INTRODUCTION

What is automatic speech recognition?
Automatic speech recognition (ASR) is a tool that uses technological algorithms to decipher individual phonemes and turn these speech sounds into text. The scope of ASR spans from giving individuals with physical disabilities the ability to type using their voice, to communication aids for those suffering with a neurological disability. ASR works by analyzing the input of a speaker and decoding the input into phonemes, which are the individual units of sound present in a word.

ASR in language learning
Online language learning websites and digital apps that utilize ASR make learning a new language accessible and simple. ASR allows L2 learners to practice their spoken communication and receive feedback on pronunciation and accuracy (Levis & Suvorov, 2012). Each type of ASR system presents different advantages in language learning – some are more adaptable to different dialects of speakers while others recognize a wider span of vocabulary.

METHODS

For our research, we consulted multiple peer-reviewed articles discussing and investigating the pros and cons of automatic speech recognition software as a means to help individuals learn a second language. These articles contained various studies that we cross-examined to further understand the efficacy of learning a second language through or with the help of speech recognition software.

In addition to this research, we reflected on our prior knowledge surrounding culture and cultural aspects of learning a second language.

RESULTS

Speech recognition technology reduces anxiety in those learning a second language by offering a judgement free and accessible mode of learning. This accessibility also gives learners more opportunities to practice speaking the language (Oh & Song, 2021). The practice offered in automatic speech recognition language learning technology also directly applies to learning, so the language learners tend to retain the information well (Levis & Suvorov, 2012).

A study conducted involving 90 Taiwanese students learning English over Google Meet revealed that the students’ oral skills improved greatly using automatic speech recognition technology (Tsai, 2022).

While ASR technology can be very helpful in language learning, some ASR technology fails to identify specific articulation errors (Levis & Suvorov, 2012). In addition to this possible technological fault, ASR language learning does not allow people to connect to the culture of the language they are learning. Second language learning has proven to be more effective when there is cultural immersion involved. A study of English-speaking adults learning Arabic as a second language in Saudi Arabia showed that the adults were more motivated to learn Arabic because of their immersion in the culture (Abdelhalim & Alqubayshi, 2020).

DISCUSSION

Automatic speech recognition is an effective and efficient tool in language learning. It eases the anxiety involved in learning a new language by providing a way to learn by yourself and on your own time.

While ASR can be very helpful in language learning and provide an on-the-go mode of learning, ASR technologies fail to integrate culture and human interaction into language learning. Learning a second language solely through ASR technologies does not allow the learner to be fully immersed in the language and learn through experience.

Learning language in person by immersing oneself in it may provide more opportunities to learn about different dialects, figures of speech, common phrases, body language, and customs.

ASR technologies are an effective aid in language learning, but they cannot recreate the valuable lessons surrounding culture and norms of learning a language through immersion.

REFERENCES