



The Impact of First Language on the use of English Diphthongs of Pakistani Multilingual Females

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Abstract

This research elaborates on the production of diphthongs in Pakistani multilingual females and how vowels are used by Pakistani multilingual females. The research type is positivistic and objective. Results are collected only from females because there could be pitch variations in between females and males. Both male and female speakers articulated the diphthongs in a singular manner. Both have articulated three central diphthongs, and three closing diphthongs, including two closings, are not realised as diphthongs. Both the vowels are articulated without gliding as monothongs. Pakistani multilinguals insert short vowels instead of long vowels; replacing one vowel with another is a mispronunciation of diphthongs. Sometimes diphthongs are mispronounced in Pakistani multilingualism and sometimes replaced by monothongs, which do not occur in English phonology. The difference between male and female speakers is duration of articulation. In this research, the female speakers articulated the five diphthongs. This research is not only based on auditory perception, which is subjective, but also on spectrogram evidence. The samples collected for this research are audio files of pronounced diphthongs converted to spectrograms. The research has analysed the diphthongs acoustically. This study focuses on Pakistani multilingual females in general. Pakistani English is associated with standard British English. Standard British English is like a mother to the Pakistani language because it laid the foundation for Pakistani English, which gradually changed under different factors. Changes are part of any variety of language. The same is true for multilingual Pakistanis. This research helped teachers focus on spoken English. Because this study was conducted on a small sample size, it can be applied to a much larger population sample. This study has revealed various Pakistani multilinguals understanding the pronunciation of diphthongs.

Keywords: diphthongs, linguistically, Pakistani English, multi-linguals, pronunciation, acoustic analysis, phonetics and phonology

1. Introduction

In this research, the production of diphthongs in Pakistani multilingual females and the conversion of diphthongs to monothongs have been studied. According to Oxford Learners' Dictionaries, a combination of two vowel sounds or vowel letters is known as a diphthong. And a monothong, according to Oxford Learners' Dictionaries, is a speech that consists of only one vowel sound. The transcription of the contrasting vowels (the vowel phonemes) in English is more difficult than the transcription of consonants for two reasons. First, the accents of English differ more in their use of vowels than in their use of consonants. Second, authorities differ in their views of what constitutes an appropriate description of vowels (Ladefoged & Johnson, 2010). Two definitions of diphthongs are given by Peter Ladefoged:

- diphthong: "a movement from one vowel to another in a single syllable" (Ladefoged, 1993, p. 31)
- diphthong: "a vowel in which there is change of quality" (Ladefoged, 1993, p. 293)

The diphthongs are the long vowels, states Sethi and Dhamija (1994) in their book: A Course in Phonetics and Spoken English. It must be stated that "long" vowels are only comparatively longer than the "short" vowels: they are always longer than the "short" vowels in identical environments. Diphthongs are generally classified into two groups, taking into consideration the direction of the movement in their production. Thus, there are "closing diphthongs" – / eɪ, aɪ, ɔɪ, əʊ, aʊ / and "centering diphthongs" / Iə, eə, ʊə / (Sethi & Dhamija, 1994). The closing diphthongs involve gliding movement towards the close region / I, ʊ / the centering diphthong on the other hand, are produced with the movement of the tongue towards / ə / which is a central vowel.

Closing diphthongs end with a glide towards /ɪ/ or /ʊ/. The glide is towards a higher position in the mouth. Closing diphthongs gliding to /ɪ/:



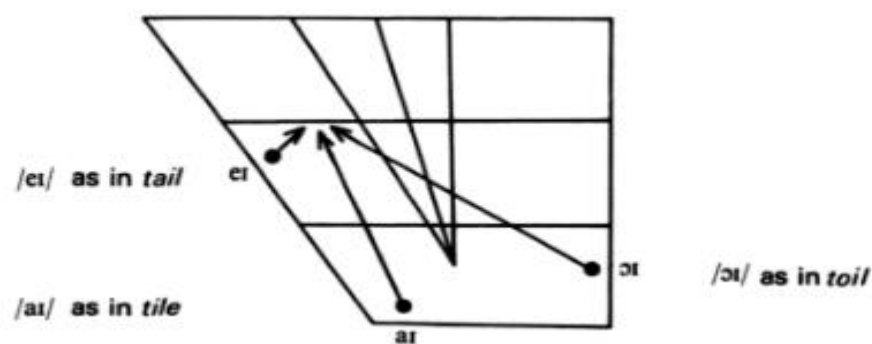


Figure 1. Closing Diphthongs Gliding to /ɪ/

Closing diphthong ending towards /ʊ/:

