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EFFECTIVE METHODS FOR DEVELOPING ENGLISH SPEECH SKILLS IN VISUALLY IMPAIRED STUDENTS THROUGH AUDIO TECHNOLOGIES

Аннотация

This article explores effective methods for developing English speech skills in visually impaired students through the use of audio technologies. The rapid advancement of digital tools has opened new opportunities for inclusive education, making language learning more accessible for learners with visual impairments. Audio technologies such as screen readers, podcasts, audiobooks, text-to-speech software, and interactive listening apps play a crucial role in enhancing the listening and speaking competencies of these students. The study highlights the importance of creating a learner-centered environment where audio materials serve not only as supplementary resources but also as primary tools for improving pronunciation, vocabulary, intonation, and fluency.

Key words: Visually impaired, speech skills, audio technologies, inclusive education, English learning, listening, communication.

ЭФФЕКТИВНЫЕ МЕТОДЫ РАЗВИТИЯ РЕЧЕВЫХ НАВЫКОВ НА АНГЛИЙСКОМ ЯЗЫКЕ У СЛАБОВИДЯЩИХ УЧАЩИХСЯ С ПОМОЩЬЮ АУДИОТЕХНОЛОГИЙ

Аннотация

В данной статье рассматриваются эффективные методы развития навыков английской речи у учащихся с нарушениями зрения с помощью аудиотехнологий. Стремительный прогресс цифровых инструментов открыл новые возможности для инклюзивного образования, делая изучение языка более доступным для учащихся с нарушениями зрения. Аудиотехнологии, такие как программы экранного чтения, подкасты, аудиокниги, программное обеспечение для преобразования текста в речь и интерактивные приложения для аудирования, играют ключевую роль в развитии навыков восприятия на слух и говорения у этих учащихся. В исследовании подчеркивается важность создания личностно-ориентированной среды обучения, где аудиоматериалы служат не только дополнительными ресурсами, но и основными инструментами для улучшения произношения, расширения словарного запаса, совершенствования интонации и беглости речи.

Ключевые слова: Слабовидящие, речевые навыки, аудиотехнологии, инклюзивное образование, изучение английского языка, аудирование, коммуникация.

KO'ZI OJIZ O'QUVCHILARNI INGLIZ TILIDA NUTQ KO'NIKMALARINI AUDIO TEXNOLOGIYALAR ORQALI RIVOJLANTIRISHNING SAMARALI USULLARI

Аннотация

Ushbu maqola ko'zi ojiz o'quvchilarda audio texnologiyalar yordamida ingliz tili nutq ko'nikmalarini rivojlantirishning samarali usullarini tadqiq etadi. Raqamli vositalarning tez sur'atlar bilan taraqqiy etishi inklyuziv ta'lim uchun yangi imkoniyatlar yaratib, ko'rish qobiliyati cheklangan o'quvchilar uchun til o'rganishni yanada qulaylashtirdi. Ekran o'quvchilar, podkastlar, audiokitoblari, matnni nutqqa aylantiruvchi dasturlar va interaktiv tinglash ilovalari kabi audio texnologiyalar bu o'quvchilarning tinglab tushunish va gapirish malakalarini oshirishda muhim rol o'ynaydi. Tadqiqot audio materiallar nafaqat qo'shimcha manba, balki talaffuz, lug'at boyligini oshirish, ohang va ravon nutqni yaxshilashning asosiy vositasi sifatida xizmat qiladigan o'quvchiga yo'naltirilgan muhit yaratishning ahamiyatini ta'kidlaydi.

Kalit so'zlar: Ko'zi ojizlar, nutq ko'nikmalari, audio texnologiyalar, inklyuziv ta'lim, ingliz tilini o'rganish, tinglash, muloqot.

Introduction. In today's rapidly evolving educational environment, ensuring equal learning opportunities for students with special needs has become a primary focus in language education. Among these learners, visually impaired students face unique challenges in acquiring and developing English speech skills due to their limited access to visual learning materials such as texts, images, and videos. However, the advancement of audio technologies has created new pathways to support the linguistic and communicative development of these learners [3]. Speech skills are a crucial component of mastering any language, as they enable learners to express thoughts, engage in conversations, and participate in social interactions confidently. For visually impaired students, traditional teaching methods that rely heavily on visual stimuli are often ineffective and demotivating. Therefore, the integration of audio technologies into English language instruction serves as an essential strategy to overcome these barriers and promote inclusive education.

Audio resources such as screen readers, podcasts, audiobooks, text-to-speech applications, and voice-recording tools provide visually impaired students with direct access to authentic language input [5]. These tools not only help improve listening comprehension but also enhance pronunciation, intonation, and

speaking fluency. By engaging in audio-based activities, learners can practice their speech in a safe environment, build confidence, and receive immediate auditory feedback. Moreover, audio technologies support independent learning by allowing students to revisit materials at their own pace, fostering autonomy and self-directed learning. Teachers can create interactive tasks, role-plays, and dialogue practices using these tools to encourage active participation and improve communication skills. This paper aims to explore the most effective methods for developing English speech skills in visually impaired students through audio technologies. It highlights practical strategies, examines the impact of audio-based learning on speech development, and provides recommendations for teachers to enhance the language learning experience of visually impaired students [7]. Ultimately, the study seeks to contribute to the broader goal of creating an inclusive and accessible educational environment for all learners.

