AN EVALUATION OF CONSONANT LETTERS IN OXFORD URDU ENGLISH DICTIONARY THROUGH PHONETIC TRANSCRIPTION ACCORDING TO IPA

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ABSTRACT

This evaluative study was categorized as a formative assessment in the field of lexicology, specifically within the framework of the International Phonetic Alphabet (IPA). The primary focus of the research was the evaluation of the Oxford Urdu English Dictionary (2013), with the IPA phonetic key as a variable and all Urdu dictionaries as the population. The research selected the Oxford Urdu English Dictionary (2013) as the sample. This first edition, published in 2013, is notable for using phonetic transcription of Urdu words according to the International Phonetic Alphabet. However, it lacks appropriate phonetic symbols for the various sounds in question, often using the same symbol for two or more distinguishable sounds in Urdu. The research tools included the IPA chart, the Handbook of the IPA, The Sounds of the World's Languages, Urdu phonetic books, and dictionaries. The etymology of words from Urdu was explored, revealing roots in Arabic, Persian, Hindi, and Sanskrit, as indicated by the phonetic key. The results releaved that the phonetic same symbols used in dictionary for different letters do not correspond to and precisely describe the sounds of different Urdu letters as pronounced in real life according to places and manners of Urdu articulation. Therefore, in the present study, appropriate symbols were selected from the IPA chart to distinguish sounds of different letters that otherwise appeared to sound alike. Despite detailed studies on consonants, research on vowels remains limited.

Key words: Evaluative Study, International Phonetic Alphabet (IPA), Oxford Urdu English Dictionary, Phonetic Transcription, Urdu Sounds, Handbook of the IPA, Sounds of the World's Languages and Urdu Dictionaries1- INTRODUCTION

The Oxford Urdu English Dictionary provides translations from Urdu to English, along with IPA transcription, which helps users pronounce Urdu words correctly and understand their sounds better. Now, even those who do not know Urdu can find English equivalents for Urdu words and learn to pronounce them accurately. This important work was completed by Sarmad Hussain, a recognized expert in Speech Science in Pakistan (Oxford Urdu English Dictionary, 2013).

1.1. International Phonetic Alphabet (IPA)

IPA (International Phonetic Alphabet) is a system of symbols for transcribing the pronunciation of each letter or word in any language of the world (Cambridge Advanced Learner's Dictionary, 2013; Oxford Advanced Learner's Dictionary, 2010).

IPA (International Phonetic Alphabet) is a system of symbols for transcribing the pronunciation of each letter or word in any language of the world (Cambridge Advanced Learner's Dictionary, 2013; Oxford Advanced Learner's Dictionary, 2010). The International Phonetic Association (IPA), founded in 1886 in Paris, is the oldest and leading organization for phoneticians. It celebrated its 130th anniversary in 2016, alongside the 130th anniversary of the International Phonetic Alphabet's first publication in 2018. The IPA promotes the scientific study of phonetics and provides a standardized notation system for representing all languages. The latest

version of the IPA was published in 2015, with charts updated annually (International Phonetic Association, 2024).

1.2. Urdu

Urdu belongs to Indo-Aryan languages. The main group of Indo-Aryan languages is under the branch of Indo European languages. There are 500 million people speaking 500 languages in North and Central India. Urdu is the subgroup of Indo-Aryan languages. It is spoken by 240 million people (Crystal, 2003).

1.3. Oxford Urdu English Dictionary

According to Oxford Urdu English Dictionary 1st Edition, published in 2013 by S.M Saleem-u-Din and Sohail Anjum, Oxford Publisher, there are 54 letters in Urdu which account for 71 phonemes. The total number of consonants phonemes are 44 come that from 49 letters. The symbols of these phonemes are mentioned in Table 1.1.

1.3.1. Classification of Consonants

The consonant phonemes are classified into two groups:
  i.   Pure Consonants
 ii.   Aspirated Consonants

i.   Pure Consonants

The total number of pure consonant phonemes is 29 that come from 34 letters. The symbols of these phonemes are mentioned in Table 1.1.

ii.   Aspirated Consonants

The total number of aspirated consonants (with the sound of h) is 15 which come from 15 letters. The symbols of these aspirated phonemes are mentioned in Table 1.1.

1.3.2. Classification of Vowels

The total number of vowel phonemes in Urdu is 27. The symbols of these vowel phonemes are mentioned in Table 1.1. The vowel phonemes are classified into six groups:
  i.   Long Vowels
 ii.   Long Nasalized Vowels
iii.   Short Vowels
 iv.   Short Nasalized Vowels
  v.   Majhul
 vi.   Other Diacritical Marks

The description of which is given below according to Oxford Urdu English Dictionary (2013):

i.   Long Vowel

There are seven (7) long vowel phonemes in Urdu. The symbols of these phonemes are mentioned in Table 1.1**Long Nasalized Vowels**

There are seven (7) long nasalized vowel phonemes in Urdu. They are produced to add the nasal sound /õ̃/ with long vowels. The symbols of these phonemes are mentioned in Table 1.1.

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ii.   **Short Vowels**

There are three (3) short vowel phonemes in Urdu. The symbols of these short vowel phonemes are mentioned in Table 1.1.

iii.   **Short Nasalized Vowels**

There are three (3) short nasalized vowel phonemes in Urdu. They are produced to add the nasalized sound /õ/ with short vowels. The symbols of these short-nasalized vowels are mentioned in Table 1.1.

iv.   **Majhul Vowels**

Majhul is the third type of vowels. The voice of this vowel (majhul) is like a long vowel but the air flow is lower than that of long vowel and higher than that of a short vowel. Based on this ground, it is called majhul. There are three (3) phonemes to represent the sounds of majhul. The symbols of these majhul vowels are mentioned in Table 1.1.

v.   **Other Diacritical Marks**

There are four (4) diacritical marks in Urdu. The symbols of these phonemes are mentioned in Table 1.1.

1.3.3.   Phonemic Chart according to Oxford Urdu English Dictionary

The Oxford Urdu English Dictionary (2013) provides a chart with the detailed description of phonemes for Urdu phonetic system. The chart is given below:**Table 1.1.** Total 71 Urdu consonant and vowel phonemes with their Urdu letters in Oxford Urdu English Dictionary (2013)

Source: (Oxford Urdu English Dictionary, 2013)
The above table shows the phonemes chart as given in the Oxford Urdu English Dictionary (2013).

Other Diacritical Marks (4)	Vowels (23)					Aspirated Consonants (15)	Consonants (44)	
	Majhul Vowels (3)	Short Nasal Vowels (3)	Short Vowels (3)	Long Nasal Vowels (7)	Long Vowels (7)		Pure Consonants (29)	
تشدید /tt/	زبرمجہول /æ/	زبر مغنونہ /ə̃/	زبر /ə/	واؤمجہول مغنونہ /õ:/	واؤمجہول /o:/	بھ /bʰ/	ب /b/	ث،س،ص /s/
تنوین /n/	زیرمجہول /e/	زیر مغنونہ /ĩ/	زیر /ɪ/	واؤمعروف مغنونہ /ũ:/	واؤمعروف /u:/	پھ /pʰ/	پ /p/	ذ،ز،ض،ظ /z/
الف زیریں /i:/	پیش مجہول /o/	پیش مغنونہ /ũ/	پیش /ʊ/	واؤلین مغنونہ /ɔ̃:/	واؤلین /ɔ:/	تھ /t̪ʰ/	ت،ط /t̪/	ح،ہ /h/
الف بالا /ɑ:/				یائےمجہول مغنونہ /ẽ:/	یائےمجہول /e:/	ٹھ /ʈʰ/	ٹ /ʈ/	خ /x/
				یائےمعروف مغنونہ /ĩ:/	یائے معروف /i:/	جھ /dʒʰ/	ج /dʒ/	ژ /ʒ/
				یائےلین مغنونہ /æ̃:/	یائےلین /æ:/	چھ /tʃʰ/	چ /tʃ/	ش /ʃ/
				الف طویل، الف مد مغنونہ /ã:/	الف طویل، الف مد /ɑ:/	دھ /d̪ʰ/	د /d̪/	ع /ʔ/
						ڈھ /ɖʰ/	ڈ /ɖ/	غ /ɣ/
						رھ /rʰ/	ر /r/	ف /f/
						ڑھ /ʈʰ/	ڑ /ɽ/	ق /q/
						کھ /kʰ/	ک /k/	و /v/
						گھ /gʰ/	گ /g/	ی /j/
						لھ /lʰ/	ل /l/	نک /ŋk/
						مھ /mʰ/	م /m/	نگ /ŋg/
						نھ	ن	