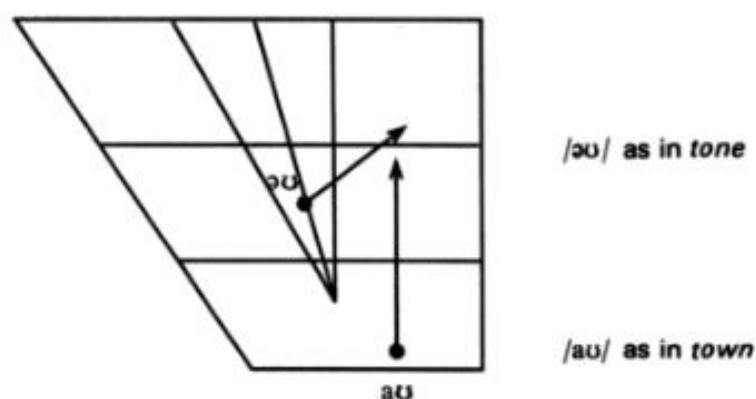


Figure 2. Closing Diphthongs Gliding to /ʊ/

This research has evaluated the diphthong pronunciation of multi-linguals. So, according to the Oxford Learners' Dictionaries, speaking or using several different languages is known as multi-lingualism. Various studies have been conducted on the pronunciation of diphthongs, which has some other areas of diphthong production. For example, a study on the topic "An Analysis of the Vowel Sounds of Pakistani English" by Sheikh (2012) has an overall view of the production of vowels in Pakistani English. Research stating the topic "An Acoustic Investigation into Diphthongs of the Pakistani Variety of English" by Mehmood (2022). He has done research on both genders in Pakistan. A study on "Phonological Shifts in Pakistani English (PakE): A Comparative Study under Standard British English" (Yasir, Bashir, Jahan, Zamir, & Ahsan, 2021) looked into the deviation from British English. Acoustic research on diphthong pronunciation was done by Bilal, Azhar, Anam, and Saeed (2021). Irfan, Shahzadi, Naqvi, and Naseer (2020) conducted research on the topic "A Comparative Acoustic Analysis of Diphthongs Pronunciation by the Students of Fazaia Schools in Karachi, Pakistan." Research on the topic "Assessing ESL students' pronunciation in the Pakistani context" is done by Javed and Ahmad (2014). While this study is being conducted to investigate the pronunciation of diphthongs by Pakistani multilingual females.

1.1 Problem Statement

Generally, Pakistani multilingual females replace diphthongs with monothongs because in their first languages, such as Urdu or Punjabi, there is no concept of diphthongs. There are only perception-based studies or ideas about it. And also, there is no specific study or research on the production of diphthongs. This research has analysed the use of diphthongs acoustically.

1.2 Purpose

The purpose of this research is to elaborate on diphthong production in Pakistani multilingual females and explain how diphthongs are used by multi-lingual Pakistani females.

1.3 Objectives

In Pakistan, there are speakers of more than one language. They also have the impact of L1 on English diphthongs. So, the objective of this research is:

- to explore the use of vowels in Pakistani multilingual females
- to identify instances of replacement of diphthongs by Pakistani multilingual females
- to acoustically analyze the use of diphthongs in Pakistani multilingual females

1.4 Questions

To answer the title's questions, every possible research is conducted. So, this research answers the following questions:

1. What vowels are Pakistani multilingual females using in their daily lives?
2. How far are diphthongs being replaced by monothongs by Pakistani multilingual females?
3. How far can acoustic variation be seen in the use of diphthongs by Pakistani multilingual females?

1.5 Limitations

The results of this research only apply to multilingual Pakistani females. This study applies to all Pakistani multilingual females.

1.6 Delimitations

Since this research is not studying gender-based differences in diphthong production, it is limited to Pakistani multilingual females. The selected area for this research is the Faisalabad region of Pakistan, and results were taken from Riphah International University Faisalabad.

1.7 Significance

Teachers specifically do not focus on spoken language; that's why Pakistani multilingual females replace diphthongs with monothongs. This research helped them design a syllabus for spoken language. And this research also highlights that the use of diphthongs must be started at very young ages.

