**Pronunciation Problem with Bengali Speaking Learners and Trends in Modern English Phonology: A Case Study**

**Abstract**

Pronunciation is defined as the way a sound is spoken, or the way a specific person produces words, according to the 7th edition of the Oxford Advanced Learner’s Dictionary. Pronunciation is a fundamental aspect of second or foreign language acquisition, playing a crucial role in a learner’s ability to communicate effectively. For Bengali speakers, mastering English pronunciation presents unique challenges due to the distinct phonetic structures of the two languages. The differences in sound systems often lead to difficulties in producing certain English phonemes accurately. When learning English as a second language (L2), Bengali-speaking learners frequently encounter phonetic and phonological obstacles that impede their progress. These challenges not only slow down their learning but also hinder their overall proficiency in English pronunciation. This article explores contemporary issues faced by Bengali learners in pronouncing English sounds and examines modern phonological approaches to address these difficulties. This research offers valuable insights for English language learners, particularly those struggling with pronunciation challenges. By examining the key factors that influence pronunciation accuracy, the study provides a foundation for targeted learning strategies. Additionally, engineering students can benefit significantly from these findings, as improved English pronunciation contributes to both their academic growth and professional communication skills in global technical environments. This study offers valuable insights for English language educators in Bangladesh, providing them with research-based approaches to address common pronunciation challenges faced by Bengali-speaking students. The findings enable teachers to better understand the linguistic factors affecting Bangladeshi learners' English pronunciation while introducing contemporary phonological concepts that can enhance classroom instruction. Educators may utilize these evidence-based strategies to develop more effective pronunciation teaching methodologies tailored to their students' specific needs.

**Key Words:** English Language, Pronunciation, Bengali Speakers, Phonetics, phonology, etc.

**Introduction**

As one of the most widely spoken Indo-Aryan languages, Bengali serves as the mother tongue for approximately 350 million people across Bangladesh and several Indian states including West Bengal, Tripura, and South Assam. Recognized as both the national language of Bangladesh and an official language of India, Bengali maintains significant linguistic presence even in the Andaman and Nicobar Islands. The substantial phonological differences between Bengali and English create distinct challenges for native Bengali speakers when acquiring English pronunciation.

The process of learning second language (L2) pronunciation presents numerous phonetic and phonological obstacles that significantly impact learners' speaking and listening competencies. Research consistently shows that adult language learners encounter greater difficulties than children in achieving native-like pronunciation, primarily due to the entrenched phonological patterns of their first language (L1). My own experience as both an EFL learner and educator has provided first-hand observation of these specific challenges faced by Bengali-speaking students. The cognitive and articulatory habits formed in one's native language often create persistent barriers to acquiring new phonetic systems.

Effective English communication relies heavily on proper pronunciation and intonation patterns. This study conducts a comparative analysis of English and Bengali sound systems to identify specific areas of difficulty, while proposing actionable pedagogical strategies to address these challenges in classroom settings.

This study aims to investigate the specific pronunciation challenges encountered by Bengali learners when speaking English. By analyzing these difficulties through the framework of the International Phonetic Alphabet (IPA), the research seeks to identify systematic patterns in pronunciation errors and evaluate them against contemporary English phonological standards.

A key focus will be examining the most prevalent and significant pronunciation mistakes made by Bengali speakers, with particular attention to how these errors impact intelligibility and communication. Beyond merely diagnosing these issues, the study will propose practical pedagogical interventions and learning strategies tailored to help Bengali students improve their English pronunciation accuracy.

The ultimate goal is to provide educators and learners with evidence-based recommendations that address these pronunciation challenges effectively, thereby enhancing overall spoken English proficiency among Bengali-speaking students.

