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DIGITAL TECHNOLOGIES AS A MEANS OF DEVELOPING CRITICAL THINKING AMONG SECONDARY SCHOOL STUDENTS IN ENGLISH AS A FOREIGN LANGUAGE EDUCATION: A THEORETICAL ANALYSIS

Abstract. This study is a theoretical exploration of the role of digital technologies in the development of critical thinking skills in the context of English as a foreign language education among secondary school students. Although there has been a growing interest in the topic of digital tools and their integration in EFL teaching, there is little research that targets learners at secondary school with a focus on the specific context of Kazakhstan. This study addresses the question: What role can digital technologies play in developing critical thinking in secondary EFL classrooms?

A literature review and thematic synthesis of 30 scientific sources, including in-depth analysis of 10 studies examining secondary education. The findings indicate that digital tools including AI-based learning platforms, digital annotation tools and collaborative applications can successfully support higher-order thinking skills when they are implemented with appropriate pedagogical strategies and teacher guidance. However, issues such as digital distraction, superficial engagement, concerns over authenticity and unequal access appear to remain serious challenges.

The study addresses this gap in research by providing a conceptual synthesis relating to secondary EFL education and practical implications for teachers and curriculum developers.

Keywords: digital technologies, critical thinking, higher-order thinking skills, English as a foreign language, foreign language education, secondary school students.

Introduction

Nowadays, critical thinking is one of the most important skills for success in education and life. Critical thinking and the ability to make reasoned judgments are particularly significant for the English as a foreign language context, where learners are not merely required to perform well on

tests of linguistic forms, but they also need to read authentic materials critically, becoming familiar with cultural perspectives and being able to use the language in different real life situations. With regard to modern educational policies in the world, including Kazakhstan, now there is a growing emphasis on skills of the 21st century: critical thinking, digital literacy and higher-order cognitive abilities. Kazakhstan has launched many state initiatives aimed at digitalizing of the education system, development of not only digital competences but also implementation of innovative ways of teaching. The results of a few recent studies conducted at Kazakhstani higher education institutions show that digital tools have a motivating effect on students and increase their interest in learning. However, these advances continue to be largely at the university level, whereas the EFL developmental and motivational needs specific to EFL secondary school students have been afforded much less theoretical consideration.

This creates noticeable research gap in understanding how digital technologies can effectively foster critical thinking at the secondary school level within the Kazakhstani educational context. The present theoretical study seeks to address this gap. It aims to analyse the role and pedagogical potential of digital technologies as a means of developing critical thinking skills among secondary school students in English as a Foreign Language education. The central research question guiding this study is: What is the potential role of digital technologies in developing critical thinking skills among secondary school students in English as a Foreign Language education? The study assumes that digital technologies can significantly foster critical thinking when appropriately aligned with EFL pedagogical goals and cognitive theories.

Literature review

Critical thinking in the study of Merta L. W.S., Ratminingsih N.M., & Budasi I.G. [1] is considered as purposeful self-regulatory judgment which results in interpretation analysis evaluation and inference. Exercises for critical thinking skills allows learners to use linguistic forms in authentic texts by accessing cultural perspectives and exploring complex real world issues in English [1], [9], [20]. According to Pang Y. [9] if critical thinking is incorporated in an EFL classroom, learners build communicative competence and are better prepared for academic success and work performance. In addition to the above, Huertas-Abril C.A. [12] and Rybchynska A. [18] suggest that English lessons in secondary educational contexts can serve as a valuable means of developing competencies among school students who are at an important stage in their physical development which will better prepare adolescents for understanding 21st-century information rich digital environment. In this context, Indah et al. [17] reveal stronger relations of critical thinking with research competence as well as digital literacy among EFL students while Susyla D., & Jaya S. [19] highlight its integration into assessment practices as a way to deepen language proficiency and cognitive abilities.

