

THE RELATIONSHIP BETWEEN CULTURAL INTELLIGENCE AND PRONUNCIATION QUALITY: THE CASE OF IRANIAN EFL STUDENTS

Mahdi Nasiri

Assistant Professor, Department of English Language, University of Zanjan, Zanjan, Iran

Vali Ghadiri

Department of English, Zanjan Branch, Islamic Azad University, Zanjan, Iran

ABSTRACT

The present study aims to explore the relationship between cultural intelligence and pronunciation quality to find the nature of the relationship that exists between them. Besides, it investigates how cultural intelligence is related to gender and age. To these ends, a total number of 100 Iranian speakers of English majoring in English teaching were first asked to fill out a 20 item cultural intelligence questionnaire developed by Van Dyne, Ang, and Koh (2008) and then took an IELTS-like speaking test which was subsequently scored by two raters, the average of which was considered as the score of participants' pronunciation score that represented the pronunciation quality of the participants. The result of data analysis indicated that there is a medium positive correlation between participants' cultural intelligence and their pronunciation quality. The findings also lead the researcher to conclude that gender and age were not determining factors in the participants' cultural intelligence. The findings of the current study could be used by English teachers, practitioners and learners in the EFL/ESL contexts.

KEYWORDS: cultural intelligence, Iranian speakers of English, pronunciation quality, gender, age.

INTRODUCTION

Pronunciation plays a remarkable role in English Language Teaching (ELT) world, particularly in developing communication skills and strategies to avoid misunderstandings. Nowadays, the significance of the pronunciation is undeniable; therefore, pronunciation instruction has become an essential factor in the field of foreign or second language teaching and learning. It is widely believed that communication takes place when speakers and listeners enjoy an intelligible pronunciation skill. Pronunciation is associated with various factors among which Cultural Intelligence is so noticeable. In other words, it is related to individuals' understanding about a culture and the ways cultures differ.

Cultural Intelligence, as a multidimensional intelligence, refers to “a person's capability to adapt effectively to new cultural contexts” (Earley & Ang, 2003, p. 59). Earley and his colleagues introduced the construct of Cultural Intelligence to delve deeply into the effectiveness of people's

performance across different cultures. Individuals with a higher Cultural Intelligence attempt to understand unfamiliar situations and adjust their behavior to cope with diverse situations. They can easily acquire pronunciation skills when they are faced with a new language and culture. In contrast, individuals who demonstrate a lower level of cultural intelligence cannot deal with different cultural backgrounds and lose their confidence and energy to reach cultural awareness. They get frustrated when interacting with people from different cultures and do not know how to function in different cultural situations. In spite of the significance of cultural awareness, few studies have been carried out to shed light on the association that may exist between cultural intelligence and students' performance. The main motive behind the current study is to contribute to the understanding of how Cultural Intelligence is related to EFL/ESL learners' pronunciation.

REVIEW OF RELATED LITERATURE

Pronunciation

Being a part of a code of a language and having been used to achieve meaning in the context of use, pronunciation is known as the production of significant sounds (Dalton & Seidlhofer, 2001). In the field of second language acquisition (SLA), pronunciation is often considered as “foreign accent”. Flege (1981) believes that foreign accent is caused from differences in pronunciation of a language by native and non-native speakers, i.e. when native speakers (NS) and nonnative speakers (NNS) pronounce a language differently.

Relationship between Pronunciation and Other Variables

Researchers have identified numerous factors that are related to pronunciation. These factors include careful versus spontaneous speech, musical ability, who rated the speech samples, sociolinguistic determinants, stylistic determinants, discourse determinants, the age of L2 learning, language learning aptitude, length of residence, gender, motivation, formal instruction, and language use (Piske, Mackay & Flege, 2001, Suter, 1976).

