

Acquisition of English Lateral Allophone by Khowar Adult Speakers

Sami Ullah Khan

Assistant Professor, Lasbela University of Agriculture
water and Marine Sciences, Balochistan
samiluawms@gmail.com

Dr. Ghulam Ali Buriro

Assistant Professor, University of Sindh
gaburiro@gmail.com

Dr. Illahi Bakhsh

Assistant professor, University of Sindh.
illahibux.gopang@usindh.edu.pk

Abstract

Khowar is an Indo-Aryan language spoken in the northern part of Pakistan which carries unique sounds relatively to the major languages of Pakistan. It has lateral phoneme in contrast to English, which possess two allophonic variants such as clear /l/ and dark /l/. Looking into nature of existing literature, it is deciphered that English dark /l/ is not understood in Pakistan; therefore, this paper presents the production of English lateral allophones with two groups of Khowar L1 adult speakers: each group comprises of 15 participants and thus it makes total 30 participants. One group of participants is selected from Pakistan and the second group is taken from UK to be able to see whether Khowar L1 speakers can realize the difference of English clear /l/ and dark /l/. Lexical items carry target sounds are 'oil' and 'later' with other distracting items recorded from both groups. Acoustical study is carried out through the measurement of F1, F2 and F3 frequencies of English lateral allophones. And the study found that both groups remained poor and nonsignificant in acquisition of English dark /l/ and it is related with clear /l/ of L1 which is assumed in the Speech Learning Model by Flege (2020). The foreign group despite native intake could not perform well. However, the study recommends that traditional way of teaching does not help to acquire native-like accuracy; therefore, English teachers need to be trained about phonetic realization of English consonants which can be further helpful for the learners of second language.

Keywords: Khowar, Second Language Acquisition, Phoneme, Allophones, Acoustic Analysis

1. Introduction

English enjoys the prestige of being official language of Pakistan since the British colonizers ruled over the subcontinent. Though Pakistan and India liberated in 1947, yet English still reigns in the subcontinent. Therefore, English is used as an official language ranging from public offices to educational institutions as a medium of instructions and tool of communication among the educated class of the society (Syed, 2012). The importance of English is further enhanced with the influx of science and technology which are mostly endorsed in English language through books

and websites, as a result, people are eager to learn English for keeping pace with existing order of the world. Since the departure of British colonizers, English is used in Pakistan but with changing shapes in terms of pronunciation because the native style is not adopted, consequently new version of English is invented by local speakers and such variety is named as Pakistani English (PakE) by linguists (Rehman, 2012). This local variety of English carries different challenges to the linguists to know certain factors involved in drifting from the original variety of English. This error in pronunciation also affected the learners of English particularly Khovar native speakers.

Khovar is an Indo-Aryan language spoken in the northern parts of Pakistan including Chitral and some parts of Gilgit. It is spoken as the first language in Chitral, and its speakers are scattered in the different cities of Pakistan for the sake of jobs and education. Like other learners of English in Pakistan, Khovar speakers also come up with the peculiar variety of English which is due to the ingenious variety of English learned from the educational institutions. According to Syed (2020) such varieties are due to the interference of L1 and the input received from the local English teachers. Thus, this study will find the acquisition process of adult learners of English whose L1 is Khovar in terms of English allophonic lateral which is phonemic in Khovar. English allophonic laterals are in two forms such as clear /l/ which is produced at the initial utterance and dark /l/ that is produced at the final position of a word by native speakers of English.

As the existing literature on second language acquisition problem in Pakistan is evident that learners of English face hurdles due to the traditional method of teaching and localized way of English teaching. Teachers are trying to help to tackle such errors but, nonetheless, the traditional way is not going to resolve such issues. This paper will investigate this matter through technology to address errors in learning English faced by Khovar adult learners. Khovar phonemic chart is given below.