Over the past few years, the combination of digital technologies with active learning attracted more and more researchers' attention within the Kazakhstani educational context. According to Мейрамова С.А., Tusupbekova M., & Kulgildinova T.A. [3] rapid innovations in digital technologies provide a steady atmosphere for the emergence of models and approaches in teaching English such as problem-based learning (PBL), case-based learning (CBL) and team based learning (TBL). The co-authors demonstrate the various applications of tools like Mentimeter, YouTube, Ted-Ed, Microsoft Power BI, ChatGPT and Quizlet that help structure joint activities, provide quick feedback helping in creating a digital learning environment. A survey conducted on 46 first-year university students found that YouTube (47.8 %) and Quizlet (43.5 %) are the most commonly used tools; this greatly increased motivation and involvement in their academic careers. According to Мейрамова С.А., Tusupbekova M., & Kulgildinova T.A. [3] these digital tools promote critical thinking, attentiveness to language, and collaborative solution finding when they are combined with engaging processes (though note that many of these practices are predominantly present at the post-secondary level in Kazakhstan).

The advent of new digital technologies provides strong opportunities for promoting critical thinking in EFL contexts. Merta L. W. S., Ratminingsih N.M., & Budasi I. G. [1] claim that digital tools such as Web 2.0 applications, online collaborative platforms, interactive resources, and AI-

powered assistants offer interactive, authentic, and learner-centered environments that align closely with constructivist principles. Softa V. [4] reports that the vast majority of EFL teachers (91-95 %) consider digitalization time and effort effective and essential for enhancing the foreign language environment, although only 33-42 % of them design effective task types or possess a wide repertoire of techniques. Sabiri K.A. [11] states that ICT integration transforms the teaching environment into a learner-centered one, while Bećirović, S., Brdarević-Čeljo A., & Delić H. [15] confirm that students themselves report largely positive experiences with technology-based learning (TBL), noting increased motivation, autonomy, and access to authentic materials. Ram [8] and Indriani C.L., Muth'im A., & Febriyanti E.R. [7] similarly describe how digital resources such as games, mobile applications, and online platforms improve writing skills, pronunciation training, and overall language acquisition.

Specific digital tools have received detailed attention across recent studies. Yin, X. [2] claims that AI-driven platforms such as ChatGPT, when used as an «ideal peer» in EFL writing, significantly improve critical thinking skills through AI-assisted brainstorming worksheets and peer-review checklists. Avsheniuk, N., Lutsenko, O., Svyrydiuk, T., & Seminikhyna, N. [6] suggest that ChatGPT supports in-depth understanding of critical thinking concepts, provides model discourse with critical thinking elements, and promotes learner independence in English courses. Huertas-Abril, C.A. [12] reports that virtual classrooms and online video discussion platforms such as Flipgrid enable secondary school students to practice oral expression, comment on peers' videos, send messages, and include additional media, thereby fostering new literacies and critical meaning-making beyond simple screen reading. Pang [9] adds that web-based flipped learning combined with social media creates cooperative and collaborative activities that enhance learner engagement and critical thinking through high-quality interaction and timely feedback. In addition, gamified apps play an important role. Ram Y. [8] concludes that applications such as Duolingo and Quizlet can create engaging, self-paced learning experiences that enhance motivation, vocabulary acquisition, pronunciation practice and real-time feedback, resulting in contributing to higher-order thinking. Merta, L. W. S., Ratminingsih, N.M., & Budasi, I.G. [1] further mention specific learning media such as YouTube videos, Toondoo, e-books, Mind Mapple, and podcasts as effective tools that create a fun learning environment and stimulate critical thinking. Nykyporets, S.S. [14] describes how interactive technologies in foreign language lessons, including various digital platforms, serve as a way of critical thinking formation even for students of non-linguistic universities. Мейрамова, С.А., Тусупбекова, М., & Кульгильдинова, Т.А. [3] provide concrete Kazakhstani examples of how Mentimeter, Padlet, Calameo, Ted-Ed, and Edpuzzle support case-based and team-based learning, helping students develop analytical and communicative skills through real-life tasks.

Theoretical frameworks help explain why these tools are effective. Merta L.W.S., Ratminingsih N.M., & Budasi I.G. [1], Wei J., & Li H. [20], and Susyla D., & Jaya S. [19] explain that lower-order thinking skills (remembering and understanding) can be supported by basic digital resources, while higher-order skills (analysis, evaluation and creation) are significantly enhanced by tools that enable debate, source evaluation, content creation, and collaborative problem-solving. Wei, J., & Li, H. [20] further integrate connectivism theory, suggesting that in the digital age learning occurs through the formation and navigation of networks, meaning EFL students develop critical thinking by connecting information from multiple online sources, assessing credibility, and participating in global communities.

