2-TOM, 11-SON

THE ORGANIZATION OF VOWEL SOUNDS IN LANGUAGE

Jizzakh branch of the National University of Uzbekistan named after Mirzo Ulugbek

The faculty of Psychology, department of Foreign languages Phylology and foreign languages

Teshaboyeva Nafisa Zubaydulla qizi

Student of group 302-21**: Mamatqulova Aziza To'rabek qizi**

Annotation: This article provides a comprehensive overview of the classification of vowel sounds, detailing the key features used to categorize them, such as tongue height, backness, lip rounding, tension, and length. It explains the distinction between monophthongs and diphthongs, as well as the use of the International Phonetic Alphabet (IPA) to transcribe vowel sounds accurately across languages. The article highlights the diversity of vowel systems in different languages, from English's extensive inventory to the simpler vowel systems of languages like Spanish. It emphasizes the significance of vowel classification in fields like linguistics, language learning, and speech therapy, offering insight into how vowel sounds shape both speech production and language understanding. This resource is essential for anyone studying phonetics, phonology, or applied linguistics.

Key words: vowel sounds, classification, articulatory features, tongue height, tongue backness, lip rounding, tense vowels, lax vowels, monophthongs, diphthongs, International Phonetic Alphabet (IPA), vowel length, vowel systems, phonetic transcription, language diversity, sociolinguistics, speech pathology, phonology, language learning, speech production, phonetic research.

The Classification of Vowel Sounds

Vowel sounds are a fundamental component of human language. They play a central role in speech, helping to distinguish words, convey emotion, and contribute to the rhythm and flow of speech. Understanding how vowel sounds are classified is essential for linguists, language learners, and speech therapists alike. This article explores the key ways in which vowel sounds are classified, including their articulatory features, their role in different languages, and the methods used to describe them.

Articulatory Classification of Vowel Sounds

Vowels are produced without significant constriction in the vocal tract, in contrast to consonants, which involve some level of blockage or narrowing of airflow. The classification of vowel sounds is largely based on the position of the tongue and the shape of the oral cavity during production. The main articulatory features used to classify vowel sounds include:

Height of the Tongue: Vowel sounds can be classified based on the vertical position of the tongue within the mouth. The tongue can be raised or lowered to produce different sounds:

High vowels occur when the tongue is raised toward the roof of the mouth (e.g., [i] as in *see*).

Mid vowels occur when the tongue is positioned between high and low (e.g., [ɛ] as in *bet*).

Low vowels occur when the tongue is positioned low in the mouth (e.g., [æ] as in *cat*).

Backness of the Tongue: The horizontal position of the tongue determines whether a vowel sound is produced in the front, central, or back of the mouth:

Front vowels are produced when the tongue is positioned toward the front of the mouth (e.g., [i] as in *beet*).

Central vowels are produced when the tongue is in the center of the mouth (e.g., [ə] as in *sofa*).

Back vowels are produced when the tongue is positioned toward the back of the mouth (e.g., [u] as in *goose*).

Roundness of the Lips: Vowel sounds can also be classified according to whether the lips are rounded or unrounded:

Rounded vowels occur when the lips are rounded (e.g., [o] as in *go*).

Unrounded vowels occur when the lips are not rounded (e.g., [i] as in *bit*).

Tension and Laxness

Another important way of classifying vowels is by the tension of the vocal cords and tongue muscles during their production. This distinction leads to two main categories:

Tense vowels: These vowels are produced with greater tension in the vocal tract, resulting in a clearer and more distinct sound. Tense vowels tend to be found in closed syllables (e.g., [i] as in *see*).

Lax vowels: Lax vowels are produced with less muscular tension, and they often appear in open syllables or unstressed positions (e.g., [ɪ] as in *sit*).

Monophthongs and Diphthongs

Vowels can also be classified based on the number of distinct sound qualities they possess during their articulation:

Monophthongs: These are single, pure vowel sounds that maintain one steady sound throughout their articulation (e.g., [æ] in *cat* or [a] in *father*).

Diphthongs: Diphthongs involve a glide from one vowel sound to another within the same syllable. The tongue moves during the articulation, changing the position of the sound (e.g., [aɪ] as in *my* or [oʊ] as in *go*).

