The Mother Tongue Influence on EFL Learners' Perception and the Resultant Difficulty in English Spellings

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Abstract
Analyzing the difficulty in perception and pronunciation of such English phonemes which are not present in EFL learners' native language has been the center of focus of research into mother tongue influence on language learning. This study concentrates foreign (English) sounds that are missing in Pashto and appear to be a source of difficulty in perception, and the resultant replacement of nearby sounds as reflected in graphemes in the written output of Pashto EFL learners. The study investigates whether the difficulty lies in oral production or the problem equally exists in replacing the graphemes representing foreign sounds with those representing the nearby available L1 sounds. The data were collected from 180 Pashto L1 EFL learners. The problem was examined by the two procedures of oral-written and written-written relation of input and output. The tools used were a list of English words presented two times as stimuli (1) and (2) in the first step, and another list of Urdu words that was to be translated to English as Stimuli (3) in the second step. The study concludes that the non-availability of foreign sounds is most likely to confuse place of articulation as compared to manner of articulation and voicing in spellings. Findings of this study offer an insight into the nature and patterns of spelling errors that can be assigned to the non-availability of foreign sounds in participants' native tongue. Finally, the correlation of mother tongue influence and foreign spellings established here can be significant for further research that could carry this investigation ahead at cluster and syllabic aspects of foreign spellings.

1. Introduction

1.1 Background

English language teaching (ELT) has been the principal focus of so many studies in Pakistan- as the importance of English gets increasing. English is taught in Pakistan as a foreign language. The influence of mother tongue of foreign learners is a source of greater difficulty. Similarities of sounds systems among languages help the learners, while differences hinder their foreign language learning. Languages have subsystems in which L1 interferes (phonetics, phonology, morphology, and syntax), but the enormous difficulty is experienced in phonetics and phonology in contrast to morphology and syntax. The similarities and differences between languages influence the overall performance level of learners in learning the target language (Polinsky & Kagan, 2007).

Pashto, an indigenous language of Pakistan, has about forty to fifty million speakers. It is spoken in parts of Afghanistan, Pakistan and Iran as a native language (Hallberg, 1992; Penzl, 1954). It is the official language of Afghanistan today besides Dari. Its native speakers encounter difficulty in articulating sounds of English that are not found in their native tongue. Comparison of the sounds of both languages shows that five English consonants namely, the labio-dental voiceless fricative /f/, the labiodentals voiced fricative /v/, the dental voiceless fricative /θ/, the dental voiced fricative /ð/ and the post-alveolar voiced fricative /ʒ/ are problematic for Pashto speakers. As a common strategy, these consonants are replaced by L1 sounds: 1) English labio dental fricative /f, v/ are pronounced as bilabial voiceless stop /p/ and bilabial approximant /w/; 2) English dental fricatives /θ,ð/ are replaced by dental stops /t , d / ; 3) palatal voiced fricative /ʒ/ is replaced by palato-alveolar voiced affricate /dʒ/ (Khan et al., 2012).

Beside the nonexistence of certain English phonemes in Pashto, the lack of knowledge of phonetics and phonology of English and the lack of practice of pronouncing English sounds on the part of Pashto L1 EFL learners are noticeable reasons of difficulty experienced in perception and production of these missing phonemes in Pashto. Research into this area has mainly focused this problem in pronunciation e.g. (Ali et al., 2022; Nasir, 2022; Rehman et al., 2012; Ullah & Clark, 2011). This study finds out that the non-availability of English consonants in Pashto results in the wrong perception and the subsequent replacement of English consonants with Pashto nearest consonants- as indicated in spellings errors in writing of Pashto EFL learners at intermediate and bachelor levels. English unvoiced labio-dental fricative /f/ and its voiced counterpart /v/ (the voiced labio-dental fricative) are hard to distinguish from the nearest available sounds in Pashto such as unvoiced bilabial plosive /p/ and bilabial semi-vowel /w/ in perception and written production as indicated by spellings mistakes by Pashto L1 speakers as EFL learners. This replacement may in turn lead to change of meaning and sometime total unintelligibility on the part of readers.