However, there are several disadavantages of the use of digital technologies. Meyramova S.A., Tussupbekova M., & Kulgildinova T.A. [3] and Avsheniuk N., Lutsenko O., Svyrydiuk T., & Seminikhyna N. [6] note that AI-generated content may raise authenticity issues, while other authors such as Softa [4] and Lin Z., Ryskulova B. A., Xi C., Shanshan R., & Apaeva S. K. [10] point to gaps in teachers' ability to design effective digital tasks. Rybchynska A. [18] and Indriani C.L., Muth'im A., & Febriyanti E.R. [7] emphasize that the effectiveness of strategies such as project-based and problem-based learning supported by digital tools is different. Huertas-Abril, C. A. [12] and Karmova M., Khachmafova Z., Khabekirova Z., Khachetsukova Z., &

Shkhumishkhova A. [13] argue that while digital tools increase accessibility, their integration must be carefully aligned with pedagogical goals to avoid superficial use.

Although the research on ICT-supported EFL teaching has grown substantially, several gaps remain. Wei J., & Li H. [20], in their systematic review covering 2015-2024, note that while communicative, informative, and constructive ICT tools are widely used and effective for analysis, evaluation, and conclusion, most existing studies focus on higher education or general EFL contexts. Sabiri K.A. [11] and Merta L. W. S., Ratminingsih N.M., & Budasi I.G. [1] similarly observe that there is limited theoretical attention to the specific developmental, motivational, and infrastructural needs of secondary school students (ages 11-17). Meyramova S.A., Tussupbekova M., & Kulgildinova T.A. [3] confirm that in Kazakhstan most practical implementations of digital tools with active methods are still concentrated at the university level. Indah R.N., Toyyibah T., Budhiningrum A.S., & Afifi N. [17] and Susyla, D., & Jaya, S. [19] add that the relationship between digital literacy, research competence, and critical thinking is not always straightforward, and theoretical synthesis that systematically integrates the pedagogical affordances of specific digital tools (AI platforms, gamified apps such as Duolingo and Quizlet, virtual classrooms such as Zoom and Flipgrid) with established cognitive frameworks such as Bloom's Digital Taxonomy, constructivism, and connectivism at the secondary school level remains insufficient. Bećirović S., Brdarević-Čeljo A., & Delić H. [15] and Avsheniuk N., Lutsenko O., Svyrydiuk T., & Seminikhyna N. [6] further highlight that the potential risks and limitations of these tools in fostering genuine (rather than superficial) critical thinking in secondary EFL classrooms are still under-theorized. Nykyporets S.S. [14], Huertas-Abril C.A. [12], and Lin Z., Ryskulova B.A., Xi C., Shanshan R., & Apaeva S.K. [10] also point to the need for more focused work on teacher training and student perceptions in secondary settings.

The present theoretical analysis addresses these gaps by providing a comprehensive conceptual analysis of the role and pedagogical potential of digital technologies, including AI-driven platforms, gamified apps such as Duolingo and Quizlet, and virtual classrooms such as Zoom and Flipgrid in developing critical thinking skills among secondary school students in English as a Foreign Language education, with particular reference to the Kazakhstani educational context. It draws on established cognitive and learning theories while highlighting both affordances and limitations, thereby offering a balanced theoretical foundation for future empirical studies and practical implementation in secondary EFL classrooms.

Methods and Materials

This study is theoretical analysis aimed at examining the role and pedagogical potential of digital technologies in developing critical thinking skills among secondary school students in English as a foreign language education. The research does not have any empirical data collection, classroom experiments, surveys or statistical procedures.

The literature search was conducted between March and April 2026 using the major academic databases Google Scholar, Scopus, Web of Science, ERIC, and CyberLeninka. The search combined the keywords «digital technologies», «digital tools», «critical thinking», «higher-order thinking skills», «EFL», «English as a Foreign Language», «secondary school», «middle school», and «high school». The search was limited to peer-reviewed journal articles and high-quality theoretical works published between 2020 and 2026. The initial broad search produced more than 500 relevant publications on digital technologies and critical thinking in EFL contexts.

Strict inclusion and exclusion criteria were applied to ensure relevance and quality. Publications were included only if they met the following criteria:

(1) examined the relationship between digital technologies and critical thinking or higher-order thinking skills;

(2) focused on EFL or English language teaching;

(3) participants were secondary school students or the study provided clear implications for this educational level;

(4) offered theoretical, conceptual, or empirical insights.

