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Solving the Puzzle of Speech Sounds in English Language: AI Prompts for Improvement in Pronunciation

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Abstract

Phonemes and allophones are speech units that help in solving the puzzle of speech sounds in English language. This paper aims to analyze the phonemes and allophones as sound segments. The combination of qualitative and quantitative methods will be used to show that artificial intelligence tools can also help in defining and distinguishing allophones and phonemes. This study investigates the knowledge of phonemes and allophones among second-year English language students at the Faculty of Philology within Goce Delcev University in Stip. The study assesses students' understanding of the segments through recognizing minimal pairs, phonemic differences, and allophonic variants such glottalization and aspiration. Questionnaires and short interviews with 25 participants were conducted in order to check students' understanding and the current situation of the usage of AI in their studies. The findings indicate that while many students depend more on spelling than phonetic transcription, the majority of students are able to identify important phonetic elements. According to the open-ended comments, students believe that learning these speech characteristics helps them understand the language more, be more fluent and improve their pronunciation. The respondents also point out that to get the most out of Phonetics training, advanced English proficiency is required. The interviews also reveal that students are not dependent on artificial intelligence tools while studying and improving Phonetics and Phonology. All things considered, the study highlights how crucial it is to teach phonetic differences to facilitate efficient communication and language development.

Keywords: Phonemes, Allophones, AI, Pronunciation, English language, Speech.

Introduction

The sounds in language have an initial role in the speech system. They all differ and cannot be repeated. On the one hand, speakers differ in repeating the same sounds because of many factors: background noise, the speaker's

fatigue, distraction, or reluctance to repeat. On the other hand, it is a fact that language consists of three interlocking systems: sounds, words and grammar. These systems form the resources for creating meaning. When learning a foreign language, speakers often experience a sense of confusion due to the complexity of unfamiliar sounds. This "chaos" can be managed by following specific rules or codes.

Two basic segments on which the language system is organized and can be analyzed are found in English language: the phonemes and allophones. Phonemes are different sounds that indicate different meaning, e.g. pill/bill, till/dill, mill/nil/. Allophones are variations in pronunciation of individual sounds that do not signal difference in meaning, e.g. the difference in the way the /l/ is pronounced according to the sounds that surround it, as in "plane" and "pail". Which sounds can be put together in a given language is a rule governed, i.e. certain sounds can go together while others cannot (Wiltshire, 2019). The combinations of sounds are studied within Phonotactics which is a branch of Phonology. For example, in English, the phoneme $/ \eta / can appear at the end of a string of sounds as in$ 'sing' but not at the beginning (as opposed to languages such as Thai where / n / can appear at the beginning). Hence, studying Phonetics and Phonology can significantly help students improve their pronunciation by understanding the differences between speech segments, particularly phonemes and allophones.

It is important to point out that English has more sounds than letters; for example, there are twelve vowel sounds but only six vowel letters. Phonemes are considered contrasted when opposing sounds function to distinguish meaning. For example: bin-pin, men-man. (Ladefoged & Johnson, 2015). Pairs of words which differ in just sound are called minimal pairs. Among other things, complementary distribution, free variation, distinguishing features, and allophones are basic concepts in phoneme analysis. The phoneme is defined by the opposition of sounds in the same phonetic environment, which differentiates meanings of larger linguistic units (Odden, 2013). Moreover, the phoneme suggests that two sounds are opposed to one another in every linguistic context. The opposition of the phonemes in the same phonetic environment always differentiates meanings of bigger units.

This study's research questions are grounded in the assumption that distinguishing between phonemes and allophones is essential for students' pronunciation development. It examines the awareness of phonemes and allophones among second-year English language students at the Faculty of Philology at Goce Delcev University in Stip, North Macedonia. The study evaluates the students' comprehension of segments by identifying minimal pairs, phonemic distinctions, and allophonic variations, such as glottalization and aspiration. A series of questionnaires and brief interviews with 25 participants were carried out to assess the students' understanding of phonemes and allophones and the current state of AI usage in their academic pursuits.

