

CHAPTER II

THEORETICAL FRAMEWORK

2.1. Phonology

In pronunciation skill requires an understanding related to how to produce tones, stresses and spellings words of English, according to Olson (2023) stated that phonology is a subfield of linguistics that focuses on the systematic study of sounds within a particular language or languages. It examines the patterns, organization, and rules governing the sounds and their usage in speech. It means that phonology is more specific than linguistics, which organizes how to correct pronunciation and speak English. Phonology is also constructed explicitly in sounds and utterance, and speech through English pronunciation. In addition, all sounds of English are regulated by phonology, which focuses on studying sounds of English such as rhythm, stress, and intonation. Moreover, every single word of English contains a different pronunciation and spelling word which are organized by phonology. It investigates the structural patterns, phonology rules, and constraints that govern the distribution and combination of letters to become sounds, and how those contribute to the new meaning and correct structure of words and sentences.

In addition, according to Chen Gafni. (2025) stated that phonology is a branch of linguistics dealing with the relations among speech sounds in particular languages and in languages generally. Certain approaches to phonology are concerned with the cognitive aspects of speech sounds, namely the mental representation of three speech sounds, such as in the “mind” of the speaker, and the rules governing the interactions among them. In other words, phonology is a theory of grammar in the “descriptivist” sense. It is the set of linguistic rules concerning speech sounds that speakers acquire spontaneously and use intuitively, then “subconsciously”. It means that phonology focuses on the sounds of languages that are constructed from cognitive processes before producing sounds. Also, it categorizes communication spontaneously without planning in various languages. Phonology nowadays concerns cognitive aspects of speech, which speech and utterance come from to cognitive processing of vocabulary.

Additionally, according to Pierrehumbert (1990), phonology seeks to understand how sounds function within a language and how they contribute to meaning and communication. It explores the phonetic elements, such as phonemes, which are the smallest units of sound that can distinguish words in a language. Phonology goes beyond the physical production of sounds and

delves into the abstract and mental representations of sounds in a given language. It means that actually phonology merely finds the function that sounds towards a certain meaning, which phonology contributes to the one meaning of one word, due to wrong pronunciation and spelling, obviously different meanings. Furthermore, the statement above explained that phonology provides the pattern for the correct pronunciation of English for speaking and communication.

Moreover, The understanding of English phonology is closely associated with learners' listening abilities, as students must first grasp sound structures, phonetic features, and pronunciation before interpreting meaning effectively. Moreover, phonology is shaped by variations in sound patterns within the English language; therefore, this study highlights how learners identify phrases, sounds, and words while integrating listening skills to promote fluent speech and accurate pronunciation. Additionally, proficient learners engage deeply with phonological knowledge, enabling them to analyze and distinguish sounds in order to comprehend spoken language more effectively. According to Dodd (2003) explained that phonology with the scope of phonology encompasses several key aspects. Firstly, it examines the inventory of sounds in a language, identifying the distinct phonemes and their distribution within words. It also investigates the rules and patterns governing the combination and sequencing of sounds, known as phonotactics. These rules determine which sounds can appear in specific positions within words or syllables. It means that in every single word, the difference in production sounds due to phonology is shaped by the smallest words and meaning. Phonology clarified the correct sounds through pronunciation and speaking; despite the similar pattern, it possibly produces different pronunciation and meaning.

Furthermore, phonology is a fundamental pattern for speaking and pronouncing English well, as well as ESL (English as a Second Language) for learners. According to Zhang & Yin (2009), the ability to speak English embodies the correctness of pronunciation and intonation and directly affects intelligible communication in conversation. It means that the capability in communication automatically identifies correctness towards pronunciation and intonation in English independently. As students who study English, pronunciation and intonation are essential for ESL due to implementing communication, speaking English in daily life must be applied in practising communication and dialogue. Generally, a Student who studied English automatically communicates in English with correct pronunciation.

On the one hand, implementing phonological instruction for ESL students plays a crucial role in improving their overall communicative competence, as phonology directly affects how spoken language is produced and understood. By focusing on sound systems, stress patterns, rhythm, and intonation of the target language, ESL learners become more aware of differences between their native language and English, which helps reduce persistent pronunciation errors and negative language transfer. Effective implementation involves explicit teaching of individual sounds, minimal pairs, and suprasegmental features, combined with consistent listening and speaking practice in meaningful contexts. Through phonological awareness activities, students learn not only how to articulate sounds correctly but also how to perceive and distinguish them accurately in real communication. This process enhances intelligibility and builds learners' confidence when interacting with others, as they are more likely to be understood by their communication partners. Consequently, integrating phonology into ESL instruction supports clearer communication, promotes learner autonomy, and facilitates more successful participation in academic, social, and professional environments.

On the other hand, Students at the senior high school level are required to develop pronunciation skills in order to maximize their understanding of English. Pronunciation plays a crucial role in language acquisition because it enables learners to recognize sound patterns, distinguish between similar words, and interpret spoken messages accurately. Without adequate pronunciation competence, students may encounter difficulties in both listening and speaking, which can hinder effective communication. Therefore, systematic instruction in pronunciation should be integrated into English learning to support students' phonological awareness and improve their overall language proficiency. By mastering the articulation of sounds, stress, rhythm, and intonation, learners can enhance their comprehension while also gaining greater confidence in expressing ideas in academic and social contexts.

