

Comparative analysis of phonological processes in English reading among Sindhi and English-speaking college learners

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Received: 22 September 2023 | Accepted: 11 October 2023 | Published: 13 October 2023

Abstract: The research aimed to examine the phonological processes in English and assess the knowledge of phonological sounds among college students. The study utilized authentic newspaper paragraphs in everyday language from the Sindh region as the primary material. Data was collected from 30 young college participants who demonstrated proficiency in both English and Sindhi phonetics, with a specific focus on Received Pronunciation. The findings revealed substantial differences in accents between native speakers and those speaking English as a second language. It was observed that Sindhi English can be regarded as a distinct variety within the broader spectrum of Pakistani English. The study underscored the significant influence of one's first language on their pronunciation of a second language. Native speakers were able to accurately produce sounds even when such sounds were absent in their first language.

Keywords: Accent, Distinct variety, English and Sindhi phonetics, Phonological processes, Phonological sounds, Proficiency, Received pronunciation

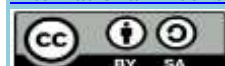
Biographical notes: Sarfaraz Ali is a versatile individual with a strong commitment to personal growth and social impact. A Pakistani national born on April 14, 1997, holds a Masters in Applied Linguistics from Universitas Diponegoro (UNDIP) and is dedicated to personal growth and social impact. With teaching experience, international training, and a passion for cross-cultural understanding, Sarfaraz is a Gold Medal recipient from Global Peace Institute London. He's committed to promoting education awareness and is a published researcher in linguistics. Sarfaraz aspires to continue making a positive impact on society and global understanding.

1. Introduction

Currently, within British English, the term "Queen's English" is utilized to denote Standard English. Standard English represents the accepted form of the language and is spoken by the Queen in England. Conversely, various regional English varieties exist in places like Ireland, Scotland, Wales, and Yorkshire. These regional variations, excluding Standard English or the Queen's English, are typically categorized as dialects. They are often perceived as non-standard or deviant forms of English and are less commonly employed in formal writing, television, or formal discourse. These dialects are often associated with oral communication and may be spoken by individuals from lower social strata (Ansari et al., 2016).

The acquisition of the English language is a paramount aspect of language learning and holds significant pedagogical importance in educational settings where language acquisition is a central focus. Teaching pronunciation to college-level learners entails imparting comprehensive knowledge about the phonetic structures of both their native language (L1) and the target language. However, it is a fact that many language instructors tend to overlook this critical facet or may lack proficiency in phonetics and phonology. The teaching methodologies for English, including pronunciation, are generally well-established. Nonetheless, the instruction of English pronunciation is not given due emphasis at the pre-primary, middle, secondary, higher secondary, college, and university levels, particularly in the Sindh Province. Additionally, college learners in Sindh who are proficient in the Sindhi language often exhibit phonetic and phonological idiosyncrasies, resulting in Sindhi-accented English instead of Received Pronunciation (RP)-accented English. This study investigates the phonological challenges that persist for college learners, focusing on English

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phonemes. Furthermore, it explores strategies for improving English reading skills and developing effective English pronunciation in accordance with Received Pronunciation (RP).

Phonology awareness is an essential element in language instruction, especially for learners acquiring a second language (L2). Phonology encompasses the ability to perceive and comprehend spoken sounds and the structure of a language, alongside both oral and aural skills. In the modern era, the significance of phonology, the sound system, in reading skills cannot be overstated; it is as fundamental as the soul to the body. The importance of phonological awareness becomes evident when considering that a single sound unit, referred to as a phoneme, can substantially alter word meanings. As Beck and Juel assert, based on research in reading, the development and instruction of reading skills heavily rely on phonological awareness of written words. On a related note, it is argued that "phonology awareness is pivotal in reading as it enables students to grasp alphabetic principles. In the initial stages, students struggle to comprehend how spoken words are represented in written form. It is only when students grasp that words consist of sound segments at the phoneme level that they can fully grasp alphabetic writing systems" (Liberman, Shankweiler & Liberman, 1989).

Lastly, research conducted by Bradley and Bryant (1985) underscores the fundamental impact of phonemic awareness on students' reading development, as it enables them to phonetically decode words in text. Research suggests that certain students encounter challenges in acquiring these skills, which are pivotal for proficient reading. Various studies indicate the potential for improved phonological awareness through targeted instruction.

