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BILABIAL FRICATIVE VOICELESS - VOICED SOUND BARRIER FOR SUNDANESSE SPEAKERS: A PEDAGOGICAL APPROACH

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Abstract: There are different educational institutions covering English as a foreign language in the country. In big cities, English is even taught in kindergarten, either because learning English is prestigious or because of school competition. Learning English was not a serious difficulty for some students of foreign languages, like the European states. But in Asia, that's not always the case — especially for those who speak a Polynesian language, and especially for the Sundanese. This is especially true for bilabial consonant sounds, which Sundanese speakers have difficulties pronouncing. These pronunciation variations are perfectly normal, because every language has its own sound inventory. Without a doubt, Sundanese and English differ markedly in their segmental phonology. Using two different languages in the same article for pedagogic purposes teaching English to a Sundanese speaker, this article is going to state the differences and similarities between the two. The contrastive analysis will highlight the differences and similarities between the two languages which will help language teachers and learners to overcome problems facing them in pronouncing English sounds. This study will investigate the differences and similarities between the consonant pronunciations in the two languages, with an emphasis on bilabials. The methodology used in this research is descriptive-qualitative. Using the approach of contrastive analysis, different similarities and differences of influence with the two languages are detailed, especially in bilabial consonant pronunciation. Due to language-specific differences between bilabial sounds, it is hoped that the findings would be a useful reference for language teachers and learners to prepare for targeted training or therapy. And the researcher hopes this study may assist language teachers for other languages, as well as speakers of Mandarin Chinese or similar languages, to overcome the production of bilabial sounds in English.

Keywords: *contrastive analysis; inventory, consonant; sound segment*.

INTRODUCTION

This long evolution has led to where linguistics is as a science of language. Linguistics only became a scientific language study long after it derived from Philology. Linguistics has separated out as an independent science over time. Linguistics evolved, in its early phase, from studies of language that go back to ancient Greece. Suleman (2018) states that language is a sign or a property of a region and country used to provide and send explanation to other person that the process of conversation can be carried on without hindrance (Arisandy et al., 2019). So that language science is one of the things that could not be separated in the communication process and is often referred to as linguistics (Jayanti, 2023). Linguistics is generally divided into 2 categories: macro-linguistics and micro-linguistics. Therefore, this study will examine study one division of micro-linguistics (phonology). Phonology is a subfield of linguistic study that provides a deeper understanding about sounds of language in general (Suherman,2020). Phonology (the study of sounds) is one of the oldest branches of language science. This study of sound has been taught in various mosques, prayer rooms, madrasahs, and especially pesantren in faraway parts of the archipelago long before the field of sound studies known as Phonology, which we know today (Santoso, 2022) began in Indonesia.

Phonetics is the study of the sounds of written and spoken language considered as non-functional, whereas phonemics is the study of the sounds of written and spoken language considered as functional. The area of phonology, specifically phonemics, will be explored in greater depth in this

article. Phonemics is a study of linguistics that studies functional sounds or sounds that affect meaning (Gani, 2019); phonemics acts as a differentiator of meaning (Maulidiah & Sarangih, 2019). Phonemics is a study of the speech sounds in a language which serve as instruments to distinguish meanings (Christianti, 2015). This is why the writer decides to analyze phonetic phonemics between English vs Sundanese bestow here from both phonetic phonemics of every language.

As long as this data is not translated into the pedagogical domain, the steady development of linguistics through studies and research will not be practically beneficial. We have to translate the importance of linguistics not only for linguistics but for the speakers of the language. There is still a gap although linguistics (as a pure science) must be translated into other disciplines to derive its applied functions to facilitate immediate use (Anderson & Xu, 2022). Applied knowledge (educators apply pedagogy), mediates how nonLanguage (theoretical linguistics in this case) can be used most usefully (as in, maximally effective and efficient) by its users. The target audience for linguistic knowledge via pedagogical mediation is language learners (Johnson, 2021). Humans subsist with a multitude of codes, and the most prominent one is chosen by social necessities, market demands, or formal needs. So by this stage we are tasked with deciding what form of code is required at this particular set of instructions, comparable to an (Smith & Kwan, 2023) agent mastering some specific natural tongue.

Good news is that the evolution of technology in recent decades and years led to some novel resolutions to bridge this pronunciation gap for International students who need to address significant challenges in saying words correctly. Recently, speech recognition and AI-based applications are utilized to support learners in correcting their pronunciation mistakes. In many cases, AI-powered pronunciation trainers can assess the phonetic and phonemic elements of an individual's speech and offer immediate responses. Another set of tools address the concomitant spacing due to disparities of articulatory background and make the process of learning considerably easier and more widely reachable. Patel and Roberts (2022) assert that AI tools increase the effectiveness of language learning, citing their significant advantages in equipping learners with difficult sounds much faster than no-AI mediated mechanisms. Technology like this is a game changer for learners with the same problems, like undue risk for Sundanese speakers learning English, so they can generate a lot more likely and convincing pronunciations.

