



Pedagogical technologies in the study of English phonetics

Odiljon MURTAZAKULOV¹

Denau Institute of Entrepreneurship and Pedagogy

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ABSTRACT

The field of language education is ever-changing. Today's language classrooms are vastly different from that of the mid-to-late 20th century (Eaton, 2010). In the realm of language learning, phonetics plays a critical role in developing accurate pronunciation and communication skills. With the advancement of pedagogical technologies, educators now have access to innovative tools and techniques that enhance the study of English phonetics. This article explores the significance of pedagogical technologies in the effective teaching and learning of English phonetics. There is also a discussion of phonetic issues occurring in speech production followed by explanations and corrections. The critical study of the advantages and downsides of the given approaches will be reviewed.

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Ingliz tili fonetikasini o'rganishda pedagogik texnologiyalar

ANNOTATSIYA

Kalit so'zlar:

talaffuz,
fonetika,
ICT vositalari,
multimedia manbalar,
nutq namunalari,
dasturiy ta'minot.

Ushbu maqolada pedagogik texnologiyalarning ingliz tili fonetikasini samarali o'qitish va o'rganishda ahamiyati o'rganiladi. Shu bilan birga, maqolada aynan nutq ishlab chiqarishda paydo bo'ladigan fonetik muammolar haqida ham muzokara mavjud. Bu muammolar haqida izohlar va ularni tuzatishlar, shuningdek, berilgan usullar ustunliklari va kamchiliklarining kritik tahlili amalga oshiriladi.

¹ Master of the Department of Foreign Language and Literature Denau Institute of Entrepreneurship and Pedagogy.
E-mail: Odiljon4706@gmail.com

Педагогические технологии в изучении фонетики английского языка

АННОТАЦИЯ

Ключевые слова:

произношение,
фонетика,
ИКТ средства,
мультимедийные ресурсы,
речевые образцы,
программное обеспечение.

В области изучения языка, фонетика играет критическую роль в развитии точного произношения и коммуникативных навыков. С развитием педагогических технологий педагоги теперь имеют доступ к инновационным инструментам и методикам, которые улучшают изучение фонетики английского языка. В этой статье исследуется значимость педагогических технологий в эффективном преподавании и изучении фонетики английского языка. В статье также обсуждаются фонетические проблемы, возникающие при произнесении речи, включая их объяснения и коррекцию. Будет рассмотрено критическое изучение преимуществ и недостатков данных подходов.

Introduction:

In the landscape of contemporary education, the integration of virtual environments and interactive applications has become pivotal, redefining traditional educational paradigms. The focus of this study arises from the critical need to explore effective methodologies for honing phonetic skills, particularly addressing the challenges encountered during the early stages of language acquisition. These challenges extend beyond mere phonetic skill development; they encompass the selection of appropriate educational materials that not only bolster student interest but also serve as motivational tools for sustained English language learning.

The impetus for this exploration is grounded in the Republic's proactive measures to enhance the quality of foreign language education, as outlined in the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated January 19, 2022, No. 34, titled "On additional measures to improve the study of foreign languages." This directive underscores the necessity to innovate and refine language education practices, thereby precipitating the investigation into cutting-edge pedagogical technologies tailored for teaching English phonetics.

This study endeavors to examine and delineate the diverse array of contemporary tools and techniques conducive to teaching and learning English phonetics. Its ultimate aim is to illuminate the strategic incorporation of sophisticated technological devices and applications in the pursuit of enhanced phonetic proficiency. Through a comprehensive exploration, this research endeavors to shed light on the transformative potential of these pedagogical technologies, their practical applications, and their consequential impact on the teaching and learning landscape of English phonetics.

Methods: Enhancing English Phonetics Instruction

In the realm of language education, the emphasis has traditionally been on grammar, vocabulary, listening, reading, and oral skills. However, pronunciation, a crucial element for effective communication, often takes a back seat in language teaching methodologies (Harmer, 2007). Recognizing the significance of pronunciation,

Pennington (1996) and Derwing (2010) advocate for a paradigm shift, urging educators to integrate pronunciation teaching from the early stages of language acquisition.

1. Interactive Pronunciation Software:

Central to modern pedagogical methodologies in English phonetics is the integration of interactive pronunciation software. These applications offer real-time feedback on pronunciation, intonation, and stress patterns. Through a combination of visual aids, audio recordings, and targeted exercises, learners gain the autonomy to enhance their phonetic accuracy independently.

