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Fossilized pronunciation errors from the perspectives of Turkish teachers of English and their implications

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Abstract

This study attempted to explore the attitudes of Turkish teachers of English towards the rehabilitation of fossilized pronunciation errors. It unearths the factors that have an effect on the production of such errors. The data were collected from 30 teachers of English who work in different state universities of Turkey with different years of experience and analyzed through descriptive and inferential statistics. The findings of the study revealed that 70% of the participants had a positive attitude towards the remediation of fossilized pronunciation errors and were motivated enough to overcome such errors. It was further discovered that the participants' years of teaching experience did not have any significant effect on their thoughts of L1 interference with regard to making phonological errors. The study also revealed that there was not significant correlation between the participants' inner beliefs to overcome fossilized errors and whether they have taken any professional pronunciation courses or not. Nevertheless, since this is a pilot study, further research is needed including a larger population so as to validate the findings of the present study and to determine what could be done to make the attitudes toward fossilized pronunciation errors positive.

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Keywords: fossilized pronunciation errors; audio-articulation model; teachers' attitudes; analytic-linguistic approach; intuitive –imitative approach

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1. Introduction

In the realm of linguistics and SLA, the critical period hypothesis (Lenneberg, 1964) has been the subject of a long-lasting debate over the years. The hypothesis claims that there is a certain age, approximately around 12, until which the acquisition of the language in a linguistically-rich environment is ideal and after which it would be more demanding for further language acquisition to occur. Acton (1984), in this respect, concurs that once one reaches puberty, the ability to learn a second language, including the possibility of acquiring a native-like accent, begins to deteriorate. Brown (2014), on the other hand, claims that the majority of pronunciation features of a second language can be learned by imitation by learners of any age. He also adds that for learning the pronunciation of a second language, it depends, however, on the learner's aptitude for mimicry, the plasticity of their brain, and their willingness to temporarily abandon the pronunciation habits of their native language.

2. Theoretical Background

2.1. Fossilized Pronunciation Errors

For more than three decades, fossilization has been the subject of many queries under different terms such as 'stabilized errors' (Schumann, 1978), 'typical error' (Kellerman, 1989), 'ingrained errors' (Valette, 1991), and 'cross-linguistics error' (Odlin, 1990). However, it was the famous American linguist Selinker, who first coined the term 'fossilization' into the literature of SLA. Selinker (1974: 41-47) presupposes that fossilized linguistic structures 'even when seemingly eradicated, are still somehow present in the brain, stored by a fossilization mechanism in an Interlanguage (IL). Wei (2008) postulates that phonological fossilization refers to the repetition of phonological errors which result from the incorrect acquisition of pronunciation of L2, usually affected by L1. According to Hişmanoğlu (2007), fossilized pronunciation errors are chronic articulation mistakes made by language learners in the acquisition of the phonological system of the target language which continue for a long time and cannot be easily solved.

As far as the reasons for such errors are concerned, Selinker (1974) suggests the following processes as to the fossilized items in learners' interlanguage: language transfer, transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization of the target language (TL) linguistic material. Hişmanoğlu (2007) states that the main reason why language learners make fossilized pronunciation errors is that they apply the phonological rules of their mother tongue to those of the target language.

2.2. Are Fossilized Pronunciation Errors Undoable?

Butler-Tanaka (2000) cited that Selinker postulates that fossilization is a mechanism which also exists in the interlanguage unit and that it will be present no matter how old or young the learner is as well as how much instruction is given. It becomes, undoubtedly, more demanding to change pronunciation once a certain level of fluency has been reached (Neufeld, 1978; Hammerly, 1982). In addition, Han (2004) cited in his book that most adults never master a foreign language, especially the phonology – hence the ubiquitous foreign accent. Their development often 'fossilizes' into permanent error patterns that no teaching or correction can undo.

Butler-Tanaka (2000), on the other hand, cited in his dissertation: Brown's definition of fossilization differs from that of Selinker and Ellis as he sees it as a reversible condition. He uses the metaphor of "cryogenation"; the process of freezing matter at very low temperatures; to depict the reversibility of fossilization. His concept of how fossilization may be reversed centres around Vigil and Oller's (1976) 'account of fossilization as a factor of positive and negative affective and cognitive feedback' (Brown, 1994: 217). Brown's summation of Vigil and Oller's model is that fossilization may be overcome if the learner is given the necessary positive affective feedback, meant to encourage further attempts at communication, together with neutral or negative cognitive feedback

According to Demirezen (2008), the rehabilitation of fossilized articulation problems can be managed through the Audio-articulation Model. Contrary to Fromkin et al (2003), who state that fossilized pronunciation errors are undoable, it claims that fossilized pronunciation errors are curable. Hişmanoğlu (2007) also speculates that it is possible to cure the chronic pronunciation errors of Turkish learners of English through using minimal sentences, contextual sentences and problem-concentrated exercises placed in a communicative context. Acton (1984) as well

concluded that it has become clear that it is possible to do much more with seemingly fossilized speech than may be generally supposed.

