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TEACHING VOICED AND VOICELESS SOUNDS IN EFL: A CONCEPTUAL REVIEW OF CHALLENGES AND PEDAGOGICAL STRATEGIES

{Antara 12 dan 15 kata}

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ABSTRACT (ABSTRAK)

The teaching of pronunciation, particularly the distinction between voiced and voiceless sounds, remains a critically underexplored domain within English as a Foreign Language (EFL) pedagogy. Despite its significance for communicative effectiveness, this area has received limited systematic attention in both curriculum design and classroom practice. This article presents a conceptual review grounded in three theoretical pillars: phonological theory, first language (L1) transfer theory, and intelligibility-based pronunciation instruction. Three primary challenges are identified: L1 phonological interference, articulatory and perceptual difficulty, and limited phonological awareness among learners and teachers. These challenges are particularly pronounced among learners from Asian language backgrounds, including Bahasa Indonesia, Mandarin, Korean, and Japanese. Four evidence-based pedagogical strategies are proposed: explicit phonological instruction, minimal pair practice embedded in communicative tasks, auditory discrimination training, and technology-assisted pronunciation tools. The article argues that the intelligibility principle should guide instructional priorities, with high-functional-load contrasts such as /s/–/z/, /t/–/d/, and /f/–/v/ receiving primary attention. Implications are drawn for EFL teachers, curriculum designers, and teacher training programs seeking to address this gap systematically.

{Minimal 150 kata dan maksimal 210 kata}

Keywords: *voiced sounds; voiceless sounds; EFL pronunciation; phonological awareness; pedagogical strategies*

{Antara 3 dan 5 kata kunci}

INTRODUCTION (PENDAHULUAN)

Pronunciation is universally recognized as a foundational dimension of communicative competence in second and foreign language learning. Among the many phonological features that English as a Foreign Language (EFL) learners must acquire, the distinction between voiced and voiceless consonants stands out as one of the most pedagogically consequential yet least systematically addressed. Voiced consonants—including /b/, /d/, /g/, /v/, /z/, /ʒ/, and /ð/—are produced with simultaneous vibration of the vocal cords, while their voiceless counterparts—/p/, /t/, /k/, /f/, /s/, /ʃ/, and /θ/—are articulated without such vibration (Celce-Murcia, Brinton, & Goodwin, 2010). When learners fail to consistently produce or perceive these contrasts, the result is not merely an accent but a genuine breakdown in intelligibility that impairs real communicative exchange.

The pedagogical neglect of voiced and voiceless instruction is not incidental. The dominance of Communicative Language Teaching (CLT) since the 1970s has

progressively marginalized explicit pronunciation work, and within what pronunciation instruction does occur, the emphasis has fallen overwhelmingly on suprasegmental features such as stress, rhythm, and intonation (Levis & Grant, 2003; Gilakjani, 2011). Segmental instruction—and voiced/voiceless contrasts in particular—has received comparatively little attention in terms of dedicated conceptual or pedagogical frameworks. Yet segmental errors involving voicing distinctions are among the most frequent and most communication-impairing errors produced by EFL learners across a wide range of first-language backgrounds (Jenkins, 2000; Munro & Derwing, 2006).

This gap is especially significant given that certain voiced-voiceless contrasts carry high functional load in English—that is, their confusion is statistically likely to cause misunderstanding (Brown, 1988). The /s/–/z/ distinction in word-final position (e.g., price vs. prize), the /t/–/d/ contrast (e.g., bet vs. bed), and the /f/–/v/ pair (e.g., fan vs. van) are among the most frequent and most intelligibility-critical contrasts in everyday English vocabulary. For speakers of languages such as Bahasa Indonesia, Mandarin, Japanese, and Korean—in which some or all of these contrasts are absent or neutralized—the acquisition of these features poses persistent difficulty rooted in deep phonological processing differences (Swan & Smith, 2001; Deterding, 2010).