2. Speech Recognition Technology:

The advent of speech recognition technology has revolutionized the landscape of English phonetics instruction. This innovative tool allows learners to compare their pronunciation with native speaker models, receiving instantaneous feedback. This technology provides a personalized learning experience, enabling learners to track their progress and focus on specific areas that require improvement.

3. Multimedia Materials and Online Resources:

The proliferation of pedagogical technologies has facilitated the creation and dissemination of multimedia materials and online resources dedicated to English phonetics instruction. These resources encompass interactive videos, audio recordings, and online pronunciation guides, offering learners diverse and engaging avenues for honing their phonetic skills.

4. Virtual Reality (VR) and Augmented Reality (AR):

Augmented Reality (AR) emerges as a dynamic technological medium applicable to language education, especially in teaching children. AR creates immersive learning experiences by overlaying digital content onto the real world, providing a unique and engaging approach to phonetics instruction.

5. Online Collaboration and Feedback:

Modern pedagogical technologies foster online collaboration and feedback in the study of English phonetics. Virtual classrooms, language exchange platforms, and online discussion forums serve as avenues for learners to practice phonetic skills collaboratively. Engaging in authentic communication with peers, teachers, and native speakers enhances learners' pronunciation abilities through continuous interaction and constructive feedback.

Incorporating these methods into English phonetics instruction aligns with the evolving landscape of language education, offering dynamic and effective approaches to mastering pronunciation skills.

Discussion:

Modern pedagogical technologies have greatly influenced the teaching of English phonetics, providing innovative and interactive approaches to instruction. These technologies offer various tools and resources that enhance the learning experience and promote effective phonetic skill development.

One prominent pedagogical technology is interactive pronunciation software. These programs utilize speech recognition technology to provide learners with real-time feedback on their pronunciation accuracy. Consequently, learners can practice phonetic sounds and receive immediate feedback on their articulation, intonation, and stress patterns. This personalized feedback helps learners identify and correct pronunciation errors, ultimately improving their overall phonetic skills. Apart from, Hennessy noted the

introduction of ICTs could act as a catalyst in stimulating teachers and pupils to work in new ways. (Hennessy, S. (2005). Such software enables learners to identify and correct their pronunciation errors, ensuring a more immersive and engaging learning experience. Studies that dealt with teaching phonetics courses using mobile applications are different according to the phonetic areas and applications types. According to Xiao & Luo "Phonetics is an essential part of foreign language learning, with the help of mobile technologies, mobile learning has developed into a new mode of learning". (Xiao, J. & Luo, Y. 2015).

Through voice recognition algorithms, learners can identify areas for improvement, such as vowel and consonant sounds, rhythm, and stress patterns. Speech recognition technology provides a personalized learning experience, allowing learners to track their progress and focus on specific phonetic aspects that require attention. To fulfil these aims, it is accepted that there are three main parts. Thus, defining important technological resources available for teaching pronunciation, materials can be divided into three main groups:

- a) *software and other programs;*
- b) *apps;*
- c) *websites, blogs, tutorials and the use of social networks.*

Multimedia materials play a crucial role in teaching English phonetics as well. Interactive videos, audio recordings, and online pronunciation guides offer learners exposure to authentic English pronunciation models. As a result, learners can engage with diverse accents and speech patterns through podcasts, songs, and interviews. This exposure enhances their listening skills, helps them imitate native speakers, and promotes a comprehensive understanding of English phonetics. Learners can access a wide range of authentic materials, such as podcasts, songs, and interviews, to practice listening and imitate native speakers. These multimedia materials enhance learners' exposure to diverse accents and speech patterns, promoting a more comprehensive understanding and mastery of English phonetics. Finally, the use of standard pronunciation and natural and suitable intonation to express ideas to achieve communication is combined with phonetics, listening and oral expression. For independent study of English phonetics, multimedia network technology should be based on the rules and needs of English phonetics learning and highlight the advantages of multimedia and network technologies to help phonetics learning. (Linyang Yuan1, Li Zhang2, 2022)

Virtual Reality (VR) and Augmented Reality (AR) technologies have also made significant contributions to phonetics instruction. Through virtual environments, learners can interact with characters, scenarios, and linguistic challenges, creating immersive experiences. VR and AR technologies provide a multisensory learning environment, allowing learners to visualize and experience phonetic features in a more engaging and memorable way. These technologies also support collaborative learning and real-time feedback, enhancing the effectiveness of phonetics instruction. AR increases the attention of the students and they seem more focused and involved. (Bower M, Howe C, McCreddie N and Robinson A, 2014).

