

# ENGLISH CONSONANTS AND THEIR BENGALI EQUIVALENTS: A CONTRASTIVE ANALYSIS

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## Abstract

The paper aimed to investigate the phonetic and phonological differences between the consonant sounds of English and Bengali. Data were collected from secondary and primary sources. Initially, data on the phonetic and phonological properties of English and Bengali consonant sounds were gathered through content analysis of various books and journal articles. These data were then analyzed using contrastive analysis (CA) with theoretical frameworks from Received Pronunciation (RP) and Standard Bengali Pronunciation (SBP). Additionally, two interviews were conducted with English Language Teaching (ELT) experts in Bangladesh, selected through purposive sampling. The experts provided insights into the pronunciation challenges faced by Bangladeshi EFL learners due to differences between English and Bengali consonant sounds, and suggested measures to address these issues. The analysis revealed significant differences between English and Bengali consonant sounds in terms of place and manner of articulation, which contribute to substantial pronunciation problems for Bangladeshi EFL learners. Based on these findings, the study offers recommendations for teaching and learning English consonant pronunciation to EFL learners in Bangladesh.

**Keywords:** *consonants; English Language Teaching; pronunciation; sound patterns; Standard Bengali Pronunciation*

## 1. Introduction

Pronunciation is a significant aspect of any language. Incorrect pronunciation often leads to miscommunication. So, to learn the pronunciation of the English language, Bangladeshi learners should be aware of the phonological patterns of English as well as their own language. When they are able to identify which sounds of their own language are similar to and different from the target language, then they are likely to be able to have a good command of the pronunciation of that language. And, this will help them to maintain communication with the English speakers around the corners of the globe. On the other hand, English teachers who are teaching English, also need to be equipped with the knowledge of the sound patterns of English and their own language.

It is a natural phenomenon that the sound patterns of each language have some distinctive features, and in many ways, are different from those of other languages. In the context of Bangladesh, some speech sounds of English have exact equivalents in Bangla and the Bangladeshi speakers of English do not have problems with producing those sounds. For

example, consonant sounds /p/, /b/, /t/, /d/, /k/, /g/, /m/, and /n/, vowel sounds /e/ and /æ/, and a number of other consonant and vowel sounds exist in both English and Bengali. So, Bengali speakers of English do not have any problems with the pronunciation of these sounds, except when /p/, /t/, /k/ are aspirated in the word's initial position. On the other hand, sounds which are distinct in different languages are pronounced differently with different places and manners of articulation. Many of the sounds of English have different places and manners of articulation from those of Bengali. Such sounds are very difficult for Bengali speakers of English and so, some deviations in pronunciation occur when they attempt to pronounce these sounds. Moreover, English consonant sounds which do not exist in Bengali phonology also pose many pronunciation problems for the Bangladeshi learners of English.

So, this present study aims to investigate what phonetic and phonological differences exist between English consonant sounds and their Bengali counterparts, and how Bangladeshi learners can overcome the problems resulting from such differences.

The general objective of this study is to explore the phonetic and phonological patterns of English consonant sounds and their Bengali equivalents. However, the specific goals of this study are to find out the differences between:

- English Plosives and their Bengali Equivalents
- English Fricatives and their Bengali Equivalents
- English Affricates and their Bengali Equivalents
- English Nasals and their Bengali Equivalents
- English Lateral and its Bengali Equivalents
- English Semi-vowels and their Bengali Equivalents

Moreover, the study also aims to investigate what kind of pronunciation problems are caused by such differences and how these problems can be overcome by Bangladeshi EFL learners.

This study follows a qualitative approach. Data for this study was collected in two steps: secondary sources and primary sources. Firstly, data regarding the phonetic and phonological properties of English and Bengali consonants are taken from different secondary sources, such as books and journal articles on English and Bengali phonology. Content analysis was used as the data collection method to collect data from different books and articles on English and Bengali phonology. Then, the data on English and Bengali sound patterns were analyzed using contrastive analysis (CA). In the analysis of this data, theoretical aspects of Received Pronunciation (RP) and Standard Bengali (SB) were used to find out the equivalent consonant sounds of these two languages. Secondly, primary data was collected from two ELT experts from the country through interviews. These two ELT experts were selected purposively as all ELT experts are not familiar with the theoretical aspects of English and Bengali phonology. So, two ELT experts who have expertise on English sounds and Bengali sounds were selected purposively for the study as the purpose of the study was to find out whether the differences between English consonant sounds and their Bengali counterparts cause any pronunciation problems for Bangladeshi EFL learners and how what measures can be taken to overcome these problems. Their opinions on what pronunciation problems are caused by the differences between English and Bengali sounds and how Bangladeshi learners can overcome these problems were analyzed descriptively.

