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## **AN OVERVIEW OF PHONETICS, PHONEMICS, AND GRAPHEMES**

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### **ABSTRACT**

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Phonetics explores how humans produce speech sounds, focusing on their physical creation and articulation. Phonemics, a subset of phonology, examines how sounds function within a language, particularly their role in distinguishing meaning. Graphemes, on the other hand, are the smallest meaningful units of written language that can differentiate words. This research aims to delve into the interaction between spoken sounds and written symbols and their contribution to linguistic communication. The study employs a descriptive qualitative approach, analyzing data from books, journals, and other relevant literature on phonetics, phonemics, and graphemics. Data collection involves library research and content analysis, which are interpreted to understand the production of language sounds, their role in conveying meaning, and their representation in writing.

Findings indicate that phonetics focuses on sound production, phonemics deals with sound units such as phonemes and their variations (allophones), and graphemics examines a language's writing system, including its basic units (graphemes). In conclusion, phonetics, phonemics, and graphemics are interconnected branches of linguistics that collectively address the role of sounds and symbols in communication.

**Keywords:** *Phonetics, Phonemics, Graphemics*



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## **Introduction**

In linguistic studies, phonetics, phonemics, and graphemes are three fundamental aspects that are interconnected and play an important role in language understanding. Although all three are related to aspects of sound and writing, each has a different focus and object of study (Lundeto, 2018). Phonetics, as a branch of linguistics that studies the sounds of language, not only examines how sounds are produced, but also how they are processed and received by listeners. Phonetics distinguishes sounds based on articulatory and acoustic properties, and is often divided into three main subdisciplines: articulatory phonetics, acoustic phonetics and auditory phonetics. Knowledge of phonetics provides an important basis for understanding how the sounds of language are produced and affected by physical factors and the communication environment.

On the other hand, phonemic focuses on the role of phonemes as the smallest units that can distinguish meaning in language. Phonemics puts more emphasis on how the sounds are used in the structure of language to produce differences in meaning. Each language has a different inventory of phonemes, organized in a distinctive system, which affects the meaning of words. For example, in Indonesian, a change in phoneme can significantly alter the meaning of a word, as in the difference between the words "ikan" and "akan". Phonemic studies help identify and analyze the phoneme structure present in a particular language, as well as how those phonemes function in everyday communication.

Graphics, as the third element in this study, deals with the writing system and the relationship between graphic symbols and language sounds. Graphemics examines how phonemes identified in phonemics are translated into written form. Although in many languages, there is a direct relationship between sounds and written symbols, the reality is that this relationship is often more complex, as seen in English, which has an orthographic system that is not strictly phonetic. Graphemic studies also involves the study of the ways in which writing can affect the interpretation and understanding of language, as well as how the world's various writing systems (such as the Latin alphabet, Arabic script, or Han characters) contribute to the representation of sound.

The interrelationship between phonetics, phonemics and graphemes is crucial in understanding how language functions in communication, both in spoken and written form. Phonetics provides the basis of how sounds

are produced and received, phonemics explains how sounds are used to distinguish meaning, and graphemics shows how those sounds are translated into written form. In practice, these three elements work together to create a language system that can be understood and used by speakers. (Setyaningsi & Rahardi, 2014).

However, although phonetics, phonemics and graphemics are interrelated, the application of these three fields in language analysis often faces various challenges. For example, in languages with inconsistent orthographic systems or in languages with many dialectal variations, the relationship between phonetics and graphemics can be very complicated. Therefore, a deep understanding of these three areas is essential, especially in the context of language teaching and translation. Knowledge of phonetics and phonemics can aid the teaching of pronunciation and enunciation, while an understanding of graphemes supports the teaching of accurate and effective writing skills.

This research aims to delve deeper into the relationship between phonetics, phonemics, and graphemes, and understand how these three aspects influence each other in the context of language communication. Thus, this research not only makes a theoretical contribution to the study of linguistics, but can also have a practical impact in the development of more effective language teaching methods, especially in second language learning.

### **Research Methods**

This research uses a qualitative descriptive method, by analyzing data taken from various sources such as books, journals, and relevant literature on phonetics, phonemics, and graphemics. Data collection is done through literature study, which is then described to explore how language sounds are produced, function as a differentiator of meaning, and are set in the writing system.

