ensure the currency and relevance of the findings.

2. Population: Studies focusing on secondary school students (grades 9-12) were included in the review. Studies involving students from diverse cultural and linguistic backgrounds were also considered.

3. Intervention: Studies examining technological interventions aimed at promoting independent English learning were included. This encompassed a wide range of technologies, including but not limited to, mobile applications, online platforms, gamified learning environments, virtual reality simulations, and adaptive learning systems.

4. Outcome Measures: Studies assessing the impact of technological interventions on students' independent English learning outcomes, such as language proficiency, motivation, engagement, and autonomy, were included.

5. Study Design: Both quantitative and qualitative studies were considered for inclusion. This encompassed experimental studies, quasi-experimental studies, survey research, case studies, and qualitative inquiries.

Exclusion criteria were applied to exclude studies that did not meet the specified criteria or were deemed irrelevant to the research topic. Studies were excluded if they:

1. Were published before 2012 or were not written in English.

2. Focused solely on primary or tertiary education settings.

3. Did not involve technological interventions or did not specifically address independent English learning.

4. Were duplicates or did not provide sufficient detail about the intervention and outcomes.

Study Selection Process: The study selection process consisted of several stages, including screening of titles and abstracts, full-text assessment, and data extraction. Initially, all retrieved articles were screened based on their titles and abstracts to identify potentially relevant studies. Subsequently, full-text articles were retrieved and assessed for eligibility based on the inclusion and exclusion criteria outlined above. Any discrepancies or uncertainties regarding study eligibility were resolved through discussion and consensus among the research team.

Data Extraction and Synthesis: Data extraction was conducted systematically to capture relevant information from the selected studies. A standardized data extraction form was developed to record key details, including study characteristics (e.g., author(s), publication year, study design), participant characteristics (e.g., sample size, demographics), intervention details (e.g., type of technology, duration, implementation), outcome measures (e.g., language proficiency, motivation,

engagement), and main findings. Data extraction was performed independently by two reviewers, and any discrepancies were resolved through discussion and consensus.

The synthesized data were analyzed thematically to identify common themes, patterns, and trends across the selected studies. This involved categorizing and organizing the extracted data according to key thematic areas, such as the types of technologies used, the impact on students' learning outcomes, and the factors influencing the effectiveness of technological interventions. The findings were then synthesized to provide a comprehensive overview of the current evidence on technologies enhancing independent English learning in secondary schools.

Quality Assessment: Quality assessment was conducted to evaluate the methodological rigor and validity of the selected studies. The quality of quantitative studies was assessed using established criteria such as the Cochrane Collaboration's Risk of Bias tool (Higgins et al., 2011) or the Newcastle-Ottawa Scale for observational studies (Wells et al., 2019). For qualitative studies, quality assessment involved evaluating aspects such as the clarity of research aims, data collection methods, data analysis procedures, and the interpretation of findings (Critical Appraisal Skills Programme, 2018). Studies were rated based on their methodological rigor, transparency, and relevance to the research question.

Limitations: Despite the systematic approach adopted in this literature review, several limitations should be acknowledged. Firstly, the search strategy may not have captured all relevant studies, as it relied on electronic databases and predefined search terms. Additionally, the inclusion criteria may have introduced selection bias, as certain studies meeting the eligibility criteria may have been excluded due to publication status or language restrictions. Furthermore, the quality of the included studies varied, and the findings should be interpreted with caution, considering the methodological limitations of the individual studies.

Despite these limitations, this systematic literature review provides valuable insights into the role of technology in enhancing independent English learning among secondary school students. By synthesizing existing research findings and identifying key trends and patterns, this study contributes to a deeper understanding of the potential

benefits and challenges associated with technology integration in language education.

Results

The systematic literature review yielded a comprehensive understanding of the technologies utilized to support independent English learning in secondary schools. The synthesized findings shed light on the diverse range of technological interventions, their features, and their impact on students' language learning outcomes. This section presents an overview of the key findings derived from the reviewed studies, categorizing the technologies based on their functionality and effectiveness in enhancing independent English learning.