Publications that were purely technical, descriptive, unrelated to language education, or focused only on primary or higher education without secondary school implications were excluded. After careful screening of titles for in-depth analysis and thematic synthesis, the following 10 most relevant studies were chosen: Kulymbetova M. [21], Williams D., & Bower M. [22], Alghasab M. B. [23], Harahap D.K., Daulay S.H., & Dewi U. [24], Duan Y., & Yu S. [25], Mahmud A.F., Usman A.H., Dahlan S., Nurchalis N.F., & Wattiheluw N. [26], Dr. Saira, Dr. Nishat Zafar, Dr. Mobeen Ul Islam. [27], Afriyeni Y., & Zuriati D. [28], Schenck A. [29] and Pardede P. [30].

The study used a combination of qualitative content analysis and thematic synthesis. Each of the 10 selected articles was read in full and coded according to the following categories: types of digital technologies, reported effects on critical thinking skills, pedagogical approaches, benefits, challenges and limitations, and context-specific findings. The coded data were compared across studies to identify patterns, similarities, and differences between practical and theoretical works. Particular attention was paid to the applicability of the results to the Kazakhstani educational context. This systematic and transparent methodological approach ensures the rigor and reproducibility of the theoretical findings.

Results and Discussion

The thematic synthesis of the 30 selected sources, with in-depth analysis of the 10 most relevant studies conducted specifically in secondary school contexts, revealed several consistent patterns regarding the use of digital technologies for developing critical thinking in EFL education.

All 10 key studies were carried out directly with secondary school students in EFL settings. The majority (8 out of 10) were practical/empirical studies, while 2 combined practical and theoretical elements. The studies represent diverse geographical contexts, including Kazakhstan [21], international [22], Gulf countries [23], Indonesia [24, 26, 28,30], China [25], South Korea [29], and Pakistan [27] (Table 1).

Table 1 – Comparative Summary of Findings

Study	Year	Country	Main Digital Tools	Key Findings on Critical Thinking
Kulymbetova M. [21]	2026	Kazakhstan	Various digital tools	Positive impact on language proficiency and critical thinking
Williams D., & Bower M. [22]	2025	International	Technology-mediated dialogue	Significant improvement in critical thinking through dialogue
Alghasab M.B. [23]	2025	Gulf countries	AI tools (ChatGPT)	Improved writing skills and higher-order thinking
Harahap D.K., Daulay S.H., & Dewi U. [24]	2025	Indonesia	Digital project-based learning	Enhanced critical thinking and problem-solving
Duan Y., & Yu S. [25]	2023	China	Digital annotation tools	Positive effect on critical reading development
Mahmud A.F., Usman A.H., Dahlan S., Nurchalis N.F., & Wattiheluw N. [26]	2025	Indonesia	Lesson study with digital tools	Improved critical thinking via collaborative approach
Dr. Saira, Dr. Nishat Zafar, Dr. Mobeen Ul Islam. [27]	2022	Pakistan	Digital learning platforms	Increased critical thinking skills
Afriyeni Y., & Zuriati D. [28]	2025	Indonesia	Digital annotation	Fostered critical reading skills
Schenck A. [29]	2024	South Korea	Various technologies	Positive relationship between technology use and critical thinking
Pardede P. [30]	2022	Indonesia	ICT tools	Positive teacher perceptions and student outcomes

The majority of the studies consistently reported that digital technologies have a positive effect on critical thinking. The most common benefits included improved analytical skills, better evaluation of information, increased ability to construct arguments, and enhanced collaborative problem-solving. AI tools and digital annotation tools (Alghasab M.B. [23], Duan & Yu [25], Afriyeni Y., & Zuriati D. [28]) were particularly effective for developing higher-order thinking in writing and reading. Digital project-based learning and technology-mediated dialogue (Harahap D. K., Daulay S. H., & Dewi U. [24], Williams D., & Bower M. [22]) showed strong positive effects on critical dialogue and group reasoning.

A high degree of similarity was observed among the practical studies. Almost all of them concluded that digital tools increase student engagement and motivation, which in turn supports the development of critical thinking. The studies also consistently emphasised the importance of well-designed tasks and teacher guidance for achieving meaningful results.

Practical studies focused on specific tools and immediate classroom outcomes, providing concrete examples and student feedback. Theoretical and mixed studies (Kulymbetova M. [21], Schenck A. [29]) offered broader conceptual frameworks and highlighted the need for systematic integration of digital technologies with cognitive development theories.

