LANGUAGE AND SPEECH UNITS ON THE PHONOLOGICAL AND PHONETIC LEVELS AND THEIR ROLE IN TEACHING LISTENING

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ABSTRACT

This article explores the nature of language and speech units at the phonetic and phonological levels, and examines their roles in the instruction of listening comprehension in second / foreign language learning. It argues that explicit attention to phonetic cues (the acoustic, articulatory details of speech) and phonological structure (phonemes, allophones, syllables, prosody) provides a foundation for more effective listening pedagogy. After conceptual clarification, the paper reviews empirical evidence linking phoneme awareness, phonetic training, and listening performance, and outlines pedagogical implications for integrating phonetic/phonological instruction into listening curricula. The article closes with suggestions for future research and instructional design.

Keywords: *phonetics, phonology, listening comprehension, phoneme awareness, suprasegmentals, L2 listening pedagogy.*

ЯЗЫКОВЫЕ И РЕЧЕВЫЕ ЕДИНИЦЫ НА ФОНОЛОГИЧЕСКОМ И ФОНЕТИЧЕСКОМ УРОВНЯХ И ИХ РОЛЬ В ОБУЧЕНИИ АУДИРОВАНИЮ

АННОТАЦИЯ

В данной статье рассматривается природа языковых и речевых единиц на фонетическом и фонологическом уровнях, а также их роль в обучении пониманию на слух во втором/иностранном языке. Подчёркивается, что целенаправленное внимание к фонетическим признакам (акустическим и артикуляционным деталям речи) и фонологической структуре (фонемы, аллофоны, слоги, просодия) служит основой для более эффективной методики обучения аудированию. Статья начинается с концептуального разъяснения, затем рассматривает эмпирические данные, подтверждающие связь между фонематическим восприятием, фонетической подготовкой и результатами аудирования. Также предлагаются педагогические рекомендации по интеграции фонетико-фонологических элементов в учебную программу по

аудированию. В завершении изложены предложения по дальнейшим исследованиям и разработке методических решений.

Ключевые слова: *фонетика, фонология, понимание на слух, фонематическое восприятие, супрасегментные единицы, методика обучения аудированию на иностранном языке.*

TIL VA NUTQ BIRLIKLARINING FONOLOGIK VA FONETIK DARAJADAGI TURLARI HAMDA ULARNING ESHITISHNI O‘RGATISHDAGI ROLI

ANNOTATSIYA

Ushbu maqolada til va nutq birliklarining fonetik va fonologik darajadagi tabiati o‘rganiladi hamda ularning ikkinchi / chet tilini o‘rganishda eshitishni tushunishni o‘rgatishdagi o‘rni tahlil qilinadi. Maqolada nutqdagi fonetik belgilar (ya’ni akustik va artikulyatsion xususiyatlar) hamda fonologik tuzilma (fonemalar, allofonlar, bo‘g‘inlar, prosodiya)ga aniq e’tibor qaratish samarali eshitish metodikasini shakllantirishda asos bo‘lishi ta’kidlanadi. Maqola avval konseptual tushunchalarni izohlab beradi, so‘ng fonema anglash, fonetik mashg‘ulotlar va eshitish ko‘nikmasi o‘rtasidagi bog‘liqlikni ko‘rsatadigan tajribaviy dalillarni ko‘rib chiqadi. Shuningdek, fonetik va fonologik bilimlarni eshitish darslariga integratsiya qilish bo‘yicha pedagogik tavsiyalar beriladi. Maqola yakunida kelgusidagi ilmiy izlanishlar va o‘quv dasturlarini ishlab chiqish bo‘yicha tavsiyalar taqdim etiladi.

Kalit so'zlar: *fonetika, fonologiya, eshitishni tushunish, fonema anglash, suprasegmental birliklar, chet tilida eshitish metodikasi.*

INTRODUCTION

Listening is often viewed as the passive skill among the four language modalities, but in fact it involves complex perceptual, phonetic, phonological, lexical, and cognitive processes. Learners must not only receive an acoustic signal but decode it, map it to linguistic units, parse it, and integrate meaning. A common challenge is that students may hear sounds but fail to interpret them correctly—because they lack fine phonetic discrimination or stable phonological categories in the target language.

In this context, phonetics refers to the physical, acoustic and articulatory properties of speech (phones, formants, voice onset time, coarticulation, etc.), while phonology refers to the abstract system of contrastive units (phonemes, allophones, stress, syllable structure, prosody) and the rules governing their distribution. Learners must bridge from the physical details to the abstract system in order to interpret speech.