Moreover, Learners should start by becoming familiar with the basic sound system of English, including vowels, consonants, and common sound contrasts that may not exist in their first language. Regular exposure to clear and authentic audio models, such as native or proficient speakers, helps students develop accurate sound perception and recognize differences in pronunciation, stress, and intonation. Practicing minimal pairs, repeating words and short sentences, and using phonetic symbols can further support awareness of how sounds are produced. In addition, beginners benefit from guided feedback from teachers, as corrective input helps them

adjust pronunciation before errors become habitual. By combining consistent practice, attentive listening, and supportive instruction, beginner students can strengthen their phonological understanding, which in turn improves intelligibility and lays a solid foundation for effective communication in English.

2.2. Glottalization

Glottalization is a branch of phonology that produces the rules to produce the sounds with a specific tone and intonation. It is focused on consonant sounds when the flow of air stopped by the glottis with the construction of the glottis, and then released. The sound is produced in the throat for specific vocabularies that appear at the front, middle, and end of consonants. In addition, glottalization has various models in its evolution. There exist several glottalizations in English, such as glottal [p], [b], [t], [d], [k], and [g]. According to William Labov (1994), glottalization is a phonological phenomenon where the glottal stop replaces or co-occurs with a consonant [t] serving as a sociolinguistic marker that indicates variation across speakers and speech contexts. He explained that glottalization generally uses the consonant [t] as a dynamic sound produced by learners. This English-speaking evolution commenced in the 19th century, where it is used in several places such as Scotland, North America, and numerous English-speaking countries. Glottal [t] is generally utilized in formal contexts such as professional work and academic fields, due to Culturally spoken must be adopted as a standard of communication for people in English-speaking countries. The glottal [t] is widely recognized as a significant phonological feature in many English-speaking countries, particularly within varieties such as British English. As a result, senior high school students are encouraged to become familiar with this pronunciation pattern to enhance their listening comprehension and speaking accuracy. The glottal [t], produced by briefly stopping airflow at the vocal cords rather than articulating a clear /t/ sound, frequently occurs in everyday speech and informal communication. A lack of awareness of this feature may lead to misunderstandings when students interact with authentic audio materials or native speakers. Therefore, introducing the glottal [t] in pronunciation instruction can help learners adapt to natural speech variations, strengthen their phonological competence, and support more effective communication in diverse linguistic contexts.

In addition, as senior high school students progress in their English learning, acquiring knowledge of the glottal [t] becomes increasingly important for developing advanced

pronunciation skills. Exposure to this phonological feature allows learners to better understand natural speech, as it commonly appears in rapid and informal conversations among native speakers. By recognizing how the glottal [t] functions within words and phrases, students can reduce potential misinterpretations and improve their listening accuracy. Furthermore, integrating this aspect of pronunciation into classroom instruction supports students in achieving greater fluency and adaptability when engaging with diverse English accents. Consequently, mastering such variations contributes to stronger communicative competence and prepares learners for academic and real-world interactions that require effective English proficiency.

According to Michaela Svoboda and Pavel Šturm (2022), glottalization is a specific phonetic event originating in the larynx that has been given a variety of labels. For non-continuant obstruent articulation at the glottis, for instance, a complete closure at the adducted vocal folds. Based on the statement above, glottalization is a sound that produces vibrations on the larynx area, such as glottal plosive, glottal stop, glottal ejective stops, and pre-glottalization. In addition, non-continuant obstruent articulation means sounds with clear articulations or not glottal, such as glottal non-continuant obstruent [p] as in *pat* [b], as in *bat* [t], as in *tap* [d], as in *dog* [k], as in *cat* [g], as in *go*. Additionally, it is not merely vocabulary that is able to produce the sound with glottalization; however, multiple words are exceptions, with normal pronunciation. Pronunciation glottis possesses several sociolinguistic impacts, such as implementing glottal [t] applied into academic fields, which contributes to formal and professional communications, such as dialect, accent, and identity, where strongly glottal [t] is represented, the specific original accent from cockney, Scottish, and northern America.

In the enhancement of languages, particularly English as an official world language for the entire countries, there existed multiple countries, such as countries that use English as a first, second, and foreign language, that utilized glottalization in numerous academic activities and social agendas. Therefore, glottalization is generally used in academic institutions to be introduced and disseminated as an official pronunciation. According to Volin. J et al. (2012) stated that Slovak and Czech learners of English, as well as native speakers of English, were participating in perception testing so that the influence of the mother tongue could be determined. The results confirm the effect of both glottalization and the L1 of the listeners. In addition, a significant effect of test item manipulations was found. Although the phrases with added or deleted glottal stops displayed no obvious acoustic artefacts, they produced longer reaction times than items with

naturally present or absent glottalizations. We believe that this finding underlines the importance of inherent stress patterns, whose alterations lead to an increase in processing load. He stated that L1 of English commonly uses glottal stops in various communications. Additionally, it has a significant impact on a lot of sectors, particularly in the academic fields. Although the phrases include whether to delete consonant sounds. It is influenced by understanding the meaning and words. It means that the L1, which as a mother tongue must be familiar to be listened to beyond L1. It is a similar context in the Indonesian Language as L1 and as a listener of a native speaker in understanding glottalization.

Involving Slovak and Czech learners of English, alongside native speakers, demonstrates that the perception of glottalization is significantly influenced by the listener's first language (L1). The findings indicate that both glottalization patterns and linguistic background affect how speech is processed, as reflected in longer reaction times for manipulated test items compared to naturally produced glottal stops. Similarly, senior high school students in Indonesia are likely to experience comparable challenges because their perception of English pronunciation is shaped by Indonesian as their L1. Since Indonesian phonology differs from English in terms of consonant production and the use of glottal stops, learners may struggle to accurately identify or interpret the glottal [t] in authentic speech. Consequently, pronunciation instruction should address cross-linguistic influence to help students develop greater phonological awareness, reduce perceptual difficulties, and improve overall listening comprehension in English.