3. Method

This present study intended to reveal the attitudes of Turkish teachers of English on the rehabilitation of fossilized pronunciation errors and the factors that influence the occurrence of such errors. In this respect, the research questions of the study were formulated as follows:

1. Does the participants' gender affect their thoughts on the age factor in making fossilized pronunciation errors?
2. Is there a statistically significant relationship between the participants' years of teaching experience and the interference of their native language in producing pronunciation mistakes?
3. What is the relationship between the participants' educational background and their perception of social pressure with regard to the production of fossilized pronunciation errors?
4. Is there any relationship between the fact that the participants have taken any professional pronunciation courses and their inner beliefs to overcome fossilized pronunciation errors?

3.1. Participants

The participants of this study are 8 males and 22 females from different state universities in Turkey such as Gazi University, Karabük University, and Selçuk University. All participants have completed their BA degree and 15 of them have also received their MA degree. They are all teachers of English and have been teaching English for years ranging from 2 to 35 years.

They all took a five-point Likert scale consisting of 25 statements, 5 of which constitute a category. There are five categories in the Likert scale: age, native language, length of time using English, social pressure, and innate ability. Those categories are thought to be the factors involved in determining whether a speaker can develop a clear pronunciation in a new language according to International Communication Centre, Carnegie Mellon University.

3.2. Instruments

A five-point Likert scale was used to investigate the attitudes of Turkish teachers of English towards fossilized pronunciation errors. The items were in a sequence such as "strongly disagree (1)", "disagree (2)", "neutral (3)", "agree (4)", and "strongly disagree (5)". The scale has two parts: the first part is about background information (gender, year of teaching experience, educational background, and affiliation with professional pronunciation course). The second part consists of 25 statements equally divided into five main categories. The items in the questionnaire focus on five factors, which are age, native language, length of time using English, social pressure, and inner belief. These factors are considered to be related to the determinants of a clear pronunciation. The items were formed in align with the categories as well as with the help of a thorough literature review on fossilized pronunciation errors.

3.3. Data collection and analysis

The questionnaire developed by the researchers was piloted with 15 Turkish teachers of English before its administration in order to measure its content and linguistic validity. Three experts from the field of ELT were consulted about whether the items in the questionnaire are clear and the scales are appropriate. Based on the feedback received, a few modifications were performed. The questionnaire proved to be reliable with a Cronbach's alpha coefficient value of 0.74.

4. Results and discussion

The following data were gathered through SPSS in accordance with the five-point Likert scale administered to 30 Turkish teachers of English.

4.1. RQ 1: Does the participants’ gender affect their thoughts on the age factor in making fossilized pronunciation errors?

Table 1: Percentages of Participants’ Responses to Statements Regarding Age

AGE	SD	D	N	A	SA	Total
I believe teen years are best for better acquisition of pronunciation.	0%	10%	20%	23.3%	43.3%	100%
The older a person gets, the harder it is to modify my accent.	0%	6.7%	10%	33.3%	50%	100%
My pronunciation became better as I learned English.	0%	0%	0	63.3%	36.7%	100%
If I had got training on pronunciation at an earlier age, I’d have improved it.	0%	0%	13.3%	36.7%	50%	100%
I begin to think that there is a critical period in acquiring native-like pronunciation.	0%	13.3%	3.3%	20%	63.3%	100%

As presented in Table 1, when “Agree” and “Strongly Agree” categories are combined, it can be concluded that 66.9% of the participants are of the same opinion that better pronunciation is acquired best in teen years. Half of the participants also stated that it becomes difficult to change their accent when they get older. A great majority of the participants, as many as 83.3%, acknowledged the fact that there is a sensitive period in the acquisition of native-like pronunciation. Moreover, 86.7% of the participants agreed that receiving pronunciation instruction at an earlier age could help them improve their pronunciation.