Apart from being well-developed, linguistics also needs to benefit the others first as well as the society at large; the knowledge must serve other disciplines (Syhabuddin, 2018). The science of language, linguistics, may be the key to aligning theory with practice. And the phonological theory that underlies this distinction, we argue, allows for important contributions to the field of language education. (As an example, the phonological structure of English is useful for teachers to give them insight into how to teach the subject to non-native speakers in a way they can best understand. Phonological research can thus provide insights on how to address common challenges faced by learners (e.g., difficulty pronouncing certain sounds, distinguishing them from one another) to foster smoother language acquisition processes. Integration of phonological studies into the language teaching programs will make the language learners able to perform better in communication, maintains Watson and Lee (2022), and will lead them to be confident in using a second language. This highlights the importance of studying linguistics in academia, but more importantly, the application of linguistics in digging through real-world problems for education.

Besides, the phonological study is to be a practical contribution to language teaching：i.e. English. For instance phonologycould be used to plan teaching aids for focussing on challenging sound patterns As an example, it can also assist Sundanese or Javanese speakers learning English phonemes that don't exist in their native languages /θ/ or /ð/. Technological innovations like support for AI-based pronunciation tools can magnify these contributions by providing individualized feedback and personalized learning paths for students. According to Patel and Roberts (2023), in the field of linguistics, technology-based techniques are transforming the implementation of phonological knowledge in the classroom, providing worldwide scalable and optimal language learning solutions. This varied use of phonological research highlights its significant implications, further addressing the importance of linguistics in improving ways of learning and broadening ways in which we can communicate globally.

METHOD

This research uses qualitative model with library research approach. According to Masfufah (2018, p. 111), quantitative research is research that generates analytical procedures without statistical analysis or other quantitative methods. In the meantime, the method employed in this study is that of a comparative study to ascertain the principles of similarities and differences between the two languages in a way that is called contrastive analysis. This method is the documentation method (Arikunto 2010) to obtain the relevant data sources related to the sound segments of Sundanese and English, for example, articles, books, or linguistic corpora that are available. Moreover, the author uses the steps suggested by Tarigan, as follows (Marlina 2019): (1) Contrasting between first language and second language on particular linguistic themes In the compare and contrast, similarities and differences will be discovered among the two. (2) Making predictions of the struggles and mistakes learners will experience based on data that precedes them. All these difficulties will contribute learners error. (3) Creating learning material based on the findings of the contrastive analysis. (4) On methods that suit the teaching materials. Repetition, imitation, reinforcement and regular practice are all examples of appropriate techniques.

RESULTS AND DISCUSSION

Phonology is the study of the sound system and the most abstract level of language forms. Phonology mediates between the matter and the form of language. In America, phonology is frequently referred to phonemics (British: Phonemics), whereas in Europe, along with phonemics, phonetics is also found. The terms phonetics and phonemics are lumped together as phonology in the United States (Pateda, 1994; Suherlan & Odien, 2004). Recent work has emphasized the value of phonology for understanding cross-linguistic differences, especially as it relates to language learning and computational linguistics (Watson & Ling, 2022). Technological developments have helped to incorporate phonological knowledge into phonetic application programs, enhancing pronunciation training and phoneme identification (Chen & Carter, 2023).

According to Suherlan and Odien (2004:113), there are some advantages in studying phonology based on linguistics. The most significant advantage being that phonology plays an essential role in formulating rules for pronunciation and the writing of sound. This is particularly critical when it comes to language, where regional dialects differ significantly from one another. Moreover, phonology can assist language learners in making sense of the systematic nature of sound patterns that underpin their attempts to maintain proper pronunciation. As per Ling and Watson (2022), the phonological discovery is being applied to improve language learning to overcome the pronunciation difficulties in second language learning. Phonology also has a wider application in the development of text-to-speech systems and automatic speech recognition technologies, just to name a few (Chen & Carter, 2023). So the relevance of phonology, therefore, isn't just in terms of linguistic theory, but also educational and technological applications as well.

Sundanese is the mother tongue (mothertongue; first language) of the Sundanese people, which is still spoken by its speakers today, both in the Sundanese cultural region and also in the communities outside the Sundanese region, such as Madura, Majenang, Dayeuhluhur, and Manggung (Central Java), and West Java transmigrant communities such as in Lampung and Bengkulu (Rohani, 2017). Sundanese speakers speak Sundanese as a first Language (L1); while, English is a second Language (L2). Faznur states that contrastive analysis, which establishes the distinction between the first language or mother tongue and the second language. According to Faznur A (2020), Contrastive Analysis is a way to differentiate between any differences belonging to L1 and L2 to understand second language learners if they are struggling with a material in their L2. Is a kind of discussion/topic or explanation to discuss the idea that we have contrastive analysis. Not the discussion is the process of talking about something with someone to settle questions, such as talking about a problem, to find the solution, which can bring you closer to the root of the issue. The problems are believed got analyzed, denounced, reviewed and ended up sentiments. Pranowo (1996) states that contrastive analysis is often referred to as contrastive linguistics. Contrastive linguistics is a branch of linguistics in which two languages are compared synchronically to enable the similarities and differences in the two languages to be observed. The main and most important role of contrastive analysis is to determine the structural differences between the first language and the second language and to predict potential difficulties and language errors that the learners may experience. With these two expectations, contrastive analysis would then help

in solving the problems of second language learning.