Literature review of the Phoneme and the Allophone

The phoneme is objective and material. It exists in the form of speech sounds. These sounds represent phonemic variants, and they are called allophones. A phoneme can be realized in different ways. In theory a phoneme can have an infinite number of allophones, but in practice they can be united into several groups. Allophones of the same groups are different; there is always some phonetic similarity (Ladefoged & Johnson, 2015). The types of allophones can be divided into positional and free. Positional allophones are the variation of the phoneme "I" which can be light and dark. Free allophones exist in different combinations. Allophones of different phonemes occur in contrastive distribution and are mutually distinctive (Crystal, 2010). This means that their usage in the same phonetic environment can result in a change in meaning, indicating that they represent separate phonemes. In contrast, allophones of the same phoneme never occur in complementary distribution because in that case they are phonetic realizations of the same sound.

The distribution of the allophones of the same phoneme is usually predictable, we can tell when one variant or another will appear. For example –[k] –representative of phoneme: kick – quick; kik - kwik. The phoneme is an abstract unit. All allophones of the same phoneme possess a set of pronunciation features which make this phoneme functionally different from any other phoneme in the language (Tatarovska, 2020). A phoneme is considered the smallest abstract and functional unit in a language that distinguishes meaning between larger linguistic elements (Trask, 1996). A phoneme represents a set of functionally relevant pronunciation features (distinctive features). The total number of the phonemes in English is forty-four out of which twenty-four consonantal phonemes and twenty vowel phonemes.

The number of phonemes varies across languages, typically not exceeding fifty. For example, Hawaiian has only thirteen phonemes, while Danish and Lithuanian have between 32 and 59 (Fromkin, Rodman, & Hyams, 2014). A phoneme is the smallest unit of sound in a language, which may or may not carry meaning on its own. When phonemes are combined, they form morphemes—the smallest meaningful units in a language (Yule, 2020).

Benjamin Lee Whorf was the person who coined the term "allophone" and developed the phoneme theory in the 1940s. Together with G.L. Trager and Bernard Bloch, the American structuralist tradition was able to clarify the word's usage. Their hypothesis states that substituting one allophone for another in a word will not change its meaning, but it can make it not comprehensible to other people (Lee, 1996).

When producing sounds for a phoneme they are always different even for the same speaker. All allophones are produced consciously and that is why some people cannot understand that they exist. A very good assertion of phonemes can be that phonemes are visible; we have signs for each phoneme and allophones can be considered as "invisible" figuratively speaking because we only pronounce them. What can be helpful in this sense is to contrast some particular examples with noted distinctions of aspiration, glottalization, nasalization or checking for minimal pairs or complementary distribution.

Phonological analyses of languages typically start out with a phonetic representation, which in addition to the distinctive properties of phonemes also contain predictable features, called allophonic non-distinctive features. Phonetic representations are reduced to phonemic representations using criteria such as complementary distribution and phonetic similarity between allophones; then phonotactic analysis determines the position of phonemes in terms of constraints on feature combinations and phoneme combinations (Van der Hulst,1993). The difference between phonemes and allophones can be explained as:

- /t/ phonemic (abstract/mental) category
- [t] [th] allophonic (phonetic) realizations

The pronunciation of a phoneme is often determined by the other sounds around it. The nearby sounds around a phoneme are called the environment of that phoneme. The use of phonetically defined distinctive features is just one way to describe classes of phonetically similar segments (Mielke, 2008).

Distinctive and non-distinctive features refer to phonemes and allophones. Since the definition of the phoneme is the smallest meaningful unit in language and bears the distinctive features whereas the allophone as a set of distinctive and non-distinctive features which are part of the phoneme, features are important in discussing phonemes and allophones (Roach, 2011). Phonemes are represented in the International Phonetic Alphabet (IPA), whereas allophones can be perceived through the positional and free allophones, the types of explosions and aspiration.

