The Pedagogical Effect of Teacher and Student-Centered Corrective Feedback Moves on Pronunciation Intelligibility

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**Effect of instruction**

Abstract: This study is an attempt at investigating the pedagogical effect of student-fronted and teacher-fronted Corrective Feedback (CF) on improving pronunciation intelligibility in a Sri Lankan context. The study identified the confusion between the / o / and / ɔ / contrast, the insertion of / ɪ / before word onset consonant clusters commencing with / s /, and the substitution of / s / for / z / to be the most frequent phonological errors that affect intelligibility of learners of English as a Second Language in Sri Lanka. The study employed a sample of forty-five ESL learners to form six experimental groups (3 teacher-centered CF and 3 student-centered CF groups) and three control groups. The research participants received instruction and the experimental groups were given CF on the three identified sound contrasts. Pre, post and delayed-post tests were used to measure improvement before and after Form Focused Instruction (FFI). The findings brought to light that the effect of instruction coupled with teacher-fronted CF is restricted to immediate uptake of a target phonological feature as no improvement was noticed in free speech production with the lapse of time. Overall, results confirmed that the effect of FFI coupled with student-fronted CF extends to sustained learning and improvement in pronunciation intelligibility. The evidence derived from this study suggests that despite the learner's age, pronunciation intelligibility could be improved provided L2 learners receive Form-Focused Instruction (FFI), sufficient opportunities to practice and Corrective Feedback (CF) that provides room for them to identify the gap between the target form and the hypothetical form.

Keywords: Corrective Feedback (CF), fossilization, phonological errors, pronunciation intelligibility

I INTRODUCTION

Communication is the process of transferring information between the interlocutor and the listener/s by encoding and decoding messages. Successful communication between the interlocutor and the listener takes place when the listener decodes the message of the interlocutor successfully. In order to decode the message, accurate perception and production of phonemes of a language is vital. For example, if the interlocutor perceives / p / as / b / and produces / b / in place of / p / when producing words such as ‘park’, ‘pat’, ‘palm’ and ‘patch’, the listener will mistakenly understand the words as ‘bark’, ‘bat’, ‘balm’ and ‘batch’, leading to a communication failure. This brings to light that accurate perception and production of phonemes play a pivotal role in intelligible pronunciation as the phonemes of a language distinguish between word meanings.

In this backdrop, intelligible and comprehensible pronunciation - the extent to which a listener understands a speaker’s message is an essential component of successful communication. Moedjito, Jaelani, & Asrobi (2019) in What makes EFL speakers’ utterances more intelligible in the context of global intelligibility? brings to light the fact that pronunciation accuracy, i.e. segmental features of English pronunciation is the first prominent factor for English as a Foreign Language (EFL) speakers’ global intelligibility. Highlighting social implications placed on pronunciation Lippi-Green (2011) explains that “accent becomes a litmus test for exclusion, an excuse to turn away, to refuse to recognize the other”. Given these concerns, it manifests that pronunciation is a yardstick for measuring intelligibility and also a significant marker that projects a person’s social identity.

However, teaching pronunciation has been eliminated from ESL curricula worldwide mainly due to theoretical claims and pedagogical practices that question the validity of pronunciation teaching. As evidenced in the studies by Flege, Munro, & MacKay and Scovel (cited in Park, 2010) those who acquire a second/foreign language after early childhood are likely to exhibit non-native-like patterns of pronunciation. Therefore, this widely accepted assumption that language acquisition is biologically linked to age made many L2 facilitators take pronunciation teaching superficially. On the other hand, Nativists’ views on language learning substantiated by Chomsky and Krashen also resulted in totally overlooking pronunciation teaching. Chomsky (1965) regarded language acquisition as a rule-governed behaviour rather than habit formation, and Krashen (1981) held a strong view against error correction as a correction could negatively impact the language learning process.

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Thus over the years pronunciation teaching has received minimal attention. As a result, in the absence of a unified instructional program for pronunciation teaching, in teacher training programmes (Baker and Murphy, 2011), course books (Marks, 2006) and applied linguistic research (Madden and Moore, 1997) pronunciation teaching was downplayed giving prominence to other skills in the L2 classroom. The General English Teachers’ Guide which was published by the National Institute of Education in Sri Lanka in 2017 too emphasizes correctness in pronunciation, especially with regard to certain sounds that are absent in the students’ mother tongues. However, due to a lack of proper instruction on pronunciation teaching, attending to L2 learners pronunciation needs is often put on the back burner in English Language Teaching settings in Sri Lanka. Thus L2 learners became predisposed to perceptually equating L2 sounds that possess mutual phonological characteristics with First Language (L1) sounds thereby giving rise to phonological fossilization. As a solution, the current study aims at investigating the pedagogical effect of Corrective Feedback (CF) in rectifying phonological errors of students learning English as a second language in Sri Lanka. This study will call for a need to revise the existing practice of teaching pronunciation in Sri Lanka and provide new insights for facilitators and curriculum designers on how Corrective Feedback should be employed in order to improve pronunciation intelligibility of English as a Second Language learners.

