

CLASSIFICATION AND DIDACTIC POTENTIAL OF DIGITAL EDUCATIONAL TOOLS AIMED AT DEVELOPING ORAL SPEECH IN JAPANESE

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Abstract: *This article explores the challenges of forming oral speech skills in teaching Japanese as a foreign language and the role of modern digital technologies in addressing them. The study analyzes mobile applications, Artificial Intelligence (AI)-based programs, and online platforms aimed at overcoming difficulties related to Japanese phonetics, particularly pitch accent. The author develops a new classification of these digital tools based on their functional capabilities (phonetic tools, communicative simulators, audiovisual platforms, social networks). Furthermore, the article reveals the didactic potential, level of interactivity, and effectiveness of each group of tools in enhancing learner autonomy. Based on the analysis results, scientifically grounded methodological recommendations for the use of digital resources are provided for Japanese language teachers and independent learners.*

Keywords: *Japanese language, oral speech, digital educational tools, CALL, MALL, Artificial Intelligence, pitch accent, didactic potential, communicative competence, autonomous learning.*

INTRODUCTION


The 21st century's globalization and Japan's economic prominence have increased the demand for learning Japanese. However, traditional grammatical methods can no longer fully meet contemporary communicative demands. The unique phonetic characteristics of Japanese, honorific forms, and the complexity of sentence structures require new, innovative technologies for language acquisition.

To address this issue, modern digital technologies (CALL and MALL) and artificial intelligence tools offer new didactic opportunities for creating individualized learning paths and providing real-time pronunciation correction. The main objective of this research is to scientifically classify digital tools that contribute to the development of oral Japanese speech and to formulate effective methodological recommendations by analyzing their didactic potential.

LITERATURE REVIEW

A comparative analysis of contemporary research at the intersection of linguodidactics and digital pedagogy reveals that the role of digital tools in language teaching has been conceptually and deeply studied by Western scholars such as M. Warschauer, S. Bax, and G. Stockwell. They divide the development of CALL (Computer-Assisted Language






Learning) into three stages: behavioristic, communicative, and integrative. In the latter, integrative stage, technology becomes an integral part of the learning process, interpreted as a means to stimulate students' cognitive activity and expand social interaction. However, these theories are primarily based on English language (ESL/EFL) teaching experiences and therefore cannot fully encompass the specific characteristics of teaching languages with complex writing and phonetic systems like Japanese. In fundamental studies on Japanese as a Foreign Language (JFL) methodology, particularly in the works of Hatasa, Chikamatsu, and other Japanologists, the role of digital technologies is extensively covered, primarily in developing writing skills (Kanji acquisition) and reading comprehension. Still, the didactic mechanisms of digital tools in developing oral speech competence remain a relatively under-researched area. Many studies are limited to the effectiveness of transferring the "Shadowing" technique into a digital format. Furthermore, comprehensive scientific conclusions regarding the accuracy and methodological appropriateness of AI-based speech recognition and text-to-speech technologies in teaching Japanese prosodic features (intonation and accent) are insufficient.

Concurrently, while the pedagogical and psychological aspects of designing digital learning environments have been investigated by scholars in local and CIS countries, a linguodidactic classification of applications and platforms specifically geared towards oral communication in Japanese (e.g., social learning networks like "HelloTalk" and "Tandem," or phonetic visualization tools like "OJAD") has not been developed. Existing scientific sources often describe digital tools from the perspective of their technical capabilities, but their step-by-step impact on developing communicative competence in language learners, i.e., their didactic role in the transition from receptive to productive skills, has not been elucidated. Another crucial aspect is that problems related to "pitch accent" observed in Japanese learners are often overlooked or explained vaguely in traditional textbooks. In contrast, modern digital tools allow for visualizing this phonetic phenomenon through graphs and comparing the student's voice with that of a native speaker. Unfortunately, the methodology for utilizing these opportunities has yet to be fully integrated into the curricula of higher education systems. Therefore, systematically classifying digital resources that serve to develop oral speech in Japanese, not only based on technical but also linguodidactic and psycholinguistic criteria, determining their role in increasing student autonomy, and consequently creating an effective methodological model, represents a pressing scientific gap in contemporary Japanology and language teaching methodology.