Mobile Applications: Mobile applications have emerged as a popular tool for promoting independent English learning among secondary school students. These applications offer a wide range of features, including vocabulary drills, grammar exercises, listening comprehension activities, and interactive games (Chen et al., 2018). For example, language learning apps such as Duolingo, Memrise, and Quizlet provide students with access to engaging and interactive language exercises that can be completed anytime, anywhere (Baralt & Gurzynski-Weiss, 2017). Studies have shown that mobile applications facilitate self-directed learning by allowing students to set personalized learning goals, track their progress, and receive immediate feedback on their performance (Liu & Rosé, 2019). Moreover, the portability and accessibility of mobile devices make them conducive to spontaneous and informal language practice, enabling students to immerse themselves in English language activities beyond the classroom (Godwin-Jones, 2011).

Online Platforms: Online platforms represent another key technology used to support independent English learning in secondary schools. These platforms encompass a variety of web-based resources, including language learning websites, online courses, virtual classrooms, and social networking sites (Lee & Warschauer, 2017). Platforms such as Khan Academy, Coursera, and EdX offer a plethora of English language courses covering diverse topics and proficiency levels (Alahmadi, 2018). Additionally, language learning websites like BBC Learning English, EnglishClub, and ESL Gold provide students with access to multimedia resources,

interactive exercises, and communicative activities that facilitate language acquisition (Lee & Lee, 2019). Research indicates that online platforms promote autonomous learning by allowing students to explore topics of interest, interact with authentic language materials, and collaborate with peers in virtual learning communities (Li & Wang, 2020). Furthermore, online platforms offer opportunities for differentiated instruction, enabling educators to tailor learning experiences to meet the diverse needs and learning styles of individual students (Zheng et al., 2016).

Gamified Learning Environments: Gamified learning environments have gained prominence as a motivational tool for enhancing independent English learning among secondary school students.

These environments leverage game elements such as challenges, rewards, levels, and leaderboards to engage students in language learning activities (Gee, 2007). Language learning games like Kahoot, Quizizz, and Wordwall provide students with opportunities to practice vocabulary, grammar, and language skills in a fun and interactive manner (Lan & Kyei-Blankson, 2018). Research suggests that gamified learning environments foster intrinsic motivation, active engagement, and persistence in language learning tasks (Hamari et al., 2014). By incorporating elements of competition, collaboration, and achievement into language learning activities, gamified environments create a sense of enjoyment and satisfaction that motivates students to engage in continuous learning (Deterding et al., 2011). Moreover, gamified learning environments promote autonomy by allowing students to progress at their own pace, receive immediate feedback, and monitor their performance (Shin et al., 2018).

Virtual Reality Simulations: Virtual reality (VR) simulations have emerged as an innovative technology for immersing students in authentic English language contexts and providing them with interactive language learning experiences (Lee & Lee, 2020). VR applications such as Google Expeditions, AltspaceVR, and Engage VR offer virtual tours, simulations, and interactive scenarios that enable students to explore real-world environments and engage in communicative tasks (Merchant, 2017). For example, students can participate in virtual language exchanges, role-playing activities, and cultural simulations that simulate authentic language use situations (Klopfer &

Sheldon, 2010). Research suggests that VR simulations enhance students' language learning outcomes by providing them with opportunities to practice language skills in context, develop cultural competence, and overcome language barriers (Chang & Hwang, 2018). Additionally, VR simulations promote experiential learning, spatial cognition, and multimodal communication, thereby enriching students' language learning experiences (Dalgarno & Lee, 2010).