2. Methodology

The research methodology includes the research framework, research type, and population sampling. Further considerations for the population and sampling include the sampling technique, sample type, sampling criteria, and sample size. The methodology also includes tools for data collection and analysis.

2.1 Research Framework

The purpose of this research is to elaborate on diphthong production in Pakistani multi-lingual females and explain how diphthongs are used by multi-lingual Pakistani females. The selected area for this research is the Faisalabad region of Pakistan. Results were taken only from female students because this research is not about studying gender discrimination. This research has analysed the diphthongs acoustically.

2.2 Research Type

This type of research is positivistic and objective. Results are collected only from females because there could be pitch variations between females and males. It is not based on auditory perception, which is subjective. Rather, it is based on spectrogram evidence.

2.3 Population and Sampling

Population and sampling include the sampling technique, sample type, sampling criteria, and sample size.

2.4 Sample Type

The sample type for this research is audio files of pronounced diphthongs that are converted to spectrograms and collected from Pakistani female students.

2.5 Sampling Technique

The sampling technique for this research is simple random sampling. The age range for sample collection is eighteen to twenty. The samples were taken from Riphah International University in Faisalabad. And the departments from which samples are taken are DPT, HND, MLT, Math, CS, BBA, and Pharm-D.

2.6 Sampling Criteria

Female students at the Riphah International University Faisalabad Campus were chosen as a sample criterion for this study. The basic purpose of this research is to study diphthongs' pronunciation in female Pakistani students. So, results are collected from only females because there could be pitch variations in females and males.

2.7 Sample Size

Seven people have been chosen to pronounce eight words. As a result, fifty-six spectrograms were created. So, the sample size is fifty-six.

2.8 Tool for data collection and Analysis

The tool for data collection for this research is Wavesurfer, version 1.8.5. The wavesurfer demonstrates the glides produced when speaking diphthongs. The studies determine whether the diphthongs are pronounced correctly or have been converted to monothongs.

Total Diphthongs: 8

Word for Each Diphthong: 1

Each word pronounced by: 7(7*8=56)

Total Spectrograms: 56

Words to be pronounced:

- 1) Date /eɪ/
- 2) Diet /aɪ/
- 3) Void /ɔɪ/
- 4) Dear /ɪə/
- 5) Dare /eə/
- 6) Poor /ʊə/
- 7) Show /əʊ/
- 8) Doubt /aʊ/

3. Findings and Discussion

All the vowels are pronounced, and Fo is visible in all the vowels. Fo determines the voicing, since all vowels are voiced according to Ladefoged (2010). So, a thick, dark patch is visible in all the following figures.

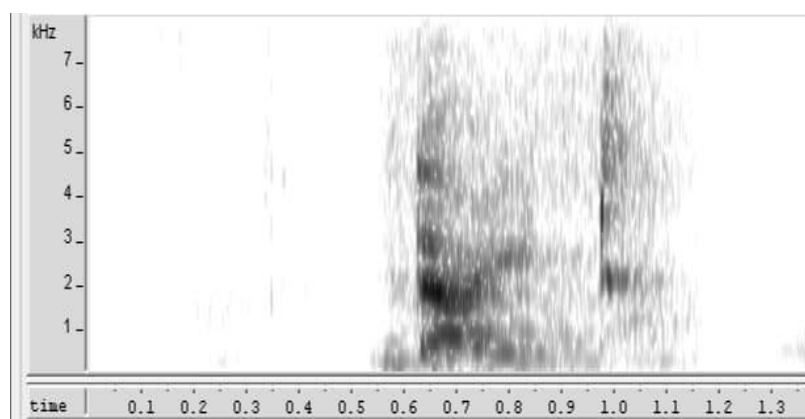


Figure 3. /aɪ/ Word Pronounced: Diet

/aɪ/

The above Figure 1 shows the spectrogram of the diphthong /aɪ/, and the word pronounced is diet. In this figure, glide can be seen from 0.6 seconds to 0.8 seconds. Fo starts at 0.6 seconds, F1 starts at 1.5 KHz, and F2 clearly ends at 3 KHz. The D sound can be heard at 0.62 seconds. The T sound can be seen at 0.89 seconds, and the vowel is visible from 0.7 to 0.8 seconds.