From among the factor that are believed to have an influence on accent and pronunciation, the age factor has traditionally been related with the Critical Period Hypothesis, and theories of brain lateralization and loss of plasticity. From Ellis' (1994) perspective, age is a social factor, and younger speakers of a foreign language are more prone to social pressures from their peer group. A lack of native-like control is obvious in adults' acquisition of foreign language pronunciation. The most popular interpretation for this phenomenon is age and the effect of a critical period for language learning and especially for pronunciation (Lenneberg, 1967; Scovel, 2000). Gender is also concerned with social identity; Ellis (1994) associates the higher possibility of experiencing greater success in pronunciation by women with identity factors, stating that “female ‘culture’ seems to lend itself more readily to dealing with the inherent threat imposed to identity by L2 learning” (p. 204). Concerning attitudes, Ellis states that a learner's attitude will represent their views toward both their own identity, and the culture of the language they are learning. These attitudes in turn will influence their success in learning the target language. Identity and pronunciation instruction are also related to each other.

Social and Identity Factors Related to Pronunciation

Along with the above factors, some scholars also noted out that younger learners of a foreign language may have less strict shaped identities. In the same line Dornyei (2009) discuss that children have relatively a weaker group identity in comparison with adults, and this may contribute to integration into a new language community to be identified with. Dalton and Seidlhofer (2001) raise questions about the ethics of trying to alter someone's pronunciation, since pronunciation may be a representative of identity. Sociolinguistic studies in the field of second language acquisition have confirmed that social, cultural and psychological factors might influence the language acquisition. There are increasing numbers of researchers interested in exploring the ways social factors affect the learner's approach to pronunciation, as well as their likelihood of fossilizing (Moyer, 2004; Piller, 2002). Considering the pronunciation achievements in the sociolinguistic paradigm, it had been indicated that more notice needs to be given to differences that individuals have in phonological attainment, especially in relation to factors such as sense of self in the new language and identity. Some issues that have been investigated concerning social issues involve the practical implications of accent and the social impact of accentedness, the relationship between learners' views toward their own accents and their accomplishments in pronunciation attainment, and how learners' social interactions might be influenced by listener perceptions and views toward pronunciation.

Studies about the effect of social factors on second language pronunciation has been presented with topics such as discrimination (Lippi-Green, 1997; Munro, 2003), identity (Zuengler, 1988), acculturation (Schumann, 1986), ethnic group identification (Gatbonton, Trofimovich & Magid 2005), thoughts about L2 speakers' intelligibility or speakers' ability to speak the language (e.g., Lindemann, 2002; Rubin, 1992), social variables thought to affect pronunciation attainment (Miller, 2003). When talking about the socio-cultural issues like acculturation, it is of high importance for individuals who migrate to foreign countries. Being able to interact and communicate comfortably and effectively in spoken English is of considerable importance for adult migrants settling in English-speaking countries, and an inability to do so may limit their educational, career and social opportunities (Derwing, Thomson, & Munro, 2006; Schellenberg & Maheux, 2007, Yates, 2011). Migrants themselves have indicated that developing speaking skills (Yates, 2010) and being able to pronounce English well (Derwing, 2003) is very important to them. Yet it seems that being able to speak with pronunciation that allows them to be understood by a range of people in a variety of different situations might be a particular stumbling block for many migrants learning English. Derwing et al. (2006) followed the progress of 40 migrants over a 10 month period as they attended beginner level English classes in Canada, and found that even after 10 months of full time English lessons, the majority of the participants were dissatisfied with their pronunciation skills. Zielinski (2010) found that developing pronunciation skills was also challenging for many migrants learning English in the Australian context. She reported that over half (54%) of the participants in a longitudinal study of migrants attending English classes in the AMEP expressed negative perceptions about their pronunciation skills.

Cultural and Language Identity

According to Hall (2003), there are two main perspectives of cultural identity. In the first, cultural identity is defined as “one, shared culture ... which people with a shared history and common ancestry hold in common” (Hall, 2003, p. 234). In this view, the shared history and cultural codes of a group of people provide a sense of “oneness”, a sense of “us” versus “them”. The second view of cultural identity more fully acknowledges the complexity of culture, and recognizes that within any group an exact shared experience is not possible. Even within a group sharing many experiences, there are “critical points of deep and significant difference” (Hall, 2003, p. 236).

RESEARCH QUESTIONS

1. Is there any relationship between cultural intelligence and pronunciation quality of Iranian speakers of English as a foreign language?
2. Do Iranian speakers of English with different genders have different cultural intelligence levels?
3. Is there any relationship between age of Iranian speakers of English and their cultural intelligence?