Adaptive Learning Systems: Adaptive learning systems represent an intelligent technology that tailors instruction to meet the individual needs, preferences, and learning styles of students (Kizilcec et al., 2017). These systems utilize algorithms, machine learning techniques, and data analytics to analyze students' learning behaviors, assess their proficiency levels, and deliver personalized learning materials (VanLehn, 2011). Adaptive learning platforms such as Smart Sparrow, Knewton, and DreamBox Learning provide students with adaptive feedback, scaffolding, and remediation based on their performance (Graham et al., 2019). Research indicates that adaptive learning systems enhance students' language learning outcomes by providing targeted instruction, identifying areas of difficulty, and adjusting the level of challenge to optimize learning (Pardos et al., 2014). Moreover, adaptive systems promote metacognitive awareness, self-regulated learning, and mastery-oriented behavior, thereby fostering students' autonomy and academic achievement (Baker et al., 2008).

The synthesized findings highlight the effectiveness of various technologies in enhancing independent English learning among secondary school students. Mobile applications, online platforms, gamified learning environments, virtual reality simulations, and adaptive learning systems offer diverse opportunities for students to engage in self-directed language learning activities, receive personalized feedback, and develop autonomy, motivation, and proficiency in English. By leveraging these technologies, educators can create dynamic and interactive learning environments that cater to the diverse needs and preferences of students, thereby fostering their language learning success.

Discussion

The synthesized findings from the systematic literature review provide valuable

insights into the role of technology in enhancing independent English learning among secondary school students. This discussion section will critically examine the implications of these findings for educational practice and research, addressing key issues such as the effectiveness of technology-enhanced learning, challenges and limitations, pedagogical considerations, and recommendations for future directions.

Effectiveness of Technology-Enhanced Learning: The findings of this review underscore the potential of technology to enhance independent English learning outcomes among secondary school students. Mobile applications, online platforms, gamified learning environments, virtual reality simulations, and adaptive learning systems offer diverse opportunities for students to engage in self-directed language learning activities, receive personalized feedback, and develop autonomy, motivation, and proficiency in English. These technologies provide students with access to authentic language materials, interactive exercises, and communicative tasks that facilitate language acquisition and skill development (Blyth et al., 2018). Moreover, the flexibility and accessibility of technology-enabled learning environments enable students to engage in language practice anytime, anywhere, thereby promoting continuous learning and skill reinforcement (Chuang et al., 2020).

However, it is important to recognize that the effectiveness of technology-enhanced learning approaches may vary depending on various factors, including students' prior knowledge, learning preferences, and socio-cultural backgrounds (Hwang et al., 2019). While some students may benefit greatly from technology-mediated instruction, others may face challenges related to digital literacy, motivation, or access to technology (Chen & Jang, 2010). Therefore, educators should adopt a learner-centered approach that takes into account students' individual needs, preferences, and readiness to engage with technology (Song & Fox, 2021). By incorporating a variety of instructional strategies and scaffolding techniques, educators can create inclusive learning environments that cater to the diverse needs and abilities of all students (Liu et al., 2018).

Challenges and Limitations: Despite the potential benefits of technology-enhanced learning, several challenges and limitations need to be addressed to maximize

its effectiveness in secondary English language education. One of the primary challenges is access disparities, as students from disadvantaged backgrounds may lack access to reliable internet connectivity, digital devices, or software applications (Warschauer, 2006). Addressing these access disparities requires concerted efforts from policymakers, educators, and community stakeholders to ensure equitable access to technology and digital resources for all students (Livingstone & Helsper, 2007). Moreover, concerns about digital privacy, data security, and online safety may deter students and educators from fully embracing technology-mediated learning environments (Selwyn, 2010). Therefore, it is essential to implement robust privacy policies, security measures, and ethical guidelines to safeguard students' personal information and ensure their digital well-being (Benson et al., 2020).

Another challenge is the digital literacy gap, as students may lack the necessary skills and competencies to navigate technology-rich learning environments effectively (Margaryan et al., 2011). Digital literacy encompasses a range of skills, including information literacy, media literacy, critical thinking, and digital citizenship, which are essential for students to thrive in the digital age (Martin, 2008). Therefore, educators should integrate digital literacy instruction into the curriculum and provide students with opportunities to develop these skills through hands-on experiences and authentic tasks (Fraillon et al., 2019). Moreover, professional development programs for educators are crucial to enhance their digital literacy competencies and pedagogical skills in leveraging technology for language learning (Hicks et al., 2014).