						/nʰ/	/n/	

1.4. Statement of the Problem

The learners of Urdu as first or second language with or without Urdu background are unable to distinguish the sound (phoneme) of such letters (ت /t̪e:/،ط /tˤoːe:/، ث /s̪e:/، س /siːn/ ، ص/sˤʊɑˑd̪/، ذ /z̪aˑl/، ز /ze:/، ض /ðˤɑˑd̪/ ، ظ /zˤoːe:/، ح /ħe:/، ہ /he:/) that have similar sound but not exactly the same sound, when they follow IPA (International Phonetic Alphabet) style mentioned in Oxford Urdu English Dictionary (2013). For instance,

- ت /t̪e:/ ، ط /tˤoːe:/

  as in طرز /t̪ərz/ and تب /t̪əb/.

- ث /s̪e:/ ، س /siːn/ ، ص/sˤʊɑˑd̪/

  as in ثابت /sɑːbɪt̪/، سر /sər/ and صابر /sɑːbɪr/.

- ذ /z̪aˑl/ ز /ze:/ ، ض /ðˤɑˑd̪/ ، ظ /zˤoːe:/

  as in ذات /zɑːt̪/، زم /zəm/ ، ضد /zɪd̪/ and ظن /zən/.

- ح /ħe:/، ہ /he:/

  as in حل /həl/ and ہم /həm/.

1.5. Research Objectives

- Assessing the correctness of IPA transcriptions for consonant letters in the Oxford Urdu-English Dictionary.
- Identify and analyse phonetic patterns in IPA transcriptions of consonant letters in the Oxford Urdu-English dictionary.

1.6. Research Questions

1. How accurately are consonant letters in the Oxford Urdu-English Dictionary transcribed using the International Phonetic Alphabet (IPA)?
2. What phonetic patterns can be observed in the IPA transcription of consonant letters in the Oxford Urdu-English Dictionary?

1.7. Significance of the Study

It is very important to evaluate Oxford Urdu English Dictionary (2013) according to IPA (International Phonetic Alphabet) transcription because Urdu is an official language of Pakistan and is spoken by masses all around the world. After rectifying the dictionary, it would be internationally accepted. The introduction of new appropriate symbols to describe seemingly similar but actually different and distinguishable sounds, as suggested in the present research, will help in understanding the etymology of words in Urdu as well as Urdu orthography. And an understanding of Urdu orthography will lead to the understanding of Urdu literature.

2- LITERATURE REVIEW

Several research projects have revealed that the phonemes of Urdu letters have separate places of articulation instead of a single place, as mistakenly represented in the Oxford Urdu English Dictionary (2013). In addition, Oxford Urdu English Dictionary (2013) mentioned the same phoneme for different letters. For instance,

- The same phoneme /t̪/ is mistakenly used for the sounds of both ت /t̪e:/ and ط /tˤoːe:/.

- The same phoneme /s/ is mistakenly used for the sounds of ث /s̲e:/ ، س /si:n/ and ص/sˤʊɑ·d̲/.
- The same phoneme /z/ is mistakenly used for the sounds of ذ /z̲ɑ·l/ ، ز /ze:/ ، ض /ðˤɑ·d̲/ and ظ /zˤo:e:/.
- The same phoneme /h/ is mistakenly used for the sounds of both ح /ħe:/ and ہ /he:/.

1.1. Places of Articulation of Urdu Distinguishable Sounds

In different Urdu English dictionaries and books, different places of articulation have been mentioned for such letters, which are considered to have the same sound in Urdu.

1.1.1. ت /t̲e:/، ط /tˤo:e:/

The sound of ت /t̲e:/ is distinct from that of ط /tˤo:e:/. Each sound has a different place of articulation. The following description makes it clear.

ت /t̲e:/

The sound of ت /t̲e:/ is articulated by the tip of the tongue against the teeth (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1977).

ط /tˤo:e:/

It is to be articulated after curling the tongue tip against the alveolar ridge of the upper teeth (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1991).

ت /t̲e:/

It is an alveolar consonant that is articulated by the tip of the tongue against the back of the teeth or the alveolar ridge. It is called alveolar consonant (فرہنگِ تلفظ trans: Pronouncing Dictionary, 1995).

ط /tˤo:e:/

It is a palatal consonant that is articulated by the tongue tip against the back of the teeth or the alveolar ridge with rounded lips. It is called palatal consonant (ibid).

ت /t̲e:/

This sound is called a dental sound and is more dental than the English sound /t/ (Platts, 2003).

ط /tˤo:e:/

The sound of ط /tˤo:e:/ is hardly distinguished from the sound of ت /t̲e:/ (ibid).

ط /tˤo:e:/

The actual or genuine sound of ط /tˤo:e:/ is stronger and harsher than the sound of ت /t̲e:/ (Forbes, 1986).

1.1.2. ث /s̱e:/ ، س /si:n/ ، ص/sˤʊɑˑd̪/

The sounds of ث /s̱e:/ ، س /si:n/ ، ص/sˤʊɑˑd̪/ are distinct from each other's. Each sound has a different place of articulation. The following description makes it clear.

ث /s̱e:/

Articulated by the tip of the tongue against the edge of upper teeth (اُردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1984).

س /si:n/

Due to the air coming from the back of the tongue and hard palate, it makes a hissing sound (اُردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1990).

ص /sˤʊɑˑd̪/

Articulated by the tip of the tongue against the lower teeth and it makes a sound like a whistle (اُردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1991).

ث /s̱e:/

This sound is articulated with the help of teeth and it is called dental sound. It has the same tone as س /si:n/ (فرہنگِ تلفظ trans: Pronouncing Dictionary, 1995).

س /si:n/

This sound is articulated with the help of alveolar ridge. That's why it is called alveolar consonant. Articulated by the tongue tip against the back of upper alveolar ridge. The air escapes through the mouth with partial obstruction (ibid).

ص /sˤʊɑˑd̪/

Articulated by the tongue tip against alveolar ridge with slightly or some rounded lips. The air escapes through the mouth with slight obstruction (ibid).

ث /s̱e:/

Its genuine sound is articulated by the tip of the tongue. Although Hindustani pronounce this sound like the sound of س /si:n/ but it is wrong (فرہنگِ آصفیہ trans: Asfia Dictionary, 1977).

ص /sˤʊɑˑd̪/

Its genuine sound is actually pronounced by Arabs. The way it should be pronounced like صواد /sˤʊɑˑd̪/. This sound does not occur in any other language (ibid).

ث /s̱e:/

The sound of ث /s̱e:/ is articulated by the tip of the ongue against the lower teeth. This sound is particularly associated with the Arabic Language (علمی اُردو لغت trans: Academic Urdu Dictionary, 1993).

ص /sˤʊɑˑd̪/

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This sound is not present in other languages except Arabic Language (ibid).

ث /s̪eː/

Its sound is similar to the sound ofس /siːn/ but not the same sound (جامع اللّغا ت trans: Comprehensive Dictionary, 1989).

ص /sˤʊɑˑd̪/

This sound is particularly associated with the Arabic language; its pronunciation is صاد /sˤɑˑd̪/. This sound is not present in any other language except Arabic Language (ibid).

ث /s̱eː/

The Hindustani pronounce this sound like س /siːn/ but it's absolutely wrong. This sound is articulated with the tip of the tongue (نور اللّغات trans: Noor Dictionary, 1989).

ث /s̱eː/

Its sound in Arabic is like a sound (in English as thin), it is to be articulated by the tip of the tongue against the upper teeth but in the Hindustani way, it is pronounced like 's' sound in English as an alveolar sound (Platts, 2003).

