

## A COMPARATIVE ANALYSIS OF ENGLISH AND UZBEK VOWELS BASED ON HORIZONTAL AND VERTICAL TONGUE POSITIONS

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<https://doi.org/10.5281/zenodo.19842620>

**Abstract.** This article contrasts the articulatory positions of English and Uzbek vowels, highlighting horizontal (front/back) and vertical (high/low) tongue placement. Using descriptive phonetic analysis, the research identifies key differences that may pose pronunciation errors among Uzbek learners of English.

**Keywords:** vowels, Uzbek language, English language, position of tongue, vertical, horizontal, pronunciation, articulation, oral cavity.

**Introduction.** Vowel articulation is essentially determined by the position of the tongue in the oral cavity. Two central parameters are involved: vertical movement (high, mid, low) and horizontal movement (front, central, back). In English, there are approximately 20 vowel phonemes, whereas Uzbek has 6 stable vowels. This difference in inventory size contributes to significant articulatory divergence.

In addition, vowel production is also influenced by other phonetic features such as lip rounding, vowel length, and tenseness, which are more systematically developed in English than in Uzbek. As a result, English vowels demonstrate a wider range of qualitative and quantitative distinctions. Uzbek vowels, on the other hand, tend to be more stable and less variable in their articulation.

This study compares tongue positions in both languages to focus on potential areas of phonetic interference, particularly for Uzbek learners of English. Differences in articulatory settings may lead to difficulties in accurately producing and distinguishing English vowel sounds. Therefore, understanding these contrasts is essential for improving pronunciation skills and developing effective teaching strategies in second language acquisition.

### Methods

A qualitative relative method was applied. Vowel articulations were categorized using the International Phonetic Alphabet (IPA) and standard descriptions from phonetic literature. English vowel positions depend on Received Pronunciation (RP) and General American references. Uzbek vowel positions rely on standard literary Uzbek. Only monophthongs were contrasted to ensure direct articulatory equivalence.

### Results

The comparison demonstrates the following:

Tongue position	English example	Uzbek example
High front /i:/; /I/	see, sit	til (tongue)
Mid front /e/; /eI/	bed, day	sen (you)
Low front /æ/	cat	none
Central /ə, / / ə:/	about, bird	none

High back /u:/	food, book	uzun (long)
Mid back /ɔ:/, /əu/	law, go	olma (apple)
Low back /ɑ:/, /a/	father	olma

Uzbek /a/ is generally more back and open than English /æ/.

As a result of analysis, we own following information:

1. English utilizes front low vowel /æ/ (e.g., cat), absent in Uzbek.
2. English utilizes central vowels (/ə/, /ɜ:/), completely absent in Uzbek.
3. In Uzbek language, there is a simpler vertical system (high, mid, low) although English has finer distinctions (e.g., high front tense /i:/ vs. lax /ɪ/).
4. Uzbek vowels are more stable in articulation than English, while English vowels often involve slight gliding even in monophthongs.

### Discussion

The absence of central and low front vowels in Uzbek cause to predictable substitution errors: Uzbek learners often substitute English /æ/ with /a/ or /e/, and /ə/ with /i/ or /u/. Moreover, the lax tense distinction (e.g., /i:/ vs. /ɪ/) is difficult, as Uzbek vowels do not vary in muscular tension. These articulatory differences interpret why Uzbek speakers may sound "flat" or overly precise in English vowel production.

To enhance pronunciation, learners should practice tongue positioning using visual diagrams and minimal pair drills (e.g., beat — bit — bat). Teachers should spotlight the existence of central vowels and the English low front /æ/, which have no equivalents in Uzbek.

### Conclusion

The vowel system of English and Uzbek languages show different phonological strategies. English uses low and front vowel, diphthongs which are not existing in Uzbek. Uzbek uses a minimal, stable set of vowels. Accordingly, Uzbek learners come across several challenges during pronunciation of English words.

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