The study adopts a systematic approach to:

* Investigate underlying factors contributing to pronunciation difficulties
* Map the specific areas of phonetic conflict between the two languages
* Enhance learners' metalinguistic awareness of English phonology
* Provide targeted solutions for interlanguage pronunciation issues

**Teaching Pronunciation:**

Pronunciation forms the auditory essence of spoken language, shaping how words are articulated and perceived. As a fundamental component of linguistic competence, it plays a pivotal role in effective communication. Within English as a Foreign Language (EFL) and Second Language (ESL) education, the pedagogical approaches to teaching pronunciation remain a subject of ongoing debate among educators. While some prioritize explicit pronunciation instruction, others question its emphasis in classroom settings.

Effective language instruction should adapt to learners' specific needs and goals. Some students may focus on expanding their lexical knowledge, while others might prioritize developing conversational fluency. However, pronunciation instruction remains particularly crucial in survival English courses, where basic communicative effectiveness is paramount. In real-world interactions, pronunciation often creates the first and most lasting impression, frequently outweighing the importance of grammatical accuracy or vocabulary range in initial encounters.

Language educators generally recognize three tiers of pronunciation proficiency:

* **Unintelligible speech**: The listener cannot comprehend the speaker's meaning
* **Partially intelligible speech**: The message is understood after repetition or clarification
* **Fully intelligible speech**: Clear comprehension on first utterance (the ideal target for most learners)

Language acquisition involves interconnected competencies, where development in one area positively influences others. This interdependence is particularly evident in the relationship between pronunciation and listening skills, as both rely on the same phonological processing system (Gilbert, 1984). Mastering the sound patterns of English enhances not only speech production but also auditory comprehension, creating a virtuous cycle of language development.

**Understanding English Phonology for Effective Pronunciation Teaching**

When teaching English pronunciation, educators must emphasize the systematic patterns of sounds in the language. A thorough understanding of English phonology - the study of how sounds function and organize within a language - is essential for teachers to deliver effective pronunciation instruction. This knowledge becomes particularly vital for ESL and EFL instructors working with non-native speakers.

Language transforms vocal sounds into meaningful patterns that serve communicative purposes. For instance, the word "calm" (/kɑːm/) might be mispronounced as /kɔm/, while "balm" (/bɑːm/) could become /bɔm/. Such examples demonstrate how subtle sound variations can impact word recognition and meaning.

The International Phonetic Alphabet (IPA), established in 1886, provides a standardized method for representing speech sounds across languages (Gray & Archibald, 2003). This system enables teachers to:

* Systematically present English sounds
* Identify and correct pronunciation errors
* Develop targeted instructional materials

Phonological analysis incorporates several key concepts:

* Phones (individual speech sounds)
* Phonemes (meaning-distinguishing sound units)
* Allophones (contextual sound variations)
* Free variation (alternative pronunciations)

Beyond individual sounds, effective pronunciation instruction must address:

* Word and sentence stress patterns
* Intonation contours
* Pitch variation
* Articulatory phonetics (how sounds are physically produced)

These suprasegmental features work in concert with segmental phonology to create natural, intelligible speech. Teachers who integrate both aspects can better help learners overcome pronunciation challenges and develop communicative competence in English.

**Key Factors Affecting Pronunciation Among Bangladeshi Learners**

Multiple elements contribute to the pronunciation challenges faced by Bangladeshi English learners. Brown's (2001) framework identifies several critical variables that shape pronunciation acquisition:

* **Native Language Influence**: The phonological system of Bangla significantly impacts how learners perceive and produce English sounds
* **Age-Related Factors**: Younger learners typically demonstrate greater phonetic flexibility compared to adult students
* **Psychological Aspects**: Learner motivation and confidence play crucial roles in pronunciation development
* **Instructional Background**: Previous exposure to formal pronunciation training affects current performance
* **Phonological Awareness**: Limited understanding of English sound patterns creates persistent difficulties
* **Suprasegmental Challenges**: Mastery of stress, rhythm, and intonation patterns proves particularly problematic

These interconnected factors collectively influence the pronunciation competence of Bangladeshi English language learners, with L1 interference often presenting the most substantial obstacle.