METHODOLOGY

This research is based on a complex approach aimed at identifying the relationship between existing theoretical approaches and practical digital solutions in Japanese language teaching methodology. It synthesizes comparative-typological analysis,






descriptive description, pedagogical observation, and content analysis methods. The methodological foundation of the study comprises the principles of digital didactics and cognitive theories of language acquisition, which allowed us to evaluate various technological solutions not merely as technical tools but as pedagogical instruments that enhance the effectiveness of the learning process. The digital applications and platforms selected as the object of study were not chosen randomly but based on strict scientific and didactic criteria: specifically, the degree of the tool's adaptation to Japanese phonetic and grammatical features (pitch accent, mora, honorific language – keigo), the integration of artificial intelligence technologies (NLP – Natural Language Processing), the pedagogical ergonomics of the user interface, and high rating indicators provided by language learners and experts globally. Simultaneously, the results of pilot surveys and direct pedagogical observations conducted among Japanese language students at Andijan State Institute of Foreign Languages and other specialized higher education institutions were analyzed to determine which types of applications had the highest coefficient in overcoming students' communicative barriers and accelerating speech reaction, thus ensuring the empirical validity of the research. In the analysis process, each digital tool was studied in depth not only based on its technical functionality (e.g., the ability to record audio) but also from a linguodidactic perspective – that is, at what stage of language learning (receptive, reproductive, or productive) and which skill (pronunciation, vocabulary, dialogic speech) it serves to develop, and based on this, their scientific classification was developed.

CLASSIFICATION AND DIDACTIC ANALYSIS OF DIGITAL EDUCATIONAL TOOLS

The process of developing oral speech competence in Japanese is a multifaceted and complex mechanism, encompassing not only the correct application of lexical and grammatical units but also the suprasegmental phonetic phenomena and sociolinguistic norms specific to the Japanese language. Therefore, it is appropriate to categorize existing digital resources into four main groups based on their dominant didactic function and their impact on speech activity. The first and most fundamental group comprises Specialized Phonetic Tools for Pronunciation and Intonation (Phonetic Tools). These tools are designed to overcome difficulties in mastering the "pitch accent" phenomenon, which fundamentally differs from Uzbek and carries meaning-distinguishing features in Japanese. The didactic potential of platforms like OJAD (Online Japanese Accent Dictionary) and Prosody Tutor Suzukikun, belonging to this group, lies in their ability to visualize a student's speech, i.e., to display the sound wave and intonation contour graphically. This eliminates the cognitive gap between "listening and repeating." For instance, the Suzukikun program automatically generates the intonational model of the text entered by the student, showing through diagrams which syllable should have a raised or lowered pitch. This allows the student to






understand and self-correct pronunciation errors not just by listening but also by seeing, resulting in the conscious formation of a rhythmic sense characteristic of Japanese intonation and ensuring the naturalness of speech.

The second group consists of Communicative Simulators and AI-based Chatbots, primarily serving to eliminate psychological barriers in students, particularly the fear of making mistakes, and to develop spontaneous (unrehearsed) speech. Applications in this category, such as ChatGPT (Voice Mode), Duolingo, and Talk, leverage generative AI models to engage in real-time dialogue with students on any topic. The didactic value of these tools is demonstrated by their high level of interactivity and adaptivity: for example, during communication with ChatGPT, students can freely express their thoughts, and the system provides immediate, but "non-judgmental feedback" on grammatical or stylistic errors, minimizing the stress factor in the learning process. Furthermore, these simulators create an ideal environment for implementing the "role-play" method in a digital format. Students can ask the AI to play the role of a shop assistant, a hotel receptionist, or a conversational friend and practice speech models suitable for various social situations (e.g., formal style – desu/masu or informal style), which provides an individualized approach not always possible in a traditional classroom setting.