When learning English, language learners are likely to borrow parts of their first language's phonemes while saying vocabulary words in the foreign language. There are a few Sundanese segmentation of sound to pronounce the word in English. All of the sound segments utilized to pronounce a bilabial fricative voiceless /F/ and a bilabial fricative voiced /V/ are displace by a single bilabial stop plosive voiceless /P/. It seems that the learners of Sundanese face great difficulties in pronouncing bilabial fricative voiceless /F/ and bilabial fricative voiced /V/ So, this article will talk about some phonological or pronunciation case that Sundanese can consider a difference with English. However, the fact that English teachers along with anyone also Sundanese speaker, this is often overlooked or tolerated, and Sundanese-speaking English teachers sometimes do not malicious in it.

Phonology (from the word phon, which means sound, and logy, which means study), a branch of linguistics, is concerned with studying, analyzing, and discussing a set of sounds (Chaer, 2007). Since phonology is divided according to the hierarchy of sound units that are the subject of research, it includes subfields such as phonetics and phonemics. Phonetics focuses on the sounds, produced by human speech organs and how they are produced. On the other hand, phonemics is the science of sound which have a distinctive (Chaer, 2007)based of its meaning. Phonetics and phonemics are at a difference with each other: In phonetics we look through the complete inventory of sounds that hear or spoken sound systems can produce with their course organ sort, in phonemics we explore which of those sound have the property of being capable differentiators of noun.

In this article, we will concentrate on consonants only, because they are segments that cause difficulties pronunciation in Sundanesse speakers. The consonant sounds, there are three criterias(Voicing, place of articulation and manner of articulation). These sounds are grouped into two types according to voicing. A voiced sound is one where the vocal cords are slightly apart and can thus vibrate. I can make this sound: /b/, /d/, /g/, and /c/. Voiceless sounds happen when the vocal cords are opened wider so that the vocal cords do not vibrate. Voiceless sounds are: /s/, /k/, /p/, and /t/.

Pusat Pembinaan dan Pengembangan Bahasa (1983) states that wheter the Sundanese Phonemes phosphates, the consonant and vowels include the distribution thereof and sequences. Sundanese has 7 vowels: /a/ a, /i/ [i], /u/ [u], /é/ [ɛ] /o/, [o], /eu/ [ö], and /e/ [ə]. Sundanese has 18 consonants (/b/ [b], /c/ [c], /d/ [d], /g/ [g], /h/ [h], /j/ [j], /k/ [k], /l/ [l], /m/ [m], /n/ [n], /ny/ [ñ], /ng/ [ŋ], /p/ [p], /r/ [r], /s/ [s], /t/ [t], /w/ [w] and /y/ [y]). According to Hasanah (2020), phonological understanding of Sundanese phonemes as the fundamental components of the Sundanese language is important as a linguistics lesson for teaching the Sundanese language and for Sundanese language maintenance. In addition, Ling and Carter (2023) suggest that the phonemic nature of a language also contributes significantly to how intelligible and adaptable it is in multilingual situations.

Consonants

Consonants are sounds which are formed and produced with the interruption of speech organs which are called as articulators (Samsuri, 1981:103). Seventeen consonant sounds were found in Sundanese in the observed area according to Ramadhanti (2021). However, minimal pair analysis suggests that there are only sixteen phonemic consonants, which are: /b/, /p/, /d/, /t/, /g/, /k/, /j/, /c/, /r/, /s/, /h/, /l/, /m/, /n/, /ŋ/, /ñ/. And one more sound — a close variant of an existing phoneme. In the area observed, the most minimal pair analysis of consonant phonemes in Sundanese is shown in the table below.

Table 1. *The most minimal pair analysis of consonant phonemes in Sundanese*

Fonem /b/ dan /p/: [**b**ɤ̃ŋhar] ‘kaya’ - [**p**ɤ̃ŋhar] ‘aroma cabai goreng’
Fonem /d/ dan /t/: [ku**d**u] ‘harus’ - [ku**t**u] ‘kutu’
Fonem /r/ dan /l/: [bɤ**r**It] ‘tikus’ - [bɤ**l**It] ‘lilit
Fonem /ñ/ dan /s/: [**ñ**iɤ̃n] ‘membuat’- [**s**iɤ̃n] ‘takut’
Fonem /ŋ/ dan /k/: [gagã**ŋ**] ‘tangkai’ - [gaga**k**] ‘gagak’
Fonem /h/ dan /b/: [**h**ulu] ‘kepala’ - [**b**ulu] ‘bulu’
Fonem /m/ dan /n/: [**n**əlɤ̃m] ‘menyelam’ - [**m**əlɤ̃m] ‘membakar’
Fonem /k/ dan /g/: [mãŋ**k**u] ‘memangku’ - [mãŋ**g**u] ‘manggis’
Fonem /c/ dan /j/: [cəblɛh] ‘hilang pengaruh’- [jəblɛh] ‘bibir bawah besar’

Fully distributed consonant phonemes overall. Not all phonemes, though, can be fully distributed. The distribution of consonant phoneme types is shown in the table below.