1.1. Sindhi and English phonemic difference

Sindhi and English, as distinct languages, exhibit pronounced disparities in their respective sound systems. It is noteworthy that English is regarded as a language with well-structured phonology and phonetics, while many aspects pertaining to Sindhi phonetics and phonology remain underexplored, particularly in terms of the acoustic dimensions of the language. A notable scholar, Ladefoged (2004), highlights that English pronunciation can be challenging due to its non-phonetic nature, and English word spellings can sometimes be misleading.

When examining their sound inventories, English encompasses a total of 44 sounds, comprising 24 consonantal sounds and 20 vocalic sounds. Among the vocalic sounds, eight are diphthongs, while 12 are pure vocalic sounds. It is crucial to acknowledge that English orthography does not strictly adhere to word spellings. Roach (2004) identifies the following 24 English consonants: /p, b, t, d, k, g, m, n, ŋ, ʃ, ʒ, f, v, θ, ð, s, z, ʃ, ʒ, h, r, j, v, w, l/, and the following 20 vocalic sounds: /eɪ, aɪ, ɔɪ, əʊ, aʊ, ɪə, eə, ʊə, i, ɪ, ʊ, ɜ:, ə, u, ʊ, e, ʌ, ɔ:, æ, ɑ, ɒ/.

In contrast, the Sindhi vocal system encompasses 52 consonants and 10 vocalic sounds. The consonantal system includes: /p, p^h, b, b^h, t, t^h, d, d^h, t̪, t̪^h, d̪, d̪^h, tʃ, tʃ^h, dʒ, dʒ^h, k, k^h, g, g^h, ʃ, ʃ^h, ʒ, ʒ^h, [dʒ, tʃ], m, m^h, n, n^h, ŋ, ŋ^h, ɲ, ɲ^h, f, v, s, z, ʃ, q, x, ɣ, h, h^h, r, r^h, ɽ, [t̪^h], w, j, l, l^h/. Meanwhile, the vocalic system comprises: /ʌ, a:, ɪ, i: ʊ, u:, e, o, ʌo, ʌe/ (Allana & Jatoti, 2009; 1996). Jatoti (1996) posits the presence of eight diphthongs [iɪ:, əʊ, eɪ, æə, əo, ʊu:, ɔi:] in Sindhi and provides minimal pairs to illustrate these diphthongs. The exact categorization of diphthongs in Sindhi remains a subject of debate, necessitating further acoustic research to ascertain their precise number in the Sindhi language.

2. Aims of the study

The principal aim of this research is to investigate the phonological factors affecting English reading proficiency among college students in Pakistan. More precisely, the study is dedicated to identifying the primary difficulties experienced by second language learners, particularly Pakistani college students, in relation to Received Pronunciation (RP). This research endeavors to reveal the practical hindrances that second language learners and individuals from different linguistic backgrounds encounter when engaging with English reading tasks at the college level within the Sindh province.

3. Literature review

3.1. Mother tongue interference

Lado, renowned Lado, a distinguished researcher, scholar, and pioneering applied linguist, is widely recognized for his significant contributions, notably the introduction of the Contrastive Analysis (CA) theory. In his seminal work published in 1957, Lado articulates the following perspective: The author posits that by systematically comparing the language and culture that learners aim to acquire with their native language and culture, it becomes possible to anticipate and describe the patterns that will either pose challenges in the learning process or those that will not. Lado's standpoint underscores the importance of developing current pedagogical and experimental materials based on this type of comparative analysis (Lado, 1957, as cited in Troike, 2005).

In contrast, Troike (2005) contends that positive transfer occurs when a linguistic structure is appropriately applied in both languages, while negative transfer, also known as interference, arises when the structure of the first language (L1) is inappropriately applied in the second language (L2). Weinreich (1953) emphasizes the concept of phonic interference, which relates to how a speaker perceives and reproduces sounds in the new language (secondary language) in relation to their primary language. Interference takes place when a bilingual individual associates a phoneme of the secondary language with one from the primary language and, during production, subjects it to the phonetic rules of the primary language.