NULL HYPOTHESIS

1. There is not any relationship between cultural intelligence and pronunciation quality of Iranian speakers of English as a foreign language.
2. Iranian speakers of English with different genders don't have different cultural intelligence levels.
3. There is not any relationship between age of Iranian speakers of English and their cultural intelligence.

METHODOLOGY

Participants

The participants were selected on a voluntary basis from Islamic Azad university located in Zanzan, Iran. A total number of 100 participants took part the present study. They were M.A. students in TEFL (teaching English as a Foreign Language) and majority of them were passing their first or third semester in the above-mentioned course. Although the researchers attempted to include the same number of both genders, it was not possible to be fulfilled due to the fact that the majority of students in the M.A. course were principally female, which consequently affected the proportion of males and females in the present study. Their age ranged from 23-40 and most of them were also English major students in their B.A course, however, there were some participants with different B.A major backgrounds in the selected participants.

Instruments

Two questionnaires were used in the current study. The first questionnaire was developed and validated by Van Dyne, Ang, and Koh (2008). It is comprised of four parts that measure the four

components of cultural intelligence i.e. motivational, metacognitive, cognitive and behavioral CQs, which altogether make a 20-item questionnaire. The first part that was the motivational component of CQ, was comprised of 5 items, the second part related to cognitive aspect of CQ had 6 items, the third items concerned the metacognitive aspect of CQ comprised of 4 items, and 6 items made the last part of the questionnaire indicated the behavioral side of CQ. In order to answer the cultural intelligence questionnaire items, the participants were free to choose from among the 4 likertive scale (from strongly disagree- strongly agree) which was so for all the items. As Van Dyne, Ang & Koh (2008) reported, the four factors of cultural intelligence were moderately related (0.21-0.45), with acceptable variances (0.75-1.03). They also found the corrected item-to-total correlations for each subscale (0.47-0.71) that indicated a strong relationship between items and their scales, supporting internal consistency. Composite reliabilities also exceeded 0.70 (metacognitive CQ = 0.71, cognitive CQ = 0.85, motivational CQ = 0.75, and behavioral CQ = 0.83). Analyses of the data also provided evidence of convergent, discriminant and criterion validity of the CQS across self- and peer-ratings.

The second instrument was the IELTS pronunciation rating scale extracted from Yates, Zielinski and Pryor (2008). This scale had 10 items (sounds, rhythm, stress at word level, stress at the sentence level, intonation, chunking, speech rate, intelligibility, listener strain, accent) that can be scored from 1-5 each, which indicate the final score of individuals' pronunciation from 10-50 altogether.

Procedure

The participants were first asked to complete the hard copies of the questionnaire related to cultural intelligence either in their free time or in class time, depending on the decision of the professors and if they were willing to cooperate with the researcher while considering the time limitation of the class. The questionnaires took about 15 to 20 minutes to complete. Having completed all the items in the questionnaire, the participants were asked to take the second part which was giving an IELTS like speaking test whenever they had free time to have the test. This speaking section actually was used as a means or as a sample of individuals' pronunciation that provided the basis to make further judgements on participants' pronunciation quality.

Since the rating procedure for pronunciation was somehow subjective, the researcher decided to have two raters in the process of rating. To make sure that the two raters had approximately the same score for the examinees, they were first asked to rate the pronunciation of 20 individuals while considering the items of the abovementioned scale, then the inter-rater reliability was calculated as indicated in Table 1.

Table 1: Correlations between the Two Raters

		rater1	rater2
rater1	Pearson Correlation	1	.928**
	Sig. (2-tailed)		.000
	N	20	20
rater2	Pearson Correlation	.928**	1
	Sig. (2-tailed)	.000	
	N	20	20

** . Correlation is significant at the 0.01 level (2-tailed).

A Pearson product-moment correlation was run to determine the relationship between the inter-rater reliability. It was found that there was a strong, positive correlation between the scores of two raters ($r = .92$, $n = 20$, $p < .0005$).

To make more accurate decisions about the pronunciation quality of the participants, the average score of two raters for every single individual was considered as the final score, in spite of having a high inter-rater reliability index.