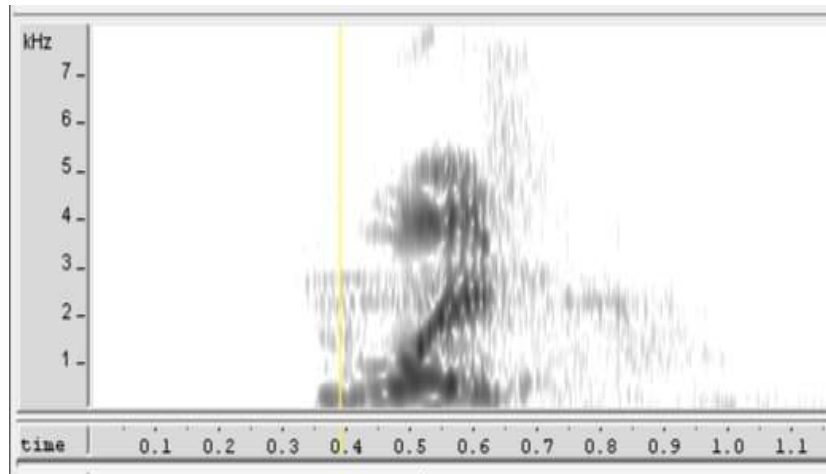


Figure 3. /ɔɪ/ Word Pronounced: Void

/ɔɪ/

The above fig no: 2 shows the spectrogram of diphthong /ɔɪ/ and the word pronounced was Void. In this figure glide can be seen from 0.5 seconds to 0.65 seconds clearly. Fo starts at 0.36 seconds, f1 starts at 1.7 KHZ and f2 at 4 KHZ. V sound is visible at 0.46 seconds, d sound is visible at 0.69 seconds and the vowel is visible in the figure from 0.49 seconds to .67 seconds.

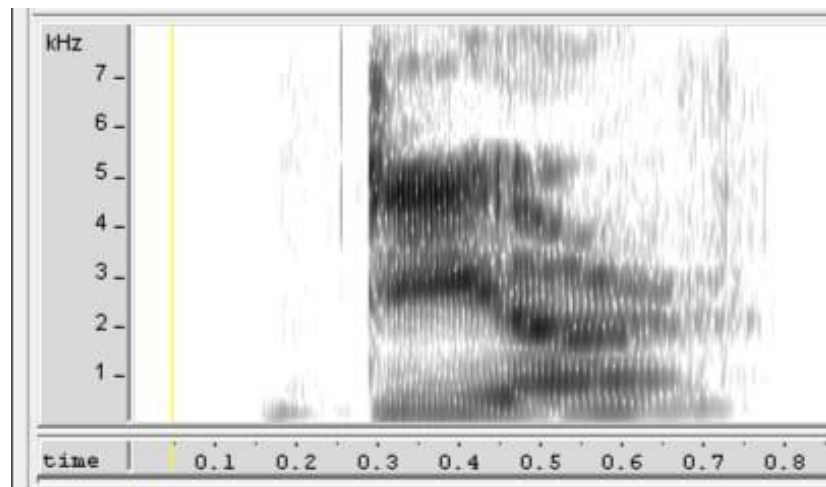


Figure 4. /ɪə/ Word Pronounced: Dear

/ɪə/

The above fig no: 3 shows the spectrogram of diphthong /ɪə/ and the word pronounced is dear. This figure shows that glide is visible from 0.32 seconds to 0.6 seconds. Fo starts at 0.3 seconds, F1 starts at 2.5KHZ and f2 at 5.5 KHZ. The d sound is visible at 0.32 seconds, r sound is visible at 0.56 seconds and the glide shows the vowel which is visible from 0.42 seconds to 0.52 seconds.