Table: 1 Phonemic Chart (Khovar)

	Bilabial		Dental/ alveolar		Post-alveolar (apical)		Post-alveolar (laminal)		Velar		Uvular	Glottal
Plosive	P	B	t	d	t̪	d̪			k	g	Q	
	p ^h		t ^h		t̪ ^h				k ^h			
Nasal	M		n									
Affricate			ʈ	ɖ	ʈ̪	ɖ̪	ʈ̪̥	ɖ̪̥	ʈ̪̥	ɖ̪̥		
			ʈ̪̥	ɖ̪̥	ʈ̪̥ ^h							
Fricative	F		s	z	ʃ	ʒ	ç	ʒ	x	ɣ	h	
Tap			r									
Approximant	v						J					
Lateral approximant			l				L					

1.1. Problem of the Study

According to Rahman (2008) and Syed (2012), English allophonic lateral varies in the production of clear /l/ and dark /l/ at a word's initial and final position by native English speakers. Thus, Khovar participants would be able to differentiate the difference between the production of clear and dark allophones of English or not but recent study on Pakistani languages shows that English dark /l/ is substituted with clear /l/ as dark /l/ is absent in the most major languages of

Pakistan. However, English dark /ɹ/ is present in Khowar in phonemic form which can give a better chance for Khowar participants to produce with the difference of production or it will be substituted with clear /r/.

1.2 Questions of the Study

- a. How do Khowar learners of English acquire ‘similar’ or ‘new’ L2 sounds?
- b. How to resolve the issue of sounds in learning which are closer phonetically?

1.3 Objective of the Study

1. To know the reason whether Khowar learners of English face problem in the acquisition of ‘similar’ or ‘new’ sounds of L2.
2. Learners of L2 often substitute L2 with the closer sound of L1 and this study would find out why phonetically closer sounds are substituted which often blocks L2 learning (Flege (1996).

1.4 Significance of the Study

This study would be first of its kinds, where Khowar learners of English are probed to see the production of English allophonic lateral which is phonemic in Khowar phonemic inventory, and such type of study is not done on Khowar L1 speakers.

2. Review of Literature

Khan et al. (2021) conducted a study on Khowar adult learners of English on the acquisition English consonant [w] and [v] as existing literature on the second acquisition of (L2) shows that these two consonants are equally produced by non native speakers though English [v] is produced with the labio-dental fricative [v] whereas [w] is produced with lip-rounding (Rehman, 2012). In addition, Khowar has labio dental approximant sound in the L1. The finding of the study shows that Khowar learners of English substituted English [v] and [w] with the Khowar L1 [v]. So, the hypothesis of the study assumed that the given English consonant sound will be substituted with closer sound of L1. Thus, the result of the study manifested that English consonant [v, w] are replaced with the sounds which is similar in terms of phonological features which is also endorsed by Flege (2020) that L2 sound is substituted with the sound of L1 if the L2 sound is absent in the L1 that is called negative transfer. This notion further consolidated by Boersma and Hamann (2009) phonetics and phonology plays vital role in the production of L2 acquisition. Thus, this study further see the impact of phonological features in acquisition of English allophonic lateral by adult Khowar learners of English which is the gap yet to be explored and previous literature shows so, no such study is done on acquisition of English lateral allophonic variation by Khowar L1 speakers.

The assumption of Speech learning model (SLM) of Flege (2020) will be taken as the tool of this study which is truly focusing on the perception and production of L2 acquisition, and this is the reason of taking this model into consideration because other models are not focusing on both process of learning (perception and production). According to the assumption (H1) of SLM if the learners of L2 are aware of the allophonic variation then learners can relate the sound of L2 with the closed sound of L1 (Syed, 2012) and his (H2) assumes that if there is realization of phonetic difference between the sound of L2 and closest L1 then the possibility of phonetic category creation arises. According to Flege (1995), if corresponding of L2 is not perceived then new phonetic category is blocked. Hence, to be able to test such assumption of SLM, English

allophonic variation providing conducive tool for experiment and current study will analyze the acquisition process of English allophonic variation by adult Khowar learners of English. Flege (2020) further divides the sounds of L2 into three categories naming as “Similar”, “Identical” and “New”. The similar sounds of L2 are equal to the sound of L1 but different in features and SLM argues that such sounds are most difficult one. In order to acquire such L2 sound then there is need of phonetic realization and realization does not take place unless L2 sound features are fully acquired like L1.

Identical sounds are easier than similar as identical sounds of L2 are equal to the sound of L1 in terms of features and resemblance therefore, learners do not feel any difficulty in acquisition of such sounds. So, L2 learners face no hurdles in learning such sounds and there is positive transfer of sound as well. However, the last category is new which is existed in the L1 of the language but not in L2 which is why this sound is easy to learn for the learners. Keeping in view the target sounds of English lateral allophone which are also present in Khowar as phoneme, it is expected to be similar which is difficult according to the categories of SLM.