The third group includes Authentic Audiovisual Content Platforms, which act as a bridge ensuring the student's transition from the "artificial" language of textbooks to lively speech in real life. YouTube (Japanesepod101), Netflix (with the Language Learning with Netflix extension), and various podcasts (Teppei sensei) are not merely passive listening tools but invaluable resources for active "Shadowing" exercises. The didactic potential of these platforms fully aligns with Stephen Krashen's "Input Hypothesis," meaning that students naturally acquire the language through comprehensible and engaging content. Specifically, tools like Language Learning with Netflix allow students to adapt to the real speech speed of Japanese speakers, conversational contractions, and slang by hiding or showing subtitles, slowing down dialogues, and listening to and repeating each phrase individually. These tools play a crucial role in transforming students' receptive skills (listening comprehension) into productive skills (speaking), as they create a rich linguocultural background for retaining context-dependent language units and subsequently using them in their own speech.

The fourth group, Social Interaction Networks (Language Exchange Apps), exemplified by applications like HelloTalk and Tandem, aims to develop the highest stage of communicative competence – pragmatic skills – by directly connecting language learners with native speakers. These tools accelerate the process of transitioning from a "learner" status to a "language user" status. From a didactic perspective, these applications are based on the theory of social constructivism, meaning that knowledge is formed through mutual





social interaction. Here, students not only learn the language but also participate in a reciprocal learning process by teaching their own culture to others. Engaging in live conversation with a native speaker requires students to think quickly, adapt to situations, and consider cultural nuances, which serves as a testing ground for the real-life application of rules learned in textbooks. Moreover, the voice message and call functions in these applications allow for the creation of an immersive language environment even remotely, which is particularly crucial for students studying outside a native language environment.

ANALYSIS AND DISCUSSION: DIDACTIC POTENTIAL OF DIGITAL TOOLS

The effectiveness of the classified digital educational tools in the Japanese language teaching process is determined not merely by their technical functionality but by the integration of deep didactic principles – interactivity, adaptivity, autonomy, and motivational support mechanisms. In particular, modern interactivity and adaptivity features allow for the individualization of the learning process, unlike the traditional "teacher-student" model.

Analysis shows that programs based on artificial intelligence (AI) algorithms (e.g., Duolingo or LingoDeer) continuously monitor a student's proficiency level and automatically adjust the complexity of tasks to match the learner's "Zone of Proximal Development" (Vygotsky's theory). This prevents strong students from getting bored and weaker students from becoming discouraged. In a language with a complex ideographic and grammatical structure like Japanese, this adaptivity is crucial as it allows students to progress at their own pace.


Furthermore, from the perspective of developing autonomous learning skills, digital tools provide students with the opportunity to be the subject of their own learning trajectory. By performing Shadowing exercises or communicating with Chatbots outside of class time, without teacher supervision, students feel responsible for their self-study, which leads to the formation of a critical factor in cognitive psychology known as "learner agency."

Another decisive didactic advantage of digital tools is evident in their feedback system and error correction mechanisms. In a traditional classroom, a teacher cannot always stop and correct every minor pronunciation flaw (e.g., insufficient lengthening of long vowels or the confusion of "tsu" and "su" sounds) for every student, as this can disrupt the flow of speech and create psychological barriers for the student.

However, applications based on Speech Recognition technology analyze the student's voice within milliseconds, providing neutral, emotionally unbiased feedback in visual or textual form.

This process eliminates "social embarrassment" in students and cultivates the skill of viewing errors as a natural part of the learning process. Although current ASR systems





cannot evaluate the contextual intonation of Japanese with 100% accuracy, they serve as the most effective "simulators" for phonetic exercises.

Additionally, the issue of motivation plays a significant role: gamification elements – such as accumulating points, leaderboards, and daily goal streaks – stimulate dopamine release, helping to reduce "motivation decline" and dropout rates, which are major problems in language learning. This ensures consistency in learning a language like Japanese, which requires long-term perseverance.