Furthermore, Corder (1981) elucidates that positive transfer occurs when there are similarities between the native language (L1) and the target language (L2). He notes that learners progress more rapidly along the developmental continuum, or specific parts of it, when formal similarities exist between their mother tongue and the target language. This notion aligns with Jones' (1976) perspective, which suggests that describing English vocalic sounds should

consider the vowels of second language learners' native tongue. This can be accomplished with the assistance of a phonetically trained instructor who can identify native vowels, enabling ESL learners to accurately pronounce English vowels. Transfer and interference are intertwined aspects in the process of second language acquisition.

Similarly, Lado (1957) provides comprehensive descriptions in his research: The author explains that individuals tend to transfer forms, meanings, and the distribution of forms and meanings from their native language and culture to the foreign language and culture. This transfer occurs both in productive aspects when attempting to speak the language and engage in the culture, as well as in receptive aspects when striving to comprehend and understand the language and native practices. It is assumed that students encountering a foreign language will find certain aspects relatively straightforward, while others will present considerable challenges. Elements resembling their native language will be easily grasped, while those that differ significantly will pose difficulties.

3.2. The Phonological Influence of L1 on L2

College students from the Sindhi community, who embark on the journey of acquiring English as a second language, face a spectrum of challenges in articulating, perceiving, and producing English language sounds. Their native language (L1), Sindhi, often poses hurdles to their progress as they attempt to pronounce English words by adapting the sounds and pronunciation patterns of their own language. This adaptation results in deviations in English phonology. It is crucial to acknowledge that phonological variations among languages render the acquisition of a second language particularly intricate for L2 learners. As highlighted by Jarvis and Pavelenko (2008), "Learners of L2 phonology are influenced by L1 pronunciation, which interferes with the production of L2 sounds. The relationship between L1 sounds and L2 sounds leads to mispronunciations and the emergence of new sounds instead of the intended ones."

Guiora (2006) underscores that achieving accurate phonological production poses a substantial challenge in second language acquisition. Pronunciation stands as a distinguishing factor between native and non-native speakers of any language, and it is evident that new learners encounter difficulties in attaining native-like pronunciation in their L2. Guiora (2006) elucidates some underlying causes for the challenges faced by learners in L2 pronunciation, including:

1. The absence of specific sounds in the learners' L1, preventing them from accurately reproducing L2 sounds.
2. Even when similar sounds exist in both L1 and L2, learners struggle to produce them correctly in practice. Hence, learning new words becomes pivotal for acquiring accurate pronunciation in the new language.
3. Learners encounter similar sounds in both L1 and L2 but lack the proficiency to effectively incorporate them into L2 sounds.

Jette et al. (2008) further elaborate on this phenomenon, asserting that when learners commence the acquisition of L2, some words are easier for them to pronounce while others pose challenges. Sounds that bear similarity to those in their L1 are acquired more readily, indicating that shared sounds between L1 and L2 facilitate the learning process, whereas distinct sounds across languages present difficulties for learners. The resemblance between phonology, morphology, and syntax in the first language and second language learning is a recognizable process. Nonetheless, there are specific sounds in L2 that do not exist in the learners' L1. As emphasized by Ellis (1994), "This deficiency leads L1 speakers to make errors in the production of L2 speech sounds." Bartelt (1992) also underscores the distinction in vocabulary and sound production among languages. Yang and Xu (2001) echo this sentiment, asserting that each language possesses its distinct words and pronunciation patterns. Lastly, prior research suggests that second language learning is notably influenced by the learner's L1 or mother tongue (O'Malley, 1990).

3.3. English in Pakistan (Sindh province)

English occupies a position of immense prestige and global dominance. Proficiency in the English language is indispensable for any nation striving to keep pace with progress across various sectors such as business, commerce, trade, communication, science & technology, and especially education (Tariq et al., 2013). In the 1980s, the concept of World Englishes emerged to distinguish between native languages spoken in countries like Britain, America, New Zealand, Australia, Canada, and parts of Europe, and non-native varieties. Braj Kachru categorized non-native varieties into the "outer circle," with Pakistani English recognized as a distinct variety, placing Pakistan in the category of outer circle countries (Kachru, 1986; Baumgardener, 2009, as cited in Tariq et al., 2013).

The significance of English in Pakistan, particularly in the province of Sindh, is noteworthy as it is often evaluated in comparison to the proficiency of native speakers. However, the reason behind this impact is that English has acquired the status of an indigenous language alongside Sindhi, Urdu, Siraki, and Punjabi. A considerable segment of Pakistan's population resides in rural areas, and the low literacy rate is often attributed to factors such as poverty and lack of access to education. Saptawulan Hening Nariswariatmojo (2011) examined both internal and external factors influencing language learning and the language learning process in Indonesia, highlighting similar challenges (Tariq et al., 2013).