AI Prompts for Improvement in Pronunciation

The ability to differentiate phonemes, i.e. the fundamental mental categories of sounds that distinguishes the language is what determines how easily one can be understood. Accent refers to the degree to which you fit in with a specific group, whether it is socioeconomic, ethnic, or geographical, and is influenced by allophones, which are subtle changes in speech patterns and often do not change the meaning in words. Given their limited language proficiency. EFL learners may be strongly tempted to use ChatGPT to craft polished, error-free essays and present them as original work (Almanea, 2024). AI prompts can be also helpful in dealing with differences relating to phonemes and allophones. AI-powered language learning tools have demonstrated significant potential in improving English-speaking accuracy and fluency among non-native speakers. Studies suggest that AI-mediated platforms, such as chatbots and language-learning applications, positively impact speaking proficiency, willingness to communicate (WTC), and learners' perceptions (Phanwiriyarat, Anggoro, & Chaowanakritsanakul, 2025). According to Belda-Medina and Kokošková (2024), the use of GPT in education has recently garnered substantial

interest and controversy worldwide. With its increasing language creation capabilities and comprehension of contextual cues, GPT can help language learners in a variety of ways.

Since different phonemes can be assessed with the minimal pair test, ChatGPT can give you plenty of examples of minimal pairs that can help students distinguish between pronunciation and spelling. This type of testing is needed if we want to differentiate between two different phonemes. The test is positive if there are two word pairs whose pronunciation is the same but differs only in one sound. So, if you seek examples of minimal pairs in English using ChatGPT, you will get the following answer:

Minimal pairs are pairs of words that differ by only one sound (phoneme), changing the meaning of the word. Here are some examples categorized by the type of sound contrast:

1. Voicing (voiced vs. voiceless)

- pat / bat
- sip / zip
- fan / van
- tick / dig
- choke / joke

2. Place of Articulation

- tan / can (alveolar vs. velar)
- · den / then (alveolar vs. dental)
- pit / kit (bilabial vs. velar)
- sip / ship (alveolar vs. postalveolar)

3. Manner of Articulation

- seat / sheet (fricative vs. affricate)
- rip / lip (approximant vs. lateral)
- cat / chat (stop vs. affricate)

4. Vowel Differences

- bit / beat (/ɪ/ vs. /iː/)
- cot / cut (/p/ vs. /n/)
- bed / bad (/ε/ vs. /æ/)
- full / fool (/ʊ/ vs. /uː/)

Fig.1. Minimal pairs on ChatGPT

As shown in picture 1, correct minimal pairs can be identified along with their distinctive features such as voicing, place of articulation, manner of articulation and length of sounds. Once students acquire distinctive features, they can apply this knowledge by giving examples of minimal pairs with sounds that differ in their distinctiveness. When prompting the

accurate definitions, tools like ChatGPT can provide useful examples. An effective strategy for improving pronunciation within the fields of phonetics and phonology involves three key components: understanding the segmental features of speech (such as individual phonemes), developing the ability to articulate these sounds accurately, and utilizing appropriate materials that model the sounds of English (Celce-Murcia, Brinton, & Goodwin, 2010). Bearing in mind the last hint, ChatGPT can be a very good provider of examples and a way to help students understand the phonemes and the allophones before trying to acquire the transcription symbols.

ChatGPT can be very successful in doing an exam in Linguistics. According to Ronan and Schneider (2023), ChatGPT-4 was largely successful in producing broad phonetic transcriptions—including weak forms—for a short English text. Its only notable limitation was occasionally rendering weak forms as fully stressed forms. Qamar, Yasmeen, Pathak, Sohail, Madsen, and Rangarajan (2024) claim that the developers of ChatGPT are aware that the comprehension of meaning in human language is far more complex and often depends on both linguistic and extralinguistic factors.