**I. L1 Interference in English Pronunciation Among Bengali Learners**

The influence of a learner's first language (L1) on second language (L2) pronunciation is well-documented in linguistic research. For Bengali speakers learning English, the phonological differences between the two languages lead to distinct pronunciation challenges. Since Bangla lacks certain English phonemes, learners often substitute them with the closest available sounds in their native language, resulting in a noticeable accent. Common issues include misarticulation of aspiration patterns, stress placement, and intonation, all of which contribute to foreign-accented speech.

Rahman (1996) highlights that Bengali speakers tend to carry over L1 phonetic habits into English, particularly in vowel length distinctions. Unlike English, where vowel duration affects meaning (e.g., /ɪ/ in "sit" vs. /iː/ in "seat"), Bangla does not use length contrastively. As a result, learners often fail to differentiate between short and long vowels, pronouncing words like "full" (/fʊl/) and "fool" (/fuːl/) identically. Additionally, Bengali speakers struggle with weak forms (e.g., schwa /ə/ in unstressed syllables), a feature absent in their native language.

Consonant articulation presents further difficulties. Mujaffar (1999) notes that Bengali learners frequently substitute English fricatives and affricates with native plosives. For instance:

* /f/ and /v/ are replaced with aspirated bilabial stops /pʰ/ and /bʰ/ (e.g., "very" pronounced as /bheri/).
* Dental fricatives /θ/ and /ð/ become alveolar stops /tʰ/ and /d/ (e.g., "think" as /tʰɪŋk/).
* The voiced palato-alveolar affricate /dʒ/ and fricative /z/ are often confused (e.g., "zoo" pronounced as /dʒuː/).

Moreover, consonant clusters (e.g., /sp/, /st/) pose challenges, leading to epenthesis—inserting vowels to break up clusters (e.g., "school" as /iskuːl/). The rhythmic differences between English (stress-timed) and Bangla (syllable-timed) further complicate pronunciation, as learners tend to apply native prosodic patterns to English speech. These systematic deviations underscore the need for targeted phonological training to help Bengali learners achieve greater intelligibility in English.

**II. Native Language**

If the sound patterns of the native language are similar to L2, pronunciation becomes easier. The L1-L2 distance makes pronunciation difficult proportionately. From this expect researchers find a lot of variation between English and Bangla sound patterns.

**III. Learner’s age**

Pronunciation is best learnt at a tender age. Children seem to pick up accents very quickly, and the ability to do looks to diminish with age, and the knowledge of their native language to a large extent acts as annoying interference while to their second language learning. Meanwhile, Pronunciation is considered to be the most challenging part of a speech for adult learners to master.

Some researchers argue that, after puberty, lateralization (the assigning of linguistic functions to the different brain hemispheres) is completed, and adults’ ability to distinguish and produce native-like sounds is more limited. Bengali speaking learners also face these challenging factors in English pronunciation.

**IV. Learner’s attitude and psychological factors**

View towards the target language learning can influence achievement in pronunciation. It is not common to find that quite a few students resist coordination with teachers in phonetic classes. Thus, the teacher has to have sufficient knowledge of his/her area as well as the learner's psychological, socio-cultural, and pragmatic factors and act as a facilitator of learning through his/her skills, methods, instruction, strategies, materials, equipment, etc.

**V. Innate phonetic ability**

Innate can be used figuratively for something that comes from the mind rather than from external sources. Some people are more susceptible to the sounds of other languages. They learn pronunciation easily. Because of mother tongue influence or controversial issues, this percentage is deficient.

**VI. Motivation and concern for proper pronunciation**

Motivation and interest help students to learn a foreign language quickly. Proper motivation can influence the leaner’s to articulate the sounds properly. Researchers find out that because of insufficient training on English pronunciation, Bangladeshi teachers give a little focus on it in the classroom. Even the proposing syllabus of government for higher and secondary levels is not given importance on teaching pronunciation.