## 2. Research Method

This research adopted a qualitative methodology to investigate the phonetic and phonological differences between English and Bengali consonant sounds. Qualitative research methods are particularly suitable for exploring complex phenomena where deep understanding and rich, contextualized insights are required (Creswell, 2013).

The primary data was collected through interviews with English Language Teaching (ELT) experts. Purposive sampling was employed to select participants who have significant experience and expertise in the field of ELT, particularly in the context of Bengali learners of English. Purposive sampling is an effective method in qualitative research to ensure that the participants are well-suited to provide in-depth and relevant information (Palinkas et al., 2015).

Secondary data was gathered by collecting information on consonant sounds from various books and journal articles. This data included detailed descriptions of the phonetic and phonological properties of English and Bengali consonant sounds. Content analysis was utilized to systematically analyze these secondary sources. Content analysis allows researchers to interpret textual data through a process of coding and categorizing, which is particularly useful for identifying patterns and themes (Krippendorff, 2018).

The data collected from both primary and secondary sources were analyzed using contrastive analysis (CA). CA is a method used to identify similarities and differences between languages at various levels of linguistic structure, including phonetics and phonology (Lado, 1957). In this study, the theoretical features of Received Pronunciation (RP) and Standard Bengali Pronunciation (SBP) were applied to examine and compare the consonant sounds of English and Bengali.

To ensure the validity and reliability of the findings, triangulation was employed. Triangulation involves using multiple data sources, methods, or theories to cross-check and confirm results (Denzin, 1978). By combining interview data from ELT experts with content analysis of secondary sources, the study aimed to provide a comprehensive and well-substantiated understanding of the phonetic and phonological differences between the two languages.

Ethical considerations were carefully addressed throughout the research process. Informed consent was obtained from all interview participants, and confidentiality was maintained by anonymizing personal information. The study adhered to ethical guidelines as outlined by the American Psychological Association (APA, 2010).

## 3. Results and Discussion

In the Bengali sound system, there exist 35 consonant sounds whereas the number of consonant sounds in English is 24 (Shahidullah, 1988). Of these consonant sounds of these two languages, some sounds are common; some sounds are slightly different, and some sounds are greatly different (Ibid). So, it is necessary for the Bangladeshi speakers of English to know which Bengali sounds are similar to and different from English sounds. Below are detailed English consonant sounds and their equivalents that exist in the Bengali phonology.

### 3.1 English Plosives and their Bengali Equivalents

In English there are 6 plosive sounds whereas the number of plosives in Bengali is 20 (Hai & Ball, 1961; Islam, 2021). Some plosives in Bengali are similar to those of English having the same places and manner of articulation. For example, /b/ and /g/. These Bengali sounds are exactly the same to the corresponding English sounds /b/ and /g/ as they have the same

places and manner of articulation. These sounds also have the same voicing quality (Shahidullah, 1988).

### **3.1.1 English /p/ and its Bengali Equivalent**

In English, /p/ is a voiceless bilabial plosive. When this sound is produced, two lips come together and form a complete stricture. Then, the air-flow trapped inside the bilabial stricture is released with plosion when two lips are taken away suddenly from each other. Likewise, Bengali /p/ has the same place and manner of articulation like that of English /p/. That is, in both the languages, /p/ is a voiceless bilabial plosive. However, Bengali /p/ differs from English /p/ in that the latter is aspirated in the initial position whereas the former is never aspirated (Hai & Ball, 1961).