RESULTS AND DISCUSSION

Data Analysis for the First Research Question

The first research question of the present study deals with the relationship between cultural intelligence and pronunciation quality of Iranian speakers of English. To answer this research question, the researcher attempted to do a Pearson correlation between the two variables in focus which is illustrated in detail in Table 2.

Table 2: Correlations between CQ and Pronunciation Quality

		Pronunciation	CQ
Pronunciation	Pearson Correlation	1	.34**
	Sig. (2-tailed)		.001
	N	100	100
CQ	Pearson Correlation	.34**	1
	Sig. (2-tailed)	.001	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

As Table 2. suggests a Pearson product-moment correlation coefficient was computed to assess the relationship between Iranian English speakers' cultural intelligence and their pronunciation quality. There was a positive correlation between the two variables, $r = 0.34$, $n = 100$, $p = 0.001$. Considering all the facts from the table above, it can be stated that there is a positive significant correlation between Iranian English speakers' cultural intelligence and their pronunciation quality. Increases in Iranian speakers' cultural intelligence moderately correlate with increases with their pronunciation quality.

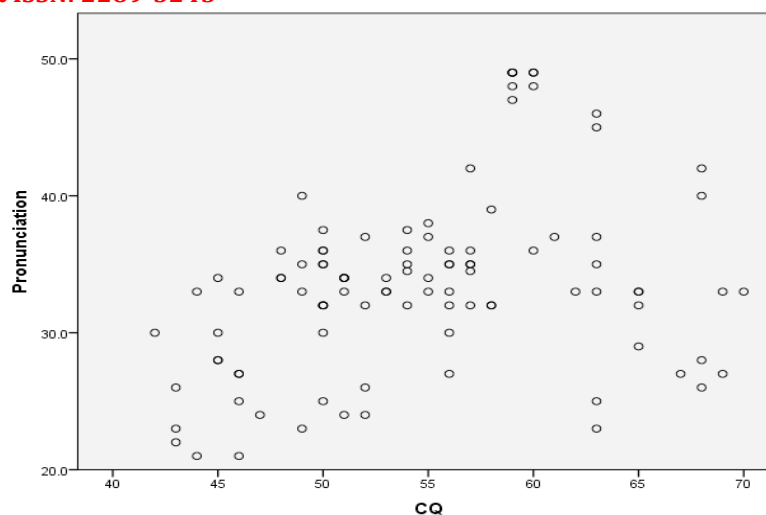


Figure 1: Scatterplot for Iranian English speakers' Pronunciation quality vs. their CQ

Figure 1 also proves the moderate positive relationship that exists between Iranian cultural intelligence and their pronunciation quality.

Data Analysis for the Second Research Question

The second research question of the present study aims to investigate if Iranian speakers of English with different genders have different cultural intelligence levels or not. As Ary et.al (2013) assert, t-test is used to determine whether the difference between two sample means is statistically significant. Field (2009) state that independent-samples t-test is used when different participants are assigned to different conditions. Based on what was said above, an independent sample t-test was used to see if gender had any influence on cultural intelligence of Iranian English speakers of English:

Table 3: Group Statistics for Different Genders

	Gender	N	Mean	Std. Deviation	Std. Error Mean
CQ	male	43	54.95	5.95	.90
	female	57	54.72	7.90	1.04

Table 4: Independent Samples Test for Different Genders

		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% Interval Difference	Confidence of the Difference
									Lower	Upper
C	Equal variances assumed	7.29	.008	.16	98	.87	.23	1.44	-2.62	3.09
Q	Equal variances not assumed			.16	98.00	.86	.23	1.38	-2.51	2.98

As Tables 3 and 4. indicate female Iranian speakers of English ($M = 54.72$) had almost the same level of cultural intelligence with that of males ($M = 54.95$) and the difference was not significant, $t = .16$, $p > .05$. Based on findings of the data analysis, it was found that gender was not an influential factor in determining the cultural intelligence level of Iranian speakers of English and the mean of the two groups was nearly the same regardless of the genders they had.

Data Analysis for the Third Research Question

The third research question of the present study deals with the relationship between age of Iranian speakers of English and their cultural intelligence. To detect the relationship between the variables in questions, the researcher attempted to do a Pearson correlation, the result of which is illustrated in the Table 5.