Common challenges identified across the studies included digital distraction, risk of superficial engagement, authenticity issues with AI-generated content, and the digital divide. Several authors also noted the lack of sufficient teacher training as a major barrier to effective implementation in secondary schools.

In Kazakhstan, Kulymbetova M. [21] is one of the very few studies that directly addresses the secondary school level. It confirms the potential of digital technologies but also highlights the need for more localised research and teacher professional development.

Overall, the results of the analysis confirm that digital technologies can serve as an effective means for developing critical thinking in secondary EFL classrooms when used with appropriate pedagogical design and teacher support.

The thematic synthesis of the literature confirms that digital technologies have substantial potential to support the development of critical thinking skills among secondary school students in EFL education. The 10 key studies conducted specifically in secondary school contexts consistently showed that tools such as AI platforms (ChatGPT), digital annotation tools, project-based digital platforms, and collaborative applications (Mentimeter, Padlet, Flipgrid) can enhance higher-order thinking processes, including analysis, evaluation, argumentation, and critical reading [23, 24, 25, 26, 28, 30]. Practical studies demonstrated clear improvements in student engagement, motivation, and the ability to construct reasoned opinions when digital tools were used with well-designed tasks and teacher guidance [21, 22, 27].

In the Kazakhstani context, Kulymbetova M. [21] provides one of the few local examples showing positive effects of digital technologies on language proficiency and critical thinking at the secondary level. However, most existing research still originates from other countries (Indonesia, China, South Korea, Pakistan), highlighting the limited number of local studies.

A significant outcome of this analysis is the identification of persistent research gaps. Although more than 500 publications on digital technologies and critical thinking in EFL were initially identified, only a small number of studies have been conducted specifically with secondary school students. The majority of research remains concentrated at the university level or provides general overviews. In Kazakhstan, empirical and theoretical works at the secondary school level are particularly scarce. Furthermore, few studies systematically integrate specific digital tools with cognitive frameworks such as Bloom’s Digital Taxonomy, constructivism, and connectivism, or examine long-term effects on critical thinking.

This theoretical article makes several contributions. It provides a comprehensive conceptual synthesis that brings together international findings and adapts them to the Kazakhstani educational context. It offers secondary school EFL teachers, curriculum developers, and policymakers a balanced view of both the affordances and limitations of digital technologies. The study can serve

as a theoretical foundation for the development of localised teaching materials, teacher training programs, and digital integration strategies in Kazakhstani secondary schools.

Based on the results of this analysis, several directions for future research can be recommended. First, empirical studies (quasi-experimental or longitudinal) should be conducted in Kazakhstani secondary schools to test the effectiveness of specific digital tools on critical thinking development. Second, comparative research between urban and rural schools would help address the digital divide. Third, teacher training programs focused on designing pedagogically sound digital tasks should be developed and evaluated. Finally, mixed-methods studies exploring students' and teachers' perceptions of digital technologies in relation to critical thinking would provide deeper insights for policy and practice.

Conclusion

This theoretical study has examined the role of digital technologies in developing critical thinking skills among secondary school students in English as a Foreign Language education. The synthesis of 30 sources, including 10 studies conducted specifically in secondary school contexts, shows that digital tools such as AI platforms, digital annotation tools, project-based applications, and collaborative platforms can significantly enhance higher-order thinking skills when integrated with appropriate pedagogical design and teacher support.

The findings confirm the positive potential of these technologies, while also highlighting important limitations, including digital distraction, superficial engagement, authenticity issues with AI-generated content, and the digital divide. In the Kazakhstani context, research at the secondary school level remains very limited, underlining a clear research gap.

This paper provides a conceptual framework that bridges international findings with local educational realities. It offers practical implications for EFL teachers and curriculum developers and lays a foundation for future empirical research. Longitudinal studies, teacher training programmes, and context-specific models are recommended to ensure effective and equitable use of digital technologies in Kazakhstani secondary schools.

In conclusion, digital technologies represent a promising means for fostering critical thinking, but their success ultimately depends on thoughtful pedagogical integration and sensitivity to the developmental needs of secondary school students.