As students of senior high school, learners are strongly influenced by their first language (L1) when acquiring English pronunciation. Linguistic research has shown that the perception of phonological features, such as glottalization, is shaped by the listener's native language, which can either facilitate or hinder accurate speech processing. In the Indonesian context, students may encounter difficulties in recognizing the glottal [t] because its usage and distribution differ from those found in Indonesian phonology. This cross-linguistic influence can lead to slower comprehension and potential misinterpretation when learners are exposed to natural English speech. Therefore, it is essential for pronunciation instruction at the senior high school level to address these differences, enabling students to strengthen their phonological awareness, enhance their listening skills, and achieve more effective communication in English.

In addition, one of the biggest impacts of pronunciation and speech for communication glottal [t] when British English and American English become partners for communication. Glottal

[t] is constructed through the evolution of English naturally, with social adaptation and dialect. According to Wells (1982: 260), glottalization affects many phonemes in British English, such as [t], [p], [k], and [tʃ]. However, this dissertation is interested only in glottalization in relation to the [t] phoneme. This phenomenon affects the [t] by adding an allophone, which is called “glottal stop”, to its range of options. This realization of [t] is a voiceless plosive articulated at the glottis, where the airstream suddenly stops and then is released after a short period of time, producing a silence while the air does not flow. It means that Wells stated there existed multiple glottalizations in British English, particularly glottal [t], which is frequently used in numerous developing academic English.

Learning the consonant [t] focuses on the letter [t] with various sounds and pronunciation. Letter [t] is used as a prefix and suffix in a word, constructing different sounds. The glottal [t] emphasized in how to pronounce [t] that is utilized by native speakers encompasses culture and academic English. Understanding [t] with glottal plosive, glottal stop, glottal ejective stops, and pre-glottalization is required to implement and practice the sounds to become clear and fluent. Understanding the consonant [t] in words has a significant influence on pronunciation, as glottal [t] highlights how phonological realization is shaped by morphological structure and prosodic boundaries. In English, the phoneme [t] does not always surface as a clear alveolar stop; instead, it may be realized as a glottal stop [ʔ] when it occurs at morpheme boundaries, word-final positions, or before syllabic nasals. From a phonological standpoint, this variation illustrates the interaction between segmental phonology and morphology, demonstrating that pronunciation is influenced not only by individual sounds but also by word formation processes. For learners, especially ESL students, understanding how [t] behaves in prefixes and suffixes improves both perception and production of naturally occurring English speech, as these positions frequently appear in high-frequency words. Academically, this focus supports a deeper understanding of rule-governed variation, allophony, and connected speech phenomena, reinforcing the idea that pronunciation patterns are systematic rather than random. Consequently, studying the glottal [t] in prefix and suffix environments strengthens learners’ phonological awareness and provides a more accurate model of authentic English pronunciation.

Furthermore, as ESL students understand sounds [t], comprehension of the [t] sound at the beginning of words is essential at the early stages of language learning because word-initial consonants play a critical role in lexical access and speech perception. In English, the initial /t/ is

typically produced as a voiceless alveolar stop with aspiration, and this phonetic feature helps listeners distinguish it from other consonants such as [d] or [s]. When beginners fail to recognize or produce this sound accurately, it can lead to confusion in identifying words. From an academic phonological perspective, mastering initial [t] supports the development of segmental awareness and establishes a foundation for understanding more complex variations of the same phoneme, including flapping and glottalization in different environments. Early comprehension of initial [t] also facilitates listening comprehension, vocabulary acquisition, and pronunciation accuracy, as learners rely heavily on word onsets to process spoken input. Therefore, emphasizing the [t] sound at the beginning of words provides ESL students with a stable phonological anchor that enhances intelligibility and prepares them for more advanced aspects of English phonology.

2.3. Pronunciation

Pronunciation is a fundamental component of language learning that focuses on the accurate production and perception of speech sounds. It encompasses several elements, including segmental features such as vowels and consonants, as well as suprasegmental aspects like stress, rhythm, and intonation. Mastery of pronunciation is essential because it directly influences learners' ability to communicate effectively and to be understood by others. Moreover, clear pronunciation supports listening comprehension, enabling learners to interpret spoken language more accurately in both academic and everyday contexts. In the process of acquiring English as a foreign language, students must develop phonological awareness to recognize sound distinctions that may not exist in their first language.

Therefore, integrating pronunciation instruction into language education is crucial for fostering fluency, improving intelligibility, and strengthening overall communicative competence. According to Chan (2018), stated that pronunciation is one of the most difficult parts of learning English. Mispronunciation can change the meaning of a sentence. It can significantly alter the meaning of a sentence, particularly in spoken communication, where meaning is conveyed not only through vocabulary and grammar but also through accurate phonological production. In addition, suprasegmental features such as intonation, stress, and rhythm play a crucial role in signaling grammatical relationships and pragmatic intent; incorrect intonation may cause a statement to be interpreted as a question, while misplaced stress can shift the focus or emphasis of a sentence. Pronunciation is widely regarded as one of the most challenging aspects of learning

English, as inaccuracies in sound production can lead to significant changes in meaning. Mispronunciation may distort a speaker's intended message, particularly in spoken communication, where understanding relies not only on vocabulary and grammar but also on precise phonological realization. Furthermore, suprasegmental features, including intonation, stress, and rhythm, play a vital role in indicating grammatical relationships and pragmatic intent. For instance, incorrect intonation can cause a declarative statement to be perceived as a question, while misplaced stress may alter the focus or emphasis within a sentence. As students, particularly at the senior high school level, are expected to develop communicative competence, a strong understanding of pronunciation becomes essential. By cultivating phonological awareness and practicing accurate sound patterns, learners can enhance intelligibility, minimize misunderstandings, and participate more effectively in academic and social interactions conducted in English.