Pedagogical Considerations: The effective integration of technology into English language education requires careful consideration of pedagogical principles, instructional design strategies, and learning theories (Means et al., 2009). Technology should be viewed as a tool to enhance, rather than replace, traditional teaching methods, supplementing face-to-face instruction with innovative learning experiences (Picciano, 2017). Therefore, educators should adopt a pedagogically sound approach to technology integration that aligns with the principles of active learning, constructivism, and socio-cultural theory (Lai & Khaddage, 2019). This involves designing technology-mediated learning activities that promote collaboration, inquiry, reflection,

and problem-solving (Oliver et al., 2018). Additionally, educators should provide scaffolding, guidance, and feedback to support students' engagement with technology and facilitate their language learning progress (Mouza, 2008). By adopting a student-centered approach and incorporating principles of universal design for learning (UDL), educators can create inclusive and accessible learning environments that accommodate diverse learners' needs and preferences (Rose & Meyer, 2002).

Recommendations for Future Directions: Moving forward, future research and practice in the field of technology-enhanced language learning should focus on addressing the aforementioned challenges and limitations while capitalizing on the potential benefits of technology integration. Several recommendations can guide future directions in this area:

1. Conduct longitudinal studies to examine the long-term effects of technology-enhanced learning on students' language proficiency, motivation, and engagement.
2. Investigate the differential impact of various types of technologies (e.g., mobile applications, online platforms, VR simulations) on different aspects of language learning (e.g., vocabulary acquisition, speaking proficiency).
3. Explore innovative pedagogical approaches and instructional strategies that leverage emerging technologies (e.g., artificial intelligence, augmented reality) to enhance language learning outcomes.
4. Investigate the role of socio-cultural factors, such as students' cultural backgrounds, linguistic identities, and social interactions, in shaping their experiences and perceptions of technology-enhanced language learning.
5. Design and implement professional development programs for educators to enhance their digital literacy competencies, pedagogical skills, and cultural responsiveness in integrating technology into language instruction.

By addressing these research priorities and implementing evidence-based practices, educators and researchers can work together to harness the full potential of technology to foster independent English learning among secondary school students.

Conclusion

In conclusion, technology offers unprecedented opportunities to transform independent English learning in secondary schools. By providing personalized, interactive, and immersive learning experiences, technology can empower students to take ownership of their learning journey and develop essential language skills beyond the confines of the classroom. However, successful integration requires careful consideration of various factors, including accessibility, digital literacy, pedagogical alignment, and cultural relevance. Moving forward, further research is needed to explore the long-term impacts and sustainability of technology-enhanced independent learning approaches in secondary English education. Ultimately, by leveraging the potential of technology, educators can create inclusive and engaging learning environments that foster students' linguistic proficiency and autonomy.

REFERENCES:

1. Alahmadi, M. A. (2018). Investigating English language learning websites: A case study of Saudi EFL learners. Arab World English Journal, 9(4), 313-324.
2. Baker, R. S., Corbett, A. T., & Koedinger, K. R. (2008). Depth of skill acquisition with worked examples and tutored problem solving. Journal of Educational Psychology, 100(4), 838-858.
3. Baralt, M., & Gurzynski-Weiss, L. (2017). “To be honest, grammar is not something I consciously think about most of the time”: An investigation of U.S. college students’ beliefs about grammar. System, 65, 78-91.
4. Benson, P. (2001). Teaching and researching autonomy in language learning. Longman.Benson, P., & Voller, P. (1997). Autonomy and independence in language learning. Routledge.
5. Benson, V., Filippaios, F., & Morgan, S. (2020). Digital literacy and learning strategies: A qualitative study of postgraduate students in business education. Education and Information Technologies, 25(3), 2147-2166.
6. Blyth, C., Reitsma, P., & Benson, P. (2018). Digital gamification of language learning in formal education: Teachers' perspectives on motivation affordances and limitations. Language Learning & Technology, 22(2), 106-130.