### **Results And Discussion**

Phonetics is a branch of linguistics that studies the sounds of language. It involves analyzing how the sounds of language are produced, how they are transmitted through the air, and how they are received and processed by the listener. According to (Achmad Hafsini & Syaichona Moh Cholil Bankalan, 2021) phonetics plays an important role in understanding human

communication through language, because spoken language consists of a series of sounds produced by the speech organs, transmitted through the air, and finally received by the listener for interpretation.

The science of phonetics is also divided into three main subfields that have different focuses. Articulatory phonetics is a branch of phonetics that studies how sounds are produced by human speech organs, such as the tongue, lips, teeth and palate. How we move these organs to produce certain sounds is the main topic in articulatory phonetics. Acoustic phonetics focuses on the physical properties of language sounds, such as the frequency, amplitude and duration of the sounds produced. It analyzes how sound waves travel through the air and how those physical properties affect the way sounds are received. Meanwhile, auditory phonetics studies how those sounds are processed by the human auditory system. This includes the analysis of how we hear, recognize and distinguish language sounds in everyday communication. (Masyhur, 2022).

Dapar explained that one of the important concepts in phonetics is phoneme, which refers to the smallest sound unit in language that can distinguish the meaning of words. For example, in Indonesian, changing the first phoneme in the word "stone" to "one" will result in a change in meaning. In the study of phonetics, phonemes are not only seen as abstract sounds, but also represented visually through phonetic transcription, which uses a system of symbols known as the IPA (International Phonetic Alphabet). IPA helps represent the sounds of language in a more accurate and universal way, allowing for in-depth analysis of sounds from different languages.

Phonetic transcription uses symbols that correspond to specific sounds, which can be very useful in language learning. Phonetics becomes an effective tool for language learners to understand how to pronounce sounds that may not be present in their native language. For example, in English, learners who speak Indonesian will often have difficulty pronouncing certain sounds, such as /θ/ or /ð/, which are not present in Indonesian. With the help of IPA, learners can learn how to pronounce these sounds more precisely. (Setyaningsi & Rahardi, 2014).

In addition, phonetics also plays a role in the world of forensic linguistics, which deals with the analysis of sounds in a legal context. Speech recognition technology relies heavily on phonetic principles to recognize and process sounds. For example, in cases involving recorded

voice evidence, phonetics can be used to identify who is speaking or to evaluate the authenticity of the voice.

Phonetics also deals with sound variation in language, which can be influenced by geographical, social, or contextual factors. Accent is one example of phonetic variation, where people from different regions or social groups may pronounce words in different ways. For example, in English, the pronunciation of a word like "schedule" can differ between American and British speakers. This difference is an example of how language sounds can vary across regions.

According to (Azizah & Nugraheni, 2020) another phenomenon studied in phonetics is allophones, which are variations of a single phoneme that do not change the meaning of the word. For example, in English, the phoneme /t/ can be pronounced in different ways depending on the context, such as the pronunciation [tʰ] (with a firm sound) in the word "top" and [ʔ] (with a glottal sound) in the word "button". Although both are ways of pronouncing the same phoneme, this difference does not change the meaning of the word.

The author can conclude that phonetics is the study of language sounds from various perspectives—from how the sounds are produced to how they are received and processed by the listener. Phonetics is very important in many fields, including language teaching, technology, and clinical linguistics. Through phonetic transcription and IPA, we can represent the sounds of language more accurately, which helps in language analysis and comparison. By understanding phonetics, we can better understand how language works and how the sounds in language are used to communicate.

Phonemic is a branch of linguistics that studies phonemes, the smallest unit in language that serves to distinguish the meaning of words. Phonemes are not only the sounds produced when speaking, but rather a category of sounds that have a role in distinguishing the meaning of words in language. For example, in Indonesian, the difference between the phonemes /t/ in the word "frog" and /k/ in the word "foot" changes the meaning of the word, even though there is only one sound difference. Therefore, phonemes serve to ensure that every spoken word has a clear and unambiguous meaning.

In phonemics, it is important to understand that phonemes are not always identical to physically pronounced sounds. According to (Azizah & Nugraheni, 2020) Phonemes refer more to the category of sounds used in a

language to distinguish the meaning of words. In other words, one phoneme can be pronounced in different ways by different speakers, but if the difference does not affect the meaning of the word, then the phoneme is still considered the same phoneme. For example, in English, the phonemes /p/ in the word "pat" and /p/ in the word "spit" are pronounced in slightly different ways, but they are still considered the same phoneme because they do not change the meaning of the word.

