

## A MODEL FOR DEVELOPING JAPANESE SPEAKING PROFICIENCY IN A DIGITAL LEARNING ENVIRONMENT

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**Abstract:** This study analyzed the efficacy of a hybrid model combining synchronous and asynchronous tools (including Artificial Intelligence) to develop Japanese speaking skills using a mixed methodology. The results indicated that this model reduces speaking anxiety while significantly enhancing student motivation, pronunciation, and grammatical accuracy.

**Keywords:** Japanese as a Foreign Language (JFL), digital learning environment, speaking skills, EdTech, hybrid learning, communicative competence, Artificial Intelligence (AI), Mobile-Assisted Language Learning (MALL), pragmatic appropriateness, interactive model.

### INTRODUCTION

While the digitalization of education in the 21st century has created new opportunities in foreign language teaching, significant methodological challenges persist in teaching Japanese. Due to the complex writing system and grammar of Japanese, primary attention in education has often been directed towards reading and writing, leading to deficiencies in students' speaking skills. As a result, even highly knowledgeable students experience psychological barriers and cognitive difficulties in live communication [1: 47]

Existing research is predominantly focused on English, and comprehensive models for teaching the specific characteristics of Japanese (pitch accent, social context, honorific language) in a digital environment have not been developed. Therefore, the objective of this research is to create an innovative pedagogical model that integrates artificial intelligence and digital platforms, develops students' linguistic and pragmatic competencies, and proves its effectiveness [2: 90].

### II. LITERATURE REVIEW

In modern linguodidactics, CALL (Computer-Assisted Language Learning) and MALL (Mobile-Assisted Language Learning) approaches, along with Artificial Intelligence (AI) technologies, enable language learners to acquire knowledge regardless of location and to develop speech in a safe environment.

Although AI contributes to increasing speech fluency, it still has limitations in fully encompassing the complex socio-cultural and pragmatic nuances inherent in Japanese [3: 125].

Furthermore, while immersive technologies like VR (Virtual Reality) and AR (Augmented Reality) foster situational speech by simulating the Japanese cultural environment, "Shadowing" exercises on LMS (Learning Management System) platforms are effective tools for improving pronunciation and prosodic features (pitch accent) [4: 31].

Psychologically, the digital environment reduces "Foreign Language Anxiety" (FLA), eliminating students' fear of social evaluation and encouraging free communication.

Analysis shows that while individual digital tools are effective, there is a need in Japanese language methodology to integrate them into a coherent pedagogical system that harmonizes linguistic and psychological factors [5: 112].

### III. METHODOLOGY

This study was organized using an "Explanatory Sequential Mixed Methods Design" to investigate the dynamics of developing communicative competence in Japanese, combining quantitative and qualitative analysis.

Sixty students of A2-B1 level from higher education institutions in Uzbekistan participated in the study.

A four-stage "D-J-Speak" integrative model was introduced in the experimental group: 1) "Input" – working with authentic content via LMS; 2) "Process" – individual phonetic exercises using AI applications and collaborative role-playing via Zoom/Teams; 3) "Output" – creating topic-related video vlogs; 4) "Feedback" – peer and teacher analysis, along with reflection based on automatic statistics.

The validity of the results was ensured through triangulation. Speaking skills (fluency, accuracy, pronunciation) were statistically analyzed using SPSS software (T-test) based on "Pre-test" and "Post-test" scores. Qualitative analysis was conducted using the FLCAS scale and focus group interviews to examine the dynamics of student motivation and psychological barrier changes.

### IV. RESULTS

The "Independent Samples T-test" conducted in SPSS confirmed a statistically significant difference ( $p < 0.05$ ) between the experimental and control groups. While the groups' scores were almost equal in the "Pre-test" stage ( $M=62.4$  and  $M=63.1$ ), after implementing the "D-J-Speak" model, the Experimental group's score sharply increased to  $M=84.7$  in the "Post-test," while the Control group's score was  $M=68.5$ . The highest improvement was observed in speech fluency and phonetic accuracy.

Analysis showed that AI-based trainers helped reduce students' tonal (pitch accent) errors by 40%, whereas this remained unchanged in the traditional group. According to qualitative analysis, 92% of participants in the experimental group reported reduced psychological pressure and fear of making mistakes during interaction with AI agents, along with increased self-confidence and motivation. This scientifically substantiates the positive impact of the proposed hybrid model on both cognitive and affective factors.

### V. DISCUSSION

The analysis of empirical results indicates that the superiority of the hybrid model is explained by the synergy of psycholinguistic and technological factors.

The possibility of 24/7 practice based on the "ubiquitous learning" principle optimized cognitive load, and in accordance with Krashen's "Affective Filter" hypothesis, reduced anxiety levels and created a favorable psychological environment for language acquisition.

The model also showed high effectiveness in teaching the specific characteristics of Japanese: visualization tools enabled students to consciously correct "Pitch Accent" and intonation, while VR and role-playing helped in acquiring the "Keigo" (honorific language) system as a pragmatic function.

However, technical limitations and the lack of paraverbal tools indicate the necessity of maintaining a balance in "Blended Learning" in the future. The conclusion is that digital tools should not fully replace live communication but rather serve as enriching instruments.

#### VI. CONCLUSION

The study's analysis confirmed that a hybrid model integrating artificial intelligence and collaborative teaching serves as a stable platform for developing speaking skills in Japanese language education, overcoming the limitations of traditional methodology.

The combination of synchronous and asynchronous approaches demonstrated high effectiveness in forming linguistic and sociolinguistic competencies, as well as in increasing motivation by reducing foreign language anxiety.

These conclusions necessitate a shift from teachers to a "digital facilitator" function and the adoption of technologies as an integral part of the learning process. In future research, it is advisable to improve the model through fully immersive VR technologies and adapt its principles to the methodology of teaching other complex Eastern languages.

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