**VII. Stress and intonation factor in the target language**

“Stress and intonation are two essential aspects of pronunciation. Learners make mistakes in the stress of words and rhythm of sentience, unlike many other languages, English requires that one syllable in each word to stress others. Does stress mean prominence in pronunciation produced by four factors? Loud of voice, length of the syllable, pitch related to the frequency of vibration of the vocal folds as well as to low/high tone and quality of vowels functioning individuality or in combination” (Roach, 2000).

The Bengali speaking learner faces difficulties in the stress placement in English words because, on the one hand, English stress placement varies according to grammatical categories, for example, 'abstract, conduct, contract, contrast, import, incline, insult, perfect, present, produce, rebel, etc.' as verbs receiving stress on the second syllables and as nouns on the first, and on the other, he/she is used to assigning stress almost invariably on the first syllable of every word in his/her first language.

**Distinctions between Bangla and English Phonological Systems:**

To facilitate second language acquisition, the contrastive analysis of the target language and the learner’s native language can play an important role. And it is very important to make learners more aware of the differences between the two words and consciously compare the two expressions themselves during the learning process. It is necessary to make the learning process easier.

In a similar study, Maniruzzaman (2010), Banu (2000), Hoque (2010), Ismael (2015), Uddin and Manjur (2015) have found “specific phonemes in English on which there is a strong influence of local varieties of Bangladesh. Learners face a lot of problems in pronouncing English sounds because of this distinction”. They brought out the following distinction between the Bengali and English phonological systems:

* An English short vowel is used as a long on during pronunciation like: /e/ ~ /eː/
* Learners cannot easily make a difference between diphthongs and monophthongs. Some diphthongs become monophthongs like: /əɩ/ ~ /oː/ and /eɩ/ ~ /eː/. And diphthongs /eι/ and /əu/ of BRP are replaced by monophthongs /e:/ and /o/.
* Central vowels /ʌ/ in words like love, cut, hut are made laxer and more open, and the result is almost like an /a/ like bas, kat, hat.
* A voiced palatal plosive becomes a voiced palato-alveolar affricate or vice versa: /z/ ~ /ʤ/ and /ʤ/ ~ /z/.
* The BRP /з:/ in words like bird, girl, etc. are transformed into lax /a/ and /bard/ and /girl/. Bengali speakers tend to substitute some unaspirated English consonants with aspirated sounds.
* /f/ and /v/ sounds were mispronounced as /p/ and /b/ in all positions.
* /s/ was mispronounced as /z/. Students could not recognize the different sounds of /s/ when it falls in the medial and final positions.
* Sometimes Bengali students replace /d/ with /t/, for example-bad /bæd/ is pronounced as /bæt/, good /gud/ as /gut/.
* Students also commonly replace /tʃ/ with /s/, observed in the pronunciation of actually /æksuælι/, which /huιs/, much /mʌs/, child /saild/, teacher as /ti:sʌr/, etc
* Some labio-dental fricatives become bilabial plosive or bilabial aspirated plosive: /f/ ~ /p/, /f/ ~ /pʰ/, /v/ ~ /b/, and /v/ ~ /bʰ/.
* Also, they noticed that an alveolar fricative becomes a palato-alveolar fricative during articulation: /s/ ~ /ʃ/.
* A voiced palatal plosive becomes a voiced palato-alveolar affricate or vice versa: /z/ ~ /ʤ/ and /ʤ/ ~/z/.
* /ʤ/ was mispronounced by students as /g/ in the initial and final positions.
* A dental fricative becomes a dental plosive: /θ/ ~ /t/

Research by Cook (2002) highlights several ways in which a learner's native language (L1) shapes their acquisition of second language (L2) pronunciation:

* **Phonetic Features** – Pronunciation learning extends beyond individual phonemes to include subtle articulatory characteristics that may differ across languages.
* **Syllable Patterns** – Learners often modify complex consonant clusters by inserting vowels (epenthesis) to align with L1 syllable structures.
* **Timing of Voicing** – The acquisition of L2 voice onset time (VOT) for stop consonants is gradual and influenced by L1 phonetics.
* **Prosodic Transfer** – While learners can perceive tonal differences, they often apply L1 intonation patterns to L2 speech (Cook, 2002, pp. 69-83).