س /siːn/

It is also pronounced like a sound of the English /s/, as in sin or sun (ibid).

ص /sˤʊɑˑd̪/

The pronunciation of ص/sˤʊɑˑd̪/ is hardly distinguished as compared to the pronunciation of س/siːn/ in Hindustani (ibid).

ث /s̱eː/، س /siːn/

The sounds of these letters (ث /s̱eː/ ، س /siːn/) are similar to the sound of English /s/ (=alveolar sound) (Forbes, 1986; Shakespeare's Dictionary, 1996).

ص /sˤʊɑˑd̪/

Its pronunciation is hardly distinguished from س/siːn/ (ibid).

1.1.3. ذ /ðˤɑˑl/، ز /zeː/ ،ض /ðˤʊɑˑd̪/ or /ðˤɑˑd̪/، ظ /zˤoːeː/

The sounds of ذ /ðˤɑˑl/ ، ز /zeː/،ض /ðˤʊɑˑd̪/ ، ظ/zˤoːeː/ are distinct from each other. Each sound has a different place of articulation. The following description makes it clear.

ذ /ðˤɑˑl/

Articulated by the tongue tip against the edge of the central incisor. Its sound is similar to ز /zeː/ (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1989).

ض /ðˤɑˑd̪/

Articulated by the side edge of the tongue against right or left and the upper root of molar teeth. This sound is exactly pronounced by Arabs. Urdu speakers pronounce it as ضواد /ðˤʊɑˑd̪/ or واد د /d̪ʊɑˑd̪/ (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1991).

ظ /zˤoːeː/

The sound of ظ /zˤoːeː/ is articulated by the tip of the tongue against the alveolar ridge (ibid).

ذ /ðˤɑˑl/

The sound of ذ /z̧ɑ·l/ is articulated by tongue tip against the edge of upper teeth. It is similar to ز /ze:/ (فرہنگِ تلفظ trans: Pronouncing Dictionary, 1995).

ز /ze:/

The sound of ز /ze:/ is articulated by the tip of the tongue against the alveolar ridge (ibid).

ض (ضاد) /ðˤɑ·ḏ/ or /ðˤʊɑ·ḏ/

It has mixed sound between ذ /z̧ɑ·l/and ز /ze:/. This sound is exactly pronounced by the Arabs. It is pronounced like ز /ze:/ (ibid).

ظ /zˤo:e:/

This sound is articulated with rounded lips. Its pronunciation is near to ذ /z̧ɑ·l/and ز /ze:/ pronounced by the ip of the ongue (Articulated by the tip of the ongue against the edge of upper teeth with rounded lips) (ibid).

ظ /zˤo:e:/ ، ض / ðˤɑ·ḏ/

This sound does not occur in any other language except Arabic. This letter is particularly associated with the Arabic language (علمی أردو لغت trans: Academic Urdu Dictionary, 1993).

ذ /z̧ɑ·l/

This sound is articulated by the tip of the tongue (ibid).

ز /ze:/

In Urdu, it is pronounced as زے /ze:/ (ibid).

ذ /z̧ɑ·l/

It is articulated by the tip of the tongue (فرہنگِ آصفیہ trans: Asfia Dictionary, 1977).

ز /ze:/

This sound does not occur in its pure form in Hindi or Sanskrit but its sound is similar to the English sound /z/ (ibid).

ض /ðˤɑ·ḏ/

Urdu speakers pronounce this ضواد /ðˤʊɑ·ḏ/ orدواد /ḏʊɑ·ḏ/. This sound is exactly pronounced by the Arabs (ibid).

ظ /zˤoːe/

This sound is not exactly pronounced in the Urdu Language; its pronunciation is ظوا /zˤoːɐ/ (ibid).

ذ /ẕɑ·l/

In Urdu, it is pronounced as مہذب اللّغا ت) ذال /ẕɑ·l/ trans: Muhazzab Dictionary, 1969).

ز /zeː/

In Urdu, it is pronounced as زے /zeː/ (ibid).

ض /ðˤɑ·ḏ/

This sound is exactly pronounced by the Arabs. Urdu speakers pronounce this as ضواد مہذب اللّغا ت) /ðˤʊɑ·ḏ/ trans: Muhazzab Dictionary, 1970).

ظ /zˤoːe/

In Urdu, it is pronounced as ظوئے /zˤoːeː/ (ibid).

ذ /ẕɑ·l/

In Urdu, it is pronounced as جامع اللّغا ت) ذال /ẕɑ·l/ trans: Comprehensive Dictionary, 1989).

ز /zeː/

In Urdu, it is pronounced as زے /zeː/ (ibid).

ض /ðˤɑ·ḏ/

In Urdu, it is pronounced as ضاد /ðˤɑ·ḏ/ (ibid).

ظ /zˤoːe/

In Urdu, it is pronounced as ظوئے /zˤoːeː/ (ibid).

ذ /ẕɑ·l/ and ز /zeː/

They are hardly distinguished by their pronunciation. They are similar but not the same sounds. These sounds are similar to the English /z/ sound (Platts, 2003; Forbes, 1986; Shakespeare's Dictionary, 1996).

ض /ðˤɑ·ḏ/

Its sound is similar to the English /z/ sound in Hindustani and Persian (Platts, 2003; Forbes, 1986).

ض /ðˤɑ·ḏ/

Its pronunciation is distinguished by the pronunciation of ز /zeː/ (Shakespeare's Dictionary, 1996).

ظ /zˤoːeː/

The Persian and the Muhammad of Hindustan pronounce this sound like the English /z/ (Platts, 2003).

ظ /zˤoːeː/

This letter is purely used in Arabic and has no substitute character in Sanskrit Language (Forbes, 1986).

1.1.4.   ح /ħeː/ and ہ /heː/

The sound of ح /ħeː/ is distinct from that of ہ /heː/. Each sound has a different place of articulation. The following description makes it clear.

ح /ħeː/

This sound is articulated by the root of throat or guttural. In Arabic and Persian, it is pronounced as حا /ħɑː/ and in Urdu as حے /ħeː/ (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1987).

ہ /heː/

It is to be articulated by just above the root of the throat. The air escapes freely through the throat with no turbulence (=obstruction/disruption) (أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 2007).

ح /ħeː/

This sound is articulated by the root of throat or guttural (فرہنگِ تلفظ trans: Pronouncing Dictionary, 1996).

ہ /heː/

Articulated by just above the root of the throat. The air escapes through with no turbulence (ibid).

ح /ħeː/

The aspiration of this sound is much stronger and formed deeper in the throat than the sound of ہ /heː/ (Platts, 2003; Shakespeare's Dictionary, 1996).

ہ /heː/

It has the sound of English /h/ (ibid).

1.2.   The sounds of و /ʋɑˑoː/

It is pronounced in both ways as consonant and vowel. As for as articulation is concerned, the sound of و /ʋɑˑoː/ is articulated by the lower lip against the upper teeth in the mouth. When it is pronounced with پیش /peːʃ/ ِ, the shape of lips will be rounded (فرہنگِ تلفظ trans: Pronouncing Dictionary, 1996; أردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 2007).

The sound of و /ʋɑˑoː/ is pronounced in both ways as consonant and vowel (أردو لغت تاریخی) trans: Urdu Dictionary on Historical Principle, 2007; فرہنگِ آصفیہ trans: Asfia Dictionary, اصول پر trans: Academic Urdu Dictionary, 1993) علمی أردو لغت trans: Academic Urdu Dictionary, 1993).

و /ʋɑˑoː/ sometimes sounds like 'v' and other times like 'w'. This voiced approximant labiodental /ʋ/ can be used for both the sound variations of voiced fricative labiodental /v/ and voiced labial-velar approximant /w/ (Handbook of the IPA, 1999, p.102).

