

"Study Of Phonemes For Native-Speakers: A Review"

Dr. Poornima Arora¹, Ms. Deepti Tiwari^{2*}, Jitendra Mewada³

¹Associate Professor, Department Of Humanities, Prestige Institute of Management & Research, Bhopal
Email: drpoornima.arora@gmail.com

^{2*}Assistant Professor, Department Of Humanities, Jai Narain College of Technology, Bhopal
Email: tiwarideepti905@gmail.com

³Assistant Professor, Department Of Humanities, Jai Narain College of Technology, Bhopal
Email: mewadajitendra1996@gmail.com

Abstract

The relationship between English (L2) sound symbols and English (L2) spelling poses a persistent challenge in both teaching and learning English pronunciation. This issue not only affects learners but also confuses trainers seeking connections between spoken and written English. Research findings indicate that the high unemployment rate among graduates is often linked to their low English proficiency and inadequate communication skills is also a prominent issue. This challenge is particularly pronounced for Indian students whose First Language (L1) is Hindi, a language known for its phonetic consistency in speech and writing. As English continues to serve as a global medium of communication in various domains like business, science, politics, medicine, and technology, mastering its pronunciation with the correct accent becomes increasingly difficult for Hindi-speaking learners. The approach of this paper is to present a review of research work that has been done regarding L2 and L1 internationally, so that the gaps can be properly measured, and scope for future work can be identified.

Keywords: Phonetics, Phonology, English Sound Symbols, L2 & L1 comparison, English Pronunciation.

Introduction

This paper aims to review the literature and work done in the field of understanding the problems encountered by native speakers while learning English as a second language. By doing so, it aims to enhance the understanding between the learning and teaching of correct pronunciation of L2 words. The International Phonetic Alphabet has been widely used for over a century to transcribe the sounds of languages (Vajda & J., 2000). A global definition of phonetics is as 'the study of the spoken medium of language' in its broadest sense, aiming to describe, model, and explain speech communication across the world's languages (K, 2000). Phonetics and Phonology pose challenges for both learners and trainers, particularly due to the lack of defined teaching methodologies in the Indian education system. This phenomenon becomes more complicated in learners who already have more than one vowel system in their linguistic repertoire, as L2 learners tend to approximate the quality of non-native vowels to their existing vowel systems (Masykar, S, & R, 2023). This challenge is further compounded when teaching English (L2) as a second language, as it is not the native language (L1) for many learners, hindering their immersion in the subject matter. The focal point in linguistic studies examining the sound structure of words is pronunciation, which refers to the way sounds are articulated in a language, within the phonology branch (Endahati & Hum 2018). Furthermore, while there is a growing trend of introducing phonemes at the pre-primary level in Tier 1 cities, learners in Tier 2 and 3 cities still face challenges in grasping phonetic sound symbols. Understanding students' attitudes towards learning English as a second language is not a new concern. However, there's still much to discover about the factors influencing these attitudes, particularly among those residing in rural areas (F & B., 2019). These areas often exhibit lower perceptions and performance in English learning compared to their urban counterparts in India. This topic remains absent from undergraduate and postgraduate studies across various bachelor degree courses, adding to the struggle for proficiency in phonetics and phonology. Phonetic symbols serve as tools that simplify precise understanding and reproduction of sounds; however, inaccuracies in their usage can lead to substantial misunderstandings (Kinanti, Khualid, & Lubis, 2024).

The complexity of teaching English sound symbols becomes apparent when considering several factors. The problems prevail in the field of English sound symbols are as under: -

1. Starting from Zero: Many students have not been introduced to phonetics during their primary and secondary education, leaving them with little to no foundation in the subject.
2. Foreign Language Environment: English being a foreign or second language means students lack sufficient opportunities for practice and immersion, hindering their ability to grasp pronunciation intricacies.
3. Discrepancy with English: In Hindi, there's a direct correspondence between writing and pronunciation, unlike English where there's often a disparity. This gap arises due to the absence of phonetic instruction.
4. Lack of Easy Solutions: Unfortunately, there are no simple remedies to bridge this knowledge gap, making the teaching of phonetic symbols all the more crucial despite its complexity.