1.2 Objectives

This study aimed to achieve the following objectives:

i.   To shed light on English problematic consonants for Pashto L1 EFL learners and the resultant difficulty in perception and consequent written output;
ii. To find out and suggest ways to overcome the tendency of misspellings.

1.3 Research Questions

The study seeks answer to the following questions:

    i.   How English problematic consonants cause difficulty in perception and consequent errors in written output of Pashto L1 EFL learners?

   ii.   What are the ways of overcoming these errors?

1.4 Significance

The study approaches the difficulty caused by four English consonants that are not available in Pashto, not focusing pronunciation, as done usually, but in writing. By making the use of empirical data, the issue is investigated at a deeper level by establishing correlation between oral input, aural perception and written output. Findings of this study account for a wide range of spelling errors in students' writing that are caused by wrongly replacing the graphemes of English sounds with graphemes of nearest Pashto sounds. Lastly, the study offers a deeper insight into the nature, patterns and frequency of such errors. Therefore, it may appear helpful for different stakeholders of ELT in minimizing and overcoming difficulties encountered by Pashto L1 EFL learners caused by problematic English sounds.

1.5 Delimitation

The study highlights the difficulty in perception caused by the non-availability of four target (English) sounds, namely: /v/, /f/, /p/ and /w/, reflected in participants' spelling errors. It is exclusive of evaluating their pronunciation. Moreover, other manifestations of phonetic and phonological errors related to this difficulty found in participants' written output were beyond this study's scope. Finally, respondents comprised only bachelor level Pashto L1 EFL students who were from the same linguistic background and speakers of the same dialect.

2.   Literature Review

It is necessary to learn English pronunciation not in terms of letters of the alphabet but rather in terms of phonemes, because of the puzzling nature of English spelling (Roach, 2000). Baugh and Cable place the non-phonetic character at the top of the list of liabilities of English language. Where certain English consonants are problematic to spell, the case is even more serious with English vowels. They highlight the difficulty in spellings faced by EFL learners, as well as by native speakers of English, as a result of this liability (Baugh & Cable, 1993). As a common strategy, English phonemes are replaced by the nearest available phonemes in indigenous languages in Pakistan (Sheikh, 2012). Variation in Pakistani English exists because of the impact of local languages (Mahboob & Ahmar, 2004). Foreign learners mainly encounter difficulties in perception and production of non-native phonetic categories (Flege, 1992; Best, 1993). This is the central theme of 'Contrastive Analysis' that errors are resulted due to differences between L1 and L2 or foreign languages (Wardhaugh, 1970). Pashto is no exception in this regard, as Rehman et al. (2012) put that five English consonants lack in Pashto; they are replaced by nearest available Pashto sounds by its native speakers.

In a comparative study, Davenport and Hannahs (2010) enlist –besides other sounds— English consonants i.e. /f/, /v/, /p/, /ʒ/, /w/ which are lacking in Pashto. They further

mention the nearest Pashto sounds to these missing English phonemes as /f/ for /p/, /θ/ for /ð/, /v/ for /w/. They conclude that Pashto native speakers used nearest sounds on the basis of place of articulation. There is also possibility that the same English sounds are heard as the nearest Pashto sounds by Pashto L1 speakers in their perception (Davenport & Hannahs, 2010).

The existing literature shows that emphasis has been given on issues of pronunciation while analyzing influence of the mother tongue (Pashto) while learning English as a foreign language (EFL). Analyzing spelling mistakes on segmental level in the writing of Pashto speakers caused by perception being foreign learners of English is yet to explore. The present study tends to bridge this gap.

