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Enhancing Multilingual Vocabulary Acquisition with AI-Generated Music: A Comparative Study of English, Japanese, and Chinese Learners

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ABSTRACT

Music has long been recognized for its ability to activate the brain and enhance learning, yet its application across multiple languages remains underexplored. While popular songs can sometimes mislead learners due to grammatical inaccuracies, creating educational songs presents significant challenges for educators, as it requires specialized expertise. AI-generated music offers a promising solution by customizing songs for educational purposes. This study explores the impact of AI-generated songs on vocabulary learning across three languages: English, Japanese, and Chinese. A two-week investigation was conducted with 60 university students, divided into three groups: English learners and Japanese learners from China, and Chinese learners from Thailand. Each group was further divided into experimental and control groups. The experimental groups utilized AI-generated songs, while the control groups adhered to traditional learning methods. Results revealed that the experimental groups exhibited significant improvements in vocabulary retention and comprehension, with more stable and durable learning outcomes compared to the control groups. The study underscores the potential of AI-generated songs to enhance vocabulary learning across languages, particularly by boosting student engagement and motivation. These findings suggest that AI-generated music can effectively complement traditional language learning methods, leading to more dynamic and enjoyable educational experiences. Further research with larger sample sizes and varied educational contexts is recommended to fully realize the potential of AI in multilingual language education.

Keywords: Cultural Differences; Educational Technology; Educational Songs; Language Acquisition; Memory Retention