Research Objectives:

The objectives of this paper are as under:

1. To present a systematic review of the literature on research conducted thus far, aimed at better understanding the problems encountered during second language acquisition.
2. To explore and identify common challenges and difficulties encountered by native learners of English as a second language.
3. To assess teaching methods by evaluating various teaching methodologies and approaches used in second language acquisition to determine their effectiveness in addressing learner challenges.
4. To examine linguistic features of English that pose challenges for second language learners, such as grammar, vocabulary, pronunciation, and syntax.
5. To explore the role of cultural factors in second language learning and how they influence language acquisition and proficiency.

Expected Outcomes:

The expected outcomes of this review paper could include:

1. A comprehensive understanding of the challenges encountered during second language acquisition, as documented in existing research literature.
2. Clear identification and exploration of common challenges and difficulties faced by native learners of English while learning a second language.
3. An evaluation of various teaching methodologies and approaches used in second language acquisition, providing insights into their effectiveness in addressing learner challenges.
4. In-depth examination of linguistic features of English that pose challenges for second language learners, including grammar, vocabulary, pronunciation, and syntax.

Review of Literature:

Language serves as the cornerstone of communication. While borders may shift, such changes typically occur gradually over extended periods. In contrast, languages exhibit constant evolution, continuously adapting and updating. Their fluid nature defies the confines of the nations they are associated with (Safina, 2024). English, as a language, holds heritage value due to its belonging to the Germanic language family. This lineage traces back through history, influencing its structure, vocabulary, and cultural significance (Ordeniza & Lucas, Vol-1, Issue-2, July 2022). Before the 14th century, English was simply a Midland's dialect confined to a small region of England. Education primarily relied on French, Greek, and Latin, influenced greatly by France and Greece. French, in particular, had a significant impact on English, introducing new suffixes and altering the phonology (e.g., introducing the /z/ sound as in "pleasure"). Chaucer, known as the father of English, championed writing in English, marking a pivotal moment in its evolution (Smith, Volume 24, 2002). Despite its journey to becoming the world's third most spoken language and an international lingua franca, English perplexes foreign learners due to its irregularities in spelling and pronunciation. The historical trajectory of English, from a language aligned with its written form to its present complexity, can be traced through various factors including wars, invasions, the printing press, and the Great Vowel Shift. The recorded history of English is conventionally divided into three main periods: Old English (OE), Middle English (ME), and Modern English (MDE). (Richard Hogg; David Denison Ed., 2006)

Old English (OE): From its introduction on the island of Britain to the end of the eleventh century, characterized by distinct Germanic roots and influences.

Middle English (ME): From around the end of the eleventh century to the end of the fifteenth century, marked by significant changes in vocabulary, grammar, and pronunciation due to Norman French and Latin influences.

Modern English (MDE): From around 1500 to the present day, featuring further evolution and standardization of the language, including the Great Vowel Shift and the Renaissance.

These periods are useful for reference but are somewhat arbitrary, with transition dates subject to debate. Other periodizations exist, and the division into early and late sub-periods is also common. It's important to note that these divisions serve as a framework for understanding the historical development of English but should not be strictly adhered to without considering additional evidence and context. This complexity is further compounded by the influences of multiple languages, resulting in a vast and diverse vocabulary. Despite its challenges, English remains indispensable in global domains such as business, science, politics, medicine, and technology.

Phonetic symbols serve as a visual representation of speech sounds, aiding learners in accurately producing and distinguishing sounds that may be unfamiliar or challenging. (Y, E, & S, 2023). In the field of phonetics and phonology, the work that has been done until now mostly focuses on the systematic study of sound formation, including various vowel and consonant sounds, from the air pipe to the nasal and oral cavities of the mouth, and the positions of the tongue during sound formation. Many authors have described the articulation of these symbols. Ivy Houser, Divyanshi Shaktawat, and Nina Topinzi have conducted research exploring the analytical study procedure of phonetics and phonology. Several authors have worked hard to find connections between English and foreign languages such as Mandarin, Thai, and Arabic. Mompean J. has written an article exploring the potential of phonetic symbols in pronunciation teaching and learning, focusing on English language instruction. She has concentrated her study on

pronunciation instruction in second-language teaching literature, while A. Gilakjani has focused on Phonetics Teaching instruction.