A. Background

The coexistence of Standard British English (SBE) primarily with the Sinhala language (the language of the majority ethnic group in Sri Lanka) since the British East India company conquered the maritime regains in 1796 has systematically nativized certain phonological features of the Standard British English (SBE). In the process of becoming a bilingual, the locals perceived the sounds of the target language (SBE) to be phonologically similar to Sinhala and nativized phonologically distinct sounds of SBE (Standard British English) by substituting unfamiliar sounds of SBE for the sounds that show a close affinity to the sounds in the L1 phonology (Sinhala). Thus perception and production of certain L2 sounds that deviate from the Standard Sri Lankan English (SSLE), which is recognized as the model used in education and the local broadcasting / telecasting systems tend to affect intelligibility when L2 learners operate in English.

As substantiated by literature on phonology in Sri Lanka, the core phonological deviations from the Standard Sri Lankan English (SSLE) which appear to impede intelligibility are - the substitution of /o/ for /o/ and /a/, the insertion of the lax vowel, /l/ before consonant clusters (-sk, -st and -sm) commencing with /l/, the substitution of /l/ for /p/l, the substitution of /s/ for /l/ and the assimilation of the word-initial /l/ for /s/ (Gunesekera, 2005, Widyalankara, 2014). The presence of the aforementioned deviated phonological features from the SSLE is considered a negative class marker, as the dichotomy between the High Prestige Dialect (HPD) referred to as the Standard Sri Lankan English (SSLE), and the Lower Prestige Dialect (LPD), often derogatorily referred to as “Not Pot English”, “non-standard English”, “Other Varieties of Sri Lankan English” (OVSLE), “sub-standard English” or “uneducated English” (Ratwatte, 2016) is strongly evidenced in pronunciation than in grammar and vocabulary (Gunesakara, 2005). Widyalankara (2014) too substantiated the fact that the demarcation line between the HPD and the LPD is pronunciation. Highlighting the importance of pronunciation Canagarajah (2005) stresses the fact that “pronunciation is the linguistic feature most open to judgment” (p.365). In an ELT context, the dichotomy of standard and nonstandard varieties provides the distinction between acceptable forms which can be considered ‘correct’, as well as those considered ‘errors’ in the classroom (Fernando and Shivaji, 2014). Thus correcting phonological errors in the ESL classroom which affects intelligibility is mandatory.


2. RESEARCH ELABORATIONS

A. Classification of Corrective Feedback Types

According to Lyster and Ranta (1997) Corrective Feedback (hereafter CF) is commonly recognised as negative evidence (White, 1989), repairs (Kasper, 1985), negative feedback (Anett, 1969). The following description is a brief overview of the definitions of CF. Lightbown and Spada (1999) have defined CF as “any form of indication to a learner that his or her use of the target language is incorrect” (pp.171-172). As defined by Gass (1991), the term negative feedback is generally understood to mean “information about what is incorrect in the language produced by a learner and what is needed to make a correction to align the learner’s language with the target language” (p.136). The term CF was used by Mitchell and Myles to refer to “some kind of input that lets a learner know that a particular form is not acceptable according to target - like norms” (p. 22).
Lyster and Ranta (1997) classified CF types into two broad categories – recast and prompts. CF types including clarification requests, metalinguistic clues, repetition and elicitation of the correct form that encourage learners to produce a target-like output are referred to as prompts, and the one that provides learners with target-like reformulations and exemplars and therefore obviates the necessity of self-correction is referred to as recast. This study identified prompts as a student-centred /fronted move as prompts let the learner produce output in response to the input whereas recast is viewed as a teacher-centered / fronted CF move as it restricts the output opportunities.

B. Phonological Deviations that Affect Intelligibility of L2 Learners in Sri Lanka

In a pilot study conducted to investigate the most common deviations which affect intelligibility, the substitution of /o/ for /ʊ/, the insertion of the lax vowel /i/ before word onset consonant clusters commencing with /s/ and the assimilation of /s/ and /z/ in word-initial position were identified as the common deviations from the SSLE. The section below is a detail account of the aforementioned deviations.