This article examines the roles of phonetic and phonological units in listening comprehension and argues for their explicit integration into listening pedagogy. First, we clarify these units; second, we examine empirical evidence showing how phonetic/phonological training influences listening performance; third, we offer pedagogical implications for teaching listening with phonetic/phonological awareness. Finally, we conclude with reflections and suggestions for further work.

Role of Phonetic and Phonological Units in Listening

Phonetic Units: The Acoustic–Articulatory Interface

When learners listen, they receive acoustic waves which carry subtle cues: formant transitions, bursts, aspiration, voice onset time (VOT), spectral shape, coarticulatory effects, and suprasegmental features (duration, pitch, intensity). These **phonetic cues** are the raw data from which listeners must infer phonological structure. Without sensitivity to such cues, learners may misperceive ambiguous or fast speech, or be confused by variation in real speech.

For example, the difference between /p/ and /b/ may depend on small timing differences (voicing onset) and aspiration. Learners who cannot reliably detect these differences will struggle to discriminate minimal pairs. Similarly, vowel quality depends on subtle formant patterns; learners must become attuned to these. The concept of auditory phonetics (how listeners categorize acoustic signals) underscores how phonetic variation is filtered and normalized into categories.

Phonetic sensitivity also helps learners deal with coarticulation and reduction in connected speech—phenomena that blur segmental boundaries. If learners recognize that incoming acoustic patterns may deviate from canonical isolated sounds, they can better “undo” phonetic distortions when mapping to phonological units.

Phonological Units: Abstract Categories and Patterns

Once learners detect phonetic cues, they must assign them to *phonological units*—phonemes, syllables, stress units, and prosodic patterns. Phonemes are contrastive sound categories (e.g. /t/ vs /d/), and learners must learn to ignore irrelevant allophonic variation while attending to contrastive distinctions. Beyond phonemes, phonology includes syllable structure (onset, nucleus, coda), phonotactic constraints (which sequences are allowed), stress, rhythm, and intonation units.

These phonological representations enable efficient lexical access: when a listener hears a sequence of phonemes, they match it to stored lexical forms. Strong phonological competence—clear categories, robust phonotactic expectations, and knowledge of syllable/word boundaries—speeds word recognition in continuous speech.

Further, *suprasegmental phonology* (stress, rhythm, intonation) supports parsing of longer stretches of speech: they help signal phrase boundaries, highlight focal information, signal questions/statements, and cue discourse structure. For example, a rising intonation or a stressed syllable can alert the listener to expectations about what follows.

Without reliable phonological representations, learners may mis-segment speech, misrecognize words, or fail to predict what comes next. Students often struggle with reduced forms (e.g. "gonna," "wanna") or weak forms because they lack phonological expectations about what "counts" in a fluent utterance.

Interplay in Listening: From Bottom-Up to Top-Down

In the listening process, bottom-up processing (from acoustic input to phonological representation to lexical access) is essential, especially in unfamiliar or noisy contexts. Phonetic sensitivity underlies correct detection of sounds; strong phonological categories guide mapping to meaningful units. As learners improve in bottom-up processing, they can free cognitive resources to engage top-down processes (contextual inference, prediction, integration).

Empirical studies show that phonetic/phonological training can improve listening performance, particularly for lower-proficiency learners whose bottom-up processing is less robust. For instance, a blended phonetic training intervention (HVPT + explicit training) significantly improved listening comprehension among EFL children; lower-proficiency learners showed the greatest gains. Also, a classic intervention with Japanese EFL students showed that integrating phonetics/phonology into listening instruction enhanced students' discriminatory ability and general listening performance.

In a study at Universities Negeri Padang, students' phonemic awareness (their ability to identify phonemes) was strongly correlated with their listening comprehension scores ($r = 0.785$). This supports the notion that phonological awareness is a foundational predictor of listening success.

Thus, phonetic and phonological units are not peripheral to listening—they are central. They provide the scaffolding that allows learners to decode speech robustly, especially under challenging conditions.