In order to understand more about phonemes, phonemic transcription is used, which allows us to represent phonemes in written form. One of the most commonly used systems for phonemic transcription is the International Phonetic Alphabet (IPA). The IPA provides symbols that accurately describe the sounds present in a language without regard to standard spelling. For example, the word "sampah" in Indonesian can be written as /sampa/ in IPA. Although the pronunciation of this word may vary, phonemic transcription using IPA provides a consistent representation of the basic sound of the word.

According to (Akhyaruddin et al., 2020) besides phonemes, the concept of allophones is also an important part of phonemic studies. Allophones refer to phoneme variations that do not change the meaning of the word. Although allophones can be pronounced in different ways, they are still considered part of the same phoneme because they do not affect the meaning of the word. For example, in English, the phoneme /t/ can be pronounced with a firm sound [t<sup>h</sup>] in the word "top" and with a softer sound [t̚] in the word "button". Although these two pronunciations sound different, they are still considered allophones of the same phoneme because they do not change the meaning of the word.

Each language has a different phoneme system, which means that phonemes present in one language may not be present in another. For example, in English there are phonemes /θ/ in the word "think" and /ð/ in the word "this", which are not found in Indonesian. Conversely, in Indonesian, the phoneme /v/ does not exist, which causes Japanese or English speakers may have difficulty in Indonesian pronunciation. This shows how important it is to understand phonemes in a particular language context in order to speak correctly and effectively.

Overall, phonemic is an important branch of linguistics that studies the role of phonemes in a language. An understanding of phonemes helps us recognize the way phonemes work to distinguish word meanings and

facilitate clear and effective communication. From language learning to forensic analysis and language evolution, phonemics has wide and deep applications in various fields of study.

According to (Atikah et al., 2023) Graphemis is the smallest unit in a writing system that has a specific meaning or function in a language. In simple terms, graphemis can be interpreted as a graphical representation of language units, such as letters or punctuation marks, which are used in the writing process.

Graphics can also be defined as the smallest unit in a writing system that serves as a visual representation for sound or meaning in written language. These graphemes can be letters, numbers, punctuation marks, or other symbols used to form words and sentences. In the writing system, graphemes have a very important role because they allow messages to be conveyed in writing and facilitate understanding for readers.

According to (Silva, 1993) in alphabetic systems, such as in Indonesian, graphemes represent phonemes, which are the smallest sound units that can distinguish the meaning of words. For example, in Indonesian, letters such as 'a', 'b', and 'c' are visual representations of the phonemes that make up words. Each letter has a specific sound associated with its pronunciation, and the combination of these graphemes will form words that have meaning.

On the other hand, in the syllabic system, which is used in Japanese, each grapheme represents a single syllable or combination of sounds. For example, in the hiragana script, graphemes such as 'あ' (a) or 'か' (ka) represent one larger sound unit compared to the alphabetic system which breaks sounds into separate phonemes. Thus, syllabic systems focus more on combining sounds to form complete syllables.

It is important to distinguish between graphemes and phonemes, because while both relate to sound, graphemes refer more to the visual forms used in writing, while phonemes are the smallest units of sound in spoken language. For example, in Indonesian, the phoneme /k/ can be written with the graphemic "k" or "c" in words like "horse" and "love", depending on the context.

According to (Try Evelina et al., 2024) understanding graphemis is very important in linguistics, especially in writing analysis and learning to read and write. In education, the introduction of graphemes is the first step for children to learn to read and write correctly. Each introduced grapheme

connects visual symbols with relevant sounds, thus helping children recognize the relationship between writing and pronunciation.

Graphemics also play a role in adding variety to language, as certain symbols or signs in a graphemis can add meaning or nuance to a sentence. For example, punctuation marks such as commas, periods, question marks or exclamation marks provide clues about the intonation and structure of the sentence, which affects how the reader understands the message in the sentence. In this case, graphemes are not only letters or numbers, but also symbols that clarify meaning.

By understanding graphemes, we can more easily understand how the writing system works to convey meaning. Graphemis provides a visual form that is essential for readers to access written information. In many of the world's languages, graphemes serve as a link between spoken and written language, allowing people to store, share and disseminate information through writing.