The substitution of Sinhala mid-back vowel for SSLE half-open back vowel /ə/ is considered a key characteristics of non-standard English which affect intelligibility. The illustration given below, records a graphemic representation of all core vowels and the two diphthongs of Sinhala. As shown in Table 1 there is no graphemic representation for the /ʃ/ vowel.

Table 1: Mapping Sinhala Graphemes to Phonemes: Vowels

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(Karunatillake, 2004, p.23)

According to Wasala and Gamage (2005), Sinhala language has only a mid-back vowel with a weak rounding (Chandralal 2010), Thus the Sinhala bilingual users replace both SSLE / o / and / ʊ / with the corresponding vowel sound available in L1 when they speak in L2. Given the above reason, Passë (1943 as cited in Fernando,1985) noticed that the spelling combinations ‘ore’, ‘our’, ‘oar’, ‘oor’ and, some words with ‘or’ which are pronounced with /ə/ in the SSLE are articulated with /o/ due to inaccurate perception of /ʊ/ sound which requires a distinct lowering of the jaw (Widyalankara,2014). Thus fossilized lack of usage of the lower jaw has directly impacted pronunciation intelligibility as /ʊ/ sound in words such as “court”, “law” and “ball” is substituted for Sinhala mid back vowel /ə/.

When producing consonant clusters such as -sk, -skr, -sp,-spr, -st commencing with /s/ which are absent in colloquial Sinhala, the majority of L2 speakers are predisposed to insert the front lax vowel /i/ to ease pronunciation. For instance, the words such as station, screen and spoon are pronounced as /istɛn /. /ískrɛn / and /ispʌn /respectively. According to Widyalankara (2014) and Gunasekara(2005) the insertion of the lax vowel /i/ in word-initial bi/tri consonantal clusters with word onset /s/ is evident in the S/OVSLE bilingual. Therefore, insertion of the front lax vowel /i/ before word onset consonant clusters commencing with /s/ is considered a negative class marker.

Moreover, /z/ is also an absent phoneme in the Sinhala phonological system. As /s/ and / z/ are fricative counterparts, L2 learners substitute /s/ for / z/. Although it is accepted in the SSLE in word-medial and word-final positions, it violates an SSLE norm and affect pronunciation intelligibility when it is extended to the word-final position (Widyalankara,2014). For example, if /z/ at the word-initial position of the word ”zip” is substituted for /s/, the semantic value of the word changes (ZIP vs. SIP) resulting in a communication breakdown. Thus the substitution of the word initial /z/ for /s/ is considered a feature of the OVSLE that affects intelligibility.

C. Theoretical Framework

According to the Output Hypothesis suggested by Swain (1985), in order to master a language, production of output opportunities in response to input is indispensable. When learners receive feedback on their attempts at communicating, they reformulate their initial utterances which promote language development. Swain observed that the learners in content-based French immersion classrooms had comprehension difficulties, and they lacked accuracy in oral production in content-based French. Thus based on her observations, she rejected Krashen’s claim and stated that comprehensible input alone does not improve language acquisition. Although it is primarily assumed that empirical findings of L2 speaking could be applied to improve language skills in general, surprisingly little attention has been paid to studying to what extent the Output Hypothesis can be applied to correct phonological errors of L2 learners. The study measures to what extent can pronunciation intelligibility of ESL learners in Sri Lanka be improved through student-centred and teacher-centred CF moves?
D. Research Sample

The research sample selected for the study consisted of forty-five Sinhala students of 20-22-year age group (Mean = 21) who followed the National Diploma in Technology in the medium of English.

E. Research Design

The current study which was designed to examine the impact of Corrective Feedback on phonological errors involved a pilot test, a pretest, an immediate post-test, and a delayed post-test. Initially, a pilot test was carried out to investigate the most frequently occurring phonological errors among Sri Lankan ESL learners.

Accordingly, the pilot test measured perception and production of the /o/ and /ɔ/ contrast, the /p/and /f/contrast, /s/and /l/, /s/ and /z/ in the word initial position and the consonant clusters commencing with / s/. Subsequently, a questionnaire on demographic information was administered to the sample population, and forty-five students were chosen based on their proficiency in English, exposure to the language and nationality. The sample of forty-five students was polarised into three groups as Group I, II and III (15 students in each) and each group was again divided into two experimental groups: a teacher-fronted CF group, a student-fronted CF group, and a control group (5 in each), and after four weeks, a delayed post-test was administered.