### **3.1.2 English /k/ and its Bengali Equivalent**

In English, /k/ is a voiceless velar plosive. When this sound is produced, the soft palate or the velum is pressed tightly against the back part of the tongue, forming a complete stricture. Then, the air-flow trapped inside the complete stricture is released with plosion when the soft palate or the velum is taken away suddenly from the tongue. Likewise, in Bengali, /k/ has the same place and manner of articulation as that of English /k/. That is, in both languages, /k/ is a voiceless velar plosive. However, Bengali /k/ differs from English /k/ in that the latter is aspirated in the initial position whereas the former is never aspirated (Hai & Ball, 1961).

### **3.1.3 English /t/ and its Bengali Equivalent**

In English, /t/ is a voiceless alveolar plosive. When this sound is produced, the tip of the tongue is pressed against the alveolar ridge and forms a complete stricture obstructing the flow of the air from the lungs. Then, the air-flow trapped inside the complete stricture at the alveolar ridge is released with plosion when the tip of the tongue is taken away suddenly. In Bengali phonology, there exists an alveolar retroflex /ʈ/ which is produced by the curling up of the tip of the tongue unlike English /t/ although they share the same place and manner of articulation (Hai & Ball, 1961). Moreover, Bengali /t/ differs from English /t/ in that the latter is aspirated in the initial position whereas the former is never aspirated (Hai & Ball, 1961).

### **3.1.4 English /b/ and its Bengali Equivalent**

In English, /b/ is a voiced bilabial plosive. When this sound is produced, two lips come together and form a complete stricture. Then, the air-flow trapped inside the bilabial stricture is released with plosion when two lips are taken away suddenly from each other. Likewise, Bengali /b/ has exactly the same place and manner of articulation as that of English /b/. /b/ is also voiced in Bengali. That is, there exists no phonological difference between English /b/ and Bengali /b/.

### **3.1.5 English /d/ and its Bengali Equivalent**

In English, /d/ is a voiced alveolar plosive. When this sound is produced, the tip of the tongue is pressed against the alveolar ridge and forms a complete stricture obstructing the flow of the air from the lungs. Then, the air-flow trapped inside the complete stricture at the alveolar ridge is released with plosion when the tip of the tongue is taken away suddenly. In the Bengali phonology, there exists an alveolar retroflex /ɖ/ which is produced by the curling

up of the tip of the tongue unlike English /d/ although they share the same place and manner of articulation (Hai & Ball, 1961).

### **3.1.6 English /g/ and its Bengali Equivalent**

In English, /g/ is a voiced velar plosive. When this sound is produced, the soft palate or the velum is pressed tightly against the back part of the tongue, forming a complete stricture. Then, the air-flow trapped inside the complete stricture is released with plosion when the soft palate or the velum is taken away suddenly from the tongue. Likewise, in Bengali /g/ has exactly the same place and manner of articulation as that of English /g/. /g/ is also voiced in Bengali. That is, there exists no phonological difference between English /g/ and Bengali /g/.

## **3.2 English Fricatives and their Bengali Equivalent**

English has 9 fricative sounds in its sound system. But the number of fricative sounds is very few in Bengali. According to Hai & Ball, there exist only three fricatives in the Bengali sound system, which includes the palato-alveolar /ʃ/, alveolar /s/, and glottal /h/ (Hai & Ball, 1961). Below are described English fricatives and their equivalents in Bengali.

### **3.2.1 English Fricative /s/ and its Bengali Equivalent**

In English, /s/ is an alveolar fricative. When English /s/ is produced, the soft palate is raised, closing the nasal air passage, and the tip and the blade of the tongue come very close to the alveolar ridge and form a narrow passage (Connor, 1980). And the airflow from the lungs passes through this narrow passage, creating an intense friction noise (Ibid). On the other hand, Bengali fricative /s/ has exactly the same place and manner of articulation as that of English /s/. /s/ is also voiceless in Bengali. Bengali fricative /s/ hardly differs from its English counterpart /s/ (Hai & Ball, 1961).