3.4. Received pronunciation

The accent recognized as Received Pronunciation (RP) in the United Kingdom can be likened to the dynamic between standard varieties and regional forms in other European languages (McDavid, 1965). In the Oxford English Dictionary, RP is characterized as "the standard accent of English as spoken in the South of England" (Pearsall, 1999). Sociolinguistic factors have endowed RP with a particular prestige in specific regions of Britain (Hudson, 1981). As a result, it has traditionally been seen as the accent of individuals holding power, wealth, and influence. However, in recent times, some view it with negative connotations, associating it with unearned privilege (Crystal, 2007).

3.5. Types of phonemes

In various colleges, students receive instruction on the sounds of letters and words in the target language, which, in this case, is English. These students are often grouped based on characteristics such as whether the sounds are continuous or stop sounds, voiced or unvoiced sounds, which significantly contributes to their reading skills development. For instance, let's take the word "bun," which comprises three phonemes: /b/ /u/ /n/.

This instructional approach focuses on linguistic units, ranging from the largest (sentences) to the smallest (phonemes):

Sentence: "There is a bun of bread."

Word: "Bun," Syllable breakdown: "bun," "bun-bread," "bun-ny."

Onset-Rime: "b-un," "b-unny," "b-unny."

Phoneme: "b-u-n."

However, it's important to note that the word "foot" also contains three phonemes: /f/ /oo/ /t/.

4. Research methodology

This research adopts a qualitative research methodology to delve into the phonological processes influencing English reading skills among Sindhi-English college students in Pakistan. The study's participants are college learners who are in the process of acquiring English as a second language. The research approach is interpretative, with the primary objective of comprehending the participants' grasp of the English language concerning Received Pronunciation (RP). To collect data regarding the participants' English pronunciation, the study employs both observation and semi-structured interviews as data collection techniques.

The study's findings reveal that several factors play a significant role in shaping the participants' English pronunciation. These factors encompass the influence of the Sindhi language, cultural or native language background, and a potential lack of familiarity with RP. All of these elements can impact the way in which the participants articulate English words and sounds.

4.1. Participants

The study encompassed the acquisition of data from a cohort comprising 30 youthful individuals native to the Sindhi language. These individuals were enrolled as students in colleges and fell within the age range of 15 to 20 years. The recruitment of these participants took place at the "C&S and Govt Girls Degree Colleges Shikarpur, Sindh, Pakistan." Among the thirty participants, gender parity was maintained, with 15 female students and 15 male students at the collegiate level. It's important to note that these participants exhibited diverse backgrounds in terms of their English language learning experiences. It is essential to underline that all college learners in this study were, in fact, native speakers of the Sindhi language. The selection process was conducted through a random sampling method, and the participants were subsequently tasked with engaging in oral readings to facilitate the precise collection and subsequent analysis of their speech sounds.

4.2. Data collection

Before their active involvement in the research study, comprehensive information and guidance were generously provided to all the student participants regarding the entire research protocol. They were thoroughly briefed about the study's objectives and purpose. Subsequently, with a clear understanding of the research's aims, each student willingly elected to take part.

At the outset of the research endeavor, every student was furnished with a document containing a brief passage comprising specific words designated for pronunciation assessment. They were then furnished with clear and precise instructions to enunciate these words audibly, affording the research team the opportunity for meticulous scrutiny of their pronunciation. However, in consideration of the students' comfort and ease, some individuals were not compelled to record their readings, as certain participants exhibited hesitance or discomfort.

Throughout the duration of the data collection process, meticulous records were maintained, encompassing any phonetic errors or inaccuracies made by the participants. In the culminating phase of the research initiative, a semi-structured interview was conducted, focusing on the reading proficiency of all thirty college students, with particular emphasis on their pronunciation abilities. The amassed data was subsequently subjected to thorough analysis, vis-à-vis the Received Pronunciation (RP) framework, to derive pertinent conclusions and glean insights of significance.