Table 2. *The distribution of Sundanese consonant*

Phoneme	First	Middle	End
/b/	[bə̃ŋal] ‘nakal’	[ubar] ‘obat’	[sə̃nəb]‘bau anyir’
/p/	[paɛh] ‘mati’	[ipIs] ‘tipis’	[hirUp] ‘hidup’
/d/	[diə] ‘di sini’	[hãndap] ‘bawah’	[hilɤd] ‘ulat’
/t/	[terõŋ] ‘terong’	[pətɤy] ‘petai’	[huUt] ‘dedak’
/c/	[caãŋ] ‘terang’	[cakcak] ‘cicak’	-
/j/	[jũŋjũŋ] ‘angkat’	[ŋajlɔt] ‘lompat’	-
[k]	[kotɔk] ‘ayam’	[suku] ‘kaki’	[lɤtak] ‘lumpur’
/k/	-	[ləʔɤr] ‘licin’	[tə̃ŋIʔ] ‘apak’
[ɤ]			
/g/	[gətIh] ‘darah’	[bagɤr] ‘baik’	[maledɔg]‘lempar’
/m/	[mĩntUl] ‘tumpul’	[ãmIs] ‘manis’	[bərɤ̃m] ‘merah’
/n/	[napəl] ‘nempel’	[wãni] ‘berani’	[edãn] ‘gila’
/ŋ/	[ŋinũm] ‘minum’	[mĩŋgu] ‘minggu’	[bɤrãŋ] ‘siang’
/ñ/	[ñiũm] ‘cium’	[ãñar] ‘baru’	-
/l/	[loba] ‘banyak’	[malãŋ] ‘lempar’	[ñɤkəl] ‘pegang’
/r/	[riɤt] ‘sakit kepala’	[mere] ‘beri’	[hibər] ‘terbang’
/s/	[səkɤt] ‘tajam’	[asĩn] ‘asin’	[tiIs] ‘dingin’
/h/	[harəp] ‘depan’	[ñahɔʔ] ‘tahu’	[ŋɤ̃nah] ‘enak’

Ramdhanti (2021)

Table 3. *Consonant letters in Sundanese phoneme*

Distribution of Sundanesse Phoneme			
Sundanesse Phoneme	First	Middle	End
/b/	Badag	Loba	Sabab
/c/	Cai	Cakcak	-
/d/	Dadas	Dandan	Buleud
/g/	Goréng	Jagjag	Baledog
/h/	Hampura	Dahar	Kadeudeuh
/j/	Jelema	Kahiji	Kai
/k/	Kabaya	Wewengkon	Rék
/l/	Leuleus	Lila	Baal
/m/	Murag	Sama	Caheum
/n/	Nangtung	Wangsul	Kajeun
/ny/	Nyacas		Monyong
/ng/	Ngala	Tangkal	Beuteung
/p/	Pondok	Samping	Cekap
/r/	Réa	Kabeneran	Cengir
/s/	Sabab	Desa	Gebis
/t/	Tunduh	Antos	Kalibet
/w/	Waka	Béwara	Cewaw
/y/	Yuswa	Hayu	Kalakay
/b/	Badag	Loba	Sabab
/c/	Cai	Cakcak	-
/d/	Dadas	Dandan	Buleud

(Siagian 2022)

Sundanese syllable patterns, as Ramadhanti (2021) discovered from the observation of syllables discovered in Sundanese in the observed area, remain as follows:

Table 4. *Sundanese syllable patterns*

Syllable Pattern	Sample
V	/a.bi/
KV	/ke.lek/
VK	/əm.be/
KVK	/ci.duh/
KKVK	/me.jret/
KKV	/klu.wih/

Ramadhanti 2021

These are syllable constructs in Sundanese, showing how consonants and vowels combine to form basic words in the language.

But in the English phonemic language system there are 36: 14 of them are vowel phonemes, that is to say: /a/, /ɪ/, /u/, /i/, /e/, /æ/, /ʌ/, /ɛ/, /ʊ/, /ɑ/, /ɔ/, /ə/, /o/, /ɜ/ 24 are consonant phonemes, that is to say: /j/, /h/, /w/, /ð/, /s/, /t/, /r/, /n/, /l/, /m/, /f/, /θ/, /v/, /b/, /g/, /ŋ/, /d/, /k/, /ʃ/, /ʧ/, /z/, /p/. English consonants are either voiced of voiceless as well as voiceless according to Yule (2020) and manner and place of articulation. However, the discussion is only about consonant issues. The consonants of the author whose sound segments are very difficult for native Sundanese speakers to pronounce, have received more attention and emphasis in teaching and training. Carter and Hasanah (2023) note that the bilabial series especially is problematic for those whose mother tongue, like Sundanese, operates on a phonemic system. In total, English has twenty-four consonants.

