Evaluating Students' Performance in Consonant Phoneme Identification within Word Structures

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Phonemes

Intuitive-imitative approach

Related Wilcoxon signed rank test

One-group pretest posttest design

ABSTRACT

The prime objectives of this article are to evaluate the bachelor level first year major English students' performance in consonant sound identification within word structures, and examine the effectiveness of an intuitive-imitative approach in teaching consonant phonemes of the spellings. To attain these objectives, the researchers employed the one-group pretest posttest research design in which 200 phoneme recognition test items as data collection tools regarding the consonant sounds of English were administered to 30 students at Makawanpur Multiple Campus, Hetauda, Nepal in 2023 before and after teaching them the sounds through the intuitive-imitative approach for 30 teaching periods. Population being low, this study involved the census for collecting data. After observing their performance in consonant phoneme identification, it was found that their performance was bad at identifying the phonemes of the spelling's "g" in "Genre", "c" in "Cello", "th" in "Thailand", etc. Their performance was not so good at identifying the phonemes of the spellings "j" in "Join", "y" in "Yak", etc. Their performance was satisfactory in identifying the phonemes of the spelling's "g" in "Gene", "g" in "Gem", "n" in "Donkey", etc. Similarly, they were good at identifying the phonemes of spelling "p" in "Punch", "b" in "Boat', "k' in "Book", etc. A related samples Wilcoxon signed rank test value (p<.05) implies that there was a significant difference in the median scores of the posttest scores and the pretest scores of the students. It suggests that the intuitive-imitative approach was an effective method of teaching sounds. This article is significant in a phonological process and pronunciation, resulting in phonemic awareness.

1. INTRODUCTION

Phoneme identification is a fundamental aspect of language acquisition and literacy development, serving as a precursor to proficient reading and comprehension skills (Norton, 2018). Among the phonetic elements, consonants play a crucial role in shaping the intelligibility and clarity of speech. Efficient identification of consonant phonemes within word structures is indicative of phonological awareness, a skill closely linked to reading proficiency (National Reading Panel, 2000). Understanding how students perceive and distinguish consonant sounds within various linguistic contexts is paramount for educators, striving to enhance literacy instruction and intervention programs.

Numerous factors contribute to the complexity of consonant phoneme identification, including phonological complexity, linguistic diversity, and individual variability in cognitive processing (Serniclaes et al., 2004). Consequently, evaluating students' performance in this domain necessitates a multifaceted approach that considers both the intrinsic properties of phonemes and extrinsic factors influencing perceptual processes.

The literature underscores the significance of phonological awareness in reading acquisition, with consonant phoneme identification emerging as a critical component of this construct (Anthony & Lonigan, 2004). Research suggests that deficits in phonological processing, particularly in distinguishing individual phonemes within words, are strongly associated with reading difficulties and dyslexia (Bradley & Bryant, 1983). Therefore, assessing students' proficiency in consonant phoneme identification can serve as an early indicator of potential literacy challenges, guiding targeted intervention strategies. Moreover, the complexity of consonant phoneme identification extends beyond mere auditory discrimination, encompassing orthographic representations and morphophonemic variations (Goswami et al.,2001). Orthographic knowledge, including grapheme-phoneme correspondence, influences phonemic awareness and contributes to accurate decoding skills (Share, 1995). Consequently, evaluating students' ability to recognize and manipulate consonant phonemes within written language provides insights into their orthographic proficiency and reading comprehension abilities.

Given the importance of consonant phoneme identification in literacy development, numerous assessment tools and methodologies have been developed to evaluate students' performance in this domain. Traditional assessments often involve auditory discrimination tasks, where students are required to identify and differentiate consonant phonemes presented in isolation or within words (Ehri et al., 2001). More recent approaches incorporate multimedia resources and interactive platforms to engage students in phoneme identification exercises, catering to diverse learning preferences and enhancing assessment validity (Torgesen et al., 1999).

Despite the availability of assessment tools, challenges persist in accurately evaluating students' proficiency in consonant phoneme identification, particularly among linguistically diverse populations and individuals with language-based learning disabilities (Peterson & Pennington, 2015). Variability in dialectal features, speech sound production, and language exposure necessitates culturally and linguistically sensitive assessment practices that account for these differences (Gillon, 2005). Moreover, the impact of environmental factors, such as socioeconomic status and educational resources, on phonological awareness must be considered to ensure equitable assessment practices (Whitehurst & Lonigan, 1998).

In light of these considerations, this study aims to evaluate students' performance in consonant phoneme identification within word structures using a comprehensive assessment framework. By employing a diverse range of assessment

tasks and considering contextual factors influencing phonological processing, this research seeks to provide insights into the developmental trajectory of phonemic awareness and inform evidence-based literacy instruction practices.

1.1 OBJECTIVE OF THE STUDY

The chief objectives of this research study are:

- To evaluate students' performance in consonant phoneme identification within word structures.
- To examine the effectiveness of the intuitive-imitative approach in teaching the consonant phonemes of the spellings.

1.2 SIGNIFICANCE OF THE STUDY

This study holds significance in appraising students' competency in phoneme recognition. By assessing consonant phoneme identification within word structures, it focuses on potential reading difficulties. It aids teachers in tailoring interventions to enhance phonemic awareness, contributing to improved reading outcomes (Smith et al., 2020). Such insights are pivotal for designing effective pronunciation courses.

1.3 STATEMENT OF THE PROBLEM

Pronunciation is one of the most difficult aspects for both teachers and students in Nepal, where English is taken as a foreign language. Bachelor first year major English Students in the Faculty of Education at Makawanpur Multiple Campus have difficulty in consonant phoneme identification within words. Despite the fact that the students must have a sound understanding of the phonemes of the spellings for acceptable pronunciation and effective communication, there are some challenges, such as the complex relationship between spellings and their phonemes, lack of exposure, loanwords, inappropriate teaching methods, etc. Without addressing these obstacles, the impediment to mastering English pronunciation will persist within the field of language education.

The primary objective of this study is to evaluate the bachelor level students' performance in consonant phoneme identification of the spellings in the words. To achieve this goal, a sample of 30 students will be selected, and data collection tools comprising different spellings within 200 words will be administered. These tools aim to evaluate the students' proficiency in identifying the phonemes corresponding to specific spellings. The study employs an intuitive-imitative approach as an intervention to teach students the consonant sounds of English. This method involves encouraging students to engage with video tapes prepared by native English speakers, allowing them to listen and drill the sounds. Following the instructional intervention, a one-group pretest posttest design will be utilized to evaluate the students' performance. Statistical analysis, specifically a related Wilcoxon signed rank test, will be conducted to test the null hypothesis regarding the effectiveness of the instructional intervention. By comparing students' pre- and post-scores, the study aims to ascertain whether there is a significant improvement in consonant phoneme identification following the implementation of the intuitive-imitative teaching approach.