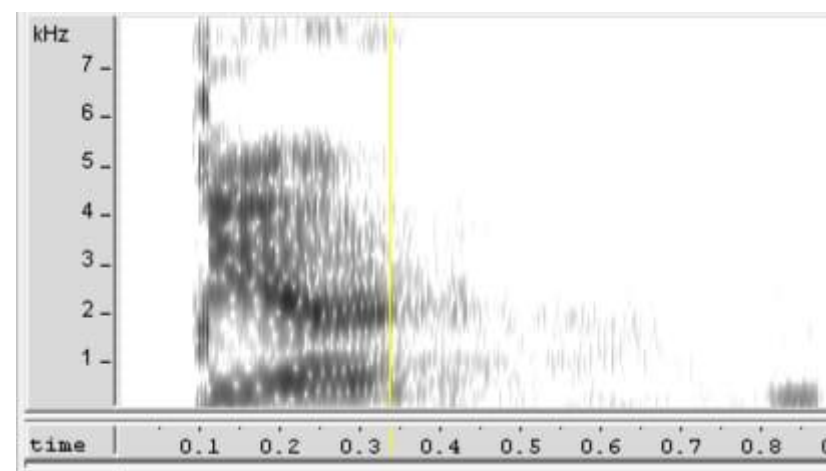


Figure 5. /eə/ Pronounced Word: Dare

/eə/

The above fig no: 4 shows the spectrogram of diphthong /eə/ and the word pronounced is Dare. This figure clearly shows that glide is formed from 0.1 second to 0.3 second. Fo is can be seen at 0.1 seconds f1 starts at 2.5KHZ and f2 at 2 KHZ. The D sound is visible at 0.12 second, r sound is visible at 0.32 seconds and the vowel is visible from 0.19 seconds to 0.25 seconds.

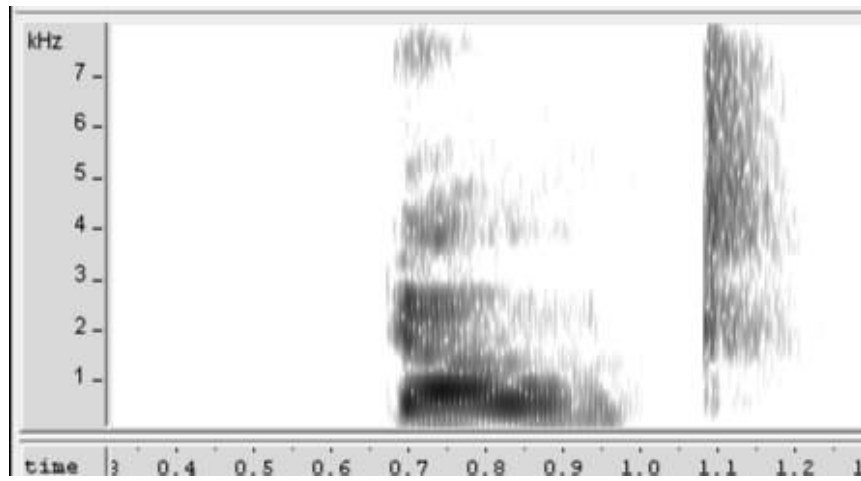


Figure 6. /aʊ/ Word Pronounced: Doubt

/aʊ/

The above fig no: 5 shows the diphthong /aʊ/ and the word pronounced is Doubt. In the above figure glide formed from 0.7 second to 0.9 second can be seen clearly. Fo can be seen at 0.69 second, f1 at 1KHZ and f2 at 3KHZ. The d sound is visible at 0.72 seconds, t sound is visible at 0.91 second and the vowel is visible from 0.77 seconds to 0.85 seconds.

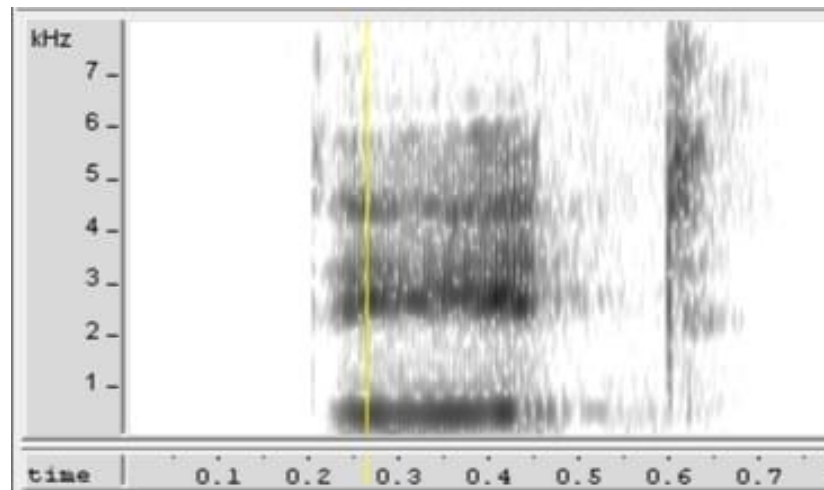


Figure 7. /eɪ/ Word Pronounced: Date

/eɪ/

The above fig no: 6 shows the diphthong /eɪ/ and the word pronounced is Date. Fo is visible at 0.24 seconds. In the above figure, no glide can be seen. When glide is formed, sound variations can be heard, but here no sound variations are present. So, the flat spectrogram shows that no f1 and no f2, which are visible when glide is formed, are visible. So, it shows that a diphthong has been converted to a monothong.