1.3. Nasalization of ن /nuːn/ in Urdu

The transcription of گنگا (name of the river) and رنگا (painted) are presented /gəŋgɑː/ and /rəŋgɑː/ in Oxford Urdu English Dictionary (2013). The phoneme /ŋg/ is used in both words but actually, the nasalization of ن /nuːn/ is differently pronounced in both words although four letters are used in both words گنگا /gəŋgɑˑ/and رنگا /rəŋgɑˑ/ but four are pronounced in گنگا/gəŋgɑˑ/and three are pronounced in رنگا /rəŋgɑˑ/. In ن غُنّہ /nuːnɣunnɑˑ/ the nasalization of ن /nuːn/ is pronounced in such a way with the preceding letter as it is a fixed voice, ن مغنونہ /nuːn məɣuːnɑˑ/ is used with رنگا /gəŋgɑˑ/ (أردو لغت تاریخی اصول پر) trans: Urdu Dictionary on Historical Principle, 1977). The transcription of بہنگی ، مہنگا ، مہنگائی is presented in Oxford Urdu English Dictionary (2013) as /bæhŋgiː/, /mæhŋgɑː/, / ن غُنّہ /nuːnɣunnɑˑ/ is used with گنگا/gəŋgɑˑ/ and in ن مغنونہ /nuːn məɣuːnɑˑ/ the nasalization of ن /nuːn/ is pronounced in such a way with preceding letter, as it is a mixed voice mæhŋgɑːiː/ and /læhŋgɑː/, respectively.

The transcription of مہنگائی ، بہنگی ، مہنگا and لہنگا are presented as /mæhŋgɑːiː/, /mæhŋgɑː/, /bæhŋgiː/ and لہنگا/læhŋgɑː/respectively in Oxford Urdu English Dictionary (2013) but the act of nasalization in such words starts immediately preceding their letters ل /lɑˑm/ in لہنگا /læhŋgɑˑ/, م /miːm/ in مہنگائی /mæhŋgɑːiː/, مہنگا /mæhŋgɑˑ/ and ب /beː/ in بہنگی /bæhŋgiː/ (Hassan, 1994, p.184).

1.4. History of IPA for Urdu Consonants in Sub-Continent from 17th to 20th Centuries

As for as the problem of converting Urdu consonants into Roman script is concerned, it is important to review it historically. The Roman script was a strange letter for Sub-Continent but when the European traders stepped forward to conceal their economic exploitation in shape of spreading Christian preachers to establish the sacred name of the religion in Sub-Continent, they first tried to promulgate this letter (Hashmi, 1963, p.5-8).

This work was not done with the specific aim that the people should be taught the Gospel by adopting Roman script for local languages. This idea came to their mind about a century later. At that time, its immediate aim was that the traders could acquaint their agents with the local words here, especially the names of people. At the time, the Roman script was first used for proper nouns. About 100 years later, when a large number of people embraced Christianity and got settled, they were acquainted with Roman script. So, the need was felt that these Christian should be prevented from the local letter, particularly, the Persian script so that their approach remained focused on the same formatting. The result was that the local languages were also written in Roman letters (ibid).

After that, the scope or circle of the French and English plundering increased. The Roman letter began to expand. Christian preachers also continued their mission. Modern and Old Testament was Romanized and distributed in local languages and Persian language for local Christians. English domination used to regulate this letter in military operations, military rules and treatment of horses and in some health issues. After the death of Tipu Sultan in 1799 when the political period of India was over and the French opponents left the field, defeated forever in the early nineteenth century, the British started paying real attention to the spread of English instead of Roman (ibid).

The Roman letter was used for Urdu. It first appeared in Gilchrist, English and Hindoostanee Dictionary, which was named after the Governor of India, General Sir John Macpherson. Its first edition was published in 1786 and second in 1798 from Kolkata. Christian mission played a great part in the publication of Roman script for Urdu. In fact, this method had been adopted without any problem by a large class of Indian population, namely the Christians, whose native language was Urdu. For them, the Torah, the Gospel, the Zabur and the other books were printed in more quantities. Since education was to spread, this literature was prepared for this category in which less commonly used symbols were kept at the minimum. Usually, a few indications were considered to be sufficient (Sherwani, 1987).

There was an attempt in India to write down European court's verdict and technical terms by using the Roman script but on the other side European researchers were trying to use different symbols to express real pronunciation for Urdu and other eastern languages. Sir William Garrison gets the credit for being the first person to write Urdu language and its actual pronunciation in a scientific way (ibid).2.7.12. Distinguishable Sounds by Different Scholars in Historical Context

The following table lists and describes the symbols for distinguishable sounds as proposed by Urdu scholars.

Table 2.12. Distinguishable phonemes according to different scholars in historical context

Urdu Letters	International Phonetic Letters (IPA)	Steingass Dictionary	John T. Platts, M. A Dictionary	John Shakespeare Dictionary	Duncan Forbes, Urdu And English Dictionary	Islamabad University	Punjab University, Karachi University	Mushtaq Ahmad, Punjab University	Journal of the American oriental society by the Hon. C. W Badly	Bodleian catalogue	Urdu Nazma, Roman Orthography of Urdu Words by Shan-ul Haq Haqi	Catalogue British Museum (Rieu)
ت /t̯e:/	/t̯/	/t/	/t/	/t/	/t/	/t/	/t/	/t/	/t/	/t/	/t̶/	/t/
ط /tˤoːeː/	/tˤ/	/t̤/	/t̤/	/t̤/	/t̤/	/t/	/t̤/	/t̤/	/t̤/	/t/	/Tw/	/t̤/
ث /se:/	/s̯/	/s̤/	/s̤/	/s̤/	/s̤/	/th/	/ṡ/	/ṡ/	/s̤/	/th/	/s/	/s̤/
س /siːn/	/s/	/s/	/s/	/s/	/s/	/s̤/	/s/	/s/	/s/	/s/	/s/	/s/
ص /sˤʊɑ·d̯/	/sˤ/	/ṣ/	/ṣ/	/ṣ/	/ṣ/	/s/	/ṣ/	/ṣ/	/s̤/	/s/	/sw/	/ṣ/
ذ /zɑ·l/	/z̯/	/z̤/	/z̤/	/z̤/	/z̤/	/dh/	/ż/	/ż/	/z̤/	/dh/	/z/	/z̤/
ز /ze:/	/z/	/z./	/z/	/z/	/z/	/z/	/z/	/z/	/z/	/z/	/z/	/z/
ض /ðˤɑ·d̯/	/ðˤ/	/ẓ/	/ẓ/	/ẓ/	/ẓ/	/d/	/z̤/	/ẓ/	/ẓ/	/d/	/x//dz/	/ẓ/
ظ /zˤoːeː/	/zˤ/	/z./	/z̤/	/z̤/	/z̤/	/z/	/z̤/	/z̤/	/z̤/	/z/	/zw/	/ż/

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Urdu Letters	International Phonetic Letters (IPA)	Steingass Dictionary	John T. Platts, M.A Dictionary	John Shakespeare Dictionary	Duncan Forbes, Urdu And English Dictionary	Islamabad University	Punjab University, Karachi University	Mushtaq Ahmad, Punjab University	Journal of the American oriental society by the Hon. C. W Badly	Bodleian catalogue	Urdu Nazma, Roman Orthography of Urdu Words by Shan-ul Haq Haqi	Catalogue British Museum (Rieu)
ح /ħeː/	/ħ/	/ḥ/	/ḥ/	/ḥ/	/ḥ/	/ḥ/	/ḥ/	/ḥ/	/ḥ/	/h/	/ḣ/	/ẕ/
ہ /heː/	/h/	/h/	/h/	/h/	/h/	/h/	/h/	/h/	/h/	/h/	/h/	/h/
و /ʋɑ̇ːoː/	/ʊ/	/w/	/v/ /w/	/v/ /w/	/w/ /v/	/w/	/w/	/w/	/v/ /w/	/w/ /v/	/v/	

The sources used for the collection of distinguishable phonemes according to different scholars in historical context are: Ethe, 1905; Grierson, 1923; Haim, 1952; Sharify, 1958; Gibb, 1960; Rieu, 1966; Haqi, 1977; Lohdi, 1986; Forbes, 1986; Shakespeare's Dictionary, 1996; The Sounds of the World's Languages, 1996; Handbook of the IPA, 1999; Platts, 2003; Steingass, 2005.

The above chart lists different historically proposed symbols for distinguishable sounds proposed by a different scholar.