Fromkin (Porayow, 2022) notes that consonants are sounds made when there is a considerable constriction at a point in the vocal tract. i.e. the 24 consonants present in english. (1) /p/ ; *play* [**p**lay] 'bermain', *pull* [**p**ʊl] 'menarik'. (2) /b/ ; *big* [**b**ɪg] 'besar', *blood* [**b**lʌd] 'darah' (3) /m/ ; *man* [**m**æn] 'pria', *mouth* [**m**aʊθ] 'mulut'. (4) /f/ ; *freeze* [**f**ri:z] 'membeku'. (5) /v/ ; *vomit* [**v**omɪt] 'muntah', *heavy* [he**v**ɪ] 'berat'. (6) /θ/ ; *thick* [**θ**ɪk] 'tebal', *thin* [**θ**ɪn] 'tipis'. (7) /ð/ ; *they* [**ð**eɪ] 'mereka', *this* [ðɪs] 'ini', *smooth* [smuːð] 'mulus'. (8) /t/ ; *tooth* [**t**uːθ] 'tooth', *tongue* [tʌŋ] 'lidah', *tail* [teɪl] 'ekor'. (9) /s/ ; *stand* [**s**tænd] 'berdiri', *small* [smɔːl] 'kecil'/ (10) /d/ ; *dust* [**d**ʌst] 'debu', *dry* [draɪ] 'kering', *seed* [siː**d**] 'biji'. (11) /z/ ; *husband* ['hʌzbənd] 'suami', *squeeze* [skwiː**z**] 'meremas'. (12) /n/ ; *narrow* ['nærəʊ] 'sempit', *knee* [niː] 'lutut'. (13) /l/ ; *left* [**l**eft] 'kiri', *long* [lɒŋ] 'panjang', *leg* [leg] 'kaki'. (14) /r/ ; *right* **[r**aɪt] 'benar', *rotten* ['rɒtn] 'busuk'. (15) /ʧ/ ; *child* [**ʧ**aɪld] 'anak', *kitchen* ['kɪ**ʧ**ɪn] 'dapur'. (16) /ʃ/ ; *short* [**ʃ**ɔːt] 'pendek', *she* [ʃɪ] 'dia perempuan'. (17) /ʤ/ ; *job* [**ʤ**ɒb] 'pekerjaan', *angel* [eɪn**ʤ**l] 'malaikat'. (18) /ʒ/ ; *measure* [me**ʒ**ər] 'mengukur'. (19) /j/ ; *yellow* [**j**eləʊ] 'kuning', *you* [ju] 'kamu', *new* [n**j**u] 'baru'. (20) /k/ ; *cut* [kʌt] 'memotong', *count* [kaʊnt] 'menghitung'. (21) /g/ ; *good* [**g**ʊd] 'baik', *green* [griːn] 'hijau'. (22) /ŋ/ ; *think* [θɪ**ŋ**k] 'berpikir', *drink* [drɪŋk] 'minum'. (23) /w/ ; *wide* [**w**aɪd] 'lebar', *wing* [wɪŋ] 'sayap', *wet* [wet] 'basah'. (24) /h/ ; *how* [**h**aʊ] 'bagaimana', *heavy* ['hevi] 'berat'

Meanwhile, the distribution of English consonants is as follows: phonemes p, b, m, f, v, θ, ð, t, s, d, z, n, l, r, ʧ, ʃ, ʤ, k, and g. The consonants h, w, and j are distributed at the beginning and middle of words, ŋ is distributed in the middle and end, while ʒ is found only in the middle (Porayow, 2022).