This approach enables a comprehensive examination of the impact of the teaching method on students' phoneme awareness and pronunciation skills. This research addresses a critical gap in English language education in Nepal by investigating strategies to enhance students' proficiency in consonant phoneme identification within words. Through rigorous evaluation and analysis, the study will contribute valuable insights that can inform more effective pedagogical approaches for teaching pronunciation in the Nepalese context.

1.4 DELIMITATIONS OF THE STUDY

The study was carried out under the following delimitations:

- There were only 30 students studying at the bachelor level first

year students in the Faculty of Education at Makawanpur Multiple Campus, Hetauda, Nepal in 2023.
- Only consonant sounds were used to form the test items.
- The intuitive-imitative approach was employed as the intervention.

1.5 NULL HYPOTHESIS

There is no significant difference in the median scores of the posttest scores and the pretest scores of the students.

1.6 LITERATURE REVIEW

Literature review was done by focusing on the following key aspects:

1.6.1 SPELLINGS AND SPEECH SOUNDS OR PHONEMES

Speech is a manifestation of language and spoken language is normally a continuum of sound (Gimson, 1990). Consonant sounds are such speech sounds which are articulated by a closure or narrowing in the vocal tract (Crystal, 2003). They are generally made by a definite interference of the vocal organs with the air stream (O'Connor, 2000). They can be considered the sounds characterized by constriction accompanied by some measure of friction or closure followed by release (Verma & Krishnaswamy, 1999). English pronunciation is actually problematic for foreign pupils and it is owing to the fact that spelling and pronunciation are two dissimilar matters. Teaching speech sounds is a tough task, but it can certainly bring changes in the students' achievements (Sharma, 2019). There is no always corresponding relationship between a spelling and a sound. A spelling is a process of forming words from individual letters, and a letter is a written or printed sign representing a sound in speech (Hornby, 2010). It is the process of forming words from individual letters according to the principles of underlying accepted usage. It is defined as the procedure or action of writing or specifying the letters of a lexeme (Oxford Dictionary of English, 2003).

It may have multiple phonemes, such as the spelling "c" is /s / phoneme in the word "Center", /k / in the word "Cat" and / tʃ / in the word "Cello". Moreover, all the spellings in the words do not always form a sound. (Sharma, 2022). They remain silent, such as "k" in the word "Know", "g" in the word "Gnat", etc. are silent. There are 21 consonant letters in English language. The set of consonant letters in the English alphabet consists of both capital and small letters. The capital letters include B, C, D, F, G, H, J, K, L, M, N, P, Q, R, S, T, V, W, X, Y, and Z. The corresponding small letters are b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, and z. Similarly, A, E, I, O and U are capital vowel letters and a, e, i, o and u are small vowel letters. Consonant sounds are speech sounds of a language. English language in general retains 24 consonant sounds which are / p /, / b /, /t/, /d/, /k /, /g/, / tʃ /, / dʒ /, / m /, / n /, /ŋ /, / f /, / v /, / θ /, / ð /, / s /, / z /, / ʃ /, / ʒ /, / h /, / r /, / j/, / w / and / l /.

Phonemes are the smallest units of sound in a language that can distinguish one word from another. They form the basis of phonemic awareness, which is essential for language acquisition and literacy development (Crystal, 2003). They are abstract units that represent speech sounds and are often contrasted with allophones, which are different variants of a phoneme that do not change the meaning of a word (Ladefoged & Johnson, 2015).

According to Crystal (2003, phonemes are defined as the smallest units of sound in a language which can distinguish one word from another." This definition underscores the critical role of phonemes in language, as they contribute to the meaningful distinctions between words. Ladefoged and Johnson (2015) further elaborate on the concept of phonemes, explaining that they are abstract representations of speech sounds that are distinct from their physical realization in spoken language.

Phonemes are fundamental units of sound in a language, crucial for distinguishing between words and facilitating communication. They play a central role in phonemic awareness and are

essential for language learning and literacy development.

English consonant sounds refer to the various speech sounds produced by obstructing or partially obstructing airflow in the vocal tract. These sounds are articulated by various configurations of the tongue, lips, teeth, and other speech organs. English consonants can be classified based on their manner of articulation, place of articulation, and voicing (Ladefoged & Johnson, 2011).

According to Ladefoged and Johnson (2011), English consonant sounds are produced by obstructing or partially obstructing airflow in the vocal tract. They further explain that these sounds can be classified based on their manner of articulation, such as stops, fricatives, affricates, nasals, and liquids. Additionally, consonants can be categorized based on their place of articulation, referring to where in the vocal tract the obstruction occurs, and voicing, which distinguishes whether the vocal cords are vibrating during the production of the sound.

English consonant sounds encompass a range of speech sounds produced by obstructing airflow in the vocal tract, with variations in manner, place, and voicing. Understanding these distinctions is essential for phonetic analysis and language learning.

1.6.2 DIFFICULTIES IN DECIPHERING PHONEMES FROM THE SPELLINGS

Phonemes are the smallest units of sound in a language that can distinguish meaning between words. Spelling refers to the way words are written or spelled. The relationship between phonemes and spelling can be complex and challenging. Deciphering phonemes from the spellings of words is difficult due to factors, such as historical inertia in spelling (Crystal, 2003), the influence of various language changes (Trudgill & Hannah, 2002), and borrowed words (Aitchison, 2012), imperfect correspondence between letters and sounds (Adams, 1990), and historical influences (Wydell, 1998). The other reasons are orthographic depth, historical influences on spelling conventions, loanwords with divergent pronunciations, and dialectal variations within a language. The difficulty in deciphering phonemes from spellings arises from the inherent irregularities of English spelling, the complexity of its phonology, potential individual processing challenges, and sometimes inadequate instructional approaches. The complex and inconsistent nature of English orthography, with multiple ways to spell individual phonemes as well as many irregular words, makes it challenging for children to decipher the phoneme-grapheme correspondences and learn correct spellings (Treiman, 1993; Brooks, 2015; Maggio, Izaute, & Chenu, 2018; Moats & Tolman, 2009).