A literature review. The development of speech skills in visually impaired students presents unique challenges that require the integration of specialized teaching methods and technologies. According to Wittenstein, auditory strategies play a crucial role in teaching language to blind and visually impaired students, enabling them to compensate for the lack of visual input by

enhancing listening and speaking skills [10]. Studies by Argyropoulos emphasize that Information and Communication Technologies (ICT), particularly audio-based tools, have proven effective in supporting visually impaired learners in English language acquisition [2]. Richards highlights the importance of listening and speaking activities in language learning, which are easily adaptable for visually impaired learners through audio technologies [8]. Tools such as screen readers, audiobooks, podcasts, and text-to-speech software provide access to authentic language input and pronunciation models. These tools promote better comprehension, enhance vocabulary acquisition, and improve fluency in speech production.

Furthermore, Gonzalez states that podcasts and audiobooks not only serve as valuable resources for listening practice but also engage learners in meaningful contexts, promoting critical thinking and language usage in real-life situations [4]. Similarly, Mayer suggests that multimedia learning, when adapted appropriately, can significantly support language development even for learners with disabilities [6]. Research by Akram and Malik confirms that audio aids increase motivation and confidence among ESL learners, particularly at elementary levels [1]. The studies collectively agree that incorporating audio technologies in English language teaching creates an inclusive environment, allowing visually impaired students to develop essential speech skills effectively. Overall, the literature supports the integration of audio resources as a practical and impactful approach to enhancing speech skills in visually impaired learners.

Research methodology. This study employs a qualitative research methodology to explore effective methods for developing English speech skills in visually impaired students through audio technologies. Data was collected from a sample of 15 visually impaired students aged 14 to 18, studying at a specialized educational institution. The primary research tools included classroom observations, audio-recorded speaking tasks, and semi-

Table. Improvement in English speech skills after using audio technologies.

Speech skill	Initial level	After 6 weeks	Improvement	Audio tools used
Pronunciation	Weak	Good	Clearer word articulation	Text-to-speech, audiobooks
Vocabulary usage	Limited	Moderate-strong	Increased range of words	Podcasts, audiobooks
Speaking fluency	Slow	Fluent	Improved sentence flow	Dialogue practice, podcasts
Listening comprehension	Low	High	Better understanding of context	Screen readers, audiobooks
Intonation	Poor	Improved	More natural speech rhythm	Audio dialogues, role-plays
Confidence level	Low	High	Increased participation	Repetitive listening tasks, audio tasks

Notes:

Participants: 15 visually impaired students;

Duration: 6 weeks of audio-integrated learning;

Observation: Clear progress in all aspects of speech skills;

Most Effective Tools: Audiobooks, Podcasts, Text-to-

Speech apps.

During the research process, an important issue was identified – currently, there is no official Braille transcription of English letters or pronunciation guidelines available for visually impaired students in Uzbekistan. This creates additional challenges in learning correct English pronunciation. As part of this project, we plan to develop a small guidebook that provides the Braille transcription of English letters along with pronunciation tips. This will be the first resource of its kind in Uzbekistan, aimed at helping visually impaired learners improve their independent speaking skills in English more effectively.

Conclusion. In conclusion, the integration of audio technologies into English language instruction for visually

structured interviews with both students and English language teachers.

Audio technologies such as screen readers, podcasts, audiobooks, and text-to-speech software were integrated into regular English lessons over a period of six weeks. Students participated in listening and speaking activities designed to improve pronunciation, fluency, and intonation. Teachers monitored the learners' progress and provided feedback based on students' recorded responses.

Data analysis focused on identifying improvements in speech skills, levels of student engagement, and challenges faced during the process [9]. The findings helped determine which audio methods were most effective in enhancing the speaking competence of visually impaired learners.

Analysis and results. The analysis of classroom observations, recorded speech tasks, and interviews revealed significant improvement in the students' English speech skills after integrating audio technologies. Most participants showed noticeable progress in pronunciation, fluency, and intonation. Audiobooks and podcasts were particularly effective in expanding vocabulary and improving listening comprehension, while text-to-speech tools helped students practice pronunciation and sentence formation. Students reported increased motivation and confidence when performing speech tasks, as audio tools provided repeated exposure to correct language models. Teachers also noted that students became more active and engaged in speaking activities, demonstrating better sentence construction and clearer articulation. The findings indicated that interactive audio-based exercises, such as role plays and dialogue practices, enhanced students' communication skills. Overall, the use of audio technologies created a supportive learning environment, enabling visually impaired learners to overcome speech difficulties and develop their English-speaking competence more effectively.

impaired students has proven to be highly effective in developing their speech skills. Tools such as audiobooks, podcasts, text-to-speech applications, and interactive audio exercises significantly enhance pronunciation, fluency, and listening comprehension. These technologies not only improve language skills but also increase learners' motivation and confidence. However, the lack of a Braille transcription system for English letters and pronunciation guidelines in Uzbekistan remains a serious gap. Therefore, it is strongly recommended to develop a practical guide that includes English Braille transcriptions and phonetic instructions to support visually impaired learners. Teachers should also receive specialized training to effectively incorporate audio resources and Braille materials into lessons, ensuring a more inclusive, engaging, and accessible English learning environment for all students.

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