The experiment was conducted in three phases: an instructional phase, a treatment phase and an assessment phase. During the instructional phase, a two-hour brief introductory session on phonetics was conducted, followed by a discussion on the characteristics of the selected phoneme/s. A diagram of speech organs and videos were used for this purpose. Group I was exposed to a Form-Focused Instruction (FFI) session on the disparity between /o/ and /ɔ/ vowel contrast, the subjects in Group II were introduced to the articulation of /s/ when it occurs in word-initial position preceding a consonant cluster, and Group III were acquainted with the disparity between the articulation of the voiceless fricative /s/ and the voiced fricative /z/. During the treatment phase which spanned over ten days, a series of tasks was conducted to perceive and practice the articulation of the target phoneme/s. The tasks included listening discrimination tasks, controlled practice, guided practice and communicative practice tasks. While the subjects were engaged in the tasks, the teacher-fronted feedback group received feedback in the form of recasts, and the student-fronted feedback group received feedback in the form of prompts. Three control groups received comparable instruction without feedback. Immediately after the treatment phase was over, a post-test was conducted to measure the effect of CF on phonological intelligibility. After a time interval of four weeks, a delayed post-test was administered to check the impact of CF on sustained learning.

F. Test Instruments

Pretest: Three pretests (see Appendix A1, A2 and A3) were designed and administered to each group separately to gauge students’ ability to perceive and produce the target phoneme/s. Pretest I assessed students’ ability to perceive and produce the problematic / o/ and / ɔ/ vowel contrast. Pretest II evaluated how the word onset consonant clusters commencing with /s/ were articulated by the students, and Pre-test III measured their ability to discern and produce the /s/ and /z/ contrast.

Post-test: A post-test was designed to obtain two types of spoken production samples: a standard sample and a free speech sample to measure improvements immediately after the treatment session. As the first task, all the participants in the three groups individually read aloud five sentences specially designed for each group (See Appendices B1,B2 and B3). Group I received five sentences which included ten word tokens requiring the production of /o/ and / ɔ/. Group II was administered five sentences comprising five word tokens commencing with a consonant cluster (e.g. sk, st, sp) and Group III received 5 sentences consisting of five word tokens commencing with /z/. All the word tokens selected for the post-test were familiar words that the participants had already practised during the treatment phase. In order to collect free speech samples from the participants, each group was given a picture to describe (See Appendices B4, B5, B6) as the second task.

Delayed post-test: A delayed post-test was conducted to measure the participants’ ability to produce the target forms at a subconscious level after a lag of four weeks. The delayed post-tests of Group I and Group II were conducted in the form of a conversation with each participant. However, as the occurrences of a considerable number of /z/ initial words in free speech was quite unlikely, Group III was advised to make five sentences incorporating the words given on cards.
III RESULTS / FINDINGS

a. Comparison Pre-test and Post-test Results at Controlled Speech Levels

This section presents a comparative analysis of the performances of the experimental groups and the control groups at the post-test with their performances at the pretest. This comparison will disclose whether there is a significant effect of Form Focused Instruction on phonological errors.

Figure 1 below compares pretest and post-test results of Group 1 that were exposed to FFI and CF on the production of the /o/ and /ɔ/ vowel contrast.

As depicted in Figure 1, instruction on the vowel contrast has a positive effect on pronunciation as the student–fronted group, the teacher-fronted group and even the control group had performed better at the post-test than on the pretest (mean = 0). However, the two experimental groups have outperformed the control group which highlights the superiority of FFI coupled with CF. A closer look at Figure 1 also reveals that the performance of the student–fronted CF group (mean =56) is exceptional in comparison with the performance of the teacher-fronted CF group (mean=20).

Figure 2 below compares the performances of the participants in Group 11 before and after FFI and CF sessions on the production of the word onset consonant clusters commencing with /sl/.

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As illustrated above, both student-fronted and teacher-fronted groups have exhibited a considerable improvement after receiving FFI together with CF, compared to the control group. In accordance with the previous instance, results indicated that when participants receive FFI along with feedback on pronunciation, they display a significant improvement. However, it can be seen that in comparison with the teacher-fronted group the student-fronted group exhibited a marked improvement gaining a mean score of 76 and 20 respectively.

Figure 3 below presents a comparison of pre and post-test average scores of group III which was exposed to a treatment session on /s/ and /z/ contrast.

![Figure 3: Comparison of Pre and Post-test Results (Group III)](image)

As evidenced by results it is confirmed that awareness raising is essential for L2 learners to discern and produce /s/ and /z/ accurately as both groups have gained a mean score close to 90 irrespective of the CF type improved remarkably after the FFI treatment session when it was combined with CF.