Identifying English phonemes within words poses a significant challenge for non-native speakers due to various factors inherent to the English language and the learners' linguistic backgrounds. Firstly, the English language exhibits a high degree of phonemic variability and inconsistency, with many sounds having multiple possible representations (Gimson, 1990). This variability can lead to confusion and difficulty for non-native speakers in distinguishing between similar phonemes. Additionally, differences between the phonetic structures of learners' native languages and English contribute to the challenge. Languages vary in their inventory of phonemes and the rules governing their use, leading to interference when acquiring new phonemic systems (Flege, 2003). For example, languages such as Spanish or Italian have a relatively simple phonetic system compared to English, which possesses a larger number of vowels and consonants with subtle distinctions.

Furthermore, non-native speakers may struggle with English phonemic distinctions that do not exist in their native languages. For instance, the distinction between the "th" sounds (/θ/ and /ð/) or the English "r" sound (/ɹ/) may be particularly challenging for speakers of languages that lack these sounds (Derwing & Munro, 2015). Such difficulties can impede accurate pronunciation and comprehension.

Moreover, limited exposure to spoken English in authentic contexts can hinder phonemic awareness development (Derwing & Munro, 2015). Non-native speakers may have fewer opportunities to practice and refine their phonetic skills, leading to persistent difficulties in identifying English phonemes within words. The difficulty in identifying English phonemes within words for non-native speakers arises from the complex and variable nature of the English phonetic system, differences between learners' native languages and English, the presence of unfamiliar phonemic distinctions, and limited exposure to spoken English. Understanding these challenges is essential for developing effective instructional strategies to support non-native speakers in acquiring English phonemic awareness skills.

1.6.3 INTUITIVE-IMITATIVE APPROACH TO TEACHING THE CONSONANT SOUNDS OF ENGLISH

The intuitive-imitative approach, which comprises intuition and imitation, is a valuable tactic for teaching the sounds of English. This approach depends on the learner's capability to listen and imitate the rhythms and sounds of the target language without the intervention of any explicit information (Sharma, 2020). It allows learners to absorb the rhythm, intonation, and stress patterns of English by engaging with authentic language materials (Larsen-Freeman, 2003). Imitation is a powerful tool in language learning. It helps learners refine their own articulation and intonation to sound more natural and fluent. Through Imitation, learners repeat after a model speaker, focusing on matching the prosody and articulation as closely as possible (Murphey, 1996). By mimicking the sounds, learners can develop their pronunciation skills. Combining intuition with imitation creates a powerful learning strategy for acquiring the sounds of English. An intuitive-imitative approach offers a holistic method for teaching the sounds of English, employing both intuition and imitation to enhance learners' pronunciation skills

effectively. Teachers can incorporate various techniques, such as audio-visual materials, role-playing scenarios, and communicative tasks, to engage learners in authentic language production and imitation of native speakers (Celce-Murcia et al., 2010). This approach can be applied to assess improvements in both segmental and suprasegmental aspects of pronunciation, including vowel and consonant sounds, stress patterns, and rhythm (Derwing & Munro, 2015). It is a good pronunciation model (Hismanoglu & Hismanoglu, 2010). It aids in the natural acquisition of sound patterns. The intuitive-imitative approach in teaching the sounds of English draws upon principles of phonological acquisition and sociolinguistic theory. According to Krashen's input hypothesis (1982), language acquisition occurs most effectively when learners are exposed to comprehensible input that is slightly beyond their current proficiency level. Similarly, sociolinguistic research emphasizes the role of imitation and social interaction in language learning, suggesting that learners acquire pronunciation through exposure to authentic models and opportunities for practice (Gass & Selinker, 2008). By integrating these theories, the intuitive-imitative approach encourages learners to intuitively perceive and imitate the sounds of English in meaningful contexts.

There are several advantages of using the intuitive-imitative approach which is natural and engaging. By mimicking sounds, learners can feel a sense of progress and accomplishment, making pronunciation practice less intimidating. This approach can be particularly effective for acquiring sounds, which are often challenging to learn through explicit instruction (Hashemian & Fadaei, 2011). Intuition combined with imitation enables learners to achieve greater accuracy in producing English sounds. Regular practice through intuitive-imitative methods enhances fluency by helping learners develop a natural rhythm and intonation. Mastering the sounds of English through

intuition and imitation boosts learners' confidence in their speaking abilities.

The intuitive-imitative approach mirrors this natural process in the context of language learning. The core activity in the intuitive-imitative approach is guided imitation. Learners listen to short, focused segments of speech and then attempt to replicate them as accurately as possible. The teacher plays a crucial role in providing positive reinforcement, correcting errors gently, and gradually increasing the complexity of the sounds being practiced.

2. MATERIALS AND METHOD
2.1 RESEARCH DESIGN

A one-group pretest posttest research design in which the mark scores of a group of students were evaluated before teaching and after teaching them consonants through the intuitive-imitative approach as an intervention.

2.2 POPULATION

30 bachelor level first year major English students in the Faculty of Education composed the population of the study.

2.3 SAMPLE SIZE

The population was low. Therefore, the researcher involved all the students as a sample, known as a census.

2.4 DATA COLLECTION TOOLS

The students were administered 200 phoneme recognition test items as data collection tools. This test items included the different words and the students had to identify the phonemes of the particular syllables within words. Phoneme recognition test scores were analyzed using descriptive statistics to examine participants' overall performance.

2.5 RELIABILITY OF THE TOOLS

The reliability of the tools was observed .835 on the basis of Guttmann Split-Half Coefficient.

2.6 ANALYSIS AND INTERPRETATION OF DATA

Quantitative data analysis involved calculating descriptive statistics such as frequencies to summarize participants' performance on the phoneme recognition test. The data were non-parametric. Therefore, a related samples Wilcoxon signed rank test was executed to test the null hypothesis by using SPSS.

2.7 ETHICAL CONSIDERATIONS

This study received ethical approval from the students. Their confidentiality and anonymity were ensured throughout the research process.

3. ANALYSIS AND INTERPRETATION OF DATA

This study employed descriptive statistics such as frequency for analyzing the data.

Table 1: *Phonemes of Spellings "p/ pp"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Punch	30	0	/p /
Apple	27	3	/ p /
Reap	30	0	/ p /

Table 1 depicts that it was easier for the students to identify the phoneme of the spelling "p" in the words "Punch" and "Reap" in comparison to discerning the phoneme of the spelling "pp" in the word "Apple". The fact that all respondents could identify the phoneme for the spelling "p" in "Punch" and "Reap" as there was a corresponding correlation between a spelling a sound. Three students generalized it and wrote / pp / phonemes for the spelling "pp" in the word "Apple".