Pronunciation involves the elements that must be well-prepared correctly to be learnt before expressing the utterance in communication through pronunciation. According to Burns and Seidlhofer (2013), they propose some principles for learning pronunciation. First, learn pronunciation from the beginning. This means that, in the first place, you need to master the correct usage of phonemes, consonants, vowels, intonations, and word stress. Next, test the students on how to use correctly pronounced words in simple conversations. It means that learning pronunciation is not merely learn however how to pronounce the vocabulary correctly. Students can comprehend the smallest parts of pronunciation, such as phonemes, phonetics, consonants, vowels, intonation, and word stress, which students are able to master in those elements that enable them to automatically able to pronounce vocabulary correctly. The whole utterance and expression possess rules to be obeyed. It is an important factor to study pronunciation, vocabulary, sounds, and speech correctly.

As additional knowledge related to glottal [t] sounds, in the implementation of the consonant [t] had a significant influence on pronunciation, because in professional and academic fields, the consonant [t] or glottal [t] is used as an important part for sustaining cultural, social identity, and norms of spoken English. According to John C. Wells (1982), the pronunciation of [t] as a glottal stop, generally described as t-glottalization or t-glottalling, has long been documented as being a Cockneyism, especially when occurring in intervocalic word-medial position (e.g. *butter* ['bʌʔə]). Hence, it has usually been considered a regional feature and has been

widely regarded as ugly and as a lazy sound. The statement above that glottaling [t] or glottal [t] comes from the Cockney United Kingdom, where it becomes familiar to numerous countries in the world, particularly English-speaking country then Non-English-Speaking Country. Many speakers in non-English-speaking countries experience difficulty in understanding the pronunciation of the glottal [t], despite its frequent occurrence in academic listening assessments and authentic English speech. This challenge arises primarily because the glottal [t] is rarely taught explicitly in formal English language instruction, which traditionally emphasizes careful or citation forms of pronunciation rather than natural connected speech. As a result, learners are often trained to expect the alveolar plosive [t] to be fully articulated, and they may fail to recognize familiar lexical items when [t] is replaced by a glottal stop, as in *bottle*, *written*, or *football*.

Additionally, in academic proficiency tests such as IELTS or TOEFL, listening materials are designed to reflect real-world usage and therefore commonly include speakers who employ glottal [t] in accordance with regional or sociolinguistic norms, particularly in British English varieties. For learners and students who lack exposure to this feature, the presence of the glottal stop can reduce intelligibility and increase cognitive processing load, leading to misinterpretation or missed information. From a phonological perspective, this difficulty highlights the gap between prescriptive pronunciation models and actual spoken English, as well as the importance of receptive phonological awareness. Consequently, developing familiarity with the glottal [t] is essential, not because learners must produce it in formal speech, but because they must be able to comprehend it accurately in academic and professional contexts where natural speech patterns are unavoidable.

In the era of globalization, non-English-speaking countries increasingly require an understanding of the glottal [t] to participate effectively in international communication and academic exchange. English now functions as a global lingua franca in education, business, science, and technology, and exposure to authentic spoken English is unavoidable in transnational interactions, digital media, and standardized proficiency tests. The glottal [t], as a common feature of natural speech in wide English varieties, particularly British English, frequently appears in lectures, conferences, interviews, and academic listening materials. Without adequate awareness of this phonological feature, listeners may struggle to recognize familiar words, leading to reduced comprehension and communicative inefficiency. From a sociolinguistic perspective, globalization demands not only grammatical competence but also the ability to interpret diverse accents and

pronunciation patterns, as English is spoken by users from multiple linguistic and cultural backgrounds. Understanding the glottal [t], therefore, represents a form of receptive competence that enables non-native speakers to navigate global discourse more confidently and accurately. As global mobility and digital communication continue to expand, equipping learners in non-English-speaking countries with the ability to comprehend features such as the glottal [t] is essential for academic success, professional competitiveness, and meaningful participation in the global community.

Furthermore, students' capacity requires an early understanding of formally obtaining material related to the glottal [t] as a foundational component of effective listening and pronunciation development in English language learning. Introducing this phonological feature at the beginning stages helps learners build accurate perceptual awareness of natural spoken English, which often differs substantially from the careful, citation forms presented in textbooks. When students are unfamiliar with the glottal realization of [t], they may fail to recognize common words in connected speech, resulting in reduced listening comprehension and increased processing difficulty. From a psycholinguistic perspective, early exposure allows learners to form robust phonological representations in long-term memory, enabling them to map variable surface forms of pronunciation onto stable lexical items. Moreover, understanding the glottal [t] at an initial stage supports the development of receptive competence, which is essential for academic contexts such as lectures, discussions, and standardized listening assessments that frequently reflect authentic speech patterns. Pedagogically, early instruction prevents fossilization of inaccurate listening strategies and promotes greater confidence when encountering different English accents. Therefore, integrating the glottal [t] into early pronunciation and listening instruction is not merely an advanced or optional topic, but a necessary element in preparing students for real-world communication and academic success in global English environments.

2.4. Linguistics

The theories and references related to this case study are presented in this chapter, providing additional information. Linguistics constitutes an integral component of spoken English, includes various elements, including phonology, which it constructs how to speak correctly and well-spoken in communication. In addition, linguistics is also a method and research that analyzes the establishment of language. According to Brumfit (1995: 27), applied linguistics

is how creative inquiry has been used in applied linguistics research and how it might extend our understandings of communication and language in relation to real-world problems. It means that linguistics is also a part of how to communicate and implement the language well. Based on the statement above, this research emphasizes a kind of language for communication, particularly English, as a language analysis.