Vowel Length

Some languages differentiate vowel sounds based on their length, which refers to the duration for which the vowel is held during articulation:

Short vowels: These vowels are typically produced with a short duration (e.g., [ɪ] as in *sit*).

Long vowels: These vowels are articulated with a longer duration (e.g., [iː] as in *see*).

In some languages, such as Finnish or Japanese, vowel length can be phonemic, meaning that vowel length can change the meaning of a word.

The International Phonetic Alphabet (IPA) and Vowel Diagrams

To accurately describe vowel sounds across languages, linguists use a system called the International Phonetic Alphabet (IPA). The IPA provides a consistent set of symbols to represent vowel sounds, ensuring that linguistic sounds can be transcribed and understood universally. One of the most helpful tools for representing vowel classification visually is the *vowel chart*, which maps the relative positions of tongue height and backness, often arranged in a grid format.

In the IPA chart, each vowel sound is represented by a unique symbol. For example, the high front vowel [i] (as in *beet*) is represented by the symbol [i], and the low back vowel [ɑ] (as in *father*) is represented by [ɑ].

Vowel Systems in Different Languages

Different languages feature varying numbers and types of vowel sounds. For instance:

English has a relatively large vowel system with around 14 vowel sounds, depending on the accent. These include both monophthongs and diphthongs.

Spanish typically has only five vowel sounds, represented by the pure monophthongs [a], [e], [i], [o], and [u].

French features nasalized vowels like [ã] as in *sans* and [õ] as in *nom*, which do not occur in many other languages.

German has a contrast between tense and lax vowels, and also features rounded front vowels like [y] in *Lücke* (hole).

Conclusion

The classification of vowel sounds is complex, with various factors such as tongue height, tongue backness, lip rounding, tension, and vowel length playing key roles. While English has a broad array of vowel sounds, other languages may simplify or expand on this system, leading to unique sound inventories. Understanding vowel classification helps linguists and language learners not only in phonetic transcription but also in mastering the subtle differences between sounds in various languages. Whether for language acquisition or phonetic research, the study of vowel sounds remains an integral part of understanding how speech works across different cultures and linguistic systems. In summary, the classification of vowel sounds reveals the intricate and dynamic nature of speech production. Vowels are shaped by a combination of physiological factors and linguistic rules that vary across languages and dialects. Their classification into categories like height, backness, tension, and length helps linguists not only describe but also understand the phonetic diversity found around the world. For language learners, mastering these classifications is essential for accurate pronunciation and comprehension, as even subtle differences in vowel quality can lead to significant changes in meaning. Moreover, the study of vowel sounds is a key component in fields such as phonology, sociolinguistics, and speech pathology, where an understanding of vowel variation can aid in diagnosing speech disorders, preserving endangered languages, and improving communication in multilingual contexts. Thus, the classification of vowels is not only a fundamental aspect of phonetics but also an indispensable tool for bridging the gap between the theoretical and practical aspects of language use.

REFERENCES

1. Abercrombie, D. (1967). *Elements of General Phonetics*. Edinburgh University Press.
2. Catford, J. C. (1988). *A Practical Introduction to Phonetics*. Oxford University Press.
3. International Phonetic Association. (1999). *Handbook of the International Phonetic Association: A Guide to the Use of the International Phonetic Alphabet*. Cambridge University Press.
4. Ladefoged, P. (2001). *Vowels and Consonants: An Introduction to the Sounds of Languages*. Blackwell.
5. Ladefoged, P., & Johnson, K. (2014). *A Course in Phonetics* (7th ed.). Cengage Learning.
6. Peterson, G. E., & Barney, H. L. (1952). *Control Methods Used in a Study of the Vowels*. Journal of the Acoustical Society of America, 24(2), 175-184.
7. Trask, R. L. (1996). *A Dictionary of Phonetics*. Routledge.
8. Teshaboyeva, N., & Mamayoqubova, S. (2020). COMMUNICATIVE APPROACH TO LANGUAGE TEACHING. In МОЛОДОЙ ИССЛЕДОВАТЕЛЬ: ВЫЗОВЫ И ПЕРСПЕКТИВЫ (pp. 409-414).