CONCLUSIONS AND RECOMMENDATIONS

The conducted analysis and classification of digital resources show that in 21st-century linguodidactics, information technologies act as a catalyst, not denying traditional educational methods, but complementing, enriching, and elevating them to a new qualitative level. In developing oral speech competence in Japanese, no single application or platform can be a "universal solution"; instead, each group of tools has its specific role and function.

Specifically, phonetic tools (Suzukikun) proved most effective in laying the foundation, communicative simulators (AI Chatbots) in overcoming fear, audiovisual platforms (YouTube, Netflix) in understanding real speech, and social networks (HelloTalk) in facilitating pragmatic communication. Therefore, a successful pedagogical strategy should be based on the systematic integration of these tools.

Based on these conclusions, the following pedagogical recommendations have been developed:

For Teachers: It is advisable to organize Japanese language classes in higher education institutions based on "Blended Learning" or "Flipped Classroom" models. In this approach, grammatical explanations and phonetic exercises should be independently mastered outside of class time through digital platforms, while classroom time should be dedicated solely to live interactive communication, discussions, and role-playing. In this process, the teacher should act not as a "knowledge provider" but as a "facilitator" who coordinates the student's use of digital resources.

For Students: It is recommended to develop a clear algorithm (Roadmap) for using digital tools in independent study:

Stage 1: Visually learn the correct pitch accent of words and sentences through OJAD and Suzukikun.

Stage 2: Practice elementary speaking skills using Duolingo or AI Chatbots.

Stage 3: Work with podcasts and videos using the Shadowing technique.

Stage 4: Engage in live communication with Japanese speakers via HelloTalk or Tandem.



This sequence will help organize the language learning process systematically and effectively.

REFERENCES:

1. Stockwell, Glenn. Mobile assisted language learning: Concepts, contexts and challenges. Cambridge University Press, 2022.
2. Case, Rod. " Integrating Artificial Intelligence Technology into Language Teacher Education.", 27(1), 12–28.
3. Toda, T. (2021). Shadowing: Let's Speak Japanese! (Intermediate to Advanced Level). 3A Corporation. (Focuses on the shadowing technique methodology).
4. Nakamura I, Minematsu N, Suzuki M, Hirano H, Nakagawa C, Nakamura N, Tagawa Y, Hirose K, Hashimoto H. Development of a web framework for teaching and learning Japanese prosody: OJAD (online Japanese accent dictionary). InInterspeech 2013 (pp. 2554-2558).
5. Baqoyev Navro'zjon. "Raqamli ta'lim muhitining asosiy tushunchalari va yapon tilida gapirish ko'nikmalarini rivojlantirish." Zamonaviy filologiya muammolari 2, no. 3 2025, 108-114 p.
6. Baqoyev, N. Z. Yapon Tilini o'rgatishda talabalarning gapirish ko'nikmasini rivojlantirish: tamoyillar, bosqichlar va innovatsion usullar. Maktabgacha va Maktab Ta'limi Jurnali, 675724.
7. Navro'zjon, B. (2024). Yapon va o'zbek adabiyotidagi mifologik obrazlar. Journal of scientific research, modern views and innovations, 1(2), 319-323.
8. Bakoev, N. (2024). ONE OF MODERN LANGUAGE TEACHING METHODS IS COMMUNICATIVE LANGUAGE TEACHING 'S DISADVANTAGES.«. Моя профессиональная карьера.
9. Bakoev, N. (2024). One of modern language teaching methods is task-based language teaching (tblt) disadvantages and its solutions. Educational research in universal sciences, 3(4), 53-57.
10. Abdurasulova, U., & Navruzjon, B. (2024). TILLARNI O'RGATISHNING ZAMONAVIY USULLARI. Science and innovation, 3(Special Issue 27), 84-87.
11. Bakoev, N. (2026). THE SIGNIFICANCE OF DEVELOPING JAPANESE SPEAKING SKILLS IN A DIGITAL LEARNING ENVIRONMENT. Bulletin news in New Science Society, 3(3), 109-116.