3. Research Methodology

A group of 180 Pashto L1 speakers being EFL learners, with 12-14 years schooling, from three different institutions were randomly selected. Data were collected by conducting two diagnostic tests taken in two consecutive sessions. In the first session, eighteen shifts of students containing ten students each were tested one after another for their perception of the first stimuli in a sound-proof room. The same stimuli of words-list were presented for the second time using different channel to subject one-by-one. Following this, a large examination hall was used for the conduction of second diagnostic test from all the students simultaneously. They were provided copies of the third stimuli and were asked for their output on the same pages. No mention was made to them on either occasion about the target sounds being focused in the study so that they may not become overly conscious to those sounds and their spellings.

The first stimuli contained the oral presentation of sixty English words in researchers' own voices. The selected sixty words contained the four target sounds on different positions i.e. start, medial and final. Participants were asked to write down the words spoken before them one by one on the pages given to them. The researchers ensured the absence of distracters and other sound-barriers in the room where the experiment was taking place. The second stimuli were in the form of the audio input of the same words list through a talking dictionary. The researchers made this time the use of laptop with the software of Oxford Advance Dictionary installed on it. The words were heard by subjects through earphones. Words were pronounced one by one randomly with the intention of disturbing the systematic order of the division of words having the target sounds in start, medial and final positions. It was done to divert subjects' attention from focusing the target sounds specifically. The third stimuli were in the form of written input that contained a list of thirty (30) Urdu words. The English version of these Urdu words had the four target sounds in all three positions. Since Urdu was the second language of the subjects, they were asked to translate those words into English.

The total output given by the subjects was scanned several times carefully. Instances of target sounds replacements in spellings were examined in students' written output. These replacements were further analyzed by focusing each target sound in all the three positions of words.

4. Results and Discussion

Table 1

Results Related to Stimuli (1) and (2): Replacement of /f/ and /ph/ with /p/ and Vice Versa

Grapheme	Number of required entries	Number of errors	Percentage
f	2828	109	5.34
p	6091	134	2.20

The first set of data contained participants' written output in response to the first two stimuli (1) and (2). The difficulty concerning the first problematic consonant (f) was as found two-fold. In the first sort, participants used the grapheme /p/ instead of /f/ and /ph/ in 109 instances. The total frequency of /f/ phoneme in subjects' total written output in response to the first two stimuli was 2828. Instances of faulty substitutions of /f/ and /ph/ with /p/ form 5.34%. These statistics imply that participants made error in every 20th instance of perceiving and then spelling /f/. The fact is established that /f/ is tricky equally in perception and then in turn in written production. The difficulty was experienced by the respondents mostly in the initial position of words, then in medial and the least in the final.

The second sort of errors is opposite of the first just described. The voiceless bilabial plosive /p/ was wrongly perceived and consequently spelled with graphemes /f/ and /ph/ representing voiceless labio-dental fricative /f/ in 134 out of the total desired occurrences of /p/ (6091), forming 2.20%. This average of errors suggests that participants made errors of the second sort in every 60th instance. Moreover, the cases of replacing /f/ with /p/ are two times grater (5%) than vice versa.

The phoneme /p/, described as voiceless bilabial plosive phonetically, was not confused and replaced with its voiced counterpart /b/ by subjects in either case in perception, neither /f/ was replaced with its voiced counterpart /v/. It illustrates that error in perception is marked by subjects' tendency of opting for the nearest available sound in their native tongue in terms of place of articulation. Thus, participants' mother tongue influence and the resultant misperception and difficulty in spelling /f/ and /p/ are more detrimental to confuse place of articulation, not manner and voicing. Examples of the above two sorts of mistakes found in participants' writing are cited as under:

*pace (face), *perpect (perfect), *halp (half)

*fower (power), *caftive (captive), *plof (flop)

Table 2

Results Related to Stimuli (1) and (2): Replacement of /v/ with /w/ and Vice Versa

Grapheme	Number of required entries	Number of errors	Percentage
v	2,535	112	4.41
w	2,454	81	3.30