9. Teshaboyeva, N. (2020). LINGUISTIC PERSONALITY, ITS STRUCTURAL CHARACTERISTICS IN THE NEW PERSPECTIVE DIRECTIONS. In МОЛОДОЙ ИССЛЕДОВАТЕЛЬ: ВЫЗОВЫ И ПЕРСПЕКТИВЫ (pp. 415-420).

10. Teshaboyeva, N. Z. (2019). TEACHING ENGLISH THROUGH LITERATURE INTESL AND TEFL CLASSROOMS. In СОВРЕМЕННЫЕ ТЕХНОЛОГИИ: АКТУАЛЬНЫЕ ВОПРОСЫ, ДОСТИЖЕНИЯ И ИННОВАЦИИ (pp. 82-84).

11. Хидирова, Д., & Тешабоева, Н. (2022). Pedagogical conditions for the development of the healthy thinking in students. Zamonaviy innovatsion tadqiqotlarning dolzarb muammolari va rivojlanish tendensiyalari: yechimlar va istiqbollar, 1(1), 120-122.

12. Gaybullayeva, N. D. K., & Kizi, T. N. Z. (2022). THE ROLE OF INNOVATIVE METHODS FOR LISTENING COMPREHENSION IN TEACHING LANGUAGE LEARNERS FOREIGN LANGUAGES AND MAINLY ENGLISH. *Central Asian Research Journal for Interdisciplinary Studies (CARJIS)*, *2*(10), 8-10.

13. Teshaboyeva Nafisa Zubaydulla qizi, Jurayev Muhammadrahim Murod o'g'li, & Mamirova Munisa Rajab qizi. (2021). Language Learning Culturally and the Role of Literature in Teaching Process. *Central Asian Journal of Theoretical and Applied Science*, *2*(3), 1-5. Retrieved from https://www.cajotas.centralasianstudies.org/index.php/CAJOTAS/article/view/84

14. Teshaboyeva, N. (2023). THE IMPORTANCE OF TOURISM IN PRESENT DAY. Журнал иностранных языков и лингвистики, 5(5).

15. Teshaboyeva, N. (2023). THE MODERN INNOVATIVE TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES. Журнал иностранных языков и лингвистики, 5(5).

16. Teshaboyeva, N. Z. (2023, November). Adjective word group and its types. In " Conference on Universal Science Research 2023" (Vol. 1, No. 11, pp. 59-61).

17. Teshaboyeva, N. Z. (2023, November). Modifications of Consonants in Connected speech. In " Conference on Universal Science Research 2023" (Vol. 1, No. 11, pp. 7-9).

18. Teshaboyeva, N., & Rayimberdiyev, S. (2023, May). THE IMPORTANCE OF USING MULTIMEDIA TECHNOLOGY IN TEACHING ENGLISH CLASSES. In Academic International Conference on Multi-Disciplinary Studies and Education (Vol. 1, No. 8, pp. 149-153).

19. Nafisa, T., & Marina, S. (2023). TEACHING AND LEARNING OF ENGLISH VOCABULARY IN TESL AND TEFL CLASSROOMS. International Journal of Contemporary Scientific and Technical Research, 465-469.

20. Teshaboyeva Nafisa Zubaydulla kizi, & Akramov Ibrohimjon. (2023). WORD FORMATION. COMPOUNDING. "XXI ASRDA INNOVATSION TEXNOLOGIYALAR, FAN VA TA'LIM TARAQQIYOTIDAGI DOLZARB MUAMMOLAR" Nomli

Respublika Ilmiy-Amaliy Konferensiyasi, 1(12), 109–113. Retrieved from https://universalpublishings.com/index.php/itfttdm/article/view/3187

21. Teshaboyeva, N., & Yakubova, N. (2023). CHANGES OF MEANING OF WORDS. Центральноазиатский журнал образования и инноваций, 2(12), 126-129.