What is lacking in the current literature is a conceptual synthesis that brings together phonological theory, L1 transfer research, and classroom-applicable pedagogical strategies into a coherent framework specifically addressing voiced and voiceless instruction. The present article addresses this gap by asking three organizing questions: (1) What are the primary theoretical and empirical challenges EFL learners face in acquiring voiced and voiceless sound contrasts? (2) What evidence-based pedagogical strategies are available to address these challenges? (3) How should the intelligibility principle guide the prioritization of voiced and voiceless instruction in EFL contexts? It is hoped that this conceptual review will provide a practical reference point for EFL teachers, inform curriculum design decisions, and stimulate targeted empirical research in an undertheorized area of pronunciation pedagogy.

(Minimal 400 kata dan maksimal 500 kata)

METHOD (METODE)

This study employs a conceptual review methodology, a well-established approach in applied linguistics and language education research for synthesizing and theorizing about a body of existing literature without collecting primary empirical data (Torraco, 2005). Conceptual reviews are particularly appropriate when a topic has received fragmented treatment across multiple disciplines or research traditions and requires an integrative theoretical framework. The topic of teaching voiced and voiceless sounds in EFL classrooms intersects phonetics, phonological acquisition, second language acquisition (SLA), and language pedagogy—making a conceptual synthesis both necessary and timely.

The literature reviewed was identified through systematic searches of major academic databases, including ERIC, Google Scholar, JSTOR, and Scopus. Search terms included combinations of the following: "voiced and voiceless sounds EFL," "pronunciation instruction," "L2 phonology," "segmental features EFL," "minimal pairs

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teaching," "explicit pronunciation instruction," and "functional load." Priority was given to peer-reviewed journal articles from the past two decades, though foundational theoretical works from earlier periods were included where relevant. Approximately forty primary sources formed the basis of this review, consistent with the scope of similar conceptual articles in applied linguistics (Atar, 2018; Zarate-Sandez, 2020).

Analysis followed a thematic synthesis approach (Thomas & Harden, 2008), in which themes were identified inductively from the literature and organized into a coherent conceptual framework. The review prioritizes sources addressing: (1) the phonological and acquisitional basis of voiced–voiceless difficulty; (2) pedagogical strategies for segmental pronunciation instruction; and (3) teacher beliefs and practices concerning explicit pronunciation teaching. The resulting framework is intended to be both theoretically grounded and practically applicable to diverse EFL classroom contexts, with particular relevance to teachers working with learners from Asian language backgrounds.

(Minimal 300 kata dan maksimal 400 kata)

RESULTS AND DISCUSSION (HASIL DAN PEMBAHASAN)

Challenges in Acquiring Voiced and Voiceless Sound Contrasts

The acquisition of voiced and voiceless contrasts by EFL learners is shaped by the interaction of three principal challenge categories: L1 phonological interference, articulatory and perceptual difficulty, and limited phonological awareness among both learners and teachers.

L1 phonological interference is the most consistently documented challenge in the literature. Languages such as Bahasa Indonesia, Mandarin Chinese, and Korean impose significant phonological constraints on their speakers' production of English voicing contrasts (Swan & Smith, 2001). In Bahasa Indonesia, voiced stops /b/, /d/, and /g/ exist phonemically in syllable-initial positions but are systematically devoiced in word-final contexts—a pattern that leads Indonesian EFL learners to apply this devoicing process to English, producing 'cap' for 'cab' or 'bet' for 'bed' (Deterding & Poedjosoedarmo, 2001). The English fricative pair /f/–/v/ poses further difficulty, as this contrast is absent in many Asian L1 systems, leading to persistent substitution errors in both perception and production (Gilakjani, 2011). Table 1 summarizes the common L1-based interference patterns documented across major Asian language backgrounds.