Given these limitations, AI can still be a useful tool in creating practice materials for students, particularly when it comes to observing common mistakes. If you ask for examples with the phoneme /b/ you will probably get plenty of words that have /b/ in its spelling. But since a lot of sounds in English are silent, you can find examples that do not have the realization of /b/. This is especially evident with the phoneme /l/ where students often encounter words spelled with "l" that are not pronounced with it. In such cases, AI tools like ChatGPT may present incorrect examples. However, these can still be educational if students are equipped with the knowledge of correct transcription and pronunciation.

A very good practical exercise can be to ask students to use ChatGPT to find examples of minimal pairs, differences in terms of distinctive features or finding words that have certain phonemes in initial or final position and then check whether the given examples are correct or not. However, it becomes problematic if learners lose the self-directed practice necessary for autonomous learning if they depend too much on AI for inspiration, which could erode their sense of intellectual ownership (Riser, 2025).

The long-term effects of students' overreliance on tools like ChatGPT extend beyond reduced creativity. A significant loss of agency can impact how students learn, think, and perceive their role in society. Nugroho, Yasmeen, Pathak, Sohail, Madsen, & Rangarajan (2024) highlight the risk of misuse, noting that students may rely on ChatGPT to complete assignments or exams without truly understanding the material, or may even plagiarize content directly from chatbot-generated responses. Teachers have expressed concern over students using ChatGPT to write essays, reports, theses, and exam answers, prompting many to reconsider their assessment design. This shift is a natural response to the widespread adoption of AI tools. Moving forward, both students and educators must

approach AI use with caution. Students should critically evaluate the information they receive, while teachers should design more engaging, real-world-based tasks that promote original thinking and minimize opportunities for academic dishonesty.

The rise of the AI tools brings forward questions and potential pitfalls, especially concerning the impact on students' authentic voices. In pedagogical contexts, 'voice' does not just mean linguistic constructs; it encompasses unique perspectives, cultural nuances, and individual styles especially in the EFL context (Werdiningsih, Marzuki, & Rusdin, 2024). Educators should consider strategies that incorporate interactive elements into their teaching practices, thereby enhancing student engagement and learning outcomes. Interaction with AI tools should complement, not replace, the nuanced feedback and personalized instruction that educators provide (Guo, 2024). Neither students nor educators should rely solely on ChatGPT; instead, each should find their own way to use it as a supportive tool, hint or a resource.

Overview of the study design: participants and methods

This research study aims to analyze how students perceive and produce phonemes and allophones in language. Students from Goce Delcev University Stip from the Department of English language and literature (year II) have followed a course in Phonetics and Phonology are the respondents in the questionnaire. In order to see whether they have acquired the different segments, phonemes and allophones, the questionnaire is based on the following research questions:

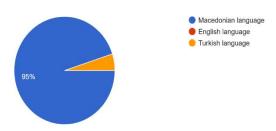
- Do you understand the terms phonemes and allophones?
- To what extent are you familiar with the differences?
- Do you think that it is important to study such nuances of speech that can change the meaning of words based on phonemes and allophones?

This research was conducted in the period between the end of May and June 2025 after the students finished the course in Phonetics and Phonology. The number of students who were eager to participate is 20 altogether with 5 random students for a short interview which gives the total number of 25 students participants. The students were assured that their answers in the surveys will stay anonymous. In accordance with the research questions students' awareness and attitudes towards the fundamental phonological concepts – allophones, phonemes and nuances of speech is being measured.