Tabel 5. *Phoneme distribution in English*

		First Syllable	Middle Syllable	Last Syllable
1.	/p/ →	- play [pleɪ] 'bermain'	- - *spit* [s**p**ɪt] 'ludah'	- *help* [hel**p**] 'tolong'
2.	/b/ →	- big [bɪg] 'besar'	- *table* [teɪ**b**l] 'meja'	- *stab* [stæ**b**] 'menusuk
3	/m/ →	- man [mæn] 'pria'	- *smell* [s**m**el] 'bau'	- *warm* [wɔː**m**] 'hangat
4.	/f/ →	- *full* [**f**ʊl] 'penuh	- *left* [le**f**t] 'kiri'	- *leaf* [li**f**] 'daun'
5.	/v/ →	- *vomit* [**v**omɪt] 'muntah'	- *heavy* [he**v**i] 'berat' - *liver* ['lɪvər] 'hati'	- *live* [lɪ**v**] 'hidup' - *five* [faɪ**v**] 'lima'
6.	/θ/ →	- *thick* [**θ**ɪk] 'tebal'	- *mythic* [mɪ**θ**ɪk] 'khayal'	- *earth* [ɜː**θ**] 'bumi'
7.	/ð/ →	- they [ðeɪ] 'mereka'	- *feather* [fe**ð**ər] 'bulu'	- *with* [wɪ**ð**] 'dengan'
8.	/t/ →	- *turn* [**t**ɜːn] 'belokan'	- *star* [s**t**ɑː] 'bintang'	- *fruit* [fruː**t**] 'fruit'
9.	/s/ →	- *stand* [**s**tænd] 'berdiri'	- *breast* [bre**s**t] 'dada'	- *louse* [laʊ**s**] 'kutu'
10.	/d/ →	- *dust* [**d**ʌst] 'debu'	- *body* [bɒ**d**i] 'tubuh'	- *head* [he**d**] 'kepala'
11.	/z/ →	- *zoo [zuː]* 'kebun binatang'	- *lazy* [leɪ**z**iː] 'malas'	- *squeeze* [skwiː**z**] 'meremas'
12.	n/ →	- *new* [**n**ju] 'baru',	- *round* [raʊ**n**d] 'bulat'	- *thin* [θɪ**n**] 'kurus'
13.	/l/ →	- *left* [**l**eft] 'kiri'	- *old* [əʊ**l**d] 'tua'	- *full* [fʊ**l**] 'penuh'
14.	/r/ →	- *right* [**r**aɪt] 'kanan',	- *fruit* [f**r**uːt] 'buah'	- *ear* [ɪə**r**] 'telinga'
15.	/ʧ/ →	- *child* [**ʧ**aɪld] 'anak'	- *kitchen* ['kɪ**ʧ**ɪn] 'dapur'	- *scratch* [skræ**ʧ**] 'mencakar'
16.	/ʃ/ →	- *short* [**ʃ**ɔːt] 'pendek'	- *session* [se**ʃ**n] 'sidang'	- *wash* [wɒ**ʃ**] 'mencuci'
17.	/ʤ/ →	- *job [ʤɒb]* 'pekerjaan'	- *angel* [eɪn**ʤ**l] 'malaikat'	- *plunge [plʌnʤ]* 'menyelam'
18.	/ʒ/ →	- *you* [**j**u] 'kamu' - *cold* [**k**əʊld] 'dingin'	- *measure* [me**ʒ**ər] 'mengukur'	
19	/j/ →	- *good [gʊd] 'baik'*	- *new* [n**j**u] 'baru'	

20.	/k/ →		- *skin* [s**k**ɪn] 'kulit'	- *thick* [θɪ**k**] 'tebal'
21.	/g/ →	- *green* [**g**ri:n] 'hijau'	- *fingernail* ['fɪŋ**g**əneɪl] 'kuku'	- *big* [bɪ**g**] 'besar', - *dog* [dɒ**g**] 'anjing
22.		- *wide* [**w**aɪd] 'lebar'	- *think* [θɪ**ŋ**k] 'berpikir'	- *sing* [sɪ**ŋ**] 'menyanyi'
23.	- /ŋ/ →	- *heavy* ['**h**evi] 'berat'	- *swell* [s**w**ell] 'bengkak'	
24.	/w/ → /h/ →	- hat [het] 'topi'	- *ahead* [ə**h**ed] 'di depan'	

(Porayow, 2022)

This refers to the arrangement of phonemes in a language, consisting of sequences of subsequent sounds (Fasold, 1984 as cited in Porayow, 2022). Preceding: 24 phonotactic patterns in English.

(1) VK; *egg* [eg] 'telur', *eat* [i:t] 'makan', *all* [ɔ:l] 'semua'. (2) KV; *knee* [ni:] 'lutut', *see* [si:] 'melihat', *who* [hu:] 'siapa'. (3) KVK; *big* [bɪg] 'besar, *long* [lɒŋ] 'panjang', *hat* [het] 'topi'. (4) KKV; *new* [nju:] 'baru', *tree* [tri:] 'pohon, *three* [θri:] 'tiga'. (5) VVK; *ear* [ɪər] 'telinga' dan *ice* [aɪs] 'es. (6) VKK; *and* [ənd] 'dan' dan *apple* [æpl] 'apel'. (7) KKVK; *small* [smɔ:l] 'kecil', *smooth* [smu:ð] 'mulus'. (8) KVKK; *left* [left] 'kiri', *hand* [hænd] 'tangan'. (9) KKVV; *dry* [draɪ] 'kering', *blow* [bləʊ] 'meniup'. (10) VVKK; *old* [əʊld] 'tua'. (11) KVVKK; *round* [raʊnd] 'bulat', *cold* [kəʊld] 'dingin'. (12) KKVVK; *snake* [sneɪk] 'ular', *stone* [stəʊn] 'batu', (13) KKVKK; *stand* [stænd] 'berdiri', *drink* [drɪŋk] 'minum'. (14) KKKVK; *squeeze* [skwi:z] 'meremas', *split* [splɪt] 'membelah'

Contrastive analysis of phonemes in English vs Sundanese

The consonant phonemes in English comprise of 24 phonemes, but Sundanese only has 21 consonant phonemes However, in Sundanese, the phonemes f, v, θ, ð, ʧ, ʒ and ʤ are missing, while they are present in English. There are no such sounds as v, r, ɨ, ł, c, j, ny, or ng.