Additionally, linguistic analysis encompasses how effective communication can be achieved correctly by examining the rules of speaking that must be used appropriately in different contexts. Through the study of phonology, linguistics explains how clear pronunciation, stress, and intonation contribute to intelligibility. Linguistic analysis, therefore, serves as a framework for identifying errors or mismatches in speech that may disrupt understanding, such as inappropriate word choice, unclear sentence structure, or violations of conversational norms. By understanding and applying these rules, speakers can adapt their language use to suit different situations, audiences, and purposes, leading to more effective, respectful, and successful communication.

In addition to linguistic research and methods, it will be identified how to comprehend English as a language for international communication. Applying linguistics in daily communication, informal and formal activities will construct the well of English, particularly in speaking and professional communication. Additionally, Brumfit stated above that linguistics can identify the problems in communication if it is not appropriate with the rules in the linguistic system. It is organized to arrange communications with correct grammar and structure, as well as speaking in English. It means that linguistics can identify problems in communication when language use does not align with the rules of the linguistic system, because communication relies on shared structures and conventions to convey meaning accurately. Linguistics provides analytical tools to examine these mismatches systematically, allowing researchers and practitioners to pinpoint whether a communication failure arises from pronunciation errors, grammatical inconsistencies, ambiguous meanings, or contextual misinterpretations. By identifying these specific linguistic violations, linguistics not only explains why communication breaks down but also offers solutions for improving clarity, appropriateness, and effectiveness in both spoken and written interactions across different social, cultural, and institutional settings.

Furthermore, according to Harvey (et al. 2020) also stated that Harvey, McCormick, and Vanden also undertook a project to develop Harvey's applied linguistics research for performance, in which they aimed to communicate to a public audience how it feels to not understand what is

going on around you, especially in a context where you expect to understand. It means that applied linguistics research is essential to achieve the goals through communication. The communication concept is understandable for all content and grammatically correct. Moreover, basically, communication in English is regulated by phonology. The aims of communication mean understanding the audience towards the content and grammatically correct, which public audience comprehended what the content and correct gramatical is indicates successful communication. However, Harvey's project shows that successful communication depends on understanding the audience as a partner in communication. Alongside, this measurement is a concrete measure of communication, such as speaking with good pronunciation, accepted based on the perspective of a communication partner.

Linguistic understanding basically requires effective communication, which needs good pronunciation in order to achieve mutual comprehension from the perspective of a communication partner, because pronunciation directly influences how spoken messages are perceived and interpreted. When a speaker produces sounds that align with the phonological rules of a language, listeners can more easily recognize words, process meaning, and respond appropriately without excessive effort or confusion. In contrast, inaccurate pronunciation may lead listeners to misidentify words, misunderstand grammatical relationships, or focus more on decoding sounds than on the intended message itself. From a linguistic perspective, pronunciation is not merely about having a native-like accent, but about producing intelligible speech that conforms to shared sound patterns, stress, rhythm, and intonation. These elements help signal meaning, emphasis, and speaker intention, which are crucial for successful interaction. Therefore, good pronunciation supports acceptance and comprehension by the communication partner, as it reduces ambiguity and facilitates smoother exchanges, especially in formal, academic, or professional contexts where clarity and precision are highly valued.

2.5. English as a Second Language (ESL)

Indonesia, as a country that adopted English as a Foreign Language using English is not primary used in social communication among Indonesians. However, with the Merdeka Curriculum applied, English is made a mandatory language in academic fields. Due to the globalization era forced student is able to speak English in daily communication informally and numerous formal agendas. According to *Permendikbudristek republic Indonesia Nomor 12 Tahun*

2024 dalam Pasal 33 is elaborated that *mata pelajaran Bahasa Inggris pada sekolah dasar, madrasah ibtidaiyah, atau bentuk lain yang sederajat menjadi mata pelajaran pilihan yang dapat diselenggarakan berdasarkan kesiapan Satuan Pendidikan sampai dengan tahun ajaran 2026/2027 dan beralih menjadi mata pelajaran wajib pada tahun ajaran 2027/2028*. From the illustration above, English has a mandatory subject in all Senior High school in Indonesia. Thus, Darma Persada University I 61 in academic sectors, in this context, English in a particular specific area becomes a Second Language (ESL) for all students in Senior High School in Indonesia. Implementing the changes National policy requires an agreement for the betterment of English as a second Language in the school's area.

In addition, the capability of English as a Second Language becomes students at Senior High School in East Jakarta automatically use bilingualism, that influenced by culture, acculturation and globalization. The school emphasized English as the primary language in the school. It means that implementing English as a second Language must be applied to daily communication and other interactions in the school area. Indonesians implemented the Indonesian language as their mother tongue, followed by English as a second language in communication. English, as a global language that dominates almost all countries in the world, has forced people, particularly students in Indonesia, to study English deeply. It is influenced by the globalization era, where native speakers and foreigners who speak English as their mother tongue are acculturating their language and culture to the Indonesian language and culture.