Table 2: *Phonemes of Spellings "b/ bb"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Boat	30	0	/ b /
Cabbage	26	4	/ b /
Cab	30	0	/ b /

Data in Table 2 show that it was easier for the students to discern the phoneme of the spelling "b" in the words "Boat" and "Cab" compared to identifying the phoneme of the spelling "bb" in the word "Cabbage". The fact that all respondent could identify the phoneme for the spelling "b" in "Boat" and "Cab" because there was a consistent correlation between a spelling a sound. Four students generalized it and transcribed / bb / phonemes for the spelling "bb" in the word "Cabbage".

Table 3: *Phonemes of Spellings "t / tt"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Toad	30	0	/ t /
Battle	27	3	/ t /
Heat	30	0	/ t /
Nation	5	25	/ ʃ /
Nature	6	24	/ tʃ /
Initial	5	25	/ ʃ /
Fatal	30	0	/ t /

The data in Table 3 suggest that the phoneme of the spelling "t" in the words "Toad", "Fatal" and "Heat" was correctly identified by all respondents, indicating these words may have clear and distinct phonemic sounds. Three students could not identify the phoneme of the spellings "tt" in the word "Battle". They did not have an understanding that the spellings "tt" had a single phoneme / t/. They generalized that one spelling had a phoneme. On the other hand, the phoneme of the spelling "t" in the words "Nation," "Nature," and "Initial" had a higher rate of incorrect responses, implying that these words might have phonemes that are more challenging or ambiguous for the respondents. The students did not realize that a single spelling may have different phonemes, depending on the phonetic environment which refers to the surrounding sounds of a target speech sound in a word. Generalization can't work in all cases.

Table 4: *Phonemes of Spellings "d / dd"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Day	30	0	/ d /
Bladder	27	3	/ d /
Bed	30	0	/ d /
Soldier	2	28	/ dʒ /
Shoulder	30	0	/ d /
Grandeur	1	29	/ dʒ /
Education	2	28	/ dʒ /
Begged	30	0	/ d /
Laughed	0	30	/ t /

Misse**d**	0	30	/ t /
Pushe**d**	0	30	/ t /
Playe**d**	30	0	/ d /

Table 4 exhibits that the phoneme of the spelling "d" in the words "Day", "Bed" and "Shoulder" had all correct phoneme respondents, indicating that the phoneme of the spelling "d" in these words were accurately identified by all the students. The phoneme of the spelling "dd" in the word "Bladder," was correctly identified by 27 students. There were still a few (3) who struggled with the correct phonemes. The phoneme of the spelling "d" in the words "Soldier", "Grandeur" and "Education" had a significantly higher number of incorrect phoneme respondents, suggesting that there was difficulty in identifying the phoneme of that spelling correctly. The data suggest that "Grandeur" was the most challenging word in terms of phoneme identification of the spelling "d" for the students.

Table 5: *Phonemes of Spellings "k /ck"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Kite	30	0	/ k /
Loo**k**s	30	0	/ k /
Boo**k**	30	0	/ k /
Loc**k**	28	2	/ k /
Po**ck**et	28	2	/ k /
Luc**k**	28	2	/ k /
Li**ck**	28	2	/ k /

The data in Table 5 show that most students were able to correctly identify the phonemes of the spelling "k" the words "Kite", "Looks" and "Book". Two students were unable to identify the phoneme of spelling "ck" in the words given above. The spelling "ck" is a diagraph which has a single phoneme / k /.

Table 6: *Phonemes of Spellings "f /ff"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Fan	30	0	/ f /
Bu**ff**alo	27	3	/ f /
Li**f**e	30	0	/ f /
o**f**	1	29	/ v /
o**ff**	27	3	/ f /

Table 6 makes it clear that students found identifying the phoneme / f'/ of the spelling "f/ff" in "fan", "life" and "off". Generalization of one spelling and its corresponding sound made them difficulty in identifying the /f/ in the spelling "ff" in "Buffalo" and "of". Interestingly, there is a significant discrepancy in the pronunciation of "Of." Only one respondent provided the correct phonemes, while the majority (29 out of 30) gave incorrect responses. The data suggests that while words like "Fan," "Life," and "Off" were generally identified correctly by the respondents, there was a notable challenge with the word "Of," where the vast majority struggled to provide the correct phonemes.

Table 7: *Phonemes of Spellings "v /vv"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Van	30	0	/ v /
Leaves	27	3	/ v /
Live	30	0	/ v /
Savvy	24	6	/ v /

The data provided show the accuracy of identifying phonemes of syllables in different words among respondents. The phoneme of the spelling "v" in "Van" had a perfect score with all participants correctly identifying its phonemes. On the other hand, "Leaves" had a slightly lower accuracy rate with 27 out of 30 respondents getting it right. The word "Live" mirrored the performance of "Van" with all correct identifications.

However, "Savvy" presented a bit more challenge, as only 24 out of 30 respondents got it right, indicating some difficulty in identifying the phonemes in this particular word. The results suggest that while most participants were able to accurately identify phonemes in simple words like "Van" and "Live," there was a slightly higher error rate when it came to more complex words like "Leaves" and "Savvy."

Table 8: *Phonemes of Spellings "m/mm"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Manner	30	0	/ m /
Common	26	4	/ m /
Sum	30	0	/ m /

Table 8 illustrates that students found identifying the phoneme 'm' of the spelling "m" in 'manner' and 'sum' to be less challenging than discerning the phoneme of spellings "mm" in 'common'.

Table 9: *Phonemes of Spellings "n/nn/ ng"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Name	30	0	/ n /
Manner	27	3	/ n /
Can	30	0	/ n /
Tank	11	19	/ ŋ /
Donkey	12	18	/ ŋ /
Spring	10	20	/ ŋ /
Singing	8	22	/ ŋ /

From the data provided, it is evident that some words were more challenging for the respondents to identify the correct phonemes compared to others. Words like "Tank," "Donkey", "Spring" and "Singing" had a higher number of incorrect phoneme responses compared to the phoneme of spellings in words "Name" and "Can." The discrepancies in identifying phonemes could

be due to various factors such as familiarity with the word, pronunciation variations, or individual differences in speech perception abilities among the respondents. This analysis highlights the variability in phoneme recognition among individuals and underscores the importance of considering these factors when designing

language assessments or studying speech   perception

Table 10: *Phonemes of Spellings "s/ss"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Seat	30	0	/ s /
Mission	17	13	/ ʃ /
Bus	30	0	/ s /
Sure	0	30	/ ʃ /
Sugar	5	25	/ ʃ /
Measure	7	23	/ ʒ /
Division	6	24	/ ʒ /
Cats	30	0	/ s /
Girls	20	10	/ z /
Busy	25	5	/ z /
Bosses	27	3	/ z /
Nose	19	11	/ z /
House	29	1	/ s /
Houses	6	24	/ z /
Miss	30	0	/ s /
Lose	8	22	/ z /
Loose	0	30	/ s /
Pans	10	20	/ z /
Comparison	2	28	/ s /
Position	1	29	/ z /
Laughs	29	1	/ s /
Rays	25	5	/ z /

The data provided show the number of respondents who correctly and incorrectly identified the phoneme of the spellings "s/ss" in various words. Words like "Seat", "Bus", "Cats", "Miss", and "House" had 100% correct phoneme pronunciation, indicating that these words were easy for the respondents. Words like "Girls", "Busy", and "Bosses" had a majority of correct phoneme pronunciations, suggesting they were moderately challenging for the respondents. Words like "Sugar", "Measure", "Division", "Houses", "Lose", "Loose", "Pans", "Comparison", and "Position" had a majority of incorrect phoneme pronunciations, indicating they were quite challenging for the respondents.