**Research Methodology**

This investigation employed a mixed-methods approach to comprehensively examine English pronunciation patterns among Bangladeshi learners. The study sample comprised 250 engineering students drawn from five geographically diverse universities across Bangladesh, ensuring representation from various regional linguistic backgrounds. This strategic sampling allowed for the observation of potential dialectal variations in English pronunciation.

To complement the quantitative data, researchers conducted in-depth qualitative analysis through systematic observation of 30 selected participants' oral presentations. This dual-method design enabled both broad statistical trends and nuanced individual patterns to emerge, providing a more holistic understanding of the pronunciation challenges faced by Bangladeshi English learners.

The methodology was carefully designed to:

* Capture a representative sample of engineering students from multiple regions
* Combine quantitative data collection with qualitative observation
* Allow for both general trends and specific case analyses
* Maintain methodological rigor while accommodating the complex nature of pronunciation studies

This approach aligns with established practices in applied linguistics research while being specifically tailored to investigate the unique context of English language acquisition in Bangladesh's engineering education sector.

This exploratory study investigates English pronunciation difficulties among Bengali-speaking learners. The research examines engineering students from various Bangladeshi universities, representing diverse regional backgrounds. This approach enables identification of both common and region-specific pronunciation patterns.

The study's exploratory nature allows for:

* Systematic mapping of pronunciation errors
* Analysis of phonetic interference patterns
* Documentation of key challenges

By including participants from different regions, the research captures Bangladesh's linguistic diversity while maintaining focus on core pronunciation issues. The methodology combines broad regional representation with detailed linguistic analysis.

**Study Participants**

This research engaged two key participant groups to ensure comprehensive data collection:

* **Educator Perspective**: 24 English language instructors provided professional insights through structured interviews
* **Learner Perspective**: 250 engineering students from five public universities across Bangladesh completed detailed questionnaires

The selected universities represent different geographical regions of Bangladesh, offering a diverse sample of pronunciation patterns. Below is the breakdown of participating institutions and their respective contribution to the study:

|  |  |  |
| --- | --- | --- |
| University Name | Teachers | Students |
| Bangladesh University of Engineering and Technology (BUET) | 05 | 60 |
| Dhaka University of Engineering and Technology (DUET) | 05 | 60 |
| Rajshahi University of Engineering and Technology (RUET) | 05 | 50 |
| Chittagong University of Engineering and Technology (CUET) | 04 | 50 |
| Khulna University of Engineering and Technology (KUET) | 04 | 30 |
|  | Total: 24 | Total: 295 |

**Table 1: Participating institutions and their respective contribution**

This dual-perspective approach allows for:

* Teacher observations on common pronunciation challenges
* Direct evidence of student difficulties
* Regional comparison of linguistic patterns

The combination of educator expertise and learner experiences creates a robust foundation for analyzing Bengali speakers' English pronunciation challenges.

**List 1-** The study employed multiple instruments to ensure comprehensive data collection:

* **Audio-Visual Documentation**: Video recordings were systematically used to capture and analyze participants' pronunciation patterns. This allowed for precise examination of articulation and phonetic production.
* **Diagnostic Word Lists**: Researchers developed specialized word lists targeting specific phonemes to identify recurring pronunciation difficulties. These lists helped pinpoint exact sound production challenges faced by Bengali learners.
* **Phonetic Analysis Tools**: Advanced technological instruments were utilized for acoustic analysis of speech samples, enabling objective measurement and verification of sound production characteristics.