L1 Phonological Interference Patterns in English Voicing Contrasts Across Asian Language Backgrounds

L1 Background	Problematic Contrast	Error Pattern in English	Example
Bahasa Indonesia	/b/–/p/, /d/–/t/, /g/–/k/ (word-final)	Final devoicing	'cab' → 'cap', 'bed' → 'bet'
Bahasa Indonesia	/f/–/v/	Substitution of /f/ for /v/	'van' → 'fan'

Mandarin Chinese	/z/–/s/, /v/–/f/	Voiceless substitution	'zip' → 'sip', 'vine' → 'fine'
Korean	/b/–/p/, /d/–/t/ (word-initial)	Tensed/aspirated substitution	'ban' → 'pan'
Japanese	/v/–/b/	/b/ substitution for /v/	'very' → 'bery'

Note. Adapted from Swan & Smith (2001), Deterding & Poedjosoedarmo (2001), and Gilakjani (2011).

The second challenge is articulatory and perceptual in nature. Producing voiced obstruents, particularly in word-final position, requires learners to sustain vocal cord vibration throughout articulatory closure—a feat that is phonetically demanding for those unaccustomed to final voicing (Flege & Port, 1981). On the perceptual side, the acoustic cues that differentiate voiced from voiceless consonants in English—Voice Onset Time (VOT), preceding vowel length, and closure duration—are language-specific in their relative salience (Lisker & Abramson, 1964; Ladefoged & Johnson, 2014).

The third challenge is limited phonological awareness. Many EFL learners—and, critically, their teachers—lack explicit knowledge of the physiological and acoustic properties that distinguish voiced from voiceless sounds (Schmidt, 2001; Pardede, 2018). Without this awareness, learners are unable to engage in the conscious noticing that Schmidt (2001) identifies as a prerequisite for L2 acquisition.

Prioritization Based on the Intelligibility Principle

A central argument of this conceptual framework is that voiced and voiceless instruction should be guided by the intelligibility principle rather than by a pursuit of native-like phonetic accuracy (Levis, 2005). Applying the functional load framework (Brown, 1988) to English voicing contrasts yields a principled basis for instructional sequencing. Table 2 presents a classification of voiced-voiceless contrasts by their functional load and recommended instructional priority.

Voiced-Voiceless Contrasts Classified by Functional Load and Instructional Priority

Contrast	Minimal Pair Examples	Functional Load	Priority Level	Instruction Focus
/s/–/z/	price/prize, sip/zip, bus/buzz	High	Primary	Early & systematic
/t/–/d/	bet/bed, bat/bad, coat/code	High	Primary	Early & systematic
/f/–/v/	fan/van, fine/vine, leaf/leave	High	Primary	Early & systematic
/p/–/b/	pin/bin, pat/bat, cup/cub	Moderate	Secondary	Intermediate stage

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/k/–/g/	coat/goat, curl/girl	Moderate	Secondary	Intermediate stage
/θ/–/ð/	thigh/thy, ether/either	Low	Tertiary	Context-dependent

Note. Functional load levels based on Brown (1988) and Munro & Derwing (2006). /θ/–/ð/ is classified as tertiary following Jenkins' (2000) Lingua Franca Core framework.

High-priority contrasts—those distinguishing large numbers of frequent words and most commonly causing communicative breakdown—include /s/–/z/ in word-final position, /t/–/d/, and /f/–/v/. These contrasts should be introduced early and practiced systematically. Lower-priority contrasts, such as /θ/–/ð/, may be addressed selectively based on learners' communicative goals and interactional contexts.

The intelligibility principle also has implications for error treatment. Not all voiced-voiceless errors warrant equal corrective attention; teachers should develop sensitivity to which errors genuinely impair comprehension and which are merely markers of a non-native accent (Derwing & Munro, 2015).

Pedagogical Strategies for Teaching Voiced and Voiceless Sounds

Drawing on the reviewed literature, four major categories of evidence-based pedagogical strategies are identified for voiced and voiceless instruction in EFL classrooms. These strategies are presented in Table 3, followed by a detailed discussion of each.