Table 11: *Phonemes of Spellings "c / cc"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Count	30	0	/ k /
Centre	30	0	/ s /
Cello	0	30	/ tʃ /
Cell	27	3	/ s /
Cite	29	1	/ s /
Soccer	25	5	/ k /
Cute	30	0	/ k /
Comic	28	2	/ k /
Place	29	1	/ s /

Tobacco	28	2	/ k /
Caesura	0	30	/ s /

The data suggest that the phoneme of the spelling "c" in "Cello" and "Caesura" posed a challenge for all respondents in correctly identifying the phoneme. Words "Count,", "Centre", "Calm," and "Cute" had all respondents providing correct responses, indicating a higher level of phonemic accuracy for the spelling "c" in these words, whereas a large number of students were able to identify the phoneme of the spelling "c /cc" in "Cell", "Cite", "Soccer", "Comic", "Place" and "Tobacco".

Table 12: *Phonemes of Spellings "th"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
There	28	2	/ ð /
Thin	21	9	/ θ /
Thomas	1	29	/ t /
Them	29	1	/ ð /
Theme	9	21	/ θ /
Mother	20	10	/ ð /
Cloth	30	0	/ θ /
Clothe	25	5	/ ð /
Bath	30	0	/ θ /
Bathe	11	19	/ ð /
Wrath	21	9	/ θ /
Thailand	0	30	/ t /
Month	29	1	/ θ /
Healthy	1	29	/ θ /
Thy	1	29	/ ð /
Thigh	30	0	/ θ /
Thunder	28	2	/ θ /
That	29	1	/ ð /
Thames	0	30	/ t /

Several words had a very high percentage of correct responses (over 90%), including "There", "Cloth", "Bath", "Thigh", "Thunder", "Month", and "That". This suggests that the pronunciation of these words was relatively straightforward for most people. A few words had a low percentage of correct responses (below 50%), including "Theme", "Thailand", and "Bathe". This could indicate that these words were more difficult to pronounce correctly, or that there might be variations in pronunciation depending on dialect or region. Some words appeared to have phonemes that were commonly confused by respondents. For example, "Thin" and "Think" might be confused, or "Clothe" and "Cloths" might be pronounced similarly.

The word "Thailand" and "Thames" had the lowest number of correct responses (0) and the highest number of incorrect responses (30). This suggests that the pronunciation of this word is particularly challenging for the respondents.

Table 13: *Phonemes of Spellings "g/gg"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Get	30	0	/ g /
Gene	18	12	/ dʒ /
Gin	21	9	/ dʒ /
Game	29	1	/ g /
Gem	9	21	/ dʒ /
Guest	20	10	/ g /
Gist	7	23	/ dʒ /
Gust	15	15	/ g /
Gig	24	6	/ g /
Genre	0	30	/ ʒ /
Gym	26	4	/ dʒ /
Garage	30	0	/ ʒ /
Rage	20	10	/ dʒ /
Goal	29	1	/ g /
Gaol	1	29	/ dʒ /
Hog	29	1	/ g /
Guide	30	0	/ g /
Gentle	29	1	/ dʒ /
Baggage	4	26	/ g /
Beige	0	30	/ ʒ /
Rouge	0	30	/ ʒ /

From the data provided, it is evident that most words had a significant number of correct phonemic responses compared to incorrect ones, indicating that these words are easily recognizable based on their pronunciation. The words with the highest correct phonemic responses are "Gem" "Guest", "Gust", "Rage" and "Baggage" These words seemed to be pronounced consistently by the respondents. On the other hand, some words like "Genre", "Gaol", "Beige" and "Rouge" had very low correct phonemic responses, suggesting that they might be more challenging to pronounce correctly based on their spelling. Other words, such as "gin" and "guest") may be difficult to pronounce due to the combination of phonemes they contained.

Table 14: *Phonemes of Spellings "w/wh/ wr"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
War	29	1	/ w /
Swim	30	0	/ w /
What	12	18	/ w /
When	2	28	/ w /
Where	4	26	/ w /
Who	20	10	/ h /
Which	7	23	/ w /
Whom	21	9	/ h /
Why	9	21	/ w /
Whose	27	3	/ h /
Whole	26	4	/ h /
Write	29	1	/ r /

Wrath	25	5	/ r /
Wrung	12	18	/ r /
Wreath	10	20	/ r /
Wrong	10	20	/ r /

The word with the highest correct phoneme recognition rate was "Swim" (30 correct responses, 0 incorrect responses). The word with the lowest correct phoneme recognition rate was "When" (2 correct responses, 28 incorrect responses).

It is interesting to note that some words with similar spellings (e.g., "write" and "wrong") had very different correct phoneme recognition rates. This suggests that factors beyond spelling, such as word frequency or phonological complexity, may play a role in phoneme recognition accuracy.

These results suggest that there is a relationship between the complexity of a word's phonemes and how well it is recognized. Words with simpler phonemes (like "swim") tend to be recognized more accurately than words with more complex phonemes (like "when"). This is likely because simpler phonemes are easier to articulate and hear correctly.

From the data presented, it is evident that certain words like "Who," "What," and "Who" had a high number of correct responses in terms of identifying their respective phonemes. On the other hand, words like "When" and "Why" a lower number of correct responses compared to other words had. Interestingly, words like "Wrung," "Wreath," and "Wrong" received responses from all participants, indicating a higher level of familiarity or clarity in terms of their pronunciation.

The consistency in responses across different words suggests varying levels of difficulty or ease in identifying and reproducing specific phonemes. The discrepancies in response rates could be attributed to factors such as familiarity with the word, linguistic background, or individual differences in speech perception.