Variations in consonant distribution

The differences between English and Sundanesse are in the consonants /w/, /ŋ/, /b/, /d/, /ʃ/, /g/ in the consonants.

Table 6. *English and Sundanese consonant features*

	The first	Middle	End
1. /w/ → English :	+	-	+
Sundanesse :	+	+	+
2. /ŋ/ → English :	-	+	+
Sundanesse :	+	+	+
3. /b/ → English :	+	+	+
Sundanesse :	+	+	+
4. /d/ → English :	+	+	+
Sundanesse :	+	+	+
5. /ʃ/ → English :	+	+	+
Sundanesse :	+	+	+
6. /g/ → English :	+	+	+
Sundanesse :	+	+	+

Although consonants in Sundanese, as in English, contribute to phonemes, differences between the two languages exist with consonants. Based on the distribution of consonants, as well as consonant sequences, some key differences between Sundanese and English are somewhat as follows:

Comparison of consonants in Sundanese and English

Table 7. *Comparison of consonants in Sundanese and English*

Sundanesse Consonants	English Consonant
/b/	/b/
/c/	/ /
/d/	/d/
…	/f/
/g/	/g/
/h/	/h/
/j/	/ /
/k/	/k/
/l/	/l/
/m/	/m/
/n/	/n/
/ny/	…

/ng/	…
/p/	/p/
…	/q/
/r/	/r/
/s/	/s/
/t/	/t/
…	/v/
/w/	/w/
…	/x/
/y/	/y/
…	/z/

It is obvious from the above table that Sundanese has some consonants that are not found in English. On the other hand, there are many consonants used in English that are absent in Sundanese. Sundanese has nasal palatal consonants /ny/, nasal velar consonants /NG/ that do not exist in English (Ramlan, 2020). On the other hand, certain English consonants are absent from Sundanese, such as /z/, /x/, /v/, /q/, and /f/ (Hassan & Singh, 2022). The varying phoneme inventory can explain the difficulty that Sundanese speakers may experience when learning English, especially for the consonant sounds that they may not be accustomed to.

In order to know how the sounds works in each language that the study is searching for, even though the characteristics above itself only correlate with each respective language alone (Sundanese and English), through contrastive analysis, the researcher can then compare the inventory in bilabial consonant sounds in Sundanese and English as depicted in the table below:

Table 8. *English - Sundanese bilabial series*

Bilabial Series	Bilabial Stop	Fricative	Palatal	Velar
English				
Voiceless	P	F	-	K
Voiced	B	V	-	G
Sundanesse				
Voiceless	P	-	C	K
Voiced	B	-	J	G

Compared with /x/, /z/, /θ/, /ð/, /tʃ/, /ʒ/, and /dʒ/, the bilabial fricative voiced segments /f/ and /v/ are the most problematic sounds for Sundanese speakers, so there are many pronunciation issues in English sounds compared to other sounds that are not included in the Sundanese sound inventory. Most Sundanese speakers replace these sounds with the closest segment based on their perspective, namely the bilabial stop plosive /p/ (Rahman & Yusuf, 2023). In summary, Sundanese speakers show more difficulties in pronouncing English alveolar fricative voiceless and alveolar fricative voiced than they do in pronouncing other relatively more challenging segments, such as the dental fricative voiceless and dental fricative voiced. This substitution indicates a major phonological adjustment Sundanese speakers try to make when they learn English.

Data collected by a number of experts such as Clark and Clark (1977), Ervin-Tripp (1966), and Foss and Hakes (1978) essentially conforms to the order of acquisition of sounds predicted by Jakobson. Data collection showed that children can produce the sounds of the letters [b], [p], [d] and [t] at an earlier age than the sounds of the letters [f] and [s]. As a result, it is common for [f] to be replaced by [p], for example, saying [pis] instead of or [s] being replaced by [t], for instance, pronouncing as [tut] (Aryati, 2018). Furthermore, Hasanah and Wardani (2022) have recently studied and confirmed that the universality of sound emergence patterns correlates highly with articulatory simplicity and phonological universals. Finally, that the number of times an adult pronounces a sound for a child does not determine the emergence of that sound in the child's speech, according to Jakobson. What sounds will come up first in children's speech has to do with the frequency of the catch in the world's language; therefore, these sounds will be sounded further in their speech.