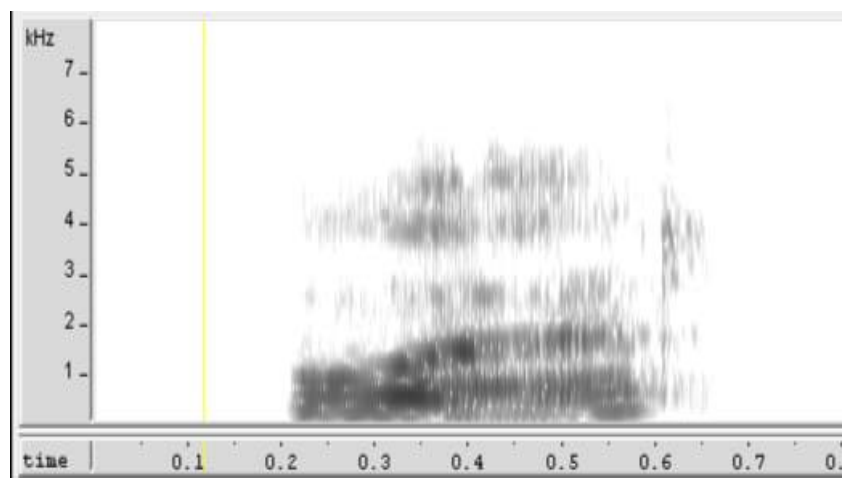


Figure 8 /ʊə/ Word Pronounced: Poor

/ʊə/

The above fig no: 7 shows the diphthong /ʊə/ and the word pronounced was Poor. Fo is visible at 0.22 second. In the figure glide is not formed and the spectrogram is flat. So, it shows that no f1 and no f2 is visible. And diphthong is converted to monothong.

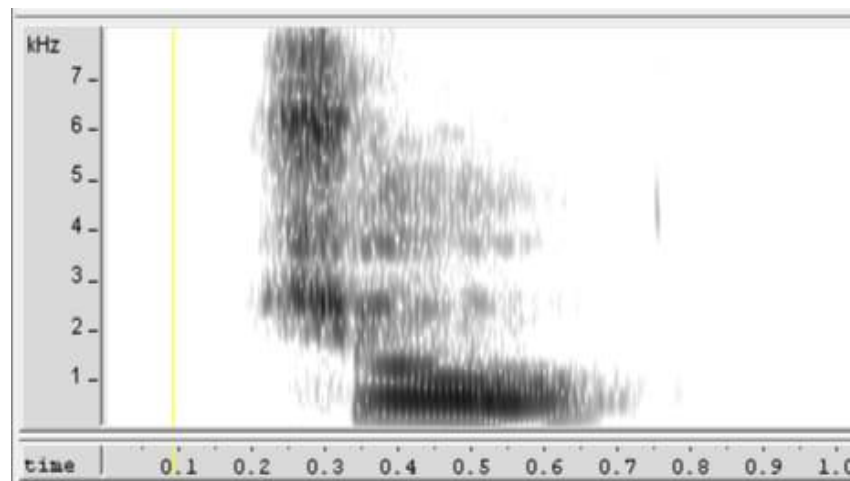


Figure 9. /əʊ/ Word Pronounced: Show

/əʊ/

The above figure 8 shows the diphthong /əʊ/ and the word pronounced is Show. Fo is visible at 0.22 second. The above figure does not show any glide. The spectrogram is flat and diphthong is converted to monothong. So neither f1 nor f2 can be seen.

4. Conclusion

All the diphthongs are pronounced by the Pakistani multilingual females. There are eight diphthongs of English (i.e., /eɪ/, /aɪ/, /ɔɪ/, /ɪə/, /eə/, /ʊə/, /əʊ/, /aʊ/). Out of these eight diphthongs the five diphthongs /aɪ/, /ɔɪ/, /ɪə/, /eə/, /aʊ/ were pronounced correctly and these diphthongs showed glides in the spectrograms. While the remaining three diphthongs /ʊə/, /əʊ/, /eɪ/ are not correctly pronounced. These diphthongs are converted to monothongs and these pronounced diphthongs do not show any glides in the spectrogram.

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Bio-notes:

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