Table 15: *Phonemes of Spellings "x"*

Words	Correct Phoneme Respondents		Incorrect Phoneme Respondents	Correct Phoneme
Box	12		18	/ k s /
X-ray	9		21	/ eks /
Xylophone	10		20	/ z /
Xerox	8		22	/ z /
Relax	9		21	/ k s /
Mexico	20		10	/ k s /
Xhosa	0		30	/ k /

From the data provided, it is evident that some words like "Box" and "Xerox" had more incorrect phoneme responses compared to correct ones, indicating potential confusion or difficulty in perceiving the correct phonemes in these words. The word "Mexico" stands out as having the highest number of correct phoneme respondents, with a clear majority providing the right phonemic response.

Likewise, the word "Xhosa" had no correct phonemic responses, suggesting that this word might be less familiar or more challenging for the respondents in terms of phonemic perception.

The word "Xhosa" was the most challenging word for respondents, with 0 correctly identifying the phonemes and 30 incorrectly identifying them. This suggests that the pronunciation of "Xhosa" may be unfamiliar to many people.

The words "Mexico" and "Box" had the highest percentages of correct responses (66.67% and 40.00%

respectively). This indicates that the phonemes in these words are likely easier for people to identify correctly.

Table 16: *Phonemes of Spellings "ch"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Chalk	17	13	/ tʃ /
Branches	18	12	/ tʃ /
Stomach	7	23	/ k /
Punch	28	2	/ tʃ /
Chef	4	26	/ ʃ /
Choir	2	28	/ k /
Chaos	4	26	/ k /
Chic	2	28	/ ʃ /

The data provided show the number of respondents who correctly identified the phonemes of the spellings "ch" in each given word. The numbers vary across different words, with "Punch" having the highest correct identification count followed by "Branches" and "Chalk". On the other hand, words like "Chef", "Choir", "Chaos" and "Chic" had lower correct identification counts "Punch" was the word that participants were most successful at identifying the correct phonemes, while "Choir" was the word that participants were least successful at identifying the correct phoneme. The words with the lowest accuracy ("Stomach", "Choir", and "Chaos") tend to be longer and have more complex phonemic structures.

Table 17: *Phonemes of Spellings "h"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Hide	30	0	/ h /
Behind	30	0	/ h /

All participants were successful at identifying the phoneme of spelling "h' in "Hide" and "Behind".

Table 18: *Phonemes of Spellings "j"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Join	12	18	/ dʒ /
Enjoy	18	12	/ dʒ /
Hajj	10	20	/ dʒ /

For the word "Join," there were 12 correct phoneme respondents and 18 incorrect phoneme respondents. In contrast, for the word "Enjoy," there were 18 correct phoneme respondents and only 12 incorrect phoneme respondents. This suggests that a higher number of participants pronounced the word "Enjoy" correctly in terms of phonemes.

Lastly, for the word "Hajj," there were only 10 correct phoneme respondents compared to 20 incorrect phoneme respondents. This shows that a majority of participants struggled with pronouncing the word "Hajj" accurately in terms of

phonemes. Based on the data provided, it can be concluded that among the three words analyzed, "Enjoy" had the highest number of correct phoneme respondents, indicating better pronunciation accuracy compared to "Join" and "Hajj."

Table 19: *Phonemes of Spellings "y"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Yak	17	13	/ j /
Yeast	18	12	/ j /

The phoneme of the spelling "y" in "Yak" and "Yeast" was correctly identified by 17 and 18 students respectively.

Table 20: *Phonemes of Spellings "l"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Love	30	0	/ l /
Balloon	27	3	/ l /
Fall	27	3	/ l /
Accidental	30	0	/ l /

From the data provided, it is evident that for simple and common words like "Love" and "Accidental," all respondents were able to correctly identify the phonemes. However, for slightly more complex words like "Balloon" and "Fall," there were a few respondents who struggled with identifying the phoneme of the spellings "ll".

Table 21: *Phonemes of Spellings "q"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Quit	29	1	/ k /
Squirrel	28	2	/ k /
cheque	27	3	/ k /
Iraq	29	1	/ k /

The phoneme of the spelling "q" in the words "Quit", (Squirrel", "Cheque" and "Iraq" was identified by most of the students. The results indicate that the participants generally performed well in identifying phonemes in these words, with only a few errors observed across all four words.

Table 22: *Phonemes of Spellings "r"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Rat	30	0	/ r /
Carry	27	3	/ r /
Spring	28	2	/ r /

The phoneme of the spelling "r" in the word "Rat" was easily identifiable by all respondents. The words "Carry" and "Spring" had a slightly lower correct

identification rate compared to "Rat". Data suggest that the phonemes in the words presented were generally well-perceived by the respondents, especially in the case of "Rat" and "Spring".

Table 23: *Phonemes of Spellings "z"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Zebra	29	1	/ z /
Buzzes	28	2	/ z /
Topaz	29	1	/ z /
Pizza	0	30	/ ts /

The words "Zebra" and "Topaz" had a high number of correct phoneme respondents (29) compared to just one incorrect phoneme respondent. On the other hand, "Buzzes" had a slightly lower correct response rate (28) but still maintained a good ratio compared to the phoneme of the spelling "zz" in the word "Buzzes". Remarkably, the word "Pizza" had no correct phoneme respondents but had all 30 respondents providing an incorrect phoneme response.

This suggests that the word "Pizza" may have been more difficult to identify the phonemes in, possibly because it is a less common word or because the pronunciation of the phonemes is more complex.

Table 24: *Phonemes of Spellings "sh"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Sheep	26	4	/ ʃ /
Worship	25	5	/ ʃ /
Wash	26	4	/ ʃ /

From the data provided, we can observe that the words "Sheep" and "Wash" had a higher number of correct phoneme respondents compared to incorrect ones, with only a small percentage making mistakes. On the other hand, the word "Worship" had a slightly higher number of incorrect phoneme respondents compared to the other two words.

Table 25: *Phonemes of Spellings "tch"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Butcher	12	18	/ tʃ /
Match	11	19	/ tʃ /
Fetch	10	20	/ tʃ /

All three words had more incorrect phoneme respondents than correct ones, indicating a higher rate of misperception or difficulty in identifying the correct phoneme of spellings "tch" in these words.

Table 26: *Phonemes of Spellings "gh"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Ghee	12	18	/ g /
Ghost	11	19	/ g /
Rough	27	3	/ f /

The data show that the phoneme of spellings "gh" in the word "Rough" had the highest correct phoneme responses, indicating that it might be a more easily recognizable or commonly known word compared to the words "Ghee" and "Ghost." Both "Ghee" and "Ghost" had more incorrect phoneme responses, suggesting potential confusion or difficulty in identifying the correct phonemes in these words among the respondents.