D. Comparison of Post-test and Delayed Post-test Results at Free Speech Levels

A comparison of the mean scores of the post and delayed post-test conducted at free speech levels will demonstrate the presence of sustained uptake of pronunciation. Figure 4 below depicts the mean scores of the post and the delayed post-test of student and teacher-fronted groups at the discourse level.

![Figure 4: Comparison of Post-test and Delayed Post-test Results (Group I)](image)
It is evident from results that both groups show improvements at free speech levels; however, the student-fronted group which received explicit feedback through prompts has outdone the teacher-fronted group with substantial gains. The mean score of the student-centered group rose from 24 to 62 whereas the mean score of the teacher-centered group slightly went up from zero to 16. This corroborates that participants who receive instruction, output opportunities to practice and explicit feedback are able to discern and produce / s / accurately in most of the instances at the discourse level.

Figure 5 shown below presents the mean scores of the post and delayed post-test of the participants who were introduced to a session on the word onset consonant clusters commencing with / s /.

![Figure 5: Comparison of Post-test and Delayed Post-test Results (Group II)](image)

As illustrated in Figure 5 above, although the student-fronted CF group showed a sign of immediate uptake at the discourse level, the teacher-fronted CF group demonstrated no improvement. Instead, they had reverted back to the fossilized form (backsliding) scoring a mean score of 12.

Figure 6 compares the mean scores of the post and delayed post-tests of Group 111. Participants in Group 111 had been assimilating both / s / and / z / sounds into / s / due to L1 influence before the treatment session but learnt to produce / z / accurately during the treatment session.

![Figure 6: Comparison of Post-test and Delayed Post-test Results (Group III)](image)

It is apparent from the results that both the experimental and the control groups also have improved the production of / z / in free speech. Student and teacher-fronted groups have also performed commendably well on the delayed post-test gaining a mean score of 92 and 80 respectively although the former received CF only through recasts, and the latter through prompts. Comparison of the posttest and delayed posttest results provide strong evidence that immediate uptake does not guarantee learning and participants require prolonged practice coupled with CF to internalize what they have acquired and to produce the target forms subconsciously.

IV CONCLUSION
The study provides evidence that input alone does not play a significant role in pronunciation acquisition as the experimental groups which received Corrective Feedback outperformed the control groups which was exposed only to Form Focused Instruction (FFI) sessions. To sum up, data yielded by the study provides strong evidence that the student-fronted and the teacher-fronted groups have shown improvement whereas the progress of the control group was limited. This shows that awareness-raising alone (Form Focused Instruction) has only a marginal effect on pronunciation improvement. Thus the study supports Swain’s Output Hypothesis and confirms that comprehensible input alone does not lead to the acquisition of phonological features and therefore endorses the fact that output opportunities in response to input are instrumental in improving pronunciation intelligibility. The study concludes that student-fronted moves which allow output in response to input is a better option than teacher-centred CF moves in providing CF to phonological errors. When CF is provided through prompts pushing the learner to correct phonological errors, it triggers learners to notice the gap that exists between L1 and the target forms and provide the learners with output opportunities that aid them to modify or restructure deviated forms from the acceptable phonological form. Thus, finally, the study confirms that age is not a limiting factor in achieving pronunciation intelligibility and that the acquisition of pronunciation intelligibility remains active throughout a person's life.

APPENDICES

Appendix A – Pretest

Appendix A1 - Group I
Read the following words.
1. Hall
2. Hole
3. Law
4. Low
5. Ball
6. Bowl

Appendix A2 - Group II
Read the following words.
1. School
2. Station
3. Scholarship
4. Strike
5. Skirt
6. Statistics

Appendix C3 - Group III
Read the following words.
1. Zip
2. Sip
3. Zinc
4. Sink
5. Zeal
6. Seal

Appendix B – Post-test

Appendix B1 – Task one (Group I)
Read aloud the following sentences.
1. English is spoken all over the world.
2. I have never seen such a naughty child before.
3. She asked me to go home.
4. She saw the man.
5. She does not like oranges.
Appendix B2 – Task one (Group II)
Read aloud the following sentences.

1. What is your school?
2. Where is the station?
3. He passed the Scholarship exam.
4. The workers are on strike.
5. We learn statistics.

Appendix B3 – Task one (Group III)
Read aloud the following sentences.

1. Can you zoom the picture?
2. There is a zebra.
3. We will visit the zoo.
4. The zipper has broken.
5. The temperature is below zero Celsius degrees.

Appendix B4 – Task two (Group I)
Describe the picture given below.

Appendix B5 – Task two (Group II)
Make sentences by looking at the pictures given below.

Appendix B6- Task two (Group III)
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