

# CHAPTER I

## INTRODUCTION

This chapter discusses the background study, research questions, research purposes, research significance, conceptual framework, and previous study.

### A. Background Study

English is frequently used for communication on a global scale and is used as a worldwide language. Pronunciation is one way to communicate and understand what someone says. As Stated in Cambridge Dictionary (2022), pronunciation is how people speak words. Burns and Claire (2003) claimed that clear pronunciation is essential in oral communication. Therefore, pronunciation is significant to English language teaching. However, pronunciation is recognized as a complex skill to learn. According to Martinez-Flor et al. (2006) and García (2007), as cited in Benzies (2013), English pronunciation is considered the most challenging skill to acquire and develop. It may be due to several factors. One of them can be caused by the pronunciation teaching and learning process.

Based on the researcher's observation in the school, especially at MAN 2 Kota Bandung, most eleventh-grade students have problems pronouncing English words. It is not only eleventh graders who have this problem; some tenth and twelfth-grade students also have similar problems with English pronunciation. However, this study was limited to choosing the participants from the eleventh graders due to sampling and resource reasons. It was found that the pronunciation problem was partly caused due to a lack of motivation that caused a lack of interest in practicing the pronunciation of English words.

The Automatic Speech Recognition (ASR) based application is one method to teach pronunciation skills. As cited in Wallace (2015), ASR can help students improve their pronunciation. ASR is the technology that

"analyses a person's specific voice and uses it to fine-tune the recognition of that person's speech, resulting in increased accuracy." ASR provides authentic material, such as native speaker's pronunciation of the target language, and at the same time allows the students to listen to and practice their pronunciation in an enjoyable setting; it also gives each learner immediate corrections and feedback, which is difficult to achieve in class with a large number of students (Sidgi & Shaari, 2017). In China, many researchers have studied ASR technology as an English learning instrument, like Feng et al. (2011), whose study proved that ASR technology, as a corrective instrument, is helpful for ESL/EFL learners to improve English pronunciation. Besides, another result showed that ASR effectively improved pronunciation (Yaniafari et al., 2022).

Some previous studies discussed pronunciation improvement through ASR, and most research methods were quantitative rather than qualitative. In addition, most of the studies on this topic were conducted on university students. The purposes of this research are to identify the implementation of ASR based-application in teaching pronunciation and to find out the challenges found by the teacher when teaching pronunciation using ASR.

## **B. Research Questions**

There are several questions that researchers should answer in this study:

1. How does the teacher implement Automatic Speech Recognition (ASR) in teaching pronunciation?
2. What challenges does the teacher find in teaching pronunciation using Automatic Speech Recognition (ASR)?

## **C. Research Purposes**

Related to the research questions, here are the objectives of the research:

1. To identify how the teacher implements Automatic Speech Recognition (ASR) in teaching pronunciation.
2. To find out the teacher's challenges in teaching pronunciation using Automatic Speech Recognition (ASR).

#### **D. Research Significances**

The results of this research are expected to provide the following practical benefits:

##### **1. Teachers**

Teachers in senior high schools can use this research. They can discover the ASR in teaching senior high school students' pronunciation skills.

##### **2. Students**

Students of a senior high school can realize that pronunciation is a very important skill in English. Those who have difficulty pronouncing English words can be helped to improve their pronunciation through ASR.

##### **3. The Researchers**

For other researchers, the study can be helpful for further research regarding ASR in teaching pronunciation skills to senior high school students. This research can be used as a reference for conducting a related study.

#### **E. Conceptual Framework**

Harmer (2007, p. 1) described pronunciation as how a language's sounds are produced, word and sentence stress placement, and pitch and intonation to convey emotion and meaning. Pronunciation is one of the essential aspects of English, particularly in oral communication. Every tone, stress arrangement, and intonation can communicate. English speakers who are not native speakers of the language must use extreme caution while pronouncing some words, or they risk confusing listeners. Therefore, understandable pronunciation is more crucial than sounding like a native speaker.

Automatic Speech Recognition (ASR) can be defined as “an independent, machine-based process of decoding and transcribing oral speech” (Levis & Suvorov, 2012, p. 316). Automatic Speech Recognition (ASR) is one method that helps learners reach the language target by offering

individual practice and feedback. Based on well-designed voice recognition, this technology will be an intelligent aid in teaching pronunciation. ASR was initially explored in the 1950s, and in the 30 years that followed, it progressed swiftly and reached maturity (Liu et al., 2019). ASR has seen widespread use since the 1990s in various industries, including network communication and language acquisition. People have favourable impressions of the application's effectiveness as a tool for language learning, particularly in terms of pronunciation.

Teaching pronunciation based on ASR may help students pronounce words more clearly, and the results are precisely the same as those obtained in a classroom. Liu (2019) prove that ASR plays a role in improving English pronunciation accuracy. English language learners can learn the language more efficiently and independently with the aid of ASR technology. Using ASR-based applications as a learning technique has many advantages, including the capacity to improve pronunciation and listening abilities. Learners can carefully examine the words, phrases, and pronunciation by transcribing spoken content. Language learners may find this very helpful as they can use ASR tools to practice and mimic native speakers' pronunciation.

#### **F. Previous Study**

Based on this research, some previous studies have been found by several researchers regarding ASR-based applications in teaching pronunciation skills.

The first study was conducted by Haryadi and Aprianoto (2020) and entitled "Integrating "English Pronunciation" App into Pronunciation Teaching: How It Affects Students" Participation and Learning." This study used a quasi-qualitative design. The participants were Forty-eight first-year English department students from two groups of learning involved in this research, aged 19 to 21. The result of the study indicated that integrating the English Pronunciation app in teaching pronunciation increased the students' participation (engagement, attitude, and conduct). In addition, the app brought

a positive effect on the establishment of independent learning for a significant number of students.

The second study was conducted by Kholis (2021) and entitled "Elsa Speak App: Automatic Speech Recognition (ASR) for Supplementing English Pronunciation Skills." This study used classroom action research (CAR) as the research design. Collaboration of qualitative and quantitative methods was also the concern of this study. The participants were the English Department Students of UNU. The result of the study found that ELSA Speak can increase students' pronunciation skills. ELSA Speak helped the students pronounce diverse words more quickly and comprehensively. Indeed, it can motivate the students to engage in learning to pronounce.

The third study was conducted by Putri et al. (2022), entitled "The Potential of ASR for Improving English Pronunciation: A Review," which revealed that ASR is beneficial in assisting pronunciation learning. ASR has been widely applied in language pronunciation, teaching, and evaluation. Many examples have proved that it can improve learners' pronunciation effectively. It is also an essential presupposition of available automatic assessment because almost all evaluations must be based on ASR's speech recognition.

Based on the previous studies above, using Automatic Speech Recognition (ASR) technology in teaching pronunciation skills can help students learn English more effectively and autonomously. However, this study is different from some previous studies. This study focuses on implementing ASR-based application in teaching pronunciation skills to Senior High School students and finds out the difficulties found by teachers in teaching pronunciation using ASR with qualitative methods. In contrast, most of the previous studies used quantitative methods and were conducted the studies at university.