2.1 Hypothesis

It is presumed that Khowar learners of English will not be able to produce English lateral allophone because existing literature shows that these sounds are difficult for Pakistani learners of English (Mahboob & Ahmar, 2004). Thus, this study will substantiate the hypothesis as Khowar learners of English also, received education from existing education system of Pakistan and having the same input which is provided to the rest of learners of the country.

3. Research methodology

3.1 Population

This study contains two groups of Khowar participants based in Pakistan and UK, where each group comprises of 15 participants. Participants based in Pakistan are graduate students holding degree in different disciplines, and the foreign-based group is also having graduate degrees from Pakistan and living in UK for the sake of further studies and job. The average years of living of UK based participants is four years and both group of participants are Khowar L1 speakers.

3.2 Design

Khowar participants of both groups were asked to read louder the lexical items and their voices were recorded through the voice recorder of cell phone. Prosody Pro (2013) and Praat (Boersma & Weenink (2019) software used for the acoustical analysis of the target sounds. The target sounds containing the tokens are ‘oil’ and ‘later’. Each token is repeated three times in order to get maximum reliability of the production by each group. The lexical items were given in random manner to obtain natural production of target sounds. F1, F2 and F3 formant values of the recorded target sounds were taken to study with the help of Praat. Independent T test is applied to obtain significance of repetition of mentioned three formants. This data is presented and discussed in the analysis portion.

4. Analysis and Discussion

English lateral allophones are in two forms known as dark /ɫ/ which is produced at word final position and the second form is clear /l/ which is produced at initial position by native speaker. Therefore, English carries these two allophonic variations which are different from Khowar and

in contrast to these English allophones Khovar posses English lateral but at phonemic level. This study is conducted to find out whether adult Khovar learners of English realize the allophonic variance of English lateral despite the presence of dark /ɫ/ in the L1 of Khovar in the form of phoneme. Hence, the parameter to check the production of Khovarlearnersis adopted through the significance of F1, F2 and F3 frequencies of Praat which shows the intensity of dark /ɫ/. The mean values of both group is taken for further analysis through independent T test. Total 30 participants took part in this study where 15 adult Khovar learners English are taken from within Pakistan, another 15 participantof Khovar L1 taken from UK who spent five years in abroad after graduating from Pakistan. The purpose of taking such type of participants sampled from abroad and Pakistan to be able to see the impact of environment and role of input either such factors affecting helps in acquisition of L2 or not. Therefore, such data is collected and the put to read acoustical analysis through Praat to get formant frequencies of F1, f2 and F3 mean values and significance English allophonic variance by the production of the given two groups which is done through the application of independent T test. However, the result is assessed on the production of clear /l/ and dark /ɫ/ which are given in the word ‘later’ which represents English clear /l/ and ‘oil’ represents dark /ɫ/. According to Syed (2012) English clear /l/ is produced at word initial position and dark /ɫ/ is produced in final position of the word by native English speakers. However, the parameters of gauging formants frequencies go as under.F1 formant frequency is high for dark /ɫ/ and low for clear /l/ in the production of native speaker secondly, F2 frequency for dark /ɫ/ is low and high for clear /l/ lastly, F3 frequency is high for dark /ɫ/(Kirkhamand McCarthy, 2020; Arsenault, Peterson and Kochetov(2020).