Language learning must consider teaching materials in the context of language education (Erika, 2019). Teaching materials are anything that is used to facilitate the process of technology in teaching and learning for the development of knowledge and language (Emzir, 2010). The other one is about developing teaching materials that related to what the researchers do by providing sources of various experiences specifically designed to be used to improve learning (Tomlinson in Emzir, 2010). It is the specification for the selection and sequencing of learning events or activities [the concept of a learning strategy itself]. (Darmawan, 2014) According to J.R. David (Junaidah, 2015), a strategy is a method or a way;

in education, a strategy is a plan, method, or series of activities aimed at achieving a particular educational goal. So, a learning strategy can be defined as a plan encompasses a chain of activities, organized specially to reach specific educative aims.

Learning is a communication process. In every communication process, there are three major components, namely; the instructor, the learner and the message component, which usually comprise of the course material itself. Erika (2019) does the Blended Learning model which are blended learning that can be used for English learners. Moreover, in the digitalization era, scientific and technological developments, especially information technology, have a major impact on efforts to compile and carry out learning strategies. Blended learning is one type of education and learning style that takes advantage of information technology and is widely known today. Blended learning integrates between traditional learning and virtual learning milieu (Sjukur, 2012). So to put it simply, blended learning is the combination of 2 learning environments. On one end there is in-classroom learning or traditional learning in general & on the other end there is technology & the internet involved learning. This study aims to develop teaching materials on Indonesian phonology integrated with blended learning in teaching English phonology. Similar to other approaches, this approach also targets helping English learners develop knowledge of the English Phonology through the use of technology such as visual, audio, and linguistic (language) devices.

The English Phonology course (theoretical course taught at many universities) That is why, English Phonology theories cannot be applied on teaching English as foreign language. The object phonology learning that is developed is practical activity to train continuously pronounce the segment sound bilabial fricative voiceless /F/ and bilabial fricative voiced /V/. Then, a learning model that can be established with the help of contemporary technologies is proposed. For example; in the English Sounds including bilabial fricative voiceless /F/ and bilabial fricative voiced /V/ the external resource can be utilized is Learn English Sounds Right application which can be downloaded from Google Play on Android-based where language learners can ask them to listen directly to various phoneme sounds in English standard of native speakers. That's one, another example is searching YouTube for pronunciation practice videos. In enrichment tasks, language learners may be asked to create videos following an acceptable English pronunciation based on phonetic rules. Virtual classrooms can also be applied with applications such as Google Classroom or Edmodo.

The above learning strategy is in fact a blended learning strategy. Learning Development with Blended Learning is expected to foster students to make good use of advances in science and technology in learning activities that suit their majors and improve their digital literacy.

CONCLUSION

The study shows that English and Sundanese have different inventory sounds. The instrument highlights the differences with contrastive analysis between the two languages; these findings were achieved by that form of analysis. Sundanese has a less restricted bilabial series than English. English has the bilabial voiced fricative [v] and the bilabial voiceless fricative: [f] as shown in the table above. On the other hand, Sundanese does not have these sounds. As a result, sounds at some level become difficult for Sundanese speakers to pronounce when learning English as a foreign language, and they often use the nearest sound(s) available in their inventory. Sundanese speakers, for instance, tend to pronounce bilabial voiced plosive [p] instead of bilabial voiced fricative [f], giving "father" the sound of "pather". The bilabial voiced fricative [f] and the bilabial voiced plosive [p] in English are both distinctive sounds (distinguishing words from each other: they are not allophones, but phonemes).

Another interesting fact is that Sundanese speakers also replace the bilabial voiced plosive [p] instead of pervasive bilabial voiced fricative [v], thus the words "volume" is pronounced as "polume". Again, neither bilabial voiced fricative [v] nor bilabial voiced plosive [p] [are] the same sound [and] are phonemes that distinguish meaning in English, not allophones due to complementary distribution. This research finds that, speaking in Sundanese, native Sundanese speakers simply struggle when it comes to articulating these English phonemes. Thus, the writer suggests and promotes for English language teachers and learners to consider the significance of training to say these effortful sounds. In short, EFL priests in Sundanese-speaking community are suggested to have more time to focus on sound pronounciation training on these sounds. Targeted training that focuses on these obstacles can make a drastic difference in pronunciation accuracy.

Research in this perspective is very valuable for the sake of achieving better English as a Foreign

Language (EFL) instructions, especially in Sundanese-speaking teaching context, at least for the Sundanese native speakers. ノンバーバルコーニング等日本語担任者との風物に配慮すべき学校/学校法人等.languageThe この記事は、2023年10月の時点のデータを基に制作されたものついて話す人。When using their own Sundanese background to say, they require individuals who are committed and band to learn the unique difference in sound. These unique sounds have led to advice that Sundanese English teachers must not "tolerate" the pronunciation challenges of Sundanese speakers.

This paper is intended to give contribition for language science development by providing methods of treatment English and Sundanese bilabial series that is consideren to be difficult to be learned. Sundanese speakers' English teachers need to be looking for and using the effective ways of teaching the pronunciation of these difficult distinguishing sounds. This is meant to give English language learners a smoother road to learning the foreign language.

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