The next set of sounds tested in this study was voiced labio-dental fricative /v/ and the voiced bilabial frictionless constituent /w/. Just like the first set of /f-p/, these two sounds in the second set are also near roughly in place of articulation: /v/ is voiced labio-dental fricative and /w/ is bilabial semi-vowel. Similarly, the nature of errors concerning this set is also two-fold. The desired number of entries of phoneme /v/ in participants' total volume of output to the first two stimuli was 2535. In the first sort of errors, it was wrongly spelled with /w/ 112 times- constituting 4.41% of its total frequency. Thus, every 25th occurrence of /v/ in participants' writing was flawed, being spelled with /w/.

Pertaining to the second sort of errors related to this set of phonemes (/v/ and /w/), the average of wrongly replacing /w/ with /v/ was found in 81 instances. It constitutes 3.30%, which means that every 33rd entry of /w/ was marked with error. Moreover, /w/ appeared as the least problematic for participants among all the four phonemes examined in this study. Remarkably, /w/ was replaced with /v/ in subjects' written output even it was not pronounced in the oral stimuli in some words. Rather, it was part of spelling only, mostly in word-final position.

Results related to the second set /v, w/ are in conformity with the first set /f,p/. Vulnerability again exists in confusing place of articulation than manner and voicing. The action of lips in the pronunciation of both these sounds is the obvious reason of confusing /f/ and /v/ by the subjects- pertaining to place of articulation. None of the subjects confused /v/ with its voiced counterpart /f/, or /w/ with voiced bilabial /b/ in their response to the first two stimuli. The following examples have been taken from participants' written output related to the second set of phonemes:

*walid (valid), *reweel (reveal), *gawe (gave), *vage (wage), *tovel (towel), *viwa (viva), *follov, (follow)

Table 3

Results Related to Stimuli (3)

Grapheme	Number of required entries	Number of errors	Percentage
/f/p/v/w/	7,200	48	0.50

Participants' written production of the four target sounds was also tested indirectly through another stimuli (stimuli 3). It was presented to participants in the form of words list in their

second language (Urdu). They were asked to provide the English equivalents of the given Urdu words. The researchers purposefully selected such Urdu words in stimuli (3) the English equivalents of which contained the four target consonants. The phenomenon of replacing the graphemes of the selected four phonemes with graphemes representing phonemes nearer in terms of place of articulation was found as identical in pattern as illustrated above (4.1 and 4.2). There were 40 instances of such sorts, out of 7200 entries in participants' written output to stimuli (3). Although this minor number (48) forms only 0.50% of the total output, they were committed by 28 students collectively, who form 15% of the total sample size (180). It indicates that roughly every 15th participant had this incongruity of wrong replacement in their writing. Though miner quantitatively, this number of instances of replacements is significant qualitatively. It suggests the existence of difficulty in perceiving the four tricky English consonants and reproducing them correctly in spelling, not only in subjects' immediate feedback, but in a more permanent form in their writing. These findings therefore reveal that the problem lies at deeper level in the form of subjects' inclination of wrongly spelling the target phonemes with graphemes standing for nearby phonemes.

4. 1 Errors of Miscellaneous Nature

Though majority of the spelling errors produced by subjects in their written output are in accordance with this study's assumption and followed a definite pattern, some of the instances of misperceiving the four target phonemes and wrongly reproducing them in writing appeared beyond the researchers' anticipation. There were 72 instances of spelling errors being dissimilar and of miscellaneous nature. Errors of these sorts include: missing altogether the letter(s) representing the target sounds, replacing the target sounds with other sounds that are nearer by in terms of manner of articulation or feature of voicing, and inserting an extra letter or transposing where graphemes represented consonants clusters-technically known as metathesis, prothesis and epenthesis. Examples of such spelling errors in each of the categories are as under:

*Doe (dove), *helful (helpful), *obtion (option), *heapy (heavy)

These instances indicate that replacement didn't always—though mostly-- takes the form of confusing place of articulation. Mistaking target sounds can sometimes result in errors pertaining to manner of articulation or feature of voicing. But unlike the relatively regular pattern of replacing target phonemes with native ones in terms of place of articulation, the two phenomena of confusing manner of articulation and feature of voicing didn't follow regular pattern in most of the cases.