4.1. Foreign Group

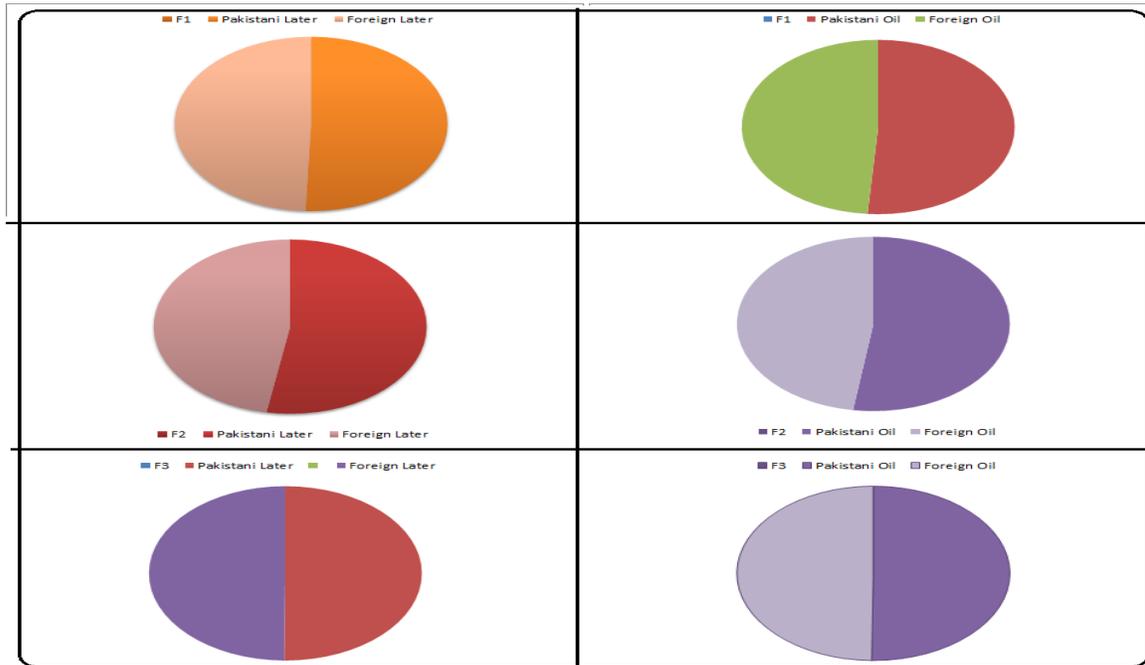
Looking into the paucity of the existing literature and findings of the study, it is found that foreign-based group F1 formant frequency according to result of independent T test for dark /ɫ/ in the production ‘oil’ is (.63) and the production of ‘later’ for clear /l/ is (.79). F2 formants frequency mean value for dark /ɫ/ is (.6) and a clear /l/ mean value is (.02). F3 is for dark clear /l/ is (.71) and dark /ɫ/ is (.41).

4.2Pakistani Group

Results of Pakistan-based participants show for the production of ‘oil’ and ‘that F1 significant value for dark /ɫ/ is (.63) and for clear /l/ is (.79). However, F2 formant significant value for dark /ɫ/ is (.06) and clear /l/ is (.02). F3 significant value for dark /ɫ/ is (.41) and clear /l/ is (.71).

Table: 2 Productions of Lateral Allophones of Pakistani and Foreign Group

The above finding 6.1 shows that none of the production is significant except F2 for clear /l/ which indicates that foreign-based participants did not recognize the difference between dark and



clear. This could be the reason that foreign-based participants did their undergraduate degree from Pakistan because, English dark /l/ is replaced with clear /l/ (Rehman, 2012) therefore and the same impact of clear /l/ is also noticed in the production of Khowar L1 speakers through the findings of this study. Though, Khowar phonemic chart shows the existing of dark /l/ in the form of phoneme not allophone and the curiosity also created with Khowar learners of English that they might differentiate the difference of dark and clear lateral because of the presence of dark /l/ in the L1 and it was also expected that the foreign native might have consolidated this difference further due to the native input and environment but the findings of this study show that foreign-based Khowar participants did not improve in terms learning English allophonic dark lateral neither they have differentiated the difference between them which indicates the poor learning and no benefit of getting foreign input. Thus, it is noted that interference of L1 and the influence early education is more consolidated in the learning process of foreign-participants therefore, despite living among the native and having native input they did not learn English allophonic lateral sounds.

Above mentioned (6.2) production frequencies of Pakistan-based group shows that none of the formants frequencies remained significant in the production of English dark /l/ and clear /l/ which indicates that they did not learn English allophonic variations. Thus, according to the findings of both groups, it is declared that Khowar L1 learners of English could not differentiate the difference of English clear and dark lateral allophone. The outcome of this study goes along with prediction of H5 of SLM that equivalent classification of L2 sound with the corresponding L1 stops acquisition of particular. English dark /l/ is taken clear /l/ rather L1 lateral phoneme of Khowar by both group therefore, new phonetic category is not created which is assumed in the

H1 which states that learners substitute L2 allophonic lateral with the phoneme of L1 but in case of this study L2 learners of Khowar did not differentiate different variant of allophone of English phoneme. If they could have differentiated allophonic variation then there is possibility of phonetic categorization or learning but Khowarlearners related English dark /ɫ/ with clear /l/ L1 which is why learning is blocked due the equivalence classification which is also assumed in the H2 of SLM (Flege, 2020).