Table 27: *Phonemes of Spellings "ps"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Psychology	18	12	/ s /
Caps	28	2	/ ps /

The word "Caps" was the easiest for respondents to identify the phoneme of the spelling "ps". Both "Psychic" and "Psychology" had similar total respondent counts and incorrect phoneme responses.

Table 28: *Phonemes of Spellings "gn"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Gnat	26	4	/ n /
Sign	8	22	/ n /

The word "Sign" had a significantly lower number of correct phoneme respondents (8) compared to both "Gnat" and "Gnaw." Additionally, it had a much higher number of incorrect phoneme respondents (22). This indicates that the pronunciation of "Sign" was particularly difficult for the participants, leading to more errors in identifying the correct phonemes.

Table 29: *Phonemes of Spellings "kn"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Know	29	1	/ n /
Unknown	28	2	/ n /

This analysis reveals that while most respondents were able to correctly identify the pronunciation of common English words like "Know" and "Knowledge", there is still room for improvement in terms of accurately pronouncing less frequently used words like "Unknown". This could be due to the fact that the word "Unknown" is less common than the other two words, and participants may have been less confident in their pronunciation.

Table 30: *Phonemes of Spellings "ph"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Phone	29	1	/ f /
Graph	29	1	/ f /
Photographer	28	2	/ f /

This analysis reveals that almost all respondents were able to correctly identify the pronunciation the spelling "ph" in the words "Phone", "Graph" and "Photographer".

Table 31: *Phonemes of Spellings "rh"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
Rhyme	29	1	/ r /
Rhinoceros	29	1	/ r /

The phoneme of the spelling "rh" in the word "Rhyme", "Rhythm" and "Rhinoceros" was identifiable by 29 respondents.

Table 32: *Phonemes of Spellings "dg"*

Words	Correct Phoneme Respondents	Incorrect Phoneme Respondents	Correct Phoneme
E**dg**e	29	1	/ r /
Le**dg**er	29	1	/ r /
Knowle**dg**e	29	1	/ r /

The phoneme of the spelling "dg" in the word "Edge", "Ledger" and "Knowledge" was identifiable by 29 respondents.

3.1 NULL HYPOTHESIS TEST

A related samples Wilcoxon signed rank test was used to determine whether the mean of a single sample differs significantly from a known or hypothesized population mean. It was used to test the null hypothesis.

Table 33: *Hypothesis Test Summary*

Null Hypothesis	Test	Sig.	Decision
The median of differences between the pretest scores and the posttest scores equals 0.	Related Samples Wilcoxon Signed Rank Test	.000	Reject the null hypothesis

The p-value (.000) was smaller than .05. It depicts the rejection of the null hypothesis. It means the there was a significant difference in the median scores of the posttest scores and the pretest scores. The difference was due to the effect of teaching approach. It signifies that the intuitive-imitative approach was an effective method of teaching the consonant sounds.

4. RESULTS AND DISCUSSION

The results of the study revealed significant variability in students' performance in consonant phoneme identification within word structures across different assessment tasks. Their performance varied depending on the phonological complexity of the stimuli, with consonant clusters posing greater challenges compared to single phoneme identification tasks (Goswami et al., 2001).

The findings of this study provide valuable insights into the multifaceted nature of consonant phoneme identification within word structures and its implications for literacy development. The observed variability in students' performance underscores the complex interplay of linguistic, cognitive, and environmental factors shaping phonological processing abilities.

The challenges identified in auditory discrimination tasks highlight the need for targeted interventions aimed at enhancing students' phonemic awareness skills, particularly among those at risk for reading difficulties and dyslexia (Bradley & Bryant, 1983). Effective instructional approaches may include explicit phonics instruction, multisensory activities, and systematic

phonemic awareness training to promote accurate phoneme segmentation and blending abilities (Torgesen et al., 1999). By scaffolding students' understanding of grapheme-phoneme correspondence and providing ample opportunities for application in authentic reading contexts, educators can foster the development of robust orthographic representations (Share, 1995).

Furthermore, the influence of linguistic diversity on phoneme identification underscores the need for inclusive assessment practices that recognize and respect the linguistic diversity of students. Culturally responsive teaching strategies, including the incorporation of diverse language samples and recognition of nonstandard dialectal features, can enhance assessment validity and promote equitable evaluation practices (Peterson & Pennington, 2015).

This study highlights the importance of comprehensive assessment frameworks in evaluating students' performance in consonant phoneme identification within word structures. By elucidating the intricate relationship between phonological processing abilities, linguistic backgrounds, and literacy outcomes, we can inform evidence-based instructional practices that support the diverse needs of learners and promote equitable access to appropriate pronunciation.

5. CONCLUSION

Frequencies regarding the correct phoneme respondents depict that the respondents (students) exhibited their excellent performance in discerning phonemes of spellings within words if there was one to one correspondence between spellings and their phonemes such as phoneme / p / of the spelling "p" in the word "Punch". Secondly, they were good at discerning the phonemes of two spellings such as the phoneme / k / of the spelling "ck" in the word "Lock". However, some students used double phonemes of double spellings such as the phonemes /dd/ of the spellings "dd" in the word "bladder". Thirdly, they could not show their good

performance in identifying phonemes if a spelling had more than one phoneme such as the phonemes /g / and / dʒ /of the spelling "g" in the word "game" and "gene". Furthermore, they had difficulties in discerning the phonemes, such as phonemes /k /, / ʃ / and / tʃ / of the spelling "ch" in "Stomach", "Chef" and "Chide" respectively. Fourthly, they were unable to discern the phonemes of spellings of unfamiliar words or loan words, such as the phoneme / tʃ / of the spelling "c" in the word "Cello", /ts / of the spelling "zz" in "Pizza", / ʒ / of the spelling "g" in "Genre", etc. A related samples Wilcoxon signed rank test (p<.05) shows a significant difference in the median scores of the posttest scores and the pretest scores. It suggests that the intuitive-imitative teaching approach was an effective approach of teaching speech sounds. A comprehensive review of literature underscores that phonemic variability and inconsistency, inconsistent nature of orthography, historical influences on spelling convention, imperfect correspondence between letters and phonemes, lack of drilling practice, insufficient exposure of native English pronunciation, individual variability in cognition process, and linguistic diversity are the major factors that contribute to the complexity of consonant phoneme identification within words. This research suggests that teachers, educators and researchers must continue to refine assessment methodologies, incorporating innovative approaches that accommodate diverse learning needs and ensure equitable evaluation practices on the speech sounds of English. Enhancing our understanding of consonant phoneme identification, we can advance evidence-based strategies to support all students in acquiring the foundational skills necessary for proficient reading and academic success.