The combination of these methods provided reliable primary data through video documentation, systematic identification of problematic phonemes, scientific validation of pronunciation patterns, and triangulation of qualitative and quantitative data.

**Results and Discussion**

The problem sounds selected for their pronunciation are:

* Students commonly replace /tʃ/ with /s/.
* /f/ and /v/sounds were mispronounced as /p/ and /b/in all positions.
* /ʤ/ was mispronounced by students as /g/ in the initial and final positions.
* The BRP / з:/ in words like bird, girl, etc. are transformed into lax /a/ and /bard/ and /girl/.
* Students mispronounce as /z/ ~ /ʤ/ and /ʤ/ ~ /z/.
* Learners cannot easily make a difference between diphthongs and monophthongs. They used to mispronounce like, /əɩ/ ~ /oː/, /eɩ/ ~ /eː/. And diphthong /eι/ and /əu/ are mispronounced as /e:/and /o/.
* Most of the Students cannot make a difference between short and long vowels like /e/ ~ /eː/, /u/ ~ /u:/, etc.

The data for this research have been collected from the following sources

* Some students have been asked to read a passage containing difficult words that are problematic for pronunciation.
* Some students have been interviewed with some questions related to English sounds to find out their problems in English words while speaking English spontaneously.
* In the open-ended questions, the teacher was given the scope to incorporate their valuable suggestions regarding the development of the pronunciation of the learners.

This section is aboutsummarizing and explaining the opinions of the 30 teachers on students’ pronunciation. See Bar (1) below, the obtained results of the teachers’ questionnaire concerned the following questions:

Q1. Do you think English pronunciation teaching is important for Bengali students?

Q2. Do you think every educational institution should follow the standard pronunciation?

Q3. Do you have a lack of sufficient materials to teach English pronunciation?

Q4. Do you think pronunciation activity should be done every day in the classroom?

Q5. Do you think your training was specially focused on teaching phonetics and phonology?

Fig 1: **Teachers’ Questionnaire**

Field visit 2024

**Analyzing the teacher’s questionnaire and interviews**

* English pronunciation is essential for Bengali students. In this opinion 70%, teachers strongly agreed on better articulation, and 30% of teachers agreed. They believe that to communicate with native speakers, English pronunciation is required. They also mentioned that it helps to make their students smart it is also required.
* Every educational institution should strictly follow the standard pronunciation. At this point, 65% of teachers agreed, 30% strongly agreed, and they believe that the case of the condition of articulation by the student will undoubtedly be developed. 5% of teachers strongly disagreed, because they think as English is a second language in Bangladesh, students should be given to scope to pronounce English in their own way.
* Material and teacher training are a fact to teach English pronunciation. 75% of teachers are not aware of using materials to teach English pronunciation. They strongly agreed on it. 20% of teachers’ points are that their training is not fully focused on pronunciation. 5% of teachers have no idea about modern digital materials.
* Some activities related to pronunciation should be done in the classroom. 60% of teachers strongly agreed, even especially pointing to the IPA phoneme chart, and to ask students to practice transcription orally.40% Teachers are recognized at this point. They mentioned that there is no particular chapter for practicing pronunciation.
* English teachers at school levels are specialized enough in phonetics and phonology to make their students aware of English pronunciation. 35% of teachers strongly disagreed, and 40% of teachers disagreed on this point. 25% teachers have little emphasis on it, and mostly those are the headmasters.

**Results of the Students' Questionnaire**

This section is aboutsummarizing and explaining the opinions of the 250 students on pronunciation.

See Bar (2) below, the obtained results of the learners’ questionnaire concerned the following questions:

Q01. Do you think English pronunciation is essential for you?

Q02. Do you think you are weak in English pronunciation?

Q03. Do you learn about English phonetic sounds?

Q04. Do you face difficulties in producing English sounds?

Q05. Do you feel satisfied with your teacher's English class?

Q06. Do you find any differences between Bangla and English sounds?