4.3. Analysis

As previously mentioned, each college student was assigned a specific passage for the purpose of vocalizing it aloud, thereby facilitating the evaluation of their pronunciation proficiency within the framework of Received Pronunciation (RP). The evaluation table was segregated into two discrete sections: 1) Accurate and 2) Inaccurate, enabling the classification of each uttered word as either correct or erroneous. The ensuing data analysis is detailed below for thorough scrutiny and examination.

4.3.1. When: /wen/

In the initial phase of the study, participants were specifically instructed to enunciate the word "When" adhering to the guidelines of Received Pronunciation (RP). Subsequent assessment unveiled a notable discrepancy in pronunciation among the participants. Out of the entire cohort, merely 10 individuals exhibited a pronunciation in accordance with RP

standards, signifying a substantial divergence from the anticipated norm. This discrepancy in pronunciation can be attributed to the fact that, within the RP framework, the pronunciation of the /w/ semivowel necessitates the adoption of a rounded mouth position.

In contrast, in the Sindhi language, this particular sound is represented as /ʋ/ and is articulated as a fricative sound, which likely played a pivotal role in the majority of college students encountering difficulty in distinguishing between these two distinct phonetic elements. The distribution of pronunciation outcomes can be summarized as follows:

Accurate = 10, Inaccurate = 20.

4.3.2. Society: /sə'saɪti/

Throughout the duration of the study, there was a consistent tendency among the students to pronounce the word "society" as /susa:iti/. It was evident that their pronunciation deviated from the expected norm, which typically involves the utilization of the /ə/ vowel and the diphthong /aɪ/ to smoothly transition from the /a/ vowel to /i/ and subsequently to another occurrence of the /ə/ vowel. Additionally, it is noteworthy that the word contains an allophone /θ/, although Sindhi speakers tend to omit this sound. As a result, a number of participants, instead of accurately articulating the short vowel /a/, erroneously pronounced it as a long vowel /a:/.

Among the 30 participants, only a mere 6 individuals managed to achieve a marginally correct pronunciation, primarily owing to their prior familiarity with the word. The breakdown of pronunciation outcomes for "society" is as follows:

Accurate = 9, Inaccurate = 21.

4.3.3. Study: /'stʌdi/

It is noteworthy that a significant majority of participants encountered challenges in correctly pronouncing a specific phonetic sound, with only three individuals managing to articulate it accurately. The prevalent error observed among the participants was the substitution of the short close front vowel sound /i/ in place of adhering to the standards of Received Pronunciation (RP), which do not incorporate any initial sounds akin to the ones employed. Furthermore, nearly all participants consistently utilized the fricative post-alveolar sound /ʃ/ during their pronunciation attempts. In the Sindhi language, the word is articulated as /ɪʃtʌdi/ (ڀيٽڻا). However, the majority of students pronounced it as /ɪstʌdi/ (ڀيٽڻا), manifesting a proclivity to emphasize the final phoneme /d/. The distribution of pronunciation outcomes for this specific word is delineated as follows:

Accurate = 4, Inaccurate = 26.

4.3.4. Wild: /waɪld/

It is noteworthy that a substantial number of students displayed accurate pronunciation of the particular word, suggesting the possibility of prior exposure to it via various channels. These students showcased a solid grasp and familiarity with the correct pronunciation, resulting in precise articulation. In contrast, 16 individuals diverged from the anticipated pronunciation in accordance with Received Pronunciation (RP). The prevailing pattern among these students was the pronunciation of the word as /wɪld/, with a distinct emphasis on the final phoneme /d/. In summary, among the total participants,

Correct= 25, Incorrect= 5.

4.3.5. School: /skhu:l/

One of the notable findings that left us intrigued during our analysis was that all participants consistently pronounced this specific word correctly. However, it is noteworthy that in their pronunciations, the phoneme /s/ was coupled with the short front vowel sound /ɪ/. In accordance with Received Pronunciation (RP), the correct pronunciation should be /ɪsku:l/. Consequently, the participants' pronunciation, while uniform among themselves, deviated from the expected RP standard.

It is essential to recognize that being college students, they might have been previously exposed to this word and subsequently adopted a pronunciation pattern that incorporates the phoneme /l/ into their renditions.

5. Findings and discussions

5.1. Findings

After conducting a comprehensive analysis of the data, engaging in meticulous observation, and conducting extensive research, I have arrived at a sobering yet substantiated conclusion. A significant proportion of L2 speakers, specifically Sindhi college students, encounter substantial challenges in achieving authentic English pronunciation, particularly within the framework of Received Pronunciation (RP). This conclusion is manifestly supported by the unambiguous results obtained. It is apparent that the absence of certain phonetic sounds in their native language represents a formidable hurdle when endeavoring to accurately reproduce those sounds in English.