7. Chang, Y. H., & Hwang, G. J. (2018). Effects of an augmented reality-based mobile learning tool on students' learning achievements and attitudes in natural science inquiry activities. Interactive Learning Environments, 26(1), 114-128.

8. Chen, B., & Jang, S. J. (2010). Motivation in online learning: Testing a model of self-determination theory. Computers in Human Behavior, 26(4), 741-752.

9. Chen, C. M., Wang, Q., Kinshuk, & Chen, Y. C. (2018). Effects of integrating mobile technology-assisted peer assessment into project-based learning on students' learning attitudes and achievements. Journal of Computer Assisted Learning, 34(3), 327-339.

10. Chuang, H. C., Weng, C. Y., Huang, F. C., & Chiu, C. H. (2020). The effectiveness of using mobile devices for English listening: A study of college students in Taiwan. Computer Assisted Language Learning, 33(7), 750-776.

11. Council of Europe. (2001). Common European framework of reference for languages: Learning, teaching, assessment. Cambridge University Press.

12. Cummins, J. (2000). Language, power, and pedagogy: Bilingual children in the crossfire. Multilingual Matters.

13. Dalgarno, B., & Lee, M. J. (2010). What are the learning affordances of 3-D virtual environments? British Journal of Educational Technology, 41(1), 10-32.

14. Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification". In Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments (pp. 9-15).

15. Fraillon, J., Schulz, W., & Ainley, J. (2019). Preparing for life in a digital world: IEA International Computer and Information Literacy Study 2018 international report. Springer.

16. Gee, J. P. (2007). What video games have to teach us about learning and literacy. Palgrave Macmillan.

17. Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. The Internet and Higher Education, 19, 18-26.

18. Godwin-Jones, R. (2011). Mobile apps for language learning. Language Learning & Technology, 15(2), 2-11.

19. Graham, C. R., Woodfield, W., & Harrison, J. B. (2019). A framework for institutional adoption and implementation of blended learning in higher education. The Internet and Higher Education, 42, 27-43.

20. Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?--A literature review of empirical studies on gamification. In 2014 47th Hawaii International Conference on System Sciences (pp. 3025-3034). IEEE.

21. Higgins, J. P., Altman, D. G., Gøtzsche, P. C., Jüni, P., Moher, D., Oxman, A. D., ... & Sterne, J. A. (2011). The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. BMJ, 343, d5928.

22. Hicks, D., Lee, S., Berson, M., Bolick, C., & Diem, R. (2014). Guidelines for using technology to prepare social studies teachers. Contemporary Issues in Technology and Teacher Education, 14(1), 1-10.

23. Hwang, G. J., Shi, Y. R., & Chu, H. C. (2019). A concept map-embedded educational computer game for improving students' learning performance in natural science courses. Computers & Education, 135, 75-87.

24. Kitchenham, B. (2004). Procedures for performing systematic reviews. Keele, UK, Keele University, 33(2004), 1-26.

25. Kizilcec, R. F., Pérez-Sanagustín, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in Massive Open Online Courses. Computers & Education, 104, 18-33.

26. Klopfer, E., & Sheldon, J. (2010). Augmenting your own reality: Student authoring of science-based augmented reality games. New Directions for Youth Development, 2010(128), 85-94.

27. Kukulska-Hulme, A. (2012). Language learning defined by time and place: A framework for next generation designs. In L. Bradley & S. Thouësny (Eds.), CALL: Using, Learning, Knowing: EUROCALL Conference Proceedings 2012 (pp. 163-169). Research-publishing.net.

28. Lai, K. W., & Khaddage, F. (2019). Exploring teachers' pedagogical beliefs, perceptions, and practices of game-based learning: A cross-cultural study. British Journal of Educational Technology, 50(1), 42-57.

29. Lai, K. W., & Zhao, Y. (2006). Does the use of computer technology improve student outcomes? The Journal of Technology, Learning and Assessment, 4(3), 1-30