In summary, the literature review emphasises how crucial precise phonetic transcription is for ensuring that a language's sound system is well represented in linguistic resources like dictionaries. Although the International Phonetic Alphabet (IPA) is a standardised method for recording phonetic information, its use in Urdu, especially in materials such as the Oxford Urdu-English Dictionary, needs to be carefully considered. Consonantal representation has not been thoroughly examined in previous research, which has mostly concentrated on broad elements of phonetic transcription in Urdu or other languages. By analysing the precision and consistency of IPA transcriptions for consonants in the Oxford Urdu-English Dictionary and detecting underlying phonetic patterns, this study seeks to close this gap. A deeper comprehension of Urdu phonology and its documentation will result from this examination.

3- RESEARCH METHODOLOGY
2.1. Procedure of the Research

This study explored Urdu phonetic description and sounds of Oxford Urdu English Dictionary (2013) through IPA (International Phonetic Alphabet) and different books by adopting the qualitative approach. Following the same approach, Urdu letters, grammatical descriptions and sounds had also been transcribed using the 'Lucida Sans Unicode' (the use of other fonts and size according to the original text format was rare) to provide the non-native learners of Urdu with accurate pronunciation. However, for Urdu and English words, the 'Times New Roman' font had been used. The abbreviation 'OUED' was used to represent Oxford Urdu English Dictionary (2013). Shaded areas in the tables indicate judged impossible or empty places of descriptions.

2.2. Tool of the Research

The tools of research were IPA (International Phonetic Alphabet) chart; Handbook of the International Phonetic Association; The Sounds of the World's Languages; and Urdu phonetics books and dictionaries for languages background; and IPA (International Phonetic Alphabet) codes identifying the sounds

2.3. Sample of the Research

All Urdu dictionaries were in population and this research chose Oxford Urdu English Dictionary (2013) as a sample.

2.4. Research Variable

IPA (International Phonetic Alphabet) key for pronunciation was the variable of the research.

2.5. Analysis of Research

Qualitative research according to given tools on the historical and etymological existence of Urdu words description was identical, for example, confusing consonants and vowels.

2.6. Limitation of the Study

It focuses only on consonant letters, excluding vowels and their sounds. Additionally, the research did not cover the entire vocabulary listed in the Oxford Urdu English Dictionary (2013) and excludes grammar, translation, and semantics. Furthermore, the study did not investigate the total number of letters in Urdu or address issues related to Urdu orthography, providing a narrow scope of analysis.

2.7. Research Gap

The current research only focuses on consonants from a phonemic perspective, leaving a significant gap in the exploration of vowel phonemes and their uses with consonants. This gap limits a complete understanding of the sound patterns.

4- DATA COLLECTION AND DATA ANALYSIS

Data is collected and analyzed according to the research procedure as discussed in Chapter 3.

3.1. Same Phoneme with Different Urdu Distinguishable Sounds

The same phoneme is mistakenly used for distinguishable sounds. For example,

- The same phoneme /t̪/ is mistakenly used for the sounds of both ت /t̪eː/ and ط /tˤoːeː/.
- The same phoneme /s/ is mistakenly used for the sounds of ث /s̱eː/ ، س /siːn/ and ص/sˤʋɑˑd̪/.
- The same phoneme /z/ is mistakenly used for the sounds of ذ /ẕɑˑl/ ، ز /zeː/ ، ض /ðˤɑˑd̪/ and ظ /zˤoːeː/.
- The same phoneme /h/ is mistakenly used for the sounds of both ح /ħeː/ and ہ /heː/.

The more examples are given below with initial, middle and final position.

4.1a. Same Phoneme /t̪/ for ت /t̪eː/ and ط /tˤoːeː/

The same phoneme /t̪/is mistakenly used for the sounds of both ت /t̪eː/ and ط /tˤoːeː/ in Oxford Urdu English Dictionary (2013). The following chart shows some instances of this practice in the dictionary.

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Table 4.1a. Indistinguishable phoneme /t̪/ for the sounds of both ت /t̪e:/ and ط /tˤo:e:/ according to Oxford Urdu English Dictionary (2013)

Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
ت /t̪e:/	/t̪e:/	تار /t̪ɑ:r/	جُتا /t̪ʊt̪ɑ:/	بات /bɑ:t̪/	328,414,139
		تاج /t̪ɑ:dʒ/	پتا /pət̪ɑ:/	مراعات /mʊrɑ:ʔɑ:t̪/	328,254,993
		تاپ /t̪ɑ:p/	آتا /ɑ:t̪ɑ:/	برات /bərɑ:t̪/	327,117,173
		تاب /t̪ɑ:b/	اتا /ət̪ɑ:/	رات /rɑ:t̪/	327,7,635
ط /tˤo:e:/	/t̪o:e:/	طُور /t̪u:r/	عِطر /ɪt̪r/	احتیاط /ehti̪jɑ:t̪/	775,787,17
		طبق /t̪əbəq/	خطر /xət̪ər/	حنُوط /hənu:t̪/	771,548,532
		طاس /t̪ɑ:s/	عطا /ət̪ɑ:/	غلط /xələt̪/	770,787,799
		طاب /t̪ɑ:b/	خطا /xət̪ɑ:/	خط /xət̪/	770,548,547

Source: (Oxford Urdu English Dictionary, 2013)

The chart shows examples how the Oxford Urdu English Dictionary (2013) uses the same /t̪/ phoneme in different variations for the two different sounds of ت /t̪e:/ and ط /tˤo:e:/ in Urdu.

4.1b.   Same Phoneme /s/ for ث /s̪e:/ ، س /si:n/ and ص /sˤʊɑ·d̪/

The same phoneme /s/ is mistakenly used for the sounds of ث /s̪e:/، س /si:n/ and ص /sˤʊɑ·d̪/ in Oxford Urdu English Dictionary (2013). The following chart shows some instances of this practice in the dictionary.

Table 4.1b. Indistinguishable phoneme /s/ for the sounds of ث /s̪e:/، س /si:n/ and ص /sˤʊɑ·d̪/ according to Oxford Urdu English Dictionary (2013)

Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
ث /s̪e:/	/se:/	ثَنی /səni:/	نثر /nəsr/	مثِل /mɪsl/	403,1018,976
		ثمر /səmər/	اثر /əsər/	اِرث /ɪrs/	403,11, 27
		ثابِت /sɑ:bɪt̪/	اِثم /ɪsm/	مُثَلَث /mʊsələs/	402,11,977
		ثار /sɑ:r/	ثالِثانہ /sɑ:lɪsɑ:nɑ:/	ثالوث /sɑ:lu:s/	402,402,420
س /si:n/	/si:n/	ست /sət̪/	رُست /rʊst̪/	پاس /pɑ:s/	688,642,245
		سب /səb/	رسا /rəsɑ:/	آس /ɑ:s/	685,645,123
		سابِق /sɑ:bɪq/	حسب /həsəb/	مجلس /məbʒlɪs/	677,522,979
		سات /sɑ:t̪/	حسن /hʊsn/	لمس /ləms/	677,523,953

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Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
ص /sˤʊɑ·ḍ/	/sʊɑ:ḍ/	صرف /sərf/	اصم /əsəm/	نُقص /nʊqs/	761,50,1094
		صد /səḍ/	اصل /əsəl/	خالِص /xɑ:lɪs/	760,49,537
		صبر /səbr/	اصف /əsəf/	مخلِص /mʊxlɪs/	759,49,988

Source: (Oxford Urdu English Dictionary, 2013)

The chart shows examples how the Oxford Urdu English Dictionary (2013) uses the same /s/ phoneme for the three different sounds of ث /se:/ ، س /si:n/ and ص /sˤʊɑ·ḍ/ in Urdu.

4.1c.   Same Phoneme /z/ for ذ /zɑ·l/، ز /ze:/، ض /ðˤɑ·ḍ/ and ظ /zˤo:e:/

The same phoneme /z/ is mistakenly used for the sounds of ذ /zɑ·l/، ز /ze:/ ، ض /ðˤɑ·ḍ/and ظ /zˤo:e:/ in Oxford Urdu English Dictionary (2013). The following chart shows some instances of this practice in the dictionary.