Additionally, globalization, English came to Indonesia as an international language, influencing many factors, particularly in the education field. The standard system of English is implemented in the lesson and subject curriculum. Thus, students must obey the rules related to implementing English in the classroom. A lot of the dynamics of the evolution of English as a Second Language has implemented English as a part of language style in daily communication, which has created many adaptations through acculturation of language. According to Albarillo (2018), stated that when two languages coexist in the classroom, it creates a scenario in which codes are exchanged. The phenomenon is commonly known as code-switching. Sociolinguists first coined the term code-switching (CS) in the 1960s. It means that English as a Second Language for Indonesians is supported with system education globalization influenced, such as communication using Code Switching. In Indonesia, particularly, code switching automatically influences all

students in the big city, which is automatically influenced by culture, globalization, and acculturation, indirectly influencing English and using code switching for daily communication as a new culture that English as a Second Language automatically. Furthermore, Code Switching, stated above, means students at State Senior High School in East Jakarta are engaged as one of part Schools in Jakarta that communicate in mixed language between the local language and a second language at the same time, then both of them have a similar level of competency. According to Hudson (1996) and Auer (1998), as cited in Hidayati (2016), code-switching, also known as using more than one language in a single utterance, is commonplace in a bilingual or multilingual environment. Code-switching is seen as an inevitable byproduct of bilingualism (or, more broadly, multilingualism). The statement above elaborated that the highlighted meaning of code-switching is when students communicate in two languages in every communication or utterance, emphasizing that they speak in two languages within a sentence or more than one sentence. in more than one language for communication in many activities.

Using of code-switching can serve as an effective pedagogical strategy to enhance comprehension and engagement among learners. In academic contexts, ESL students often face cognitive and linguistic challenges when required to process complex concepts entirely in English, especially at early or intermediate stages of proficiency; therefore, strategic code-switching, which, as students, involves shifting language from the mother language into the learning language, can function as a scaffolding mechanism that supports understanding without undermining language exposure. From a sociolinguistic perspective, code-switching is not a sign of linguistic deficiency but a natural bilingual practice that enables learners to negotiate meaning, clarify abstract ideas, and connect new linguistic input with existing knowledge structures. When English is positioned as a compulsory subject, students may experience anxiety or reduced motivation, and the limited use of the first language (*bahasa pertama*) in explanations, instructions, or feedback can lower affective barriers and increase accessibility. Academically, this approach aligns with communicative language teaching principles, which emphasize meaning-making and learner-centered interaction over rigid monolingual instruction. Thus, the integration of purposeful code-switching in ESL classrooms allows English learning to remain rigorous while still being comprehensible and relevant, ensuring that students not only fulfill curricular requirements but also develop functional proficiency that supports their academic and professional futures in a globalized world.

Moreover, English as a second language (ESL) for students requires not merely grammatical knowledge and vocabulary acquisition but also a high level of competency in understanding and producing accurate pronunciation, which is fundamental to effective communication. Pronunciation plays a critical role in intelligibility, as even minor phonological inaccuracies can impede listeners' comprehension despite otherwise correct language use. From a linguistic standpoint, ESL learners must develop both segmental competencies, such as the accurate production of vowels and consonants, and suprasegmental competence, including stress, rhythm, and intonation patterns that convey meaning and pragmatic intent. Enhancing English pronunciation also supports listening comprehension, as learners who are familiar with phonological variations are better able to decode spoken input in authentic contexts such as academic lectures, discussions, and examinations. In educational settings where English is a compulsory subject, insufficient attention to pronunciation may result in students who can perform well in written tasks but struggle in oral interaction and real-world communication. Therefore, systematic pronunciation instruction integrated with listening and speaking activities helps learners build phonological awareness, increase confidence, and reduce communication breakdowns. Academically, prioritizing pronunciation competence within ESL instruction ensures that students achieve a more balanced and functional command of English, enabling them to participate effectively in academic, professional, and global communicative environments.

2.6. English Application

In the digital era, students at State Senior High School in East Jakarta have been influenced by technology in learning methods. Technology has changed students' perspectives on accelerating the advancement of the era based on curriculum and academic guidance. The systems were created through conventional methods; however, in the digital era, students and lecturers have innovated towards teaching and learning on digital platform systems. The modern era is identified with digital data, social media applications, websites, the internet era, and fast response. In addition, technology supported the easy access for people to explore anything rapidly. Technology in the education field has been constructed in various programs such as developing information systems, analyzing data, assessing, and more. According to Richard E. Mayer (2002), related to multimedia learning occurs when a learner builds a mental representation from words and pictures that have been presented. This definition is broad enough to include book-based

environments consisting of text and illustrations, computer-based environments consisting of narration and animation, and virtual game environments consisting of interactive speech and animated micro worlds. It means multimedia learning as an embodiment in the digital era, where people who apply multimedia learning automatically utilize the internet and computers as a medium for learning.

Furthermore, a digital platform is represented by an application and website displaying visual features within a lot of elements and statistical procedures, creating the application inputting programming and data. According to Kelleher & Pausch (2005), visual programming can reduce cognitive load since learners focus on and learn the basics of programming, where the learner focuses on the structure and logic, and does not need to worry about the language structure of programming. Computer-based information is designed visually and audio, which the system contains data processing that becomes qualified information that is utilized for analysis. Computer-Based systems created a lot of digital content, such as websites, applications, digital references, and more. Furthermore, the entire society is impacted by multimedia learning systems; however, it is merely separated by function and the aim of multimedia learning. In the education field, a whole digital platform is provided for encouraging an educational learning system for informal and formal learning. It means that learning English, particularly focusing on pronunciation correctly, can be supported by a visual program, such as an application or a website. In addition, media digital in this era is a well-solution and a need system to build students with a motivation for learning, which website and application can enliven the new adaptation learning towards students' ambiance. Additionally, digital media has transformed a system from conventional into digital, which has changed the character and cultural tradition to become more dynamic and practical.

