

# Revolutionizing Language Learning With Connexelerator: An AI-Powered Approach

Lim, Jared (School: Liberty High School)

Snow, Ethan (School: Liberty High School)

Connexelerator is an innovative AI-powered language learning tool designed to enhance the efficiency and effectiveness of language acquisition. Leveraging the combined benefits of advanced AI models and proven educational theories, Connexelerator aims to accelerate language acquisition by offering dynamic, context-rich learning experiences. The application integrates multiple cutting-edge features, including language flexibility, dynamic AI-generated flashcards, a Spaced Repetition System, a comprehensive word bank, and Response Naturalness Evaluation (RNE), all accessible via a single web application. The genesis of Connexelerator was inspired by the limitations of traditional language learning tools, such as the inefficiency of static flashcards, the organization of learned information, and the challenges of maintaining consistent study habits. Connexelerator generates unique sentences for each new word or grammar rule, incorporating previously learned terms to reinforce memory and understanding. This approach, grounded in constructivist learning theory, facilitates deeper learning by embedding new knowledge within a familiar context. The dynamic flashcard system adapts to individual learning patterns, building upon Ebbinghaus' theory of the forgetting curve and the efforts of modern Spaced Repetition Systems (SRSs). Ongoing developments include image input capabilities for immersive real-world learning and further enhancements to the RNE model for more detailed feedback. Connexelerator represents a significant advancement in educational technology, promising a more engaging and effective path to language mastery by leveraging the latest in AI capabilities.