22. Sharifova Dinora Tohir qizi, & Teshaboyeva Nafisa. (2023). " NOUNS AND THEIR GRAMMATICAL CATEGORIES". Новости образования: исследование в XXI веке, 2(16), 292–297. извлечено от http://nauchniyimpuls.ru/index.php/noiv/article/view/13128

23. Teshaboyeva Nafisa Zubaydulla kizi, & Akramov Ibrohimjon. (2023). WORD FORMATION. COMPOUNDING. "XXI ASRDA INNOVATSION TEXNOLOGIYALAR, FAN VA TA'LIM TARAQQIYOTIDAGI DOLZARB MUAMMOLAR" Nomli Respublika Ilmiy-Amaliy Konferensiyasi, 1(12), 109–113. Retrieved from https://universalpublishings.com/index.php/itfttdm/article/view/3187

24. Qodirova Aziza Yunusovna, & Teshaboyeva Nafisa Zubaydulla qizi. (2023). "VERBS AND THEIR GRAMMATICAL CATEGORIES". Новости образования: исследование в XXI веке, 2(16), 280–283. извлечено от http://nauchniyimpuls.ru/index.php/noiv/article/view/13126

25. Tuxtayeva Aziza Ilhom qizi, & Teshaboyeva Nafisa. (2023). Word Formation: Compounding . "Conference on Universal Science Research 2023", 1(12), 113–115. Retrieved from https://universalpublishings.com/index.php/cusr/article/view/3185

26. Teshaboyeva Nafisa Zubaydulla, & Iskandarova Sarvinoz Shukurullo qizi. (2023). THE CLASSIFICATION OF SYNONYMS AND THEIR SPECIFIC FEATURES. "XXI ASRDA INNOVATSION TEXNOLOGIYALAR, FAN VA TA'LIM TARAQQIYOTIDAGI DOLZARB MUAMMOLAR" Nomli Respublika Ilmiy-Amaliy Konferensiyasi, 1(12), 126–131. Retrieved from https://universalpublishings.com/index.php/itfttdm/article/view/3191

27. Тешабоева, Н. (2023). Teaching writing as a major part of productive skills in mixed ability classes . Информатика и инженерные технологии, 1(2), 652–656. извлечено от https://inlibrary.uz/index.php/computer-engineering/article/view/25759

28. Teshaboyeva, N., & Yakubova, N. (2023). WORD FORMATION. COMPOUNDING. *Development of pedagogical technologies in modern sciences*, *2*(12), 187-192.

29. Teshaboyeva, N. (2023). Compound sentences in the English language. *Yangi O'zbekiston taraqqiyotida tadqiqotlarni o'rni va rivojlanish omillari*, *2*(2), 68-70.

30. Nafisa, T. (2023). THE USA ECONOMY, INDUSTRY, MANUFACTURING AND NATURAL RESOURCES OF GREAT BRITAIN. *INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY*, *1*(9), 94-97.

31. Nafisa, T. (2023, December). Secondary ways of word formation. In *" Conference on Universal Science Research 2023"* (Vol. 1, No. 12, pp. 109-112).

32. Nafisa, T. (2023). VOWELS AND THEIR MODIFACATIONS. *Новости образования: исследование в XXI веке*, *2*(16), 298-305.
33. Nafisa, T. (2023, December). Secondary ways of word formation. In *" Conference on Universal Science Research 2023"* (Vol. 1, No. 12, pp. 109-112).
34. Nafisa, T. (2023). THE EDUCATION SYSTEM OF THE USA: PRESCHOOL EDUCATION, SECONDARY AND HIGHER EDUCATION, SCHOOL FORMS. *The Role of Exact Sciences in the Era of Modern Development*, *1*(6), 53-57.
35. Qizi, T. N. Z., & Umedovich, M. Y. (2023). AMERICAN-BASED PRONUNCIATION STANDARDS OF ENGLISH. *Scientific Impulse*, *2*(15), 563-567.
36. Nafisa, T. (2023, December). Word Formation: Compounding. In *" Conference on Universal Science Research 2023"* (Vol. 1, No. 12, pp. 113-115).
37. Nafisa, T. (2023). NOUNS AND THEIR GRAMMATICAL CATEGORIES. *Новости образования: исследование в XXI веке*, *2*(16), 292-297.