Besides, English application is one of the resources of English learning in the modern and digital era. Furthermore, digital literacy has had a huge impact in the education field, as it reduces hard paper that must be printed for study. Nowadays, there exists digital data that has been published by students, professionals, and professional career lecturers who assisted students in enhancing study resources, especially in English. According to UNICEF Nascimbeni & Vosloo (2019), digital literacy means someone who has opportunities, abilities, and rights to use or not use that allow individuals to benefit and avoid negative things of digital content across all domains on the Internet. When someone understands how to use the Internet properly, they also understand

each platform's positive and negative impacts, and know what devices and skills are used on each platform. He stated that digital literacy has dual sides, negative and positive impacts, constantly changing innovation brings a lot of benefits and detrimental of students. Moreover, technology has obviously changed the innovation with positive impacts; however, it comes with negative impacts for students who are unable to control and navigate the negative impacts of technology. In the internet era, quick responses have become the ultimate factor in advancing human civilization because digital literacy is provided in software data of internet systems.

On the one hand, data and information are gained by a lot of media education platforms for learning in English media learning, such as media for learning grammar, listening, reading, writing, and speaking. All aspects of English competencies are provided mostly on the website and application. Students of Senior High School in East Jakarta contributed to enhancing their competency in pronunciation using technology in the form of an application for improving and understanding pronunciation and vocabulary. The Wellpron application was built for students of State Senior High Schools in East Jakarta, with a sample test for using the pronunciation of the glottal [t] aspects. The Wellpron is an abbreviation of Well Pronunciation, which means an application that has a function merely for analyzing English pronunciation towards vocabulary, particularly the glottal [t].

Moreover, this application is guided by the IELTS engine application, which it provides and organizes how to differentiate pronunciation in each vocabulary. Students can recheck and analyze the pronunciation of the glottal [t] and how to pronounce it correctly. However, IELTS focuses on several competencies in general and academic English; nevertheless, the Wellpron application is focused on a part with pronunciation that contains the consonant [t] or sound [t]. It was identified that the difference in pronunciation of the consonant [t] was identified after the application analyzed the sound. Alongside, it also functioned to correct sound, voice, and pronunciation with a result or score based on IELTS rules. The Wellpron application works by accepting the voice, then the application sequences and analyzes the voice with data inside the application, and then it is detected by the application. Furthermore, this application is created based on a web-based system, which students can operate this application carefully on a laptop and PC (Personal Computer). The Wellpron application is built to address numerous problems in society and schools related to comprehending and differentiating the pronunciation of vocabulary. It is also utilized for teachers to teach and recheck students' pronunciation, and how to be different.

On the other hand, the Wellpron application is also used to provide a personal assessment in evaluating how to be a better pronunciation. In addition, the essential thing that the Wellpron Application provides is to educate students, particularly in comprehending glottal [t] in communication. The application is utilized for students to enhance their competency in English pronunciation. The Wellpron application is a simple application for managing and comprehending the competency of English, particularly the glottal [t]. Moreover, in the future Wellpron application is going to be developed to become a significant system of technology in digital learning English and a solution.

2.7. Previous Study

In supporting well-oriented and sequenced research, observation, and strengthening the thesis related to the pronunciation of glottal [t] words. The first study I observed and found a similar analysis related to an Analysis of Students' Phonological Errors in Pronouncing Lexical Items at Senior High School 12 Pekanbaru (2020). It was written and analyzed by Shinta Nia Hartati Puteri from the State Islamic University of Sultan Syarif Kasim Riau in 2020. She analyzed the focus on Error pronunciation in the lexical area towards Students of Senior High School 12 in Pekanbaru, Riau. She elaborated and analyzed that Mother tongue is the most influential factor in the pronunciation skills of Javanese, Minangnese, Bataknese, and Ocensee students. This is proven because English and certain languages have different segment sounds, namely vowels and consonants. However, the fact was happening in an EFL classroom where pronunciation is considered to be difficult. Students make errors not only in pronouncing sounds that do not exist in the Javanese sound system, but also in pronouncing sounds that exist in their mother tongue.

Moreover, English and Javanese have different rules in pronunciation, thus there can be differences between the two languages. Furthermore, this analysis more emphasized that most students in Indonesia, in particular, whose first language of most of them is the local language; it poses a challenge to learn a foreign language such as English due to the fact that cultures and rules influence students to practice English fully. In this context, Error pronunciation is caused by literacy and the culture's accent of the local language. Therefore, the error in pronunciation as an Indonesian at Senior High School 12 in Pekanbaru, Riau, relates to the pronunciation of the glottal [t] vocabulary. Indirectly, in association with vocabularies consonant [t] is commonly included in

various vocabularies; thus, an error in pronunciation in this context also results in an error in glottal [t] pronunciation.

In addition, other observations from the second study, I found the relation of this research to the theme Error Analogy of English Pronunciation of The Sixth Semester Students of English Literature Department at UIN Maulana Malik Ibrahim Malang (2021). This analysis emphasized the error analogy of English pronunciation. Additionally, Rizky Firdausy, from Universitas Islam Negeri Maulana Malik Ibrahim Malang, as a writer of this analysis, is related to the error analogy in pronunciation BAWE (British Academic Written English), in which the students of the sixth semester of the English Literature Department at UIN Maulana Malik Ibrahim Malang employ words that they do not often use. Hence, during the speaking performance, they must go through an analytical process, which will finally result in forming a habit pattern. Furthermore, in core analysis, he observed that the research investigated the interference of Malay in pronouncing English voiceless stops [p], [t], and [k] by EFL students in Pontianak. This research used the quantitative method. Furthermore, they collected the data from 15 EFL students whose mother tongue is Malay. The results showed [p] 56 times mispronounced from 105 chances, [t] 42 times mispronounced from 105 chances, and [k] 31 times mispronounced from 105 chances. The mother tongue indicated that interference in students' pronunciation is included in all of the analysis of the concerned content text. The research above relates to understanding glottal [t] in their pronunciation, which is voiceless because it is sustained, and continues research on the phonology subfields of English.