Q07. Does your English teacher put emphasis on teaching English pronunciation, like stress, intonation, and English speech sounds, while taking an English class?

Q08. Do you ever try to practice English pronunciation or sounds through using modern technology?

fig (2): **Students’ Questionnaire**

Field visit 2024

**Results of the interview with Engineering University students**

Analysis of interviews with 250 engineering students revealed several critical insights about their English pronunciation learning experiences:

* **Perceived Importance**: Students unanimously emphasized the significance of proper pronunciation for effective international communication and career advancement.
* **Awareness Gaps**: While recognizing the value of pronunciation, most participants demonstrated limited knowledge of English phonetics and phonological concepts.
* **Instructional Challenges**: Despite curriculum inclusion of phonetics, students reported insufficient classroom focus on practical pronunciation training.
* **Comparative Analysis**: Many students actively compared Bangla and English sound systems, indicating metalinguistic awareness.
* **Aspirational Goals**: Exposure to native English media (e.g., BBC) created strong motivation but revealed limited understanding of IPA conventions.
* **Practice Barriers**: Occasional self-practice occurred, but students identified a need for systematic guidance and feedback.
* **Psychological Factors**: Pronunciation learning was often hindered by hesitation, particularly with sounds absent in Bangla.
* **Resource Needs**: Students strongly advocated for language laboratory facilities with computer-assisted pronunciation training tools.

**Practical Recommendations for Pronunciation Improvement**

Based on our research findings, we propose the following evidence-based strategies to enhance English pronunciation instruction for Bengali learners:

* **Modelling Correct Pronunciation**:

Instructors should consistently demonstrate accurate pronunciation

Immediate correction of student errors should be implemented

* **Technology-Enhanced Learning**:

Incorporate audio-visual materials to provide authentic pronunciation models

Utilize language learning apps and digital tools for practice and reinforcement

* **Curriculum Development**:

Implement dedicated pronunciation courses with adequate instructional hours

Integrate phonetics instruction with spelling lessons

Display and regularly reference IPA charts in classrooms

* **Pedagogical Approaches**:

Increase student speaking opportunities through interactive activities

Conduct specialized workshops focusing on problematic sounds

Train teachers in modern pronunciation teaching methodologies

* **Resource Allocation**:

Establish language laboratories with pronunciation software

Provide teachers with ongoing professional development

**Conclusion**

Mastering English pronunciation is fundamental to effective communication, especially in professional and academic settings. For Bengali-speaking learners, the journey toward pronunciation accuracy is often hindered by the absence of certain English phonemes in their native language. Although modern phonological frameworks provide useful strategies to support learning, many challenges remain unresolved. This study highlights the significant role of first language (L1) interference, a natural phenomenon that nonetheless requires deliberate and well-informed teaching methods to overcome. Unlike earlier research that typically focused either on listing problematic sounds or identifying their causes, our study offers a more integrated perspective. Through empirical analysis, we investigate both the nature of the pronunciation issues and the factors that contribute to them. Drawing on Corder’s (1973) principles, we emphasize that language instruction should address learners' specific phonological gaps and be presented in sequences that support natural, spontaneous production. Our findings confirm that Bengali learners consistently struggle with English sounds that do not exist in Bangla, making targeted instruction essential. The outcomes of this research offer valuable guidance for curriculum designers, educators, and language trainers. By adopting these evidence-based recommendations, teachers can significantly improve their students’ pronunciation skills and, by extension, their confidence and effectiveness in real-world communication. This study contributes a detailed analysis of problematic phonemes, presents practical solutions rooted in linguistic theory, and proposes a framework for developing pronunciation-focused curricula—laying a strong foundation for future improvements in English language education for Bengali learners.

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**Disclaimer (Artificial intelligence)**

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Windows App named ‘Grammarly: AI Writing and Grammar Checker App' (version: 1.2.176.1707) may have been used here and there to minimize spelling/grammatical errors. As it is a desktop support with basic grammar/spell features, it does not require any instructional prompts and it works automatically.