Pedagogical Implications for Teaching Listening

Given this theoretical and empirical backing, what practices can instructors adopt to bring phonetic and phonological awareness into listening instruction? Below are several recommendations:

1. Raise Learner Awareness via Minimal Pairs and Phoneme-Focus Tasks

Introduce minimal pairs and near-minimal pairs (e.g., ship/sheep, bit/beat) in listening exercises. Ask learners to discriminate, identify, and produce them. Use ABX tasks or oddity tasks (which of three is different?). This builds sharper phonological boundaries. Also encourage learners to reflect on how they hear differences, promoting metalinguistic awareness.

2. Phonetic Training: Explicit Exposure to Acoustic Cues

Design listening tasks that isolate phonetic cues (e.g., VOT, aspiration, formant transitions). Use computer-assisted tools or acoustic visualization (e.g. spectrograms) to show the acoustic realisations. Encourage repeated listening, manipulation (slower/normal speed), and comparison of native vs non-native tokens. Over time, embed phonetic tasks into real listening contexts.

3. Teach Connected Speech and Phonological Processes

Expose learners to reduced speech forms (weak forms, linking, assimilation, elision). Provide transcripts with phonetic realizations. In listening tasks, ask students to mark where linking or reduction might occur, or to reconstruct the canonical form. For example, play a phrase with /t/ linking across word boundaries and ask learners to detect it.

4. Emphasize Suprasegmentals: Stress, Rhythm, Intonation

Before full listening passages, have learners practice identifying stressed syllables, pitch contours (rising, falling), pause points, and rhythm patterns. Use short dialogues or examples. Then, in full listening, ask learners to track how suprasegmental cues help chunk speech or signal new/focus information.

5. Scaffold Listening Tasks from Segmental to Global

A possible sequence:

- Segmental phase: phoneme discrimination, minimal pairs
- Word/phrase phase: recognizing words/phrases in isolation
- Connected speech phase: short sentences with linking
- Extended passage: full listening with comprehension tasks

Integrate pre-listening phonetic/phonological priming, mid-listening tasks to focus attention on acoustic cues, and post-listening reflection on what phonetic or prosodic cues helped or hindered comprehension.

6. Encourage Extensive Listening and Shadowing

Promote extensive listening (graded audio, authentic input) so learners internalize phonetic and phonological patterns over time. Encourage shadowing (immediate repetition) to foster awareness of articulation and timing. Over many hours, learners fine-tune their perceptual mapping from input to phonological representation.

7. Diagnose Learners' Phonological Weaknesses and L1 Transfer

Use diagnostic listening assessments to identify which phonemes or contrasts are problematic. Compare learners' L1 phonological system with the target language's contrasts to anticipate transfer errors. Focus training on the hardest contrasts (e.g. /θ/ vs /ð/, /l/ vs /r/). The blended training study found that learners often misjudge which sounds are difficult; formal testing reveals "hidden" perceptual weaknesses.

8. Use Learner-Centered / Inquiry-Based Approaches

Rather than purely lecturing about phonetics/phonology, adopt inquiry-based learning: pose perceptual challenges, let students explore acoustic variation, compare tokens, hypothesize, test, and refine their understanding. This approach has been shown to boost retention and engagement in phonetics/phonology learning.

By embedding these practices into listening curricula, teachers can help learners build robust phonetic sensitivity and phonological representations, thereby bridging the perceptual gap between hearing and comprehending speech.

CONCLUSION

Listening is not simply a passive reception of speech—it involves delicate perceptual and representational work at the phonetic and phonological levels. Learners must detect acoustic cues in real speech (phonetic) and map them onto stable linguistic categories (phonological), including phonemes, syllables, stress, rhythm, and intonation. This layered processing underlies successful lexical access and discourse comprehension.

Research affirms that phonetic and phonological training can enhance listening performance, particularly among learners with weaker perceptual foundations. Interventions such as blended phonetic training, minimal-pair discrimination, and phonetics-informed listening instruction yield measurable gains in comprehension.

From a teaching standpoint, it is crucial that listening instruction does not bypass phonetics and phonology. Instead, curricula should scaffold from phoneme awareness to connected speech, integrate suprasegmental work, diagnose learner weaknesses, and promote extensive listening and learner exploration. In doing so, teachers help learners bridge the gap from hearing to understanding, making listening a more active, informed, and effective skill.

In sum, language and speech units at the phonetic and phonological levels constitute the backbone of listening pedagogy. Ignoring them risks leaving learners adrift in the "sea of sound" without a perceptual map. But when learners are guided to perceive, categorize, and exploit these units, listening becomes a more controlled and comprehensible process.

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