Table 4.1c. Indistinguishable phoneme /z/ for the sounds of ذ /zɑ·l/، ز /ze:/، ض /ðˤɑ·ḍ/and ظ /zˤo:e:/ according to Oxford Urdu English Dictionary (2013)

Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
ذ /zɑ·l/	/zɑ:l/	ذكر /zəkər/	آذر /ɑ:zər/	نُفُوذ /nʊfu:z/	632,121,1092
		ذَوق /zɔ:q/	اذل /əzəl/	معاذ /məʔɑ:z/	633,25,1019
		ذرا /zərɑ:/	أذن /ʊzn/	اخّاذ /əxxɑ:z/	631,25,19
		ذات /zɑ:ṯ/	بذل /bəz/	نُفُوذ /nʊfu:z/	631,171,1092
ز /ze:/	/ze:/	زر /zər/	وزن /vəzn/	برز /bərz/	669,1120,176
		زُبان /zʊbɑ:n/	بزل /bəzəl/	فراز /fərɑ:z/	667,182,805
		زار /zɑ:r/	بزم /bəzl/	راز /rɑ:z/	666,182,636
		زاج /zɑ:dʒ/	ازل /əzl /	از /əz/	666,34,33
ض /ðˤɑ·ḍ/	/zɑ:ḍ/	ضم /zəm/	وضُو /vəzu:/	إنقراض /ɪnqerɑ:z/	768,1122,96
		ضرب /zərb/	فِضا /fɪzɑ:/	محض /mæzhz/	767,810,984
		ضِد /zɪḍ/	فضل /fəzl/	غض /ɣəz/	767,810,798
ض /ðˤɑ·ḍ/	/zɑ:ḍ/	ضابِطہ /zɑ:beṯɑ:/	غضب /ɣərəz/	غرض /ɣərəz/	767,798,797
ظ /zˤo:e:/	/zo:e/	ظہر /zəhr/	بظر /bəzr/	ملحُوظ /mæhfu:z/	778,187,1036

Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
		ظلم /zʊlm/	نظم /nəzm/	الفاظ /əlfzɑːz/	777,1090,74

Source: (Oxford Urdu English Dictionary, 2013)

The chart shows examples how the Oxford Urdu English Dictionary (2013) uses the same /z/ phoneme for the four different sounds of ذ /ẕɑ·l/، ز /ze:/ ، ض /ðˤɑ·ḍ/and ظ /zˤo:e:/ in Urdu.

4.1d. Same Phoneme /h/ for both ح /ħe:/ and ہ /he:/

The same phoneme /h/ is mistakenly used for the sounds of both ح /ħe:/ and ہ /he:/ in Oxford Urdu English Dictionary (2013). The following chart shows some instances of this practice in the dictionary.

Table 4.1d. Indistinguishable phoneme /h/ for the sounds of both ح /ħe:/ and ہ /he:/ according to Oxford Urdu English Dictionary (2013)

Urdu Letter	Phonetic Transcription	Initial	Middle	Final	Page in OUED
ح /ħe:/	/he:/	حد /həḍ/	بحث /hæhs/	صباح /səbɑ:h/	517,164,759
		حبس /həbs/	بحر /bæhr/	جرح /dʒərh/	515,164,417
		حار /hɑ:r/	احد /əhəḍ/	صُلح /sʊlh/	512,17,763
		حاجت /hɑ:dʒət/	احب /əhəb/	فلاح /fəlɑ:h/	512,16,812
Urdu Letter	**Phonetic Transcription**	**Initial**	**Middle**	**Final**	**Page in OUED**
ہ /he:/	/he:/	ہرن / hɪrən /	سُہا /sʊhɑ:/	فِقہ /fɪqh/	1136,725,811
		ہر /hər/	رہا /rɪhɑ:/	رہ /rəh/	1135,661,661
		ہانک /hɑ:ŋg/	جہا /dʒəhɑ:/	راہ /rɑ:h/	1131,439,639
		باتہ /hɑ:ṯ/	تُہی /ṯʊhi:/	سیاہ /sɪjɑ:h/	1127,378,728

Source: (Oxford Urdu English Dictionary, 2013)

The chart shows examples of how the Oxford Urdu English Dictionary (2013) uses the same /h/ phoneme for the two different sounds of ح /ħe:/ and ہ /he:/ in Urdu.

4.2. IPA Symbols: Phonetic Consonant Symbols with Names and Codes

The IPA (International Phonetic Alphabet) symbols chart, given below, lists and describes the phonetic consonant symbol codes. Distinguishable sounds, types of ن /nuːn/ and the sound of ر /ɾe:/ have also been explained.

Table 4.2. Phonetic symbols with names and codes for Urdu distinguishable sounds, types of ن /nuːn/ and the sound of ر /ɾeː/ according to IPA (International Phonetic Alphabet)

Urdu Letter	Phonetic Symbol	Phonetic Name	Phonetic Description	IPA Consonant Code	IPA Diacritic Code
ت /teː/	/t̪/	Lower-case T	Voiceless apical dental plosive	103	409
ط/tˤoːeː/	/tˤ/	Lower-case T	Voiceless pharyngealized apical alveolar stop	103	423
ث /s̪eː/	/s̪/	Lower-case S	Voiceless apical dental fricative	132	409
س /siːn/	/s/	Lower-case S	Voiceless alveolar fricative	132	
ص/sˤʊɑ·d̪/	/sˤ/	Lower-case S	Voiceless pharyngealized alveolar sibilant	132	423
ذ /z̪ɑ·l/	/z̪/	Lower-case Z	Voiced apical dental fricative	133	409
ز /zeː/	/z/	Lower-case Z	Voiced alveolar fricative	133	
ض /ðˤɑ·d̪/	/ðˤ/	Eth	Voiced pharyngealized alveolar fricative	131	423
ظ /zˤoːeː/	/zˤ/	Lower-case Z	Voiced pharyngealized apical sibilant fricative	133	423
ح /ħeː/	/ħ/	Barred H	Voiceless pharyngeal fricative	144	
ہ /heː/	/h/	Lower-case H	Voiceless glottal fricative	146	
و /ʋɑ·oː/	/ʋ/	Cursive V	Voiced labiodental approximant	150	
ر /ɾeː/	/ɾ/	Fish-hook R	Voiced alveolar tap	122	
ن /nuːn/	/n̪/	Lower-case N	Voiced dental nasal	116	408
	/n/	Lower-case N	Voiced alveolar nasal	116	
	/ɳ/	Right-tail N	Voiced retroflex nasal	117	
	/ɲ/	Left-tail N	Voiced palatal nasal	118	
	/ŋ/	Eng	Voiced velar nasal	119	

Source: (Handbook of the IPA, 1999)

The above chart provides a description for the distinguishable sounds, types of ن, sounds of و /ʋɑ·oː/ and ر /ɾeː/.

4.2a.   Phonetic Diacritics and IPA Codes for Urdu

The phonetic diacritic marks in Urdu and the IPA (International Phonetic Alphabet) codes are explained below.

Table 4.2a. Phonetic diacritic marks and IPA codes in Urdu according to IPA (International Phonetic Alphabet)

Diacritic Symbol	Symbol Name	Phonetic Description	IPA Number	Placement Status
◌̪	Subscript bridge	Dental	408	n̪
◌̺	Inverted script bridge	Apical	409	t̺, s̺, z̺
◌ˤ	Superscript reversed glottal stop	Pharyngealized	423	tˤ, sˤ, zˤ ðˤ
◌ʰ	Superscript H	Aspirated	404	pʰ, t̪ʰ, ʈʰ tʃʰ, kʰ
◌ʱ	Superscript H	Breathy-voiced aspirated	689 (Unicode decimal number)	bʱ, dʒʱ, ɖʱ d̪ʱ, rʱ, ɽʱ gʱ, lʱ, mʱ nʱ, ʋʱ, jʱ

Source: (Handbook of the IPA, 1999)
Note:

Oxford English Urdu Dictionary has mentioned the only symbol /◌ʰ/ as a phonetic diacritical mark to show the aspirated sound of both voiceless and voiced consonants but actually breathy voice aspirated symbol /◌ʱ/ is used to show the purely aspirated voiced consonant instead of /◌ʰ/ aspirated sound. (Handbook of the IPA, 1999, p.51). IPA number of breathy-voiced aspirated /◌ʱ/ has not been mentioned in Handbook of the IPA, 1999 but for a description of this sound /◌ʱ/, Unicode decimal number 689 (in the absence of IPA Unicode number) has been borrowed from the UCL website (phon.ucl.ac.uk, weblink).