Table 2: Independent Samples T-test Results

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Age	Equal variances assumed	.000	.999	-264	28	.794	-05227	.19829	-45845	.35390
	Equal variances not assumed			-251	11.429	.806	-05227	.20833	-50873	-40418

When Table 2 is examined, it can be deduced from the Independent T-test results that the sig (2-tailed) or p value is greater than .05. This result suggests that there is no statistically significant difference between the participants’ gender and the statements regarding age. In other words, the participants’ gender did not affect their thoughts on the age factor with regard to making fossilized pronunciation errors. That is, the participants of both genders believe that age is a significant factor in acquiring native-like pronunciation.

4.2. RQ 2: Is there a statistically significant relationship between the participants' years of teaching experience and the interference of their native language in producing pronunciation mistakes?

Table 3: Percentages of Participants' Responses to Statements Regarding Native Language

NATIVE LANGUAGE	SD	D	N	A	SA	Total
I believe my native language is a great obstacle to having a native-like pronunciation in English...	13.3%	20%	36.7%	16.7%	13.3%	100%
I think I lack of empathy with target language native speakers and culture.	33.3%	30%	13.3%	20%	3.3%	100%
I feel that I might be inclined to establishing my pre-existing cultural and ethnic identity.	13.3%	20%	0%	53.3%	13.3%	100%
I might have rigid language ego boundaries towards English.	33.3%	46.7%	16.7%	3.3%	0%	100%
I lose my interest in perfecting my pronunciation as my native language keeps interfering.	50%	20%	20%	10%	0%	100%

When “Strongly Disagree” and “Disagree” categories are considered together, 33.3% of the participants, whose years of teaching experience ranges from 3 to 35, disagreed that their mother tongue hampers a native-like pronunciation in English. 63.3% of the participants also disapproved that they lack empathy with the native speakers and culture of the target language. 66.7% of Turkish teachers of English, who are the participants of this study, agreed that they might be prone to establishing their pre-existing cultural and ethnic identity. On the other hand, 80% of them rejected that they might have rigid language ego boundaries towards English. Similarly, 70% of the 30 participants disagreed that they lose interest in perfecting their pronunciation because of the inference of their mother tongue.

Table 4: One-Way ANOVA

Native Language

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7,856	2	3,928	10,981	.000
Within Groups	9,659	27	,358		
Total	17,515	29			

As the sig is less than .05, there is a positive correlation between the two variables. Therefore, a Post-Hoc test was administered to indicate the correlation between variables in detail.

Table 5: Post-Hoc Test: Tukey HSD

(I) How long have you been teaching?	(J) How long have you been teaching?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1-5 years	6-10 years	,74643*	,26508	,024	,0892	1,4037
	11 and more years	-,65357	,26508	,052	-1,3108	,0037
6-10 years	1-5 years	-,74643*	,26508	,024	-1,4037	-,0892
	11 and more years	-1,40000*	,29905	,000	-2,1415	-,6585
11 and more years	1-5 years	,65357	,26508	,052	-,0037	1,3108
	6-10 years	1,40000*	,29905	,000	,6585	2,1415

*. The mean difference is significant at the .05 level.

When the table is examined, it can be seen that there is a statistically significant relationship between the years of teaching experience of the teachers who were divided into three based on their years of teaching experience and their beliefs on their L1 interference in making fossilized pronunciation errors. Therefore, it can be stated that as teachers' year of teaching experience, their views on their L1 interference in fossilized pronunciation error production changes as well.

4.3. RQ 3: What is the relationship between the participants' educational background and their perception of social pressure with regard to the production of fossilized pronunciation errors?

Table 6: Percentages of Participants' Responses to Statements Regarding Social Pressure

SOCIAL PRESSURE	SD	D	N	A	SA	Total
I run away when native speakers of English are around me.	60%	20%	6.7%	13.3%	0%	100%
I feel frustrated when I make pronunciation errors.	13.3%	36.7%	23.3%	23.3%	3.3%	100%
I shudder when the principal comes to listen to my lesson.	23.3%	23.3%	30%	20%	3.3%	100%
My colleagues make fun of me when I insist on making the same fossilized pronunciation error.	53.3%	30%	10%	3.3%	3.3%	100%
Because of my pronunciation errors, I try to stay away from any environment which I have to speak.	60%	23.3%	13.3%	3.3%	0%	100%

As can be seen in Table 6, when “Strongly Disagree” and “Disagree” categories are regarded as one, it can be asserted that 80% of the participants rejected the fact that they escape the occasions when they are with native speakers of English. Therefore, it is plausible to assert that they trust their pronunciation even when they are having conversations with native speakers of the target language. Likewise, 83.3% of the participants implied that their pronunciation errors do not impede their communication with native speakers. A vast number of the participants, as many as 83.3%, stated that their colleagues do not deride their fossilized pronunciation errors. 46.6% of them also opposed to the fact that they fear the attendance of the principal in their classes. Half of the participants disagreed that they feel frustrated on the occurrences of pronunciation errors.