Findings

In table 1 below is shown the mother-tongue language of the respondents, where bigger percentage of the group is from Macedonian background and only 5% of the students who are participants of the study are from Turkish background. At Goce Delcev University, among the local students from Macedonia, students from Turkey also enroll the programs. The percentage distribution of the group English language and literature (year II) can be seen in graph 1 below:

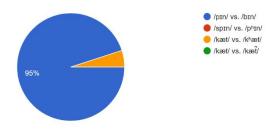
What is your mother-tongue language? 20 responses



Graph 1: Distribution of mother-tongue language

Further, the differences between allophones and phonemes are discussed and how students perceive these two notions. In graph 2, four combinations of words are given and only the first pair represents a minimal pair. Hence, 95% of the students are aware of the notion "minimal pair" having answered the question correctly. As previously defined, allophones are variations of phonemes. In the following question, examples contrasting allophones and phonemes were provided, where only the third example reflected a true difference in sounds. Graph 3 shows that nearly all respondents successfully distinguished between the transcribed sounds /s/ and / \int /:

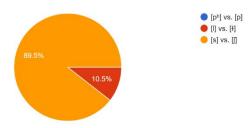
Which pair represents a difference in phoneme in English (minimal pair)? 20 responses



Graph 2: Minimal Pairs

In which of the pairs you perceive a difference between the two sounds?

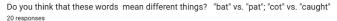
19 responses

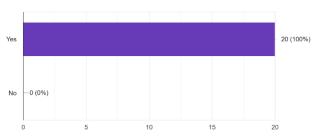


Graph 3: Differences in sounds

Another question in this study was designed to further assess students' understanding of the distinction between allophones and phonemes. Specifically, students were presented with two pairs of words and asked whether the words in each pair have different meanings. This task encourages students to rely on the spelling of the words rather than their phonetic transcription or pronunciation. This approach is particularly important because many students demonstrate lower familiarity and confidence with phonetic transcription symbols. As a result, relying on the auditory or phonetic differences can be more challenging than recognizing differences in written form.

By using orthographic cues (spelling), students find it easier to perceive semantic distinctions based on phonemic contrasts. The fact that students answered this question with 100% accuracy (as shown in Graph 4) suggests that, even if their phonetic transcription skills are still developing, they possess a clear understanding that phonemes function to distinguish meaning between words. This highlights the importance of integrating both orthographic and phonetic approaches in teaching to support students' comprehensive grasp of phonological concepts.

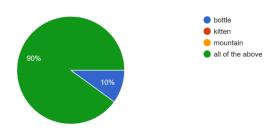




Graph 4: Differences in words

What can be helpful in contrasting phonemes and allophones is examining specific examples that highlight distinctions such as aspiration, glottalization, and minimal pairs (Ladefoged & Johnson, 2014). The question that follows represents checking the understanding of words and their pronunciation with glottalization. If students study the definition of glottalization and manage to learn examples that are pronounced with glottalization they will be able to answer that all the given words in the question (bottle, kitten, mountain) are pronounced with glottalization. However, glottalization is optional and the speaker chooses whether to use it or not. From graph 5 below can be seen that a bigger percentage of the respondents are aware of its use:

Which of the following words would you pronounce with a glottal stop? 20 responses



Graph 5: Glottalization

Finally, some open questions were asked regarding allophones and phonemes, and some interesting answers were given (appendix 1). The questions were in the direction of the usefulness of the course and the allophone and phoneme's awareness and whether these nuances of speech should be taught within their four-year studies in English language and literature. The summary of the long answers refers to the different pronunciation of the sound /t/ for example and variations that happen because of allophones, accents, dialects and the individual's speaking style. In the answers, variations such flapping sounds, variations of /l/, aspiration and glottalization were mentioned which confirms the acquired knowledge of the students considering the segments - allophones and phonemes.

In the end, the students were asked if they found this useful and most of them agreed that pronunciation differences should be taught explicitly to improve their listening comprehension, speaking fluency and naturalness in speech. However, they also agree that to follow the course in Phonetics and Phonology, students need to be more advanced in English language. Hence, it is important to note that students mentioned that the goal of speaking English is not to sound perfect but to ensure mutual understanding. Teaching and learning help students adapt to real-life situations, diverse accents and instruction should be clear, practical and balanced.