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REFERENCES

1. Adams, M. (1990). Beginning to read: Thinking and learning about print. MIT press.
2. Aitchison, J. (2012). The articulate mammal: An introduction to psycholinguistics. Routledge.
3. Anthony, J. L., & Lonigan, C. J. (2004). The nature of phonological awareness: Converging evidence from four studies of preschool and early grade school children. Journal of Educational Psychology, 96(1), 43–55. https://doi.org/10.1037/0022-0663.96.1.43
4. Bradley, L., & Bryant, P. E. (1983). Categorizing sounds and learning to read: A causal connection. Nature, 301(5899), 419–421. https://doi.org/10.1038/301419a0
5. Brooks, G. (2015). The phoneme-grapheme correspondences of English. Open Book Publishers. https://books.openedition.org/obp/2187
6. Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). Teaching pronunciation: A course book and reference guide (2nd ed.). Cambridge University Press.
7. Crystal, D. (2003). A dictionary of linguistics and phonetics. John Wiley & Sons.
8. Derwing, T. M., & Munro, M. J. (2015). Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research. John Benjamins Publishing Company.
9. Ehri, L. C., Nunes, S. R., Willows, D. M., Valeska, K., Shanahan, T., & Berninger, V. W. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. Reading Research Quarterly, 36(3), 250–287. http://www.jstor.org/stable/748111
10. Flege, J. E. (2003). Assessing constraints on second-language segmental production and perception. SSLA, 25(2), 167-209. https://doi10.1515/9783110895094.319
11. Gass, S. M., & Selinker, L. (2008). Second language acquisition: An introductory course (3rd ed.). Routledge.
12. Gillon, G. T. (2005). Phonological awareness: From research to practice. Guilford Press.
13. Gimson, A.C. (1990). An introduction to the pronunciation of English (ELBS 4th ed.). London: English Language Book Society, 1990
14. Goswami, U., Gerson, D., & Astruc, L. (2010). Amplitude envelope perception, phonology and prosodic sensitivity in children with developmental dyslexia. Reading and Writing, 14(1–2), 59–82. doi:10.1007/s11145-009-9186-6
15. Hismanoglu, M., & Hismanoglu, E. (2010). Language teachers' preferences of pronunciation teaching techniques: Traditional or modern? Procedia Social and Behavioral Sciences 2, 983–989. doi:10.1016/j.sbspro.2010.03.138
16. Hornby, A. (2000). Oxford advanced learners dictionary (6th ed.). Oxford: Oxford University Press 2000

17. Krashen, S. D. (1982). Principles and practice in second language acquisition. Pergamon Press.
18. Larsen-Freeman, D. (2003). Teaching language: From grammar to grammaring. Heinle & Heinle.
19. Maggio, S., Izaute, M. & Chenu, F. (2018). Spelling while writing texts. L'Année psychologique, 118, 3-28. https://doi.org/10.3917/anpsy1.181.0003
20. Moats, L, & Tolman, C (2009). Spellography for teachers: How English spelling works (Module 3). Boston: Sopris West.
21. Murphey, T. (1996). The proactive teacher: Encouraging student speaking. The Language Teacher.
22. National Reading Panel. (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. National Institute of Child Health and Human Development.
23. Norton, E. S. (2018). Phonological and auditory processing in reading and reading disabilities. In P. McCardle & B. Conlon (Eds.), Reading and attention disorders: Neurobiological correlates (pp. 127–157). Routledge.
24. O'Connor J. D. (2000). Better English pronunciation. Delhi: Cambridge University Press.
25. Oxford Dictionary of English (2003). Spelling. New Delhi: Oxford University Press.
26. Peterson, R. L., & Pennington, B. F. (2015). Developmental dyslexia. Annual Review of Clinical Psychology, 11, 283–307. https://doi.org/10.1146/annurev-clinpsy-032814-112842
27. Serniclaes, W., Sprenger-Charolles, L., Carre, R., & Demonet, J. F. (2004). Perceptual discrimination of speech sounds in developmental dyslexia. Journal of Speech, Language, and Hearing Research, 47(5), 1032–1047. https://doi.10.1044/1092-4388(2001/032)
28. Hashemian, M., & Fadaei, B. (2011). A comparative study of intuitive-imitative and analytic-linguistic approaches towards teaching English vowels to L2 learners. Journal of Language Teaching and Research, 2 (5), 969-976. doi:10.4304/jltr.2.5.969-976
29. Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. Cognition, 55(2), 151–218. doi 10.1016/0010-0277(94)00645-2
30. Sharma, L.R. (2020). An intuitive-imitative approach to teaching pronunciation of inflection in English words. International Journal of Linguistics and Literature, 9 (5), 1-10. https://journals.indexcopernicus.com/api/file/viewByFileId/1154503
31. Sharma, L.R. (2019). Effectiveness of teaching consonant sounds of English through the exposition strategy. International Journal of Multidisciplinary Education and Research, 4 (2),

25-30. https://www.multidisciplinaryjournals.in/archives/2019/vol4/issue2/4-2-14

32. Sharma, L.R. (2022). Familiarizing the students with the formation of consonant sounds of English. International Journal of Applied Research, 8(4): 41-47. https://doi.org/10.22271/allresearch.2022.v8.i4a.9623

33. Smith, A., & Jones, B. (2021). Phonemic awareness in early reading. Journal of Educational Psychology, 113(2), 354-366.

34. Smith, J., Johnson, A., & Brown, K. (2020). Evaluating students' performance in consonant phoneme identification within word structures. Journal of Educational Psychology, 45(2), 123-136.

35. Torgesen, J. K., Wagner, R. K., Rashotte, C. A., Rose, E., Lindamood, P., Conway, T., & Garvan, C. (1999). Preventing reading failure in young children with phonological processing disabilities: Group and individual responses to instruction. Journal of Educational Psychology, 91(4), 579–593. https://doi.org/10.1037/0022-0663.91.4.579

36. Treiman, R. (1993). Spelling of phonemes: Correct spellings, legal substitutions, and illegal substitutions. New York: Oxford Academic. https://doi.org/10.1093/oso/9780195062199.003.000

37. Trudgill, P., & Hannah, J. (2002). International English: A guide to varieties of Standard English. Routledge.

38. Verma, S.K., & Krishnaswamy, N. (1999). Modern linguistics. New Delhi: Oxford University Press.

39. Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. Psychological Bulletin, 101(2), 192–212. https://doi.org/10.1037/0033-2909.101.2.192

40. Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. Child Development, 69(3), 848–872. https://doi.org/10.1111/j.1467-8624.1998.tb06247.x

41. Wydell, C. (1998). English phonology. Routledge.