### **3.2.2 English Fricative /ʃ/ and its Bengali Equivalent**

In English, /ʃ/ is a voiceless palato-alveolar fricative. When English /ʃ/ is produced, the soft palate is raised, closing the nasal air passage, and the tip and the blade of the tongue come very close to an area which covers the hard palate and some portion of the alveolar ridge and form a narrow passage (Connor, 1980). And the airflow from the lungs passes through this narrow passage, creating an intense friction noise (Ibid). On the other hand, as the Bengali fricative /ʃ/ has exactly the same place and manner of articulation as that of English /ʃ/. /ʃ/ is also voiceless in Bengali. Bengali fricative /ʃ/ hardly differs from its English counterpart /ʃ/ (Hai & Ball, 1961).

### **3.2.3 English Fricative /z/ and its Bengali Equivalent**

In English, /z/ is a voiced alveolar fricative. When English /z/ is produced, the soft palate is raised, closing the nasal air passage, and the tip and the blade of the tongue come very close to the alveolar ridge and form a narrow passage (Connor, 1980). And the airflow from the lungs passes through this narrow passage, creating an intense friction noise (Ibid). On the other hand, as the Bengali fricative, /z/ is a voiced twin of /s/ borrowed from the Persian-Arabian languages (Hai & Ball, 1961). This has exactly the same place and manner of articulation as that of English /z/.

### 3.2.4 English Fricative /f/ and its Bengali Equivalent

English /f/ is a voiceless labio-dental fricative. When /f/ is produced, the upper teeth and the lower lip come very close to each other and form a narrow passage (Hooke & Rowell, 1982). The airflow that comes from the lungs passes through this narrow passage, creating a friction noise (Ibid). On the other hand, in Bengali phonology, there exist no labio-dental fricatives like English /f/ (Islam, 2021; Barman, 2009). However, Bengali speakers of English use a bilabial plosive /ph/ to replace English labio-dental fricative /f/ (Banu, 2000).

### 3.2.5 English Fricative /v/ and its Bengali Equivalent

English /v/ is a voiced labio-dental fricative. When /v/ is produced, the upper teeth and the lower lip come very close to each other and form a narrow passage (Hooke & Rowell, 1982). The airflow that comes from the lungs passes through this narrow passage creating a friction noise (Ibid). On the other hand, in the Bengali phonology, there exist no labio-dental fricatives like English /v/ (Islam, 2021; Barman, 2009). However, Bengali speakers of English use a bilabial plosive /bh/ to replace English labio-dental fricative /v/ (Banu, 2000).

### 3.2.6 English Fricative /h/ and its Bengali Equivalent

English /h/ is a voiceless glottal fricative. This sound also exists in the Bengali phonology. However, /h/ is a voiced sound in Bengali (Hai & Ball, 1961).

### 3.2.7 English Fricative /θ/ and its Bengali Equivalent

English /θ/ is a voiceless dental fricative. When /θ/ is produced, the tip of the tongue comes close to the lower teeth and the blade of the tongue gets close to the upper teeth. Thus, a narrowing or an incomplete closure is formed between the teeth and the tongue (Roach, 1991). The airflow that comes from the lungs passes through the narrow passage, creating a friction noise (Connor, 1980). On the other hand, in the Bengali phonology, there exist no dental fricatives like English /θ/ (Islam, 2021). However, Bengali has a dental plosive /t<sup>h</sup>/ which is considered equivalent to English dental fricative /θ/ (Shahidullah, 1988).

### 3.2.8 English Fricative /ð/ and its Bengali Equivalent

English /ð/ is a voiced dental fricative. When /ð/ is produced, the tip of the tongue comes close to the lower teeth and the blade of the tongue gets close to the upper teeth. Thus, a narrowing or an incomplete closure is formed between the teeth and the tongue (Roach, 1991). The airflow that comes from the lungs passes through the narrow passage, creating a friction noise (Connor, 1980). On the other hand, in the Bengali phonology, there exist no dental fricatives like English /ð/ (Islam, 2021). However, Bengali has a dental plosive /d/ which is equivalent to English dental fricative /ð/ (Shahidullah, 1988).

### 3.2.9 English Fricative /ʒ/ and its Bengali Equivalents

In English, /ʒ/ is a voiceless palato-alveolar fricative. When /ʒ/ is produced, the soft palate is raised closing the nasal air passage, and the tip and the blade of the tongue come very close to an area which covers the hard palate and some portion of the alveolar ridge and form a narrow passage (Connor, 1980). And the airflow from the lungs passes through this narrow passage creating an intense friction noise (Ibid). On the other hand, /ʒ/ is absent in the Bengali phonology (Islam, 2021).