Table 5: Correlations between Age and Cultural intelligence

		Age	CQ
Age	Pearson Correlation	1	-.051
	Sig. (2-tailed)		.612
	N	100	100
CQ	Pearson Correlation	-.051	1
	Sig. (2-tailed)	.612	
	N	100	100

As the content of the Table 5. suggests there was almost no correlation between the two variables in focus, $r = -.051$, $n = 100$, $p = .612$. So the age of the Iranian speakers of English was not related to their cultural intelligence level. To gain a better understanding of the nature of the relationship between the two variables, the researcher has provided a scatterplot offering an explicit view of the nature of this relationship in Figure 2. As it is obvious from the figure, there is almost no relationship between the two variables. This conclusion supports the findings of the Pearson correlation illustrated in Table 5.

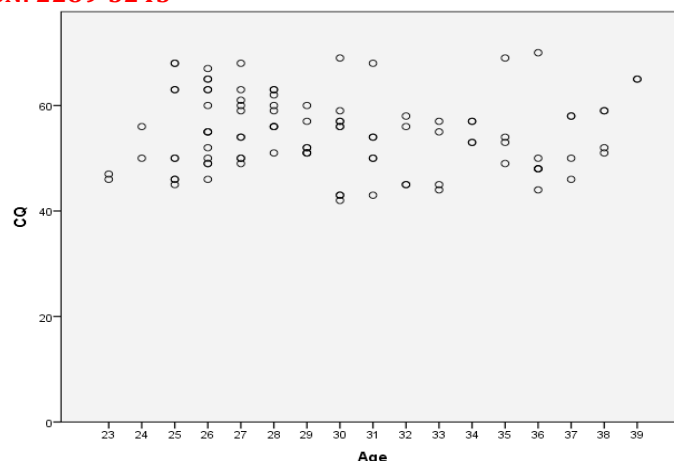


Figure 2: Scatterplot for the Age of Iranian English speakers vs. their CQ level

CONCLUSION

The first research question aimed at exploring the relationship between cultural intelligence and pronunciation quality of Iranian speakers of English. To this end the participants' answer to cultural intelligence questionnaire was correlated with their score in pronunciation. As it was revealed in the data analysis part, there was a medium positive correlation between the two variables in focus i.e. cultural intelligence and pronunciation quality which means that participants with higher cultural intelligence level moderately tended to have better pronunciation quality.

To the best of researcher knowledge, no study ever has investigated the relationship between cultural intelligence and pronunciation quality. But if we consider pronunciation as a component of language, it can be claimed that the findings of the present study, is line with the findings of Ghonsooly and Shalchy (2013) who found that CQ and cognitive CQ in particular are a good predictor of writing ability and writing fluency.

Turning to the second research question which focused on the effect of gender on cultural intelligence level, it was found that statistically there was not a significant difference between males and females as far as their cultural intelligence level was concerned. The findings of the present study are in contrast with what Azizi, Fatemi, Pishghadam, and Ghapanchi (2015) found in this respect. Based on their findings, they concluded that males had significantly higher level of cultural intelligence compared to females.

The third research question explored the relationship between age and cultural intelligence to see if people's age was significantly related to their cultural intelligence level or not. The analysis of the data collected in this study revealed that the cultural intelligence of the participants had almost no relationship with their age. This conclusion affirms the findings of Azizi, et.al (2015) in this respect who came to the conclusion that there was no statistically significant difference among the age groups with regard to their CQ level in their study.

Medium positive correlation which was shown in this study, seems logical on the ground that people with higher cultural intelligence tend to act better in a culture other than their own, make a better and successful connections with people from other cultures, and use the language in a way that facilitates the establishments of a good connection. In this case having a good pronunciation is a factor that might contribute to the establishments of a good connection.

(De)Limitations of the study

Like other researches, the current study has its own limitations. There are some factors (such as attitudes, motivation, exposure and instruction) which seem to have influence on pronunciation which could not be controlled in this study.

The participants of the present study were mainly English students in M.A level. They were preferred to be included in this study because of their better cooperation as well as ease of access.