## **Conclusion**

From the studies that have been conducted, it can be concluded that phonetics, phonemics, and graphemes are three main interrelated aspects in the study of linguistics and play an important role in language understanding. Each of these areas has a different focus, but all three form an integrated system in language communication, both oral and written.

Phonetics, as the study of language sounds, provides deep insight into how sounds are produced, controlled and processed by speakers and listeners. Knowledge of phonetics allows us to understand variations in sound production that can affect our understanding of language, especially in terms of pronunciation, intonation and accent. Phonetics also provides the basis for accurately distinguishing the sounds of language, which is then translated in phonemic analysis.

Phonemics, in turn, focuses on the function and classification of sounds as phonemes that have different meanings within a language system. Phonemes, although often very similar sounds, can significantly differentiate word meanings within a language. For example, in Indonesian, a change of one phoneme can substantially change the meaning of a word, as in the difference between the words "can" (can) and "can" (berbisa). Therefore, a good understanding of phonemics is essential

in learning the different ways sounds are used to distinguish meaning in a language.

Graphemics, which deals with the relationship between written symbols and phonemes, provides a framework for understanding how sounds are written in the form of graphemes. While there is a clear relationship between sound and writing in some languages, in many cases, especially in languages that have orthographic systems that are not fully phonetic like English, this relationship is more complex. Here, graphemes play an important role in ensuring that spoken sounds can be understood through writing, which allows for both written and visual messaging.

The interaction between phonetics, phonemics and graphemes shows how complex the structure of language is and how the three aspects support each other in communication. Although the relationship between phonetics and graphemes can be very complicated in certain languages, a deep understanding of these three aspects can help improve language teaching, whether it is teaching speaking, listening or writing skills. Teaching that focuses on the relationship between sound and writing can give students a better understanding of how language functions in various communication contexts.

In conclusion, the study of phonetics, phonemics and graphemes is not only important in understanding the theoretical structure of language, but also has a great practical impact on the teaching and application of language in daily life. A deep understanding of these three aspects can help create more effective language teaching methods, as well as improve overall language proficiency. As such, this research makes an important contribution to the study of linguistics and language education, and offers useful insights for the development of theory and practice in language teaching.

## LITERATURE

Achmad Hafsin, H., & Syaichona Moh Cholil Bankalan, S. (2021). Phonetic Contrast Analysis of Indonesian and Arabic. *Qismul Arab: Journal of Arabic Education*, 01(01), 59-69.

Akhyaruddin, Harahap, E. P., & Yusra, H. (2020). *Teaching Materials for Phonology*.

- Atikah, C., Asmawati, L., & Ekawati, R. (2023). Phonetic-based Digital Book through Book Creator Application for Early Childhood. *Journal of Obsession: Journal of Early Childhood Education*, 7(4), 4913-4924. <https://doi.org/10.31004/obsesi.v7i4.4951>
- Azizah, A. N., & Nugraheni, A. S. (2020). Songs as phonology learning media for Mi Muhammadiyah Trukan students. *Journal of Language and Literature*, 8(1), 52. <https://doi.org/10.24036/81090150>
- Lundeto, A. (2018). Analysis of Arabic Phonetics and Morphology Teaching Methods. *Iqra' Scientific Journal*, 3(1). <https://doi.org/10.30984/jii.v3i1.546>
- Masyhur. (2022). The Contribution of Phonetics in Arabic Language Studies Masyhur Faculty of Adab and Humanities UIN Raden Fatah Palembang. *Tamaddun: Journal of Islamic Culture and Literature*, 17(1), 37-58.
- Setyaningsi, Y., & Rahardi, K. R. (2014). *Indonesian Phonology: Sound System Devices in the Perspective of Educational Linguistics* (Vol. 1).
- Silva, D. (1993). *Analysis of Writing Learning Difficulties of Third Grade Students of SDN 1 Rantau Selamat Kec. Rantau Selamat Kab. Aceh Timur*.
- Try Evelina, H., Amelia Damanik, N., Alfani, R., Syahputra, R., & Audina, F. (2024). Phonemic and Graphemic Phonetics. *Dan Fitra Audina*, 2(5), 1644-1652. <https://journal.institercom-edu.org/index.php/multiple>