### 3.3 English Affricates and their Bengali Equivalent

Regarding Bengali affricates, Hai & Ball (1961) opine, "Standard Bengali has no affricate sound which compares with those of English (26)." However, Bengali has some four plosive sounds like /c/, /ch/, /j/, and /jh/ of which /c/ and /j/ are very close to English palato-alveolar affricates /tʃ/ and /dʒ/. These Bengali sounds are more plosive than affricate (Hai and Ball, 1961). These sounds are produced with some plosion while English /tʃ/ and /dʒ/ are released slowly with some friction noise like that of fricative sounds.

However, Shahidullah opines that Bengali has 4 affricates: /tʃ/, /tʃh/, /dʒ/, and /dʒh/ (Shahidullah, 1988). According to him, Bengali /tʃ/ and /dʒ/ are unaspirated palatal affricates while /tʃh/ and /dʒh/ are aspirated palatal affricates (Ibid).

#### 3.3.1 English /tʃ/ and its Bengali Equivalent:

English /tʃ/ is a voiceless palato-alveolar affricate. When /tʃ/ is articulated, the soft palate is raised closing the nasal air passage, and the front of the tongue touches the back part of the alveolar ridge and some part of the hard palate forming a complete stricture (Connor, 1980). Thus, the airflow that comes from the lungs is held back behind this stricture. And, when the air trapped behind this stricture is released slowly, the /tʃ/ is produced with a definite friction (Ibid). In the Bengali phonology, the palato-alveolar /tʃ/ is absent. However, Bengali has a palatal stop /c/ which is very close to English /tʃ/ (Barman, 2009).

#### 3.3.2 English /dʒ/ and its Bengali Equivalent:

English /dʒ/ is a voiced palato-alveolar affricate. When /dʒ/ is articulated, the soft palate is raised closing the nasal air passage, and the front of the tongue touches the back part of the alveolar ridge and some part of the hard palate forming a complete stricture (Connor, 1980). Thus, the airflow that comes from the lungs is held back behind this stricture. And, when the air trapped behind this stricture is released slowly, the /dʒ/ is produced with a definite friction (Ibid). In the Bengali phonology, the palato-alveolar /dʒ/ is absent. However, Bengali has a palatal stop /j/ which is very close to English /dʒ/ (Barman, 2009).

### 3.4 English Nasals and their Bengali Equivalent

There exist three nasal sounds in both English and Bengali: /m/, /n/ and /ŋ/. Phonetically there exist no differences between the Bengali nasal sounds and the English nasal sounds (Hai & Ball, 1961). They are produced alike with the same places and manner of articulation in both languages: /m/ is a bilabial sound, /n/ an alveolar sound, and /ŋ/ a velar sound in both Bengali and English. They are also voiced in both languages.

### 3.5 English Lateral /l/ and its Bengali Equivalent

There exists only one lateral sound in English and Bengali. This sound has the same places and manner of articulation in both the languages. This is a voiced alveolar sound in both Bengali and English. However, Bengali /l/ differs a little bit from English /l/ in that the former has a clear formation in all positions of a word whereas the latter has a 'dark' formation in the word final positions (Hai & Ball, 1961).

### 3.6 English semi-vowels and their Bengali Equivalent

Bengali has 2 semi-vowels: /w/ and /y/. They have the same places and manner of articulation as well as the voicing quality like English semi-vowels /w/ and /j/. Like English

/w/, Bengali /w/ is also a voiced labio-velar glide. Similarly, Bengali /y/ is a voiced palatal glide like English /j/ (Shahidullah, 1988).