4.3. Voiced Labiodental Approximant /ʋ/

The voiced labiodental approximant sound is a type of consonantal sound used in the Urdu language to represent the sound of و /ʋɑˑoː/ by using the phonetic symbol /ʋ/ (Handbook of the IPA, 1990, p.102; اُردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 2007).

Here are some features of the voiced labiodental approximant /ʋ/ sound:

● Its manner of articulation is approximant, which means the air escapes freely through the mouth without turbulence (Wells,2008, p.46).

There are some specific variants of the voiced labiodental approximant /ʋ/ sound:

● Its place of articulation is labiodental, which means it is to be articulated by the bottom lip against the upper teeth of the mouth (Wells, 2008, p.46; Handbook of the IPA, 1999, p.7).

● Its phonation is voiced, which means /ʋ/ is a speech sound that is produced with the vibration of vocal folds by opening and closing its sound quickly several times (Wells, 2008, p.881).

● This type of sound is consonant, which means it is to be articulated by stopping the air from flowing easily through the mouth by using speech organs (McIntosh, 2013, p.321).

● The air stream mechanism is pulmonic, which means it is to be articulated by pushing the air flow only through the lungs (Handbook of the IPA, 1999, p.9).

Note:

و /ʋɑ·oː/ sometimes sounds like 'v' and other times like 'w'. This voiced approximant labiodental /ʋ/ can be used for both the sound variations of voiced fricative labiodental /v/ and voiced labial-velar approximant /w/ (Handbook of the IPA, 1999, p.102).

4.4.   Voiced Alveolar Tap /ɾ/

The voiced labiodental approximant sound is a type of consonantal sound used in the Urdu language to represent the sound of ر /ɾeː/ by using the phonetic symbol /ɾ/ (Handbook of the IPA, 1990, p.102; اردو لغت تاریخی اصول پر trans: Urdu Dictionary on Historical Principle, 1989).

Here are some features of the voiced alveolar tab /ɾ/ sound:
● Its manner of articulation is tap, which means it is to be articulated by striking the tongue quickly or lightly against the alveolar ridge of the mouth (Hornby, 2010, p.1582).
There are some specific variants of the voiced alveolar tab /ɾ/ sound:
● Its place of articulation is alveolar, which means it is to be articulated by the tip or blade of the tongue against the alveolar ridge of the mouth (Wells,2008, p.46; Handbook of the IPA, 1999, p.8).
● Its phonation is voiced, which means /ɾ/ is a speech sound that is produced with the vibration of vocal folds by opening and closing its sound quickly several times (Wells, 2008, p.881).
● This type of sound is consonant, which means it is to be articulated by stopping the air from flowing easily through the mouth by using speech organs (McIntosh, 2013, p.321).
● The air stream mechanism is pulmonic, which means it is to be articulated by pushing the air flow only through the lungs (Handbook of the IPA, 1999, p.9).

In Urdu, voiced alveolar tap /ɾ/ can vary with voiced alveolar trill /r/. Oxford Urdu English Dictionary (2013) uses 'voiced alveolar trill /r/' to represent the sound of ر /ɾeː/ but research suggests 'voiced alveolar tap /ɾ/' for this purpose. On the other hand, the voiced alveolar trill /r/ occurs only in case of geminate /rr/ (Handbook of the IPA, 1990, p.102).

4.5.   Description of Urdu Nasal Sounds

Nasal sounds are frequently found in the Urdu language. They are produced by the specific positioning of the speech organs in the mouth and nasal cavity. Different nasal sounds have been explained with their specific features, for example voiced dental nasal (دنتی نون) /n̪/, voiced alveolar nasal (بالا دنتی) /n/, voiced retroflex nasal (معکوسی نون) /ɳ/, voiced palatal nasal (تالوئی نون) /ɲ/, voiced velar nasal (غشائی نون) /ŋ/.

4.6.   Newly Devised IPA Urdu Consonant Phonemes Chart

Given below is a newly devised International Phonetic Alphabet chart of Urdu language as recommended by the International Phonetic Association. A newly devised and recommended chart of the phonetic system of Urdu along with additional symbols are given below.

Table 4.3a. Newly devised IPA Urdu consonantal phonemic chart

	Bilabial		Labiodental		Dental		Alveolar		Post alveolar		Retroflex		Palatal	Velar		Uvular	Pharyngeal	Glottal
Phonation	VL	V	VL	V	VL	V	VL	V	VL	V	VL	V	V	VL	V	VL	VL	VL
Plosive	پ P / پھ pʰ	ب b / بھ bɦ			ت ت t / تھ tʰ / ط tˤ	د د d̪ / د ھ d̪ɦ					ٹ ʈ / ٹھ ʈʰ	ڈ ɖ / ڈھ ɖɦ		ک k / کھ kʰ	گ G / گھ gɦ	ق Q		ع ʔ
Affricate									چ tʃ / چھ tʃʰ	ج dʒ / ج ھ dʒɦ								
Nasal	م m / م m̥ ɦ				ن n̪ / نھ n̪ɦ		ن n / نھ nɦ				ن ɳ		ن ɲ	ن ŋ				
Tap							ر ɾ / رھ ɾɦ				ڑ ɽ / ڑھ ʈɦ							
Fricative			ف f		ث s / س s / ص sˤ / ظ	ذ z / ز Z / ض ðˤ / ژ		ش ʃ	ژ ʒ								ح ħ	ہ h

	Bilabial		Labiodental		Dental		Alveolar		Post alveolar		Retroflex		Palatal	Velar		Uvular	Pharyngeal	Glottal
Phonation	VL	V	VL	V	VL	V	VL	V	VL	V	VL	V	V	VL	V	VL	VL	VL
								z ʕ										
Approximant				و ʊ / و ھ ʊ ɦ									ی j / یہ jɦ					
Lateral Approximant								ل l / ل ھ l ɦ										

Source: (Handbook of the IPA, 1999; The Sounds of the World's Languages, 1996)

Note:

Diacritical marks in the transcriptions of pharyngealized, apical dental, dental and aspirated consonants are represented as /○ˤ/, /○̺/, /○̪/, /○ʰ/ and /○ɦ/, respectively, which are applied in the pharyngealized phonemes as /sˤ/, /ðˤ/, /zˤ/, /tˤ/, apical dental as /t̺/, /s̺/, /z̺/, dental as /d̪/, /n̪/, aspirated as /pʰ/, /t̪ʰ/, /ʈʰ/, /tʃʰ/, /kʰ/ and breathy aspirated as/bɦ/, /dʒɦ/, /d̪ɦ/, /ɖɦ/, /rɦ/, /ɽɦ/, /gɦ/, /lɦ/, /mɦ/, /nɦ/, /ʋɦ/, /jɦ/.

The chart shows 'VL' stands for voiceless and 'V' stands for voiced sounds in Urdu Language. Shaded areas indicate places and manners of Urdu articulations judged impossible. The series of rows in a cell has been arranged to show the places of articulations and columns to show the manners of articulations.

4.6a. Newly Devised IPA Urdu Consonantal Phonetic Codes

Different phonetic symbols have their own phonetic codes. The following chart lists old and newly suggested phonetic symbols for all the distinguishable sounds in Urdu. Codes have been given for different symbols as described in Handbook of the International Phonetic Alphabet, 1999.