The third study I found and analyzed, which both analyzed glottal [t] based on a literature review, the first previous study analyzed glottal [t] merely as mispronunciation and error analogy, and the second analysis related to error analogy of English pronunciation. In addition, the third analysis also discussed the relationship to glottal [t] in different meanings, with an emphasis on plosive pronunciation towards consonants. An Analysis of Students' Pronunciation in Plosive Voiceless Consonants of The Third Semester at English Language Education of FKIP UIR (2022). This research was written by A. Indah Sulistiyowati from the Islamic University of Riau, which analyzed related to student still having problems in their pronunciation, particularly plosive voiceless, when they pronounced words including plosive voiceless consonants such as [p], [t], and [k] in the English vocabulary. Furthermore, they missed how to pronounce English vocabulary correctly with plosive voiceless consonants [p], [t], and [k]. Then most of the students pronounced

the plosive consonant sound weakly when they pronounced words that contained the consonants [p], [t], and [k] with no aspiration in initial, medial, and final positions.

Besides, these previous studies are connected to my research, and it will be sustained with problems of mispronunciation understanding. However, my research is different due to the fact that I utilize technology in the modern era, namely the Wellpron Application, for a solution to learn and improve, even to solve the problem of how to pronounce several words in English. However, my research focuses on how to pronounce glottal [t] vocabularies, in particular the consonant [t] and [t] sounds, with a dynamic and practical solution to learn the pronunciation of [t]. Furthermore, the Wellpron application will assist students in correcting pronunciation and comprehension of the glottal sound in English vocabulary.

2.8. Hypothesis

In the hypothesis of the research, it was analyzed that the student is unfamiliar with the pronunciation of the glottal [t] specifically. According to Sugiyono (2014) stated that *hipotesis merupakan jawaban sementara atas rumusan masalah penelitian yang telah dinyatakan dalam bentuk kalimat pernyataan. Hal ini menunjukkan bahwa hipotesis Adalah dugaan awal yang perlu diuji melalui penelitian untuk menentukan kebenarannya.* Based on the statement above, the related background of the research in the literature review can be formulated into a hypothesis below:

- h1. The Wellpron application has a significant impact on enhancing ESL students 'pronunciation skills of glottal [t] before and after instruction using the Wellpron application.
- h0. The Wellpron application has significant differences in the pronunciation skills of glottal [t] accuracy between students who use the application and those who do not utilize the application.

The Wellpron application is initiated to support and encourage students to enhance their pronunciation skills in English, particularly glottal [t] sounds and to assist lecturers for teaching methods with student center system using digital media as a facilitator in teaching and learning in the classroom. It is the digital system learning which is reliable in the modern era. In addition, the Wellpron application is built from an IELTS engine, which the database guarantees originality with scoring analysis based on IELTS rule systems, such as API (Application Programming

Interface) with Speechace machine. Additionally, it has adopted the new updated digital era, which is a dynamic and flexible system to be operated for students. Wellpron application can be operated online through the internet; afterwards, it is merely supported by a web-based system.

The use of the Wellpron application is hypothesized to have a positive and significant effect on the pronunciation skills of state senior high school students in East Jakarta. By integrating digital media with academic instruction, the application is expected to assist learners in identifying phonological differences across English vocabulary, thereby improving their comprehension of words with similar sounds. Through its sound-detection technology and automated comparison with a standardized pronunciation database, Wellpron is anticipated to enhance students' speaking competence, particularly in terms of accuracy and clarity. Consequently, students who engage with the Wellpron application are predicted to achieve higher levels of pronunciation proficiency than those who are taught using traditional learning approaches without technology-assisted support.

It perceives the comprehension vocabularies with different sounds and pronunciation. Wellpron also emphasized building student competency in speaking and pronunciation of English. The application is created through the IELTS engine ReactJS with a backend/server. Alongside this application in the shape of a website using Apache, the language comes from PHP (Hypertext Preprocessor) with open source. Besides, the application used a Framework with Laravel, and the database used MySQL. In addition, the application works by detecting sounds that are produced by the user, then the application analyzes and synchronizes the sounds and data database. The result is based on a database with better and standard pronunciation.

The application introduces the unfamiliar words with different pronunciation, particularly glottal [t] sounds. In addition, most students did not understand the pronunciation of glottal [t] in the specific utterance and speaking; they merely understood the vocabulary; however, the emphasis of glottal [t] sounds in separating pronunciations is unfamiliar. Additionally, the impact of the Wellpron Application is to minimize student mispronunciation with the [t] sound in English vocabulary, and also to enhance the understanding of other sounds. Alongside, it assists teachers to teach phonology and speaking, as Wellpron acts as a digital media tool to demonstrate speaking and pronunciation correctly and creatively. The application is appropriate for Indonesian students, who are majority influenced by the accent of the local language as their first language. Moreover, the local language cultures in Indonesia emphasize that the accent must be followed.

On the one hand, in globalization, students must be capable in English as an international language, as English is used as a major language in English-speaking countries, and glottal [t] pronunciation must be comprehended. Moreover, the Wellpron application is also used for students to learning pronunciation autonomously so that students are able to recheck pronunciation correctly. On the other hand, the benefit of this application is that students can practice their pronunciation without a teacher and then improve at the same time. It can levitate, in particular, the sound [t] vocabulary growth significantly. Alongside, this application is easy to download on a web-screen laptop and a Personal computer, thus students can operate the application wherever they can open it. Eventually, the new application is designed specifically for learning the pronunciation of English and its phonology.