Evidence-Based Pedagogical Strategies for Voiced and Voiceless Instruction in EFL Classrooms

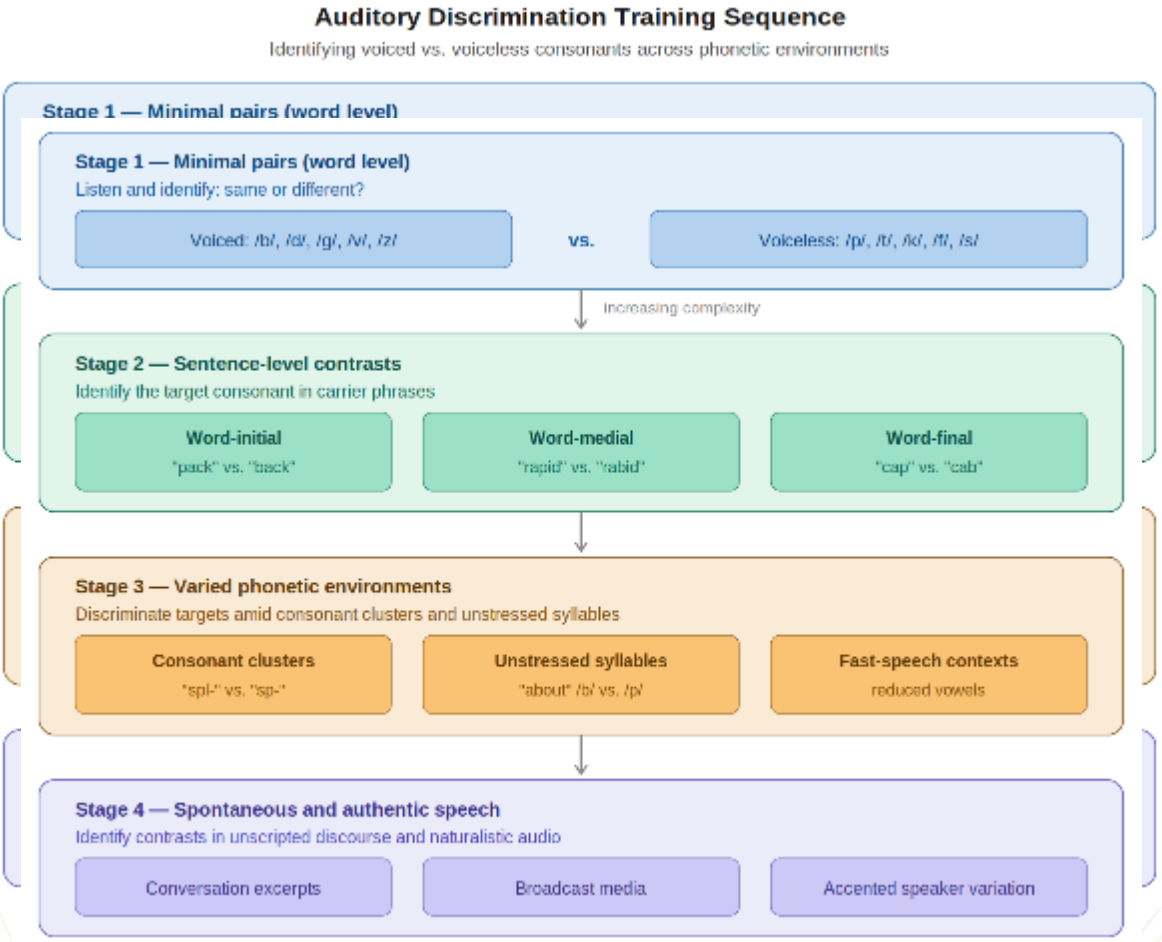
Strategy	Description	Classroom Application	Theoretical Basis
Explicit Phonological Instruction	Direct explanation of articulatory & acoustic features of voiced/voiceless sounds	Larynx vibration demo; vocal tract diagrams; phonetic charts; drilling	Schmidt's (2001) Noticing Hypothesis
Minimal Pair Practice	Word pairs differing in one sound embedded in communicative tasks	Role-play shopping scenarios; /f/–/v/ games; information gap tasks	Functional Load principle (Brown, 1988)
Auditory Discrimination Training	Systematic perceptual training before production practice	Listening identification tasks; repeated exposure across speech rates	Speech Learning Model (Flege, 1995)
Technology-Assisted Tools	Visual acoustic feedback via software (Praat,	Waveform/spectrogram comparison; naturalistic video listening	Fouz-Gonzalez (2015); Zarate-Sandez (2020)