**References**

Qader, M. A., Ashraf, T. A., Monira, S., & Muhammad, A. I. (2024). *Challenges of Pronunciation Practices in the ESL Curriculum within the CLT Framework in Bangladesh: A Systematic Review.* World Journal of Education, 14(3), 137–150.

AbdAlgane, M. A., & Idris, S. A. M. (2020). *Challenges of Pronunciation to EFL Learners in Spoken English*. Multicultural Education, 6(5), 193–202.

Al‑khresheh, M. H. (2024). *The Impact of Mispronunciation of the Bilabial Plosive /p/ on EFL Learners’ English Comprehensibility*. Cogent Education.

Abercrombie, D. (1967). *Elements of general phonetics*. Edinburgh University Press.

Baker, A. (1981). *Ship or sheep? An intermediate pronunciation course*. Cambridge University Press.

Banu, R. (2000). Bangladeshi English: A new variety? *Journal of the Institute of Modern Languages*, 64–65. Dhaka University Press.

Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). Longman.

Corder, S. P. (1973). *Introducing applied linguistics*. Penguin.

Harmer, J. (2001). *The practice of English language teaching* (3rd ed.). Longman.

Ur, P. (1996). *A course in language teaching: Practice and theory*. Cambridge University Press.

Hoque, M. A. (2010). The influence of local varieties on the sound patterns of English: A case study of Bangladeshi tertiary students. *IIUC Studies*, *7*, 197–220. https://doi.org/10.3329/iiucs.v7i0.9100 *(if available)*

Hoque, M. A. (2011). Problems of pronunciation for the Chittagonian learners of English: A case study. *Journal of Education and Practice*, *2*(6), 1–9. <http://www.iiste.org>

Hornby, A. S. (2000). *Oxford advanced learner's dictionary of current English* (6th ed., S. Wehmeier, Ed.). Oxford University Press.

Hughes, A. (1989). *Testing for language teachers*. Cambridge University Press.

Hyman, L. M. (1975). *Phonology: Theory and analysis*. Holt, Rinehart and Winston.

Ismael, A., Mahadin, D., & Masri, A. A. (2015). Difficulties facing English language students at Al-Balqa Applied University in English pronunciation. *Global Journal of Art and Social Science Education*, *3*(1), 15–22.

McNamara, T. (2000). *Language testing*. Oxford University Press.

Maniruzzaman, M. (2003). The use of the mother tongue in the EFL classroom: Learners' reaction. *Harvest: Jahangirnagar Studies in Literature*, *18*, 43–58.

Maniruzzaman, M. (2004). Teaching stress placement within the English word. *Harvest: Jahangirnagar Studies in Literature*, *19*, 55–65.

Mujaffar, T. B. (1999). On gees and zees: A comparative phonological study towards better English pronunciation. In *Proceedings of the International Conference on National and Regional Issues in English Language Teaching: International Perspectives (ELTIP)* (pp. 69–71).

O'Connor, J. D. (1980). *Better English pronunciation*. Cambridge University Press.

Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge University Press.

Richards, J. C., Platt, J., & Weber, H. (1985). *Longman dictionary of applied linguistics*. Longman.

Roach, P. (2009). *English phonetics and phonology: A practical course* (4th ed.). Cambridge University Press.

Roza, G. M. (2005). Problems of learners' difficulties in acquisition of Bengali as a foreign language. *The Bangla Academy Journal*, *2*(1), 90–104.

Tang, J. (2002). Using L1 in the English classroom. *English Teaching Forum*, *40*(1), 36–43.

Tomlinson, B. (Ed.). (1998). *Materials development in language teaching*. Cambridge University Press.

Zhang, F., & Yin, P. (2009). A study of pronunciation problems of English learners in China. *Asian Social Science*, *5*(6), 141–146. <http://www.ccsenet.org>