Phonological rules deal with the correct pronunciation of words. Pronunciation is an aspect of learning English that many students struggle with. In this digital era, students need simple thing to learn pronunciation. English sound is the application to help student learn pronunciation (Febian1, Mabruhah2, Affara3, Lailind, Nazulfa4, & Agustini5a, 2022).Pronouncing English like native speakers is a significant challenge for non-native speakers worldwide due to the interference of every mother tongue with English as a Second Language (ESL) pronunciation in each geographical community, within the context of English as a Lingua Franca (ELF)(Qader, Rahman, & Monira, 2023).The rise of English as a Lingua Franca (ELF) has resulted in both native speakers (NS) and non-native speakers (NNS) having a collective ownership of the various English varieties(Hall, 2017).In essence, while research proves that communicative pronunciation teaching benefits L2 learners' intelligibility and comprehension, recent studies reveal that it's often implemented inconsistently and informally, typically through recasts or prompts. This inconsistency may stem from a lack of guidance for L2 teachers on effectively incorporating communicative pronunciation teaching into their classes.(Nguyen, 2024)

Though researchers have worked hard on the global platform to find ways of simplifying phonetic sound symbols and pronunciation of L2 for native learners of various countries whose mother tongue is not English, research relevant to L1 (Hindi) and L2 has not yet been published in the context of Indian students. This paper is a step being taken towards this direction.

Research Methodology

The research employed a systematic review methodology within a descriptive qualitative framework to investigate the better method of learning a second language by native speakers. Data for the study were obtained from prior research studies relevant to the topic. Inclusion and exclusion criteria were rigorously applied to select studies meeting the research objectives. Through systematic review, the study synthesized findings from diverse sources to gain comprehensive insights into the relationship between second language acquisition. This research uses the literature study method, gathering information from existing sources like literature, journals, and articles related to the topic. By doing so, it examines, analyzes, and combines previously published information on the subject. This approach helps researchers gain a thorough understanding of the topic by building on existing studies.

A comprehensive definition of phonetics is the examination of spoken language in its entirety, aiming to describe, model, and elucidate speech communication across diverse languages worldwide (Kohler, 2009). The study of linguistic theory includes phonology, morphology, syntax, and semantics by analysing language structure; understanding language within its social context; tracing the evolution of specific languages; exploring how people learn languages; conducting experiments on language perception, production, and comprehension; creating computer models to simulate language processes; and examining the historical development of linguistics.(Vajda E. J., Vol. 76, No. 4 (Dec., 2000))

The account of phonemes is traced back to the early twentieth century, highlighting the origins and evolution of a unique genre of dictionaries, pioneered by H. E. Palmer and A. S. Hornby. These dictionaries were specifically crafted to cater to the requirements of English learners whom English was a foreign language (Lewis, Volume 44 , Issue 1 , April 2014).A Historical study reveals that pronunciation instruction gained prominence in second language classrooms only from the latter half of the nineteenth century. Pioneers like Berlitz, Gouin, Marcel, and Predergast initiated departures from traditional methods during the 1850s, setting a new trend. The establishment of the International Phonetic Association in Paris from 1886 to 1889 played a pivotal role in transforming pronunciation instruction. Subsequently, between the 1950s and 1970s, there was a growing interest in adopting innovative approaches to teaching pronunciation (Reed, Levis, & Ed., 2015).

In 1886, language teachers in Paris started a group called the FTA to promote phonetic writing in schools. Led by Paul Passy, it later became the AP in 1889 and then the IPA in 1897. By 1914, it had members in 40 countries, but World War I interrupted its work. It created the IPA, a standard way to write sounds of all languages. The IPA was officially formed on June 30, 2015, as a British company aiming to study phonetics and its practical applications.

The IPA has standardized a list of 44 sound symbols, covering both vowels and consonants. Before delving into specifics, it's important to clarify some terminology: in Hindi, letters are called Akshar; vowels are referred to as Swar or Matraye, and consonants are known as Vyanjan. Among these, there are 20 vowel sounds and 24 consonant sounds in English Phonetics. Vowel sounds are further categorized into monophthongs and diphthongs, with IPA recognizing 12 monophthongs and 8 diphthongs in phonetics. Additionally, among the 24 consonants, 22 are present in Hindi Vyanjans. While diphthongs are not naturally present in Hindi, the same sound can be created by combining two vowel sounds, or "matraye," in Hindi.