In response to the question No.1 which states that how do Khowarlearners of English acquire 'similar' and 'new' L2 sound? so, the findings of this study confirms the notion of Flege (1996) that similar sounds are difficult then the new ones as Khowarlearners thought English dark allophone as clear which has stopped learning new allophonic sound of L2 and complementary distribution of sound is new for Khowarlearners of English which is difficult to acquire unless realization of the variation is taken place. The response to the second question which is stated to resolve the issue of sounds of L2 in learning which are closer to L1 phonetically factually, L2 learners can learn the sounds which are phonetically closer but if the learners are informed about the differences of allophone and phoneme which is possible if English teachers are well trained and informed about the sound variations otherwise traditional method of teaching in Pakistan will create erroneous learning of English sound which does not help improving second language. It further recommended that the Pakistani students and Khowar learners in particular must be taught English phonics to be able to acquire native sound of English which is possible if the English teachers are well equipped with English sound variations otherwise equivalence classification of sound of L2 with L1 will always take place and proper learning of specific sound like English allophonic lateral will not take place.

5. Conclusion

It is found that Khowar learners of English did not learn the difference of English allophonic variance which is clear at word's initial position and dark /ɫ/ at final position. Such allophonic variance does not exist in Khowar but English dark /ɫ/ is present in Khowar as phoneme. The presence of English dark /ɫ/ as phoneme did not help Khowarlearners of English both Pakistan and UK-based in learning English lateral allophones. It was assumed that UK-based Khowar learners would perform better than Pakistani group because of the native input they received but result shows that they did not perform well in learning English dark /ɫ/. Thus, it is concluded that the traditional way of teaching does not help learning accurate English which needs proper way. Linguistic learning should be provided for English learners especially at primary level and teachers are mainly focused to be trained in English phonics otherwise, erroneous learning is expected to continue the part of the learners of English in Pakistan.

5.1. Limitation

This study is confined to the study of English lateral allophones and no other consonant sound of English is part of the study.

5.2 Recommendation

It is important to review certain element in future study which came to surface through the results of current study which are as under:

1. Despite having dark /ɫ/ in the phonemic chart of Khowar language, Khowar speakers could not realize the difference of clear /l/ and dark/ɫ/. Further the study could ascertain this issue with the detail acquisition process of phoneme of L1 and allophones of L2.
2. Traditional way of teaching does not help to learn L2 like natives, therefore, a study must be carried out where L2 learners are taught with consonantal realization which might help in the accurate realization of sounds.
3. Pakistani English is an obstacle in the way of learning native-like English therefore English teachers must be trained in English phonics which can help learners in learning accurate production

References

- Paul, B. & Weenink, D. (2019). Praat: doing phonetics by computer (Version 6.0.52)[Windows]. *Search in* (2019).
- Emil, F. J. (2018). The Speech Learning Model (SLM) account of how Japanese speakers learn English/r/and/l. *Unpublished presentation at Sophia University, Tokyo, July* (2018).
- Emil, F. J. (1999). The relation between L2 production and perception. *Proceedings of the XIVth International Congress of Phonetics Sciences*. Vol. 2. by J. Ohala, Y. Hasegawa, M. Ohala, D. Granville & A. Bailey.
- Emil, F. J., Takagi, N. & Mann, V. (1995). Japanese adults can learn to produce English/l/and/l/accurately. *Language and Speech* 38, no. 1: 25-55.
- Flege Emil, F. J., Takagi, N. & Mann, V. (1996). Lexical familiarity and English-language experience affect Japanese adults' perception of/l/and/l." *The Journal of the Acoustical Society of America* 99.2 (1996): 1161-1173.
- Khan, H. I. (2012). The evolution of Pakistani English (PakE) as a legitimate variety of English. *International Journal of Applied Linguistics and English Literature* 1.5 : 90-99.
- Rahman, T. (2020). Pakistani English. *The Handbook of Asian Englishes*: 279-296.
- Kochetov, A., Petersen, J. H., & Arsenault, P. (2020). Acoustics of Kalasha laterals. *The Journal of the Acoustical Society of America*, 147(4), 3012-3027.
- Kochetov, A. et al. (2021). Kalasha (bumburet variety). *Journal of the International Phonetic Association* 51.3 (2021): 468-489.
- Kirkham, S., Danielle, T. & Adrian, L. (2020). A typology of laterals in twelve English dialects." *The Journal of the Acoustical Society of America* 148.1: EL72-EL76.
- Xu, Yi. (2013). ProsodyPro—A tool for large-scale systematic prosody analysis. Laboratoire Parole et Langage, France.