Table 7: One-Way ANOVA

ANOVA					
Social Pressure					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,898	2	,449	,870	,430
Within Groups	13,940	27	,516		
Total	14,839	29			

As demonstrated in Table 7, the sig value is less than .05. Hence, there is statistically significant difference between the educational background of the participants and the statements regarding social pressure. Strictly speaking, no matter what educational background the participants are from, this does not have any influence on their thoughts regarding social pressure. Therefore, whether or not the participants have a BA or MA does not influence the fact that they refrain from the administration due to their non-assertive manner in pronunciation or that they feel upset when they produce pronunciation mistakes.

4.4. RQ 4: Is there any relationship between the fact that the participants have taken any professional pronunciation courses and their inner beliefs to overcome fossilized pronunciation errors?

Table 8: Percentages of Participants' Responses to Statements Regarding Inner Belief

INNER BELIEF	SD	D	N	A	SA	Total
I believe I have the ability to recognize subtle differences in sounds and reproduce those sounds.	0%	0%	26.%	46.%	26.%	100%
I don't see myself motivated enough to change my foreign accent and acquire native-like pronunciation.	0%	13,3%	20%	26.%	40%	100%
I try to practice pronunciation while watching or listening to native speakers of English as much as I can.	0%	0%	13.%	40%	43.%	100%
I believe I can overcome the fossilized pronunciation errors that I have.	0%	0%	8.%	46.%	46.%	100%
I'm not happy with my pronunciation efficacy in my teaching pronunciation.	23.3%	36.7%	23.%	13.%	3%	100%

As presented in Table 7, when “Agree” and “Strongly agree” categories are combined together, 93.4 % of the participants claimed that they can overcome the fossilized pronunciation errors. In line with this claim, 73.3 % of them asserted that they are able to recognize subtle differences in sounds and reproduce those sounds. 83.3 % of the Turkish teachers of English, who were the participants of this study, try to practice pronunciation while watching or listening to native speakers of English as much as they can. On the other hand, 40% of the participants affirmed that they are not driven enough to modify their foreign accent and acquire native-like pronunciation.

Table 9: Independent Samples T-test Results

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
		Inner Belief	Equal variances assumed	,919	,346	-,401	27	,692	-,07353	,18357
	Equal variances not assumed			-,415	26,336	,681	-,07353	,17711	-,43737	,29031

When the Table 8 which provides the T-test results is examined, it can be seen that the p value is greater than .05(.69 > .05). Hence, it can be concluded that there is no statistically significant difference between the pronunciation courses the participants have taken and their innate ability in overcoming pronunciation errors. In other words, whether or not the participants have taken any professional pronunciation courses do not influence their beliefs in their innate ability to handle fossilized pronunciation errors.

5. Conclusion

This study has focused on the attitudes of the Turkish teachers of English, who have been working for 2 to 35 years in several universities of Turkey, towards the rehabilitation of fossilized pronunciation errors. The participants were

asked to answer some statements under five main headings on a five-point Likert scale. Those headings include age, native language, length of time using English, social pressure, and inner belief- all of which are considered to have an effect on the production of pronunciation errors. In respect to age factor whether it has an effect on mistakes in pronunciation, 86.7 % of the participants concluded that they could improve their pronunciation if they got training. 70 % of the Turkish teachers of English, who participated in this study, stated that they are motivated enough to perfect their pronunciation despite the L1 interference in making phonological errors. A great majority of the participants, up to 90 %, consider that fossilized pronunciation errors are rehabilitable. In accordance with this statement, 93.4 % have also concurred that such errors hamper communication. In addition, 93.4 % of the participants asserted that they can overcome fossilized pronunciation errors in line with the innate ability.

As a conclusion, the scholars in SLA are divided into two groups in that some of them assert that fossilized pronunciation errors cannot be undone (Selinker, 1972; Ellis, 1985; Mitchell and Myles, 1998) while there are others (Acton, 1984; Demirezen, 2003; Hişmanoğlu, 2007; Wei, 2008) who claim that such errors can be remediated even though it is difficult to do so. Despite the fact that there are scholars against the possibility of rehabilitation of fossilized pronunciation errors, they haven't asserted that it is impossible to remediate such errors. Hence, an effective method, like the audio-articulation method (Demirezen, 2003, 2004), could be utilized in order to undo fossilized pronunciation errors in align with the positive attitudes of the Turkish teachers of English towards the remediation of such errors.

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