Monophthongs:

In foreign language acquisition, learners often adapt non-native vowels to fit their native vowel systems. This challenge is further complicated for learners with multiple vowel systems in their linguistic repertoire(Masykar, Pillai, & Hassan,

2023). Second language (L2) phonology aims to comprehend how learners acquire L2 sounds, often influenced by their native language (L1) sound categories (Best, 1995; Best & Tyler, 2007; Escudero, 2009; Flege, 1995). Various approaches, including acoustic measurements, phonological system comparisons, and perceived similarity evaluations by L2 learners, explore the likeness between L1 and L2 sounds. The perceptual assimilation task is a prominent method for assessing this similarity, as it relies on learners' perception to gauge the resemblance between L1 and L2 sounds.

Diphthongs

Diphthongs belong to a category of vocals distinguished by unique characteristics. They involve an intentional subtle glide from one vocal position to another. In contrast to monophthongs, we've studied thus far are simple or pure vowels. Monophthongs consist of a single vowel sound without requiring a change in position during pronunciation. Diphthongs start with one vowel sound and transition into another vowel sound. It's crucial to remember that in diphthongs, both vowel sounds retain their original sounds without undergoing any change. In Hindi we don't have diphthongs vowels. But they are very easily explained by juxtaposing the two monophthongs. Diphthongs, in English phonology and Hindi have similar pronunciations. Diphthong is usually known as long vowel. At first listen, diphthongs may appear to have the same sound, but upon closer examination, they reveal distinct differences. Besides word pronunciation, developing listening sensitivity plays a significant role in mastering diphthongs (Pratiwi & Indrayani, 2021).

Consonants

Consonants represent sounds used in speech and involve partially or completely closing the vocal tract. For example, the consonants "t" and "d" involve placing the tongue behind the front teeth, while "b," "m," and "p" require closing the lips. Consonants, like vowels, can be understood by learning their sounds. A consonant sound occurs when airflow is partially or completely obstructed by the lips, teeth, tongue, or throat. According to the Collins Dictionary, a consonant sound is pronounced by stopping the air flowing freely through your mouth, such as 'p', 'f', 'n', or 't'. English has a total of 44 speech sounds, with 24 of them being consonant sounds. Let's explore what these consonant sounds are and how they are classified.

Findings & Results :

After going through various research works we can reach on the point that they collectively present a comprehensive view of the challenges and advancements in English pronunciation learning, particularly in the context of EFL (English as a Foreign Language) students.

The W. Xiao & M. Park. (W. & M., 2021) highlight the potential of technology-based learning tools, such as ELSA Speak, in reducing students' dependency on teachers and fostering autonomous learning. It employs a mix-method approach to assess the effectiveness of the mobile application in improving pronunciation skills and promoting autonomous learning.

Whereas, Faridah, Didih, and other authors (Faridah, Friatin, & Rohayati, 2022) research focuses on the effectiveness of ASR (Automatic Speech Recognition) technology in diagnosing pronunciation errors and facilitating pronunciation practice. It investigates both learners' and teachers' attitudes towards using ASR technology as an assessment and learning tool, providing insights into its benefits for individualized learning needs.

Similarly, in another research, Kosasih and Marcella Melly. (Kosasih1, 2021) identify various factors influencing Indonesian students' pronunciation learning, including native language interference, phonological awareness, and instructional strategies. It emphasizes the importance of addressing these factors to enhance students' pronunciation accuracy and suggests practical strategies for teachers to support their students effectively.

Lastly, Monika, Winarti and other authors' paper (Monika, Winarti, & Yundayani, 2019) explores EFL students' perspectives on English pronunciation learning, highlighting challenges such as the influence of their native language and low motivation. It underscores the need for tailored pronunciation instruction that considers students' backgrounds and characteristics to enhance their learning experience.

6. Discussion:

Understanding English phonology empowers learners to enhance their pronunciation accuracy, comprehend spoken English more effectively, and improve their overall communication skills. Learning a foreign language can seem daunting until motivational factors come into play, driving the learner to engage with the language, including English. Thus, there is a research gap on the characteristics and differences between different learning styles. Such a gap can negatively affect the subsequent exploration and evaluation of learning styles for English learners and educators (Li & Pan, 2024).