The participants in this study - the students from Goce Delcev

University were asked if they have used some ChatGPT prompts for the course Phonetics and Phonology, and they all gave a negative answer. However, some of the students were caught using ChatGPT for fast responses answering questions giving incorrect answers. This is confirmed by (Annamalai and Bervell, 2025) who also found out that ChatGPT can be challenging for the students offering false information and creating difficulties for them. In our case, students often choose alternative transcription tools because they perceive ChatGPT as potentially unreliable, even in theory, and therefore they are advised to avoid using it.

Discussion

To sum up, AI can be an effective tool for enhancing pronunciation since it provides interactive practice, tailored learning, and real-time feedback. AIdriven applications can assist learners in improving their accents, correcting mistakes, and producing clearer speech thanks to developments in machine learning and speech recognition. Simatupang, Ismail, Waluvo, and Panmei (2025) discuss that robust institutional support and positive peer dynamics not only enable innovative and effective use of AI tools but also foster an environment conducive to pedagogical experimentation and collaboration. AI will become progressively more important in language learning as technology develops, increasing the effectiveness and accessibility of speech instruction for people everywhere. However, it must be pointed out that although you can now easily create content with these prompts, you still must use your mouth to practice the sounds - you cannot improve the English pronunciation and accent without practice. ChatGPT may be incorporated into teachers' and learners' array of technology tools for teaching or learning L2 pronunciation. However, ChatGPT should be regarded as a complementary tool to other pronunciation teaching and learning resources.

Above all, ChatGPT cannot replace interaction through formal instruction with teachers and other L1 or L2 speakers of English in the development of L2 pronunciation (Mompean, 2024). It is essential to speak and use the correct phonemes and allophones without having to think a lot. When this process becomes automatic, one knows that they are getting closer to your goal of your ideal accent (Lin, 2024). Hajmalek and Sabouri (2025) argue that more control and autonomy can be given not only to learners but also the AI, for instance, by adding the possibility of real-time processing and evaluation of learners' pronunciations and adjusting the pace accordingly. By combining these possibilities a strong pedagogical value can be achieved, especially in teaching pronunciation, where immediate feedback is crucial.

Conclusion

The results of this study show that even though students recognize the importance of explicit pronunciation instruction for improving fluency and comprehension, they also emphasize the need for practical, balanced teaching approaches that prioritize mutual understanding over perfection.

Although the recent studies demonstrate the limits of AI in education, recent advancements demonstrate promising ways to integrate it, particularly in pronunciation training. The mix of AI with musical and multimodal methods is already showing potential to improve language learning results. By using these technologies, app developers and education technologists can sharpen their strategies, creating more interactive and user-friendly learning platforms that better meet learners' needs and tackle existing problems.

Moreover, the new techniques used by EFL teachers to incorporate AI tools signal a major change in the teaching methods. These strategies not only highlight how AI can transform language instruction but also reflect a wider trend toward more personalized, engaging, and flexible learning environments. As learners' needs change in a fast digital world, AI-supported teaching provides a way to enhance traditional methods, making language education more accessible, effective, and suited to individual learning styles.

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Appendix 1: Open questions from the survey