To illustrate this challenge, consider the presence of the sound /ŋ/ (ڳ) in the Sindhi language. As a result, Sindhi speakers find it relatively more accessible to proficiently articulate this particular sound when compared to English, Urdu, Latin, and other languages where this phoneme is notably absent. This underscores the inherent difficulty confronted by L2 speakers in acquiring sounds that are non-existent in their native language and in other languages they encounter.

5.2. Discussions

Unquestionably, the majority of individuals do not adhere to Received Pronunciation (RP) when pronouncing words, often lacking a comprehensive understanding of RP's pronunciation rules. Furthermore, participants involved in language learning may not possess knowledge of phonological elements like allophones and vowel sounds. Even those who speak different languages may lack a basic grasp of stress, intonation, or pitch, all of which play pivotal roles in everyday conversation. A significant contributing factor to this situation is the strong influence of native speakers' pronunciation, leading learners to attempt to pronounce English words solely based on their spelling. Consequently, numerous English words are pronounced inaccurately by second language (L2) speakers.

It is noteworthy that the phonological patterns followed by L2 college learners differ from those of native Sindhi speakers who are exposed to the Sindhi variety. Within the Sindhi province, there exists another linguistic variety known as Sindhi English. Comparable to other variations of English found in Asian countries, such as Indian English, Bangladeshi English, and Nigerian English, Pakistani English exhibits its own distinct features.

This present study delved into phonological processes in English reading among Sindhi and English-speaking college learners in Sindh, Pakistan. The findings offer valuable insights into both the commonalities and disparities in phonological processing between these two groups, shedding light on potential factors influencing reading performance in a second language context. In the subsequent discussion section, we will delve into the interpretation of key findings, explore their implications, and suggest potential avenues for future research.

The results of the current study unveiled substantial distinctions in phonological processing between Sindhi and English-speaking college learners. Sindhi learners encountered difficulties in accurately mapping the phonetic features of English, which detrimentally affected their reading fluency and comprehension. These difficulties manifested as higher error rates, longer response times, and lower accuracy scores among the Sindhi group when compared to the English-speaking group. These findings underscore the criticality of considering a learner's native language background and its potential influence on their second language reading abilities.

One plausible explanation for the disparities observed in the phonological processing abilities of the two groups could be attributed to the influence of the native language's phonological system. Sindhi, characterized by distinct phonological features and a different orthographic system, may pose challenges for learners when attempting to transfer their phonological knowledge to English. The phonological processes employed in Sindhi reading might not align seamlessly with those required for English reading, thereby leading to difficulties in decoding and word recognition. This finding lends support to the notion that the native language plays a pivotal role in second language reading acquisition.

Additionally, the study illuminated that English-speaking college learners exhibited a more robust phonological processing system in the context of English reading when compared to their Sindhi counterparts. This finding underscores the role of exposure to English as a first language and continuous usage of English across various contexts in cultivating efficient phonological processing skills. These learners showcased higher accuracy rates, quicker response times, and a greater aptitude for utilizing phonological cues in decoding and comprehension. The outcomes imply that the development of proficient phonological processing skills is strongly influenced by one's first language and the extent of exposure to the target language.

The findings of this study carry substantial implications for language education in Sindh, Pakistan. They suggest that educators and teachers should acknowledge the significance of phonological processes in second language reading and provide targeted instruction to address the specific challenges encountered by Sindhi learners. Recommended measures include phonological awareness activities, explicit instruction on phonics rules, and substantial exposure to English sounds and words to enhance the phonological processing skills of Sindhi learners. Moreover, integrating strategies that facilitate the transfer of phonological knowledge from Sindhi to English, such as highlighting similarities and differences between the two languages, can be instrumental.

However, it is important to acknowledge certain limitations in this study. First, the sample size was relatively small, which limits the generalizability of the findings. Future studies should aim to encompass larger and more diverse participant groups to enhance the external validity of the results. Second, the study focused primarily on college learners, potentially limiting the representativeness of the findings to the entire population of Sindhi and English-speaking individuals in Sindh, Pakistan. Future research endeavors should include participants from various educational levels and age groups to gain a more comprehensive understanding of phonological processing abilities within different contexts.