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	YouGlish, English Accent Coach)		

Note. Strategies synthesized from Darcy (2018), Atar (2018), Zarate-Sandez (2020), Pardede (2018), and Fouz-Gonzalez (2015).

First, explicit phonological instruction involves directly explaining the articulatory and acoustic features of target sounds and making the phonological contrast salient for learners (Darcy, 2018). In the context of voiced and voiceless instruction, this entails teaching learners about the role of the larynx in voicing, demonstrating the physical sensation of vocal cord vibration (e.g., by placing fingertips lightly on the throat), and using visual aids such as vocal tract diagrams and phonetic charts (Celce-Murcia et al., 2010). Pardede's (2018) action research with Indonesian EFL learners demonstrated that explicit instruction—including video-based articulation modeling, drilling, and phonetic transcription comparison—significantly improved pronunciation accuracy.



(adapted from Derwing & Munro, 2015)

(Penulis dapat menyertakan gambar, grafik, diegram dan tabel apabilah diperlukan)

Second, minimal pair practice is a time-tested technique for directing learner attention to specific phonemic contrasts by presenting word pairs differing in only one sound (e.g., 'fan' vs. 'van,' 'sip' vs. 'zip,' 'bat' vs. 'pat') (Celce-Murcia et al., 2010). Traditional minimal pair drills have been criticized as decontextualized and

mechanical; however, the literature consistently shows that embedding minimal pair activities within communicative tasks substantially enhances their effectiveness (Atar, 2018; Moedjito, 2008).

Third, auditory discrimination training addresses the perceptual dimension of voiced-voiceless acquisition by systematically developing learners' ability to distinguish target contrasts in listening prior to requiring their production. Classroom implementation can include listening discrimination exercises, phoneme identification tasks, and exposure to recordings featuring both native and non-native speaker productions of target contrasts.

Fourth, technology-assisted pronunciation tools represent an increasingly important resource for voiced and voiceless instruction. Software and applications providing visual acoustic feedback—waveforms, spectrograms, voice onset time displays—enable learners to observe the phonetic properties of their own speech and compare them with target models (Lambacher, 1999; Fouz-Gonzalez, 2015). Praat, a free acoustic analysis program, has been used effectively with Indonesian university students to allow real-time observation of voicing patterns (Pardede, 2018).

Implications for EFL Teachers, Curriculum, and Teacher Training

For EFL teachers, this framework recommends that voiced and voiceless instruction be planned and systematic rather than incidental or reactive (Foote et al., 2016; Do Minh Luan, 2021). Dedicated pronunciation mini-lessons of five to ten minutes, embedded within broader communicative activities, can target specific contrasts identified as problematic for the particular learner group (Gilakjani, 2011).

For curriculum designers, this review recommends the explicit inclusion of voiced and voiceless instruction in EFL syllabi, sequenced according to functional load priorities and informed by learners' L1 backgrounds. Moedjito (2008) found that the absence of clear curriculum guidelines for pronunciation—including segmental features—leads to inconsistent and neglected instruction across EFL programs.

For teacher trainers, the evidence points to a critical need for pre-service and in-service programs that go beyond theoretical phonetics to include explicit training in teaching voiced and voiceless contrasts. Professional development programs modeling communicative minimal pair tasks, auditory discrimination training protocols, and the use of technology-assisted feedback tools would substantially improve teacher readiness and confidence in this underserved area of EFL pedagogy.