### 3.7 Findings

From the analysis of data presented in Sections 3.1 to 3.6, some English consonant sounds are found to be almost similar to, some are slightly different and some others are greatly different from their Bengali counterparts. However, there exist some Bengali sounds which are found to be equivalent to these English consonants absent in the Bengali phonology. Below are shown English consonants with their Bengali counterparts:

#### 3.7.1 Consonant Sounds Similar in Bengali and English

Table 1 shows English and Bengali consonants which have exactly the same place and manner of articulation and voicing quality:

English Consonant	Place of Articulation	Manner of Articulation	Voicing Quality	Bengali Consonant
/b/	bilabial	plosive	Voiced	/b/
/g/	velar	plosive	Voiced	/g/
/m/	bilabial	nasal	Voiced	/m/
/n/	alveolar	nasal	Voiced	/n/
/ŋ/	velar	nasal	Voiced	/ŋ/
/s/	alveolar	fricative	Voiceless	/s/
/w/	Bilabial	semi-vowel	Voiced	/w/
/r/	alveolar	approximant	Voiced	/r/
/l/	alveolar	lateral	Voiced	/l/
/j/	Velar	semi-vowel	Voiced	/y/

Table 1. English Consonants and their Bengali Equivalents with No Differences

#### 3.7.2 Consonant Sounds in Bengali and English with Little Differences

Table 2 shows English consonants which are found to be slightly different from their Bengali counterparts:

English Consonant	Point/s of Differences	Bengali Consonant
/p/	Aspiration	/p/
/t/	Aspiration and Manner of Articulation	/t/
/k/	Aspiration	/k/
/d/	Manner of Articulation	/d/
/ʃ/	Place of Articulation	/ʃ/
/z/	Place and Manner of Articulation	/j/
/h/	Voicing Quality	/h/

Table 2. English Consonants and their Bengali Equivalents with Little Differences

#### 3.7.3 Consonant Sounds in Bengali and English with Significant Differences

Table 3 shows English consonants which are significantly different from their Bengali counterparts:

English Consonant	Points of Differences	Bengali Consonant
/f/	Place of Articulation	/ph/



	Manner of Articulation	
/v/	Place of Articulation Manner of Articulation	/bh/
/θ/	Place of Articulation Manner of Articulation	/t <sup>h</sup> /
/ð/	Place of Articulation Manner of Articulation	/d̪/
/ʒ/	Place of Articulation Manner of Articulation	/j/
/dʒ/	Place of Articulation Manner of Articulation	/j/

Table 3. English Consonants and their Bengali Equivalents with Significant Differences

### 3.7.4 Pronunciation Problems Caused by the Differences between English and Bengali Consonant Sounds

Two interviews were conducted with ELT experts on what pronunciation problems are caused by the differences between English consonants and their Bengali counterparts for Bangladeshi learners. Both the experts opine that Bangladeshi EFL learners have problems with the places and manner of articulation of some particular English consonants as these differ significantly from their Bengali counterparts. These problems are outlined below:

- Bangladeshi learners cannot pronounce the aspirated English consonants /p/, /t/, and /k/;
- They have problems with the labio-dental English fricatives /f/ and /v/;
- They cannot pronounce the voiced palato-alveolar fricative /ʒ/;
- They cannot pronounce the dental fricatives /θ/ and /ð/;
- They also have problems with the voiced alveolar fricative /z/.

### 3.7.5 Measures for overcoming the challenges caused by the Differences

Experts also provided some measures that can help Bangladeshi EFL learners to overcome these problems caused by the differences between English consonants and their Bengali counterparts. The following measures can help the learners to overcome these problems:

- Listening to these sounds in isolation;
- Listening to these sounds in words and sentences;
- Listening to these sounds in podcasts, utube, etc.;
- Listening to native speakers;
- Practicing repetition drills on these sounds;
- Producing these sounds individually;
- Producing these sounds in words and sentences;
- Using tongue twisters.

## 4. Conclusion

From the findings of the study, it is evident that some consonant sounds are common in both English and Bengali. These are not likely to cause any pronunciation problems for Bangladeshi learners of English. However, most of the consonant sounds of English are different from their Bengali counterparts as they have different places and manners of articulation. Some of these sounds differ either in the places of articulation or in the manner

of articulation or in aspiration, or in voicing quality. But most of the English consonant sounds differ from their Bengali counterparts in multiple dimensions: place and manner of articulation, voicing, aspiration, together. So, Bangladeshi learners as well as teachers of English should be aware of such differences that exist between English and their Bengali equivalents.

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