Emerging technologies like Virtual Reality (VR) and Augmented Reality (AR) offer immersive and interactive experiences in the study of English phonetics. Learners can engage with virtual environments where they interact with characters, scenarios, and

linguistic challenges. VR and AR technologies provide a multisensory learning environment, enabling learners to visualize and experience phonetic features in a more engaging and memorable way. These technologies also allow for collaborative learning and real-time feedback, enhancing the effectiveness of phonetics instruction.

Online collaboration platforms have revolutionized the way learners practice and receive feedback on their phonetic skills. Virtual classrooms, language exchange platforms, and online discussion forums provide opportunities for learners to engage in authentic communication with peers, teachers, and native speakers. This collaborative learning environment fosters meaningful interactions, guidance, and continuous feedback, leading to improved pronunciation and communicative abilities. These collaborative platforms provide opportunities for learners to engage in authentic communication, receive guidance, and improve their pronunciation through continuous interaction and feedback. Besides, Feedback provides information to students and teachers about learning. It helps to reduce the gap between the student's current level of understanding and/or performance and a desired goal. Depending on the nature and delivery of the feedback, it can have powerful positive effects on student learning and engagement. (*Hattie & Timperley, 2007*).

EFL instructors encounter several challenges, as noted by researchers such as Maria Georgina (2022). These challenges encompass various aspects:

a) Technology-Related Constraints: Teachers highlighted impediments associated with using technology for pronunciation instruction. A significant challenge is the limited access some students have to the internet and computing devices outside the classroom. Consequently, students face difficulties practicing pronunciation and engaging in online activities remotely. Internet disruptions during classes were also identified as a barrier, hindering students from fully developing language skills through technological means. The consensus among teachers was that technology introduces distractions. For instance, one teacher noted, "When I post a link, students move to a different one, and then to another...they start to navigate!" Additionally, concerns were raised about the speed of dialogues in certain software (e.g., ELLLO) and low audio volume (e.g., Smrt), posing challenges for student comprehension.

b) Smrt English Course Limitations: Teachers critiqued the Smrt English course for lacking a dedicated section for pronunciation instruction. They observed that Smrt primarily emphasizes written response activities, such as fill-in-the-blanks or answering questions in writing. Consequently, instructors desiring to teach pronunciation using technology must search for specific software online, resulting in a time-consuming process.

c) Teacher-Related Limitations: Contrary to the responsibility assigned to language teachers in selecting didactic materials and online resources to enhance student learning, the study found instances where some teachers impede the incorporation of technology into pronunciation instruction. This perspective was articulated by some teachers, with one asserting that teaching pronunciation at lower levels is not a priority (Chapelle, 2003).

Conclusion

In conclusion, pedagogical technologies have transformed the teaching and learning of English phonetics, providing learners with interactive, immersive, and personalized experiences. Interactive pronunciation software, speech recognition technology, multimedia materials, VR/AR, and online collaboration platforms have revolutionized the way learners engage with and master phonetic aspects of English. As

educators continue to integrate these technologies into their instructional practices, learners can develop accurate pronunciation skills, enhance their communicative abilities, and achieve greater proficiency in English phonetics.

Nevertheless, a subset of teachers tends to downplay the importance of teaching pronunciation, particularly in lower proficiency levels. Some take it for granted, while others, not being native English speakers, may lack confidence in certain pronunciation aspects. Additionally, challenges such as limited experience with pronunciation software and time constraints underscore the necessity for professional development programs for teachers, enhancing their technological skills and cultivating interest in this facet of language education.

Factors like internet failures, inadequate internet access, a lack of computing devices at home, and distractions arising from internet navigation during class emerge as shared challenges that demand collaborative efforts from universities, teachers, and students for resolution, given their mutual impact.

Recognizing the limitations of the study, which relies on teachers' perceptions, future investigations should focus on assessing student outcomes following the use of specific technologies to refine this language sub-skill. While this study is a case-specific exploration, its findings can provide valuable insights for other universities with mandatory technology integration in language learning. The research contributes to a deeper understanding of EFL teachers' attitudes toward technology in pronunciation instruction at the tertiary level, shedding light on common online resources, pronunciation techniques, and their application across proficiency levels.

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