(Minimal 1000 kata dan maksimal 1500 kata)

CONCLUSION (KESIMPULAN)

This conceptual review has synthesized the theoretical and empirical literature on teaching voiced and voiceless sound contrasts in EFL classrooms and has constructed a pedagogical framework to guide practice in this underexplored area. Three primary challenges were identified: L1 phonological interference rooted in the learner's established sound system, articulatory and perceptual difficulty arising from language-specific acoustic cue weighting, and limited phonological awareness among both learners and teachers. These challenges are compounded by the

structural tendency of communicative EFL instruction to marginalize explicit segmental teaching.

In response to these challenges, the framework proposes four evidence-based pedagogical strategies: (1) explicit phonological instruction grounded in the Noticing Hypothesis, which raises learner awareness of the articulatory and acoustic properties of target sounds; (2) minimal pair practice embedded in communicative tasks, prioritized by the functional load principle; (3) auditory discrimination training that systematically builds perceptual sensitivity to voiced-voiceless contrasts before requiring their production; and (4) technology-assisted pronunciation tools that provide visual acoustic feedback and naturalistic listening contexts.

The article has argued throughout that the intelligibility principle should anchor the prioritization of voiced and voiceless instruction, directing attention to high-functional-load contrasts—/s/–/z/, /t/–/d/, and /f/–/v/—that most significantly affect communicative effectiveness. Future empirical research should evaluate the effectiveness of the proposed strategies through classroom-based studies across diverse EFL contexts and L1 backgrounds, with particular focus on long-term development in spontaneous speech.

(Antara 150 dan 300 kata)

REFERENCES (REFERENSI)

Atar, C. (2018). Should we teach pronunciation explicitly in L2/EFL classrooms? International Journal of Contemporary Educational Research, 5(2), 95–102.

Brown, A. (1988). Functional load and the teaching of pronunciation. TESOL Quarterly, 22(4), 593–606.

Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). Teaching pronunciation: A coursebook and reference guide (2nd ed.). Cambridge University Press.

Foote, J. A., Trofimovich, P., Collins, L., & Urzua, F. S. (2016). Pronunciation teaching practices in communicative second language classes. The Language Learning Journal, 44(2), 181–196.

Fouz-Gonzalez, J. (2015). Trends and directions in computer-assisted pronunciation training. In J. A. Mompean & J. Fouz-Gonzalez (Eds.), Investigating English pronunciation (pp. 314–342). Palgrave Macmillan.

Gilakjani, A. P. (2011). A study on the situation of pronunciation instruction in ESL/EFL classrooms. Journal of Studies in Education, 1(1), E4.

Jenkins, J. (2000). The phonology of English as an international language. Oxford University Press.

Lambacher, S. (1999). A CALL tool for improving second language acquisition of English consonants by Japanese learners. Computer Assisted Language Learning, 12(2), 137–156.

Levis, J. M., & Grant, L. (2003). Integrating pronunciation into ESL/EFL classrooms. TESOL Journal, 12(2), 13–19.

Lisker, L., & Abramson, A. S. (1964). A cross-language study of voicing in initial stops: Acoustical measurements. Word, 20(3), 384–422.

Moedjito. (2008). Priorities in English pronunciation teaching in EFL classrooms. K@ta, 10(2), 129–142.

Munro, M. J., & Derwing, T. M. (2006). The functional load principle in ESL pronunciation instruction: An exploratory study. System, 34(4), 520–531.

Odlin, T. (1989). Language transfer: Cross-linguistic influence in language learning. Cambridge University Press.

Pardede, P. (2018). Improving EFL students' English pronunciation by using the explicit teaching approach. Journal of English Teaching, 4(3), 143–155.

Roach, P. (2009). English phonetics and phonology: A practical course (4th ed.). Cambridge University Press.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), Cognition and second language instruction (pp. 3–32). Cambridge University Press.

Swan, M., & Smith, B. (Eds.). (2001). Learner English: A teacher's guide to interference and other problems (2nd ed.). Cambridge University Press.

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