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Table 4.3b. Newly devised IPA Urdu consonantal phonetic codes

	Bilabial		Labiodental		Dental		Alveolar		Post alveolar		Retroflex		Palatal	Velar		Uvular	pharyngeal	Glottal
Phonation	VL	V	VL	V	VL	V	VL	V	VL	V	VL	V	V	VL	V	VL	VL	VL
Plosive	پ 101	ب 102			ت 103	د 104					ٹ 105	ڈ 106		ک 109	گ 110	ق 111		ع 113
					تھ 103+404	دھ 104+689					ٹھ 105+404	ڈھ 106+689		کھ 109+404	گھ 110+689			
	پھ 101+404	بھ 102+689			ط 103													
Affricate									چ 213	ج 214								
									چھ 213+404	جھ 214+689								
Nasal		م 114				ن 116	ن 116					ن 117	ن 118		ن 119			
		مھ 114+				نھ 116+689	نھ 116+689											

	Bilabial		Labiodental		Dental		Alveolar		Post alveolar		Retroflex		Palatal	Velar		Uvular	pharyngeal	Glottal
Phonation	VL	V	VL	V	VL	V	VL	V	VL	V	VL	V	V	VL	V	VL	VL	VL
		689																
Tap								ر 124 رھ 124 + 689				ڑ 125 ڑھ 125 + 689						
Fricative			ف 128				ث 132 س 132 ص 132	ذ 133 ز 133 ض 133 ظ 133	ش 134	ژ 135							ح 144	ه 146
Approximant				و 150 وھ 150 + 689									ی 153 یھ 153 + 689					
							ل											

	Bilabial		Labiodental		Dental		Alveolar		Postalveolar		Retroflex		Palatal	Velar		Uvular	pharyngeal	Glottal
Phonation	VL	V	VL	V	VL	V	VL	V	VL	V	VL	V	V	VL	V	VL	VL	VL
Lateral Approximant							155 لھ 155 + 689											

Source: (Handbook of the IPA, 1999; The Sounds of the World's Languages, 1996)

The above chart lists different phonetic symbols along with their phonetic codes according to the recommendations of International Phonetic Alphabet.

NOTE:

The chart shows 'VL' stands for voiceless and 'V' stands for voiced sounds in Urdu Language. Shaded areas indicate places and manners of Urdu articulations judged impossible. The series of rows in a cell has been arranged to show the places of articulations and columns to show the manners of articulations. The plus sign (+) shows the addition of voiced or voiceless aspiration with the other plain voiced or voiceless sound.

4.8b. Newly Devised IPA Urdu Diacritic Phonemic Codes

Different phonetic symbols have their own phonetic codes. The following chart lists old and newly suggested phonetic diacritic codes for all the distinguishable sounds in Urdu. Codes have been given for different diacritics as described in Handbook of the International Phonetic Alphabet, 1999.

The phonsetic diacritic marks with Urdu letters and the IPA (International Phonetic Alphabet) codes are explained below.

Table 4.3c. Newly devised IPA Urdu diacritic phonemic codes according to IPA (International Phonetic Alphabet)

Diacritic Symbol	Symbol Name	Phonetic Description	IPA Number	Placement Status
̪	Subscript Bridge	Dental	408	ن /n̪/
̺	Inverted Script Bridge	Apical	409	ت /t̺/ ث /s̺/ ذ /z̺/
ˤ	Superscript Reversed Glottal Stop	Pharyngealized	423	ص /sˤ/ ض /ðˤ/ ط /tˤ/ ظ /zˤ/
ʰ	Superscript H	Aspirated	404	پھ /pʰ/ تھ /tʰ/

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				Placement Status
				ٹھ /ʈʰ/
				چھ /tʃʰ/
				کھ /kʰ/

Diacritic Symbol	Symbol Name	Phonetic Description	IPA Number	Placement Status
◌ʰ	Superscript H	Breathy Voiced Aspirated	689 (Unicode Decimal Number)	بھ /bʰ/ جھ /dʒʰ/ دھ /d̪ʰ/ ڈھ /ɖʰ/ رھ /ɾʰ/ ڑھ /ɽʰ/ گھ /gʰ/ لھ /lʰ/ مھ /mʰ/ نھ /nʰ/ وھ /ʊʰ/ یھ /jʰ/

Source: (Handbook of the IPA, 1999)

NOTE:

Oxford English Urdu Dictionary has mentioned the only symbol /◌ʰ/ as phonetic diacritical mark to show the aspirated sound of both voiceless and voiced consonants but actually breathy voice aspirated symbol /◌ʰ / is used to show the purely aspirated voiced consonant instead of /◌ʰ/ aspirated sound (Handbook of the IPA, 1999, p.51). IPA number of breathy-voiced aspirated /◌ʰ/ has not been mentioned in Handbook of the IPA, 1999 but for a description of this sound /◌ʰ/, Unicode decimal number 689 (in the absence of IPA Unicode number) has been borrowed from the UCL website (phon.ucl.ac.uk, weblink).

5-CONCLUSION

The results of the research have been calculated based on findings. The phonemics analysis of the Oxford Urdu English Dictionary (2013) suggests that the phonetic symbols used there do not correspond to and precisely describe the sounds of different Urdu letters as pronounced in real life according to places and manners of Urdu articulation.

At many places, a single symbol is given to describe multiple distinguishable sounds. For example, the sound groups like ت /t̪eː/ ، ط /t̪ˤoːeː/، ث /s̪eː/ ، س /siːn/ ، ص /sˤʊɑ˖d̪/، ذ /z̪ɑˑl/، ز /zeː/ ، ض /ðˤɑˑd̪/ ، ظ /zˤoːeː/ and ح /ħeː/ ، ہ /heː/ ، ه /heː/ have been described through the single phonetic symbol, i.e. /t̪/, /s/, /z/ and /h/, respectively. But Urdu dictionaries mention different places of articulation for each of these seemingly similar sounds and they are distinguishable from one another. Historically, many schemes had been suggested to represent the Urdu sounds through phonetic symbols but they were not appropriate to fulfil the requirements of Urdu sounds.

Secondly, the Oxford Urdu English Dictionary (2013) uses 'voiced alveolar trill' /r/ to represent the sound of ر /ɾeː/ but research suggests 'voiced alveolar tap' /ɾ/ for this purpose. On the other hand, the voiced alveolar trill /r/ occurs only in case of geminate /rr/.

Similarly, the Oxford Urdu English Dictionary (2013) is unable to deal with the aspirated sounds. For an instance, it uses the symbol /◌ʰ/ for an aspirated sound without making a distinction between

the voiced or voiceless variants of aspirated sounds. Research suggests the /◌ʰ/ symbol should be used only for voiceless aspirated sounds and another symbol /◌ʱ/ should be used for voiced (or breathy voiced as suggested in the present study) aspirated sounds.

The present study introduces and elaborates different types of nasalization for the sound of ن /nuːn/, which the Oxford Urdu English Dictionary (2013) is unable to explain. The Dictionary mentions /n/ and /ŋ/ as voiced alveolar nasal and voiced velar nasal sounds, respectively, for ن /nuːn/. On the other hand, the present study introduced three more symbols for nasalization of ن /nuːn/ sound. These are /ɳ/, /ɲ/ and /n̪/ which are described as voiced retroflex nasal, voiced palatal nasal and voiced dental alveolar, respectively.

The Oxford Urdu English Dictionary (2013) inappropriately mentions the use of voiced fricative labiodental /v/ for the sound of و /ʋɑ˙oː/ in Urdu. But, in reality, و /ʋɑ˙oː/ sometimes sounds like 'v' and other times like 'w'. The present study, however, suggests the /ʋ/ symbol, described as voiced approximant labiodental. This voiced approximant labiodental /ʋ/ can be used for both the sound variations of voiced fricative labiodental /v/ and voiced labial-velar approximant /w/.

RECOMENDATION

This study focuses only on consonant letters, excluding vowels and their sounds. After conducting extensive research on consonant letters, Research would like to further recommend the following key points that should be considered: The research did not cover the entire vocabulary listed in the Oxford Urdu English Dictionary (2013) and excludes grammar, translation, and semantics. Furthermore, the study did not investigate the total number of letters in Urdu or address issues related to Urdu orthography, providing a narrow scope of analysis and the most important area is vowel regarding the phonemic study of the Oxford Urdu English Dictionary (2013).

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