In conclusion, this study makes a significant contribution to the comprehension of phonological processes in English reading among Sindhi and English-speaking college learners in Sindh, Pakistan. The findings underscore the challenges faced by Sindhi learners and emphasize the profound influence of native language phonological systems on second language reading. This study highlights the importance of tailored instruction and language education practices that address the specific needs of Sindhi learners in fostering their phonological processing skills. Furthermore, future research should delve deeper into the factors influencing phonological processing in second language reading and investigate effective pedagogical interventions for enhancing reading abilities among learners in similar contexts.

6. Contributions of the study

This research study makes several significant contributions to the field of linguistics and phonology, particularly in the context of English language learning in Sindh, Pakistan:

Insight into Phonological Challenges: This study offers valuable insights into the phonological challenges faced by college learners in Sindh, Pakistan, particularly those with a Sindhi language background, when it comes to acquiring

English pronunciation, with a focus on Received Pronunciation (RP). It sheds light on the specific phonetic difficulties encountered by these learners.

Native language influence: The research highlights the significant influence of a learner's native language (Sindhi) on their pronunciation of English. It underscores the role of phonological patterns in the native language in shaping the phonological processes in English reading.

Comparative analysis: By comparing the phonological processes of Sindhi-speaking college learners with those of English-speaking college learners, this study contributes to a better understanding of the disparities and commonalities in phonological processing between these two groups.

Pedagogical implications: The findings have important pedagogical implications for language instruction in Sindh, Pakistan. They underscore the need for tailored instruction and strategies that address the specific phonological challenges faced by Sindhi learners in acquiring English pronunciation.

Role of exposure: The study emphasizes the role of exposure to English as a first language in developing efficient phonological processing skills. It suggests that continuous usage of English in various contexts contributes to enhanced phonological processing abilities.

Future research directions: This research paves the way for future investigations into factors influencing phonological processing in second-language reading. It encourages further exploration of effective pedagogical interventions for improving reading abilities among learners in similar linguistic contexts.

In conclusion, this study adds to the body of knowledge regarding phonological processes in English reading among Sindhi college learners in Sindh, Pakistan, and underscores the importance of considering native language influences in language instruction and curriculum design. It offers practical insights for educators and researchers aiming to enhance English language learning outcomes in diverse linguistic settings.

7. Implications of the study

The findings of this research have significant implications for various stakeholders involved in language education, policy-making, and curriculum development in Sindh, Pakistan, and potentially in other regions with similar linguistic contexts. The following implications highlight the practical relevance of this study:

Curriculum design and language instruction: Educators and curriculum developers can use the insights from this study to design language instruction programs that specifically address the phonological challenges faced by Sindhi-speaking college learners when acquiring English pronunciation. Tailored phonological awareness activities and phonics instruction can be integrated into language curricula to improve reading proficiency.

Teacher training: The study underscores the importance of equipping language instructors with proficiency in phonetics and phonology. Professional development programs for teachers should emphasize the significance of phonological processes in language acquisition and provide strategies to help learners overcome phonological challenges.

Bilingual education: Educational institutions can consider implementing bilingual education programs that acknowledge the influence of the native language on second language acquisition. Promoting bilingualism can foster a more nuanced understanding of phonological patterns in both languages and help learners transfer phonological knowledge effectively.

Materials development: Publishers of language learning materials should develop resources that cater to the phonological needs of Sindhi learners of English. These materials should include pronunciation guides, audio resources, and activities that focus on specific phonemes that pose challenges.

Language policy: Policymakers can consider the findings of this research when formulating language policies in educational contexts. Policies should recognize the importance of linguistic diversity and the role of the native language in language acquisition. Promoting multilingualism can enhance language learning outcomes.

Research continuation: This study opens avenues for further research into the phonological challenges faced by learners in diverse linguistic contexts. Future studies can explore additional factors influencing phonological processing, develop effective pedagogical interventions, and investigate the long-term impact of improved phonological awareness on language proficiency.

Enhanced communication skills: Improved phonological processing skills can lead to enhanced communication skills in English, which is valuable in various domains, including business, academia, and international communication. The study's implications extend to individuals seeking to improve their English pronunciation for personal and professional growth.

