

# THE EFFECTIVENESS OF AUTOMATIC SPEECH RECOGNITION IN ESL/EFL PRONUNCIATION: A META-ANALYSIS



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### KEY TERM

#### (Supra)segmental pronunciation

Suprasegmental pronunciation refers to the overall flow of speech while segmental pronunciation is the production of individual sounds

### WHAT EVIDENCE IS SUMMARISED?

38 effect sizes

### WHAT DOES IT FIND?

- Overall ASR has a moderate positive effect on pronunciation.
- ASR with explicit corrective feedback produces a larger effect compared to indirect feedback.
- ASR is more effective for improving segmental pronunciation than suprasegmental features.
- At least a five-week ASR-based interventions show significant benefits, while short-term use less than a month is ineffective.
- Practising with peers is more beneficial than working alone when using ASR.
- ASR is particularly effective for adult learners (18 years and older) and those at intermediate proficiency levels.

### WHAT CAN I LEARN FROM THIS SECONDARY RESEARCH?

The effectiveness of automatic speech recognition (ASR) tools on pronunciation training in ESL/EFL contexts

### HOW CAN I USE THE FINDINGS IN MY TEACHING?

- ASR programmes that offer explicit corrective feedback are recommended for use in the class.
- Teachers are encouraged to integrate ASR with multimedia tools to effectively address suprasegmental aspects together.
- A long-term ASR-assisted learning programme is recommended, organised into multiple training chunks over time.
- Peer learning activities using outcomes from ASR tasks can facilitate mutual feedback in pronunciation learning.
- Given current technological constraints, the present ASR programmes are more suitable for adult and intermediate learners.

### CONTEXT

ESL/EFL contexts with mixed proficiency