Have you noticed differences in pronunciation that don't seem to change meaning? Please describe.	Do you think such pronunciation differences should be taught explicitly in language learning? Why or why not?	How do you understand the term "allophone"? Give an example if you can.
- Yes. Sometimes some words are pronounced differently but do not change the meaning. Each speaker bears their own style of pronunciation. - Yes, for example, the /t/ sound in "butter" can be pronounced as a flap [r], sounding like "budder". Both "butter" and "budder" are understood as the same word in context. - Yes, there are many pronunciation differences in English that don't change the meaning of a word: 1. /t/ in different words. 2. "L" sounds. 3. Nasalization of vowels. - Some sounds are pronounced differently due to their position in a word; however, their meaning stays the same. An example would be the dark [t] in clip and the clear [l] in lip - English speakers pronounce certain sounds differently depending on the word or their accent, but it doesn't change the meaning - For example, the word "lead". It could mean the metal (lead) or having someone to guide (lead)	- Yes, of course. Sometimes differences in pronunciation can lead to misunderstandings. - Yes, because awareness of pronunciation variations helps learners understand native speakers more easily and improves their own speaking fluency. - Yes, pronunciation differences should be taught explicitly, but in a way that's levelappropriate and practically useful. It's not about perfect accents—it's about understanding and being understood.	 The allophone is a variation in sounds that do not change the meaning of the word. An allophone is a variant of a phoneme that does not change the meaning of a word. Pronouncing a phoneme differently Allophones are different pronunciations of the same sound (phoneme) that don't change the meaning of a word. Allophones are variations in pronunciation of individual sounds that do not signal difference in meaning. An example [ph] as in pin An allophone is a variation of a phoneme that does not change meaning The term "allophone" refers to one of the variant sounds of a single phoneme in a particular language. Ex: [t] – a regular "t" sound as in "top" [th] – an aspirated "t" (with a puff of air), like in "tap" An allophone is a variation of a phoneme that does not change the meaning of a word. For example, the English /t/ sound in "top" [th] and in "stop" [t] are allophones of the same phoneme /t/. Although they are

- Yes, there are many differences in pronunciation that don't change the meaning of a word these are often due to allophones, accents, or individual speaking styles.
- Yes, for example, the word "butter" can be pronounced as ['bʌtər] or with a flap sound ['bʌrər] in American English. Both pronunciations mean the same thing, and the difference is mainly due to regional accents or speaking style.
- Yes. For example, the word "little" might be pronounced as ['lɪtəl], ['lɪʔl], or ['lɪʔl] depending on accent or dialect. The pronunciation changes, but the meaning stays the same.
- Yes. For example, some people pronounce butter with d-like sound, while others say it with a soft pause or glottal stop, but it still means the same word.
- Some sounds are pronounced differently due to their position in a word, however their meaning stays the same. An example would be the dark [t] in clip and the clear [l] in lip.
- Yes, I have noticed that certain sounds can be pronounced differently depending on context, but these variations don't change the meaning of the word. These are the allophones, and they are very common in everyday speech.
- Yes for example the pronunciation of /t/ in butter can be realized as a flap in American English sounding like budder
- Yes, absolutely. For instance in the word "pin" the 'p' is pronounced with a small puff of air.

- I think they should be taught as they would help learners improve their listening skills and sound more natural.
- I think they should be taught not in the beginning, but as learners become more advanced. Understanding pronunciation differences helps learners sound more natural and improves listening skills. It also prevents confusion when native speakers speak quickly or use accents
- pronounced differently, they don't change the meaning of the word.
- An allophone is a variant of a phoneme that does not change the meaning of a word. The /t/ in "top" [tʰ] (aspirated) vs. "stop" [t] (unaspirated) vs. "bottle" (glottal stop in some dialects) are all allophones of the phoneme /t/.
- An allophone is a variation of a phoneme that does not change the meaning of a word.
 For example, the English phoneme /t/ can be pronounced as an aspirated [th] in top, an unreleased [t] in cat, or as a flap [r] in butter (in American English). These are all allophones of the same phoneme /t/.
- Different variants of the same phoneme that do not change the meaning of a word.
- An allophone is a variation of a phoneme that does not change the meaning of a word.
- Allophones are variations in pronunciation of individual sounds that do not signal difference An example [ph] as in pin meaning.
- Different realizations of phonemes that can be aspirated and unaspirated.
- I understand the term "allophone" that refers to a variant pronunciation of a phoneme that does not change the meaning of a word.
- An allophone is a variant of a phoneme that does not change the meaning of a word.
 Example: The t sound in top aspirated vs stops unaspirated both are allophones of the phoneme t
- A basic sound unit in a language that doesn't change the meaning of the word. ex: butter