Conclusion: -

Collectively, these works contribute valuable insights into the multifaceted nature of English pronunciation learning and offer practical implications for educators to enhance teaching methodologies and support students in achieving pronunciation mastery. The results indicated that using the International Phonetic Alphabet (IPA) had a significant impact on improving pronunciation, particularly for challenging sounds like /θ/, /dʒ/, /ð/, /ɜ:/, and /əʊ/. The main reasons for difficulties in pronunciation were identified as lack of attention to the IPA and insufficient knowledge of it. In conclusion, learning the IPA is feasible for students and can enhance their English pronunciation. For effective communication about pronunciation, both teachers and students require a metalanguage that enables accurate and precise reference to speech. This is particularly important due to L2 learners' perceptual biases stemming from their L1, and in the case of English, the lack of consistency between spelling and pronunciation (Mompean & Fouz-González, 2020).

References:

- List of all sources cited in the paper, formatted according to the APA citation style

1. F, Z., & B., R. A. (2019). Malaysian rural secondary school students' attitudes towards learning English as a second language. *International Journal of Instruction* .
2. Febian1, C. I., Maburah2, F., Affara3, F. F., Lailind, Nazulfa4, H., & Agutiningsih5a, T. (2022). ENGLISH PHONOLOGY: STUDENT'S PERCEPTION TOWARD ENGLISH SOUND APPLICATION TO THE LEARNING OF PRONUNCIATION. *Research Gate* .
3. Hall, C. (2017). *Phonetics, Phonology & Pronunciation for the Language Classroom*. Publisher: Palgrave.
4. K, K. (2000). The future of phonetics. *Journal of the International Phonetic Association* .
5. Kinanti, Khualid, A. R., & Lubis, Y. (2024). ANALYSIS OF THE CORRECT PRONUNCIATION OF PHONETIC SYMBOLS IN ENGLISH. *Cemara Journal*.
6. Kohler, K. J. (2009). *The future of phonetics*. Cambridge University Press .
7. Lewis, J. W. (Volume 44 , Issue 1 , April 2014). Phonetics in advanced learner's dictionaries. *Journal of the International Phonetic Association* , 75.
8. Li, M., & Pan, X. (2024). The Relationship Between Learning Styles and the Academic Performance of Learning English as a Second Language. *Proceedings of the International Conference on Global Politics and Socio-Humanities* .
9. Lim, H. E. (2004). Unemployment Duration of Graduates of Universiti Utara Malaysia: The Impact of English Language Proficiency. *Malaysian Journal of Economic Studies* .
10. Masykar, S, P., & R, H. (2023). A Comparison of English, Acehnese, and Indonesian. *Studies in English Language and Education* .
11. Masykar, T., Pillai, S., & Hassan, R. (2023). A Comparison of English, Acehnese, and. *Studies in English Language and Education* .
12. Mompean, J. A., & Fouz-González, J. (2020). Phonetic Symbols in. *RELC Journal* .
13. Nguyen, L. T. (2024). Pronunciation Teaching Innovation in the English as a Foreign Language Classroom. *Research Gate* .
14. Ordeniza, S., & Lucas, J. M. (Vol-1, Issue-2, July 2022). Origin, Development and History of English. *Technoarete Transactions on Language and Linguistics* .
15. Pratiwi, D. R., & Indrayani, L. M. (2021). Pronunciation Error on English Diphthongs Made by EFL Students. *TEKNOSASTIK*, Volume 19 (1) .
16. Qader, M. A., Rahman, M. R., & Monira, S. (2023). Application of Phonetics and Phonology in Secondary Level Education for Reducing Bengali Interference in English Pronunciation in Bangladesh. *Research Gate* .
17. Reed, M., Levis, J. M., & Ed. (2015). *History of ESL Pronunciation Teaching*. Wiley .
18. Richard Hogg; David Denison Ed. (2006). *A History of the English Language* . Cambridge University Press.
19. Safina, F. (2024). "Denglish" The Fusion of German and English. *Research Gate* .
20. Smith, J. J. (Volume 24, 2002). Chaucer and the Invention of English. *The New Chaucer Society* , 335-346.
21. Vajda, & J., E. (2000). *Handbook of the International Phonetic Association: A Guide to the Use of the International Phonetic Alphabet*. Language .
22. Vajda, E. J. (Vol. 76, No. 4 (Dec., 2000)). Reviewed Work: *Handbook of the International Phonetic Association: A Guide to the Use of the International Phonetic Alphabet* the International Phonetic Association. *Linguistic Society of America* , p. 928 (1 page).
23. Y, L., E, D. S., & S, N. (2023). Exploring The Importance Of Phonetic Symbols In English Language Learning. *Bahasa Dan Pendidikan* .