REFERENCES

- Azizi, Z., Fatemi, A. H., Pishghadam, R., & Ghapanchi, Z. (2015). Investigating the Relationship between Iranian EFL Learners' Cultural Intelligence and their Home Cultural Attachment. *Mediterranean Journal of Social Sciences*, 6(3 S1), 575.
- Derwing, T. M. (2003). What do ESL students say about their accents? *The Canadian Modern Language Review*, 59(4), 547-566.
- Derwing, T. M., Thomson, R. I., & Munro, M. J. (2006). English pronunciation and fluency development in Mandarin and Slavic speakers. *System*, 34(2), 183-193.
- Dornyei, Z. (2009). *The psychology of second language acquisition*. Oxford: Oxford University Press.
- Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford: Stanford University Press.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Fatemi, M. A., & Shahabi, B. (2015). Exploring the relationship among Iranian EFL teachers' cultural intelligence, their self-esteem, and gender. *International Journal of Language Learning and Applied Linguistics World (IJLLALW)*, 8 (3), 57-67.
- Flege, J. E. (1981). The phonological basis of foreign accent: A hypothesis. *Tesol Quarterly*, 443-455.
- Gatbonton, E., Trofimovich, P., & Magid, M. (2005). Learners' ethnic group affiliation and L2 pronunciation accuracy: A sociolinguistic investigation. *Tesol Quarterly*, 39(3), 489-511.
- Ghonsooly, B., & Shalchy, S. (2013). Cultural Intelligence and Writing Ability: Delving into Fluency, Accuracy and Complexity. *Novitas-ROYAL-Research on Youth and Language*, 7(2), 147-159.
- Ghonsooly, B., Sharififar, M., Sistani, S. R., & Ghahari, S. (2013). Cultural Intelligence in Foreign Language Learning Contexts. *Cultus*, 47.
- Hall, S. (2003). Cultural Identity and Diaspora. In J. E. Braziel & A. Mannur (Eds.), *Theorizing Diaspora: A Reader* (pp. 233-246). Malden, MA: Blackwell Publishing Ltd.
- Lindemann, S. (2002). Listening with attitude: A model of native-speaker comprehensibility of nonnative speakers in the United States. *Language in Society*, 31, 419-441.

- Lippi-Green, R. (1997). *English with an accent: Language, ideology, and discrimination in the United States*. Psychology Press.
- Moyer, A. (2004). *Age, accent and experience in second language acquisition*. Clevedon, England: Multilingual Matters.
- Munro, M. J. (2003). A Primer on Accent Discrimination in the Canadian Context. *TESL Canada Journal*, 20(2), 38-51.
- Piske, T., Mackay, I. R. A., & Flege, James E. (2001). Factors affecting degree of foreign accent in an L2 : a review. *Journal of Phonetics*, 29(2), 191-215.
- Schellenberg, G., & Maheux, H. (2007). Immigrants' perspectives on their first four years in Canada: Highlights from three waves of the Longitudinal Survey of Immigrants to Canada. *Canadian Social Trends. Special Edition* (Statistics Canada Catalogue no. 11-008), 1-34.
- Schumann, J. H. (1986). Research on the acculturation model for second language acquisition. *Journal of Multilingual & Multicultural Development*, 7(5), 379-392.
- Scovel, T. (2000). A critical review of the critical period research. *Annual Review of Applied Linguistics*, 20, 213-223.
- Suter, R. W. (1976) Predictors of pronunciation accuracy in second language learning, *language learning*, 26, 233-253.
- Van Dyne, L., Ang, S., & Koh, C. (2008). Development and validation of the CQS: The cultural intelligence scale. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 16-38). New York, NY: Sharpe.
- Yates, L. (2010). *Language training and settlement success: Are they related?* Sydney: AMEP Research Centre
- Yates, L. (2011). Language, interaction and social inclusion in early settlement. *International Journal of Bilingual Education and Bilingualism*, 14 (4), 457- 471.
- Zielinski, B. W. (2008). The listener: No longer the silent partner in reduced intelligibility. *System*, 36, 69-84.
- Zielinski, B. (2010, March). *What immigrants say about their pronunciation: Perceptions and reality*. Paper presented at the American Association of Applied Linguistics Annual Conference, Atlanta, GA.
- Zuengler, J. (1988). Identity markers and L2 pronunciation. *Studies in Second Language Acquisition*, 10(01), 33-49