Inclusive education: Recognizing the diverse linguistic backgrounds of learners and addressing their phonological challenges can contribute to inclusive education practices. Inclusive classrooms accommodate learners with varying language proficiencies and provide targeted support to meet their specific needs.

In conclusion, the implications of this study extend beyond the realm of academia and have practical significance for educators, policymakers, language learners, and the broader society in Sindh, Pakistan. By acknowledging the influence of the native language on phonological processes and adopting strategies to address these challenges, it is possible to enhance language learning outcomes and promote effective communication skills among college learners.

8. Conclusion

Based on the extensive study conducted, it is evident that incorrect pronunciation often stems from the influence of one's first language on their second language during conversations. Notably, individuals who are native speakers of Sindhi or other languages tend to instinctively reproduce sounds from their first language or rely on sounds that already

exist in their native tongue when using their second language. Consequently, encountering difficulties in incorporating sounds that are absent or different in their first language presents a considerable challenge when attempting to articulate those sounds accurately in their second language.

In conclusion, the primary objective of this study was to investigate the phonological processes involved in English reading among Sindhi-speaking college learners in Sindh, Pakistan, and to compare their performance with that of English-speaking college learners. The research findings shed light on the challenges faced by Sindhi-speaking learners when reading in English and provide insights into the potential factors contributing to these difficulties.

The data analysis revealed several noteworthy findings. Firstly, Sindhi-speaking college learners encountered challenges in accurately decoding and pronouncing English words, particularly those with intricate phonological patterns. This suggests that their native language, Sindhi, which possesses a distinct phonological system in comparison to English, significantly influences their ability to effectively transfer phonological skills. This finding aligns with previous research emphasizing the impact of L1 phonology on L2 reading.

Furthermore, the study identified specific phonological processes that Sindhi-speaking learners struggle with, including vowel sounds, consonant clusters, and word stress patterns. These findings indicate that these learners may benefit from targeted instruction and intervention, focusing on these specific areas of phonological processing.

Moreover, a comparison between Sindhi-speaking and English-speaking college learners indicated that the latter group generally exhibited superior phonological awareness and reading skills in English. This discrepancy underscores the significance of exposure to and immersion in the target language from an early age in contributing significantly to the development of phonological processing skills in reading.

The implications of these findings carry substantial weight for educators and curriculum developers in Sindh, Pakistan. Recognizing and addressing the unique challenges encountered by Sindhi-speaking learners in acquiring phonological skills for English reading is essential. Providing explicit instruction and interventions that target the specific phonological processes identified in this study can enhance their reading abilities and bolster their language development.

Future research endeavors could delve into the effectiveness of various instructional approaches and interventions in improving the phonological processing skills of Sindhi-speaking college learners. Longitudinal studies could also explore the trajectory of phonological development in these learners over time, in addition to investigating the impact of factors such as exposure to English media and language input outside of educational settings.

In essence, this comparative study sheds light on the phonological processes involved in English reading among Sindhi-speaking college learners and underscores the necessity for tailored instruction and interventions to support their language development. By addressing these challenges, educators can facilitate the acquisition of essential reading skills and enhance the educational outcomes of Sindhi-speaking learners in Sindh, Pakistan.

9. Funding

This research paper received no internal or external funding”

10. Acknowledgement

In the realm of profound gratitude, I humbly acknowledge the unswerving guidance and benevolent blessings bestowed upon my odyssey by the Almighty Allah. This divine grace has been the guiding force behind the triumphant voyage into the intricate Comparative Analysis of Phonological Processes in English Reading Among Sindhi and English-Speaking College Learners. This monumental achievement stands as a testament to the invaluable support and enlightenment granted by a multitude of gracious souls, with a special acknowledgment reserved for my mentor, Dr. Mualimin, M.Hum, whose role has been nothing short of transformative.

The depth of my appreciation extends to luminaries such as Dr. Nurhayati, M.Hum, and Dr. Agus Subiyanto, M.A., whose unwavering wisdom and mentorship have been fundamental in shaping the very fabric of this research. As I venture onward, I fervently beseech Allah to endow me with the wisdom to employ this research for the betterment of society. It is my sincere hope that this work serves as a wellspring of knowledge for educators and scholars, despite the inherent limitations it acknowledges. I eagerly welcome constructive feedback, for it shall undoubtedly be the compass guiding future works in this profound realm.

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