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ЦИФРОВЫЕ ТЕХНОЛОГИИ КАК СРЕДСТВО РАЗВИТИЯ КРИТИЧЕСКОГО МЫШЛЕНИЯ У УЧАЩИХСЯ СРЕДНЕЙ ШКОЛЫ В ОБУЧЕНИИ АНГЛИЙСКОМУ ЯЗЫКУ КАК ИНОСТРАННОМУ: ТЕОРЕТИЧЕСКИЙ АНАЛИЗ

Аннотация. Данное исследование является теоретическим анализом роли цифровых технологий в развитии навыков критического мышления в контексте обучения английскому языку как иностранному в средней школе. Несмотря на то что интерес к цифровым инструментам и их применению в преподавание английского языка растет, в Казахстане существует очень малое количество исследований, ориентированных на учащихся средней школы. В исследовании рассматривается следующий вопрос: какую роль могут играть цифровые технологии в развитии критического мышления на уроках английского языка на уровне средней школы?

В рамках исследования был проведён обзор литературы и тематический синтез 30 научных источников, включая углублённый анализ 10 исследований, посвящённых среднему образованию. Полученные результаты показывают, что цифровые инструменты, включая AI-платформы, инструменты цифровой аннотации и приложения для совместной работы, могут эффективно способствовать развитию навыков мышления высокого уровня при условии их применения с использованием соответствующих педагогических стратегий и при поддержке учителя. Однако такие проблемы, как цифровая отвлекаемость, поверхностное вовлечение, вопросы аутентичности и неравный доступ по-прежнему остаются серьёзными проблемами.

Данное исследование восполняет существующий научный пробел, предлагая концептуальное обобщение, относящееся к преподаванию английского языка как иностранного в средней школе, а также практические рекомендации для учителей и разработчиков учебных программ.

Ключевые слова: цифровые технологии, критическое мышление, навыки мышления высокого уровня, английский язык как иностранный, обучение иностранному языкам, среднее образование, цифровые инструменты.

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АҒЫЛШЫН ТІЛІН ШЕТ ТІЛІ РЕТІНДЕ ОҚЫТУДА ОРТА МЕКТЕП ОҚУШЫЛАРЫНЫҢ СЫНИ ОЙЛАУЫН ДАМЫТУ ҚҰРАЛЫ РЕТІНДЕ ЦИФРЛЫҚ ТЕХНОЛОГИЯЛАР: ТЕОРИЯЛЫҚ ТАЛДАУ

Аңдатпа. Бұл зерттеу орта мектеп жағдайында ағылшын тілін шет тілі ретінде оқытуда сыни ойлау дағдыларын дамытудағы цифрлық технологиялардың рөлін теориялық тұрғыдан талдауға арналған. Цифрлық құралдарға және оларды ағылшын тілін оқытуда қолдануға деген қызығушылықтың артуына қарамастан, Қазақстанда орта мектеп оқушыларына бағытталған зерттеулердің саны өте аз. Зерттеуде келесі сұрақ қарастырылады: цифрлық технологиялар орта мектеп деңгейіндегі ағылшын тілі сабақтарында сыни ойлауды дамытуда қандай рөл атқара алады?

Зерттеу аясында 30 ғылыми дереккөзге әдеби шолу және тақырыптық синтез жүргізілді, оның ішінде орта білімге қатысты 10 зерттеу терең талданды. Алынған нәтижелер AI-платформалар, цифрлық аннотация құралдары және бірлескен жұмысқа арналған қосымшалар сияқты цифрлық құралдар тиісті педагогикалық стратегияларды қолдану және мұғалімнің қолдауы болған жағдайда жоғары деңгейлі ойлау дағдыларын тиімді дамытуға ықпал ете алатынын көрсетеді. Алайда цифрлық алаңдатушылық, үстірт қатысу, аутенттілік мәселелері және тең емес қолжетімділік сияқты проблемалар әлі де маңызды мәселелер болып қала береді.

Бұл жұмыс аталған ғылыми олқылықтың орнын толтырып, орта мектепте ағылшын тілін шет тілі ретінде оқытуға қатысты тұжырымдамалық қорытынды ұсынады, сондай-ақ мұғалімдер мен оқу бағдарламаларын әзірлеушілер үшін практикалық ұсынымдар береді.

Тірек сөздер: цифрлық технологиялар, сыни ойлау, жоғары деңгейлі ойлау дағдылары, ағылшын тілі шет тілі ретінде (EFL), шет тілін оқыту, орта білім, цифрлық құралдар

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