5.   Conclusion, Recommendations and Further Research

5.1 Conclusion

Results of this study are roughly in accordance with the pioneering research into Auditory Phonetics studying misperception by Miller and Nicely (1955) who concluded that variables causing misperception of speech sounds are most unfavorable to distinguish place of articulation, less to manner of articulation, and least of all to nasality and voicing. It was found in this study that subjects mostly confused the target sounds with other nearest by sounds or with one another mostly in terms of place of articulation. The fewer instances of

replacing the target sounds with other sounds that were nearer in manner of articulations or with their counterparts on the basis of voicing didn't follow a regular pattern. The phoneme that was mostly problematic and misperceived and misspelled by the subjects was /f/. In the first set of /f-p/, subjects replaced /f/ with /p/ in majority of the cases and vice versa. Similarly, in the case of second set of /v-w/, subjects replaced the former with the latter and in majority of the cases. In fewer cases they replaced /w/ with /v/ in perception. In neither cases subjects heard /f/ as /v/ or vice versa. In very few cases (three) /p/ was replaced with its voiced counterpart /b/.

In their response to stimuli (3), the nature of errors of replacing the target phonemes as represented by graphemes while translating Urdu words to English appeared identical to the nature of errors of replacements in misperception in terms of quality, though not in quantity. However, the case of /v/ stood out to be an exception in subjects' response to stimuli (3). Being replaced in 112 cases with /w/ in the auditory perception of stimuli (1) and (2), this phenomenon was not observed in subjects' translated words from Urdu into English. Subjects' tendency of misspelling the other three sounds by replacing them with the nearer by sounds as spelled in their writing in response to written input shows the fixation of their inclination of displaying the wrong pattern of replacements of these target sounds as they did in their response to oral input. Analyzing the same sort of errors found in subjects' original writing --not in response to any stimuli-- was beyond this study's scope.

5.2 Recommendations

In the light of this study, the researchers recommend that phonetics should be given proper place in TEFL at basic level, so the students may get proper knowledge about human speech organs, number of sounds in L1 and target language, place and manner of articulation, voicing and other phonemic features. Teachers must provide students with the sound value of all the phonemes in general, and the phonemes which are missing in students' mother tongue but are found in target language in particular. Problems like the one examined in this study can be reduced by practicing of making distinction between those English sounds and the nearer by available sounds of Pashto. It can be effectively accomplished by making sets of two sounds, consisting of one foreign sound missing in students' native tongue, and thus difficult for them, and the native phoneme baring proximity with the foreign sound in terms of place of articulation. Both of these sounds should be practiced in articulation, auditory perception and production in writing by making lists of such words in which these sounds occur in start, medial and final positions. Moreover, Teachers should assign various writing tasks to students and examine their spelling errors made in the graphemes of such problematic sounds. As most of the errors fall under regular patterns, identification of such errors by establishing their root causes due to mother tongue influence and devising appropriate strategies for its elimination should be made the vital part in the process of teaching English as a foreign language.

5.3 Further Research

As aforementioned, analyzing identical spelling errors in students' normal writing which is not based on any input is a broad area open for future research. Identifying regular patterns of replacing the desired sounds by other sounds through graphemes can further explain the

nature of spelling errors. Similarly, the research can be extended to the analysis of perception of other consonants, vowels and diphthongs, their consequent wrong production in writing by replacing them in spellings. Lastly, investigating the nature and degree of such misperception of foreign sounds as indicated by wrong graphemes by increasing the frequency of stimuli in number may yield interesting results.

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