

# Construction and Validation of EFL Learners' Attitudes toward English Pronunciation (LATEP): A Structural Equation Modeling Approach

Samaneh Seyedabadi (Corresponding author)

English Department, Faculty of Letters and Humanities, Ferdowsi University of Mashhad, Iran

Azar Hosseini Fatemi

English Department, Faculty of Letters and Humanities, Ferdowsi University of Mashhad, Iran

Reza Pishghadam

English Department, Faculty of Letters and Humanities, Ferdowsi University of Mashhad, Iran

**Abstract**—The present study aimed at constructing and validating a scale to measure the significance of pronunciation in English language learners' perspectives within four major domains of Linguistic, Psychological, Sociocultural, and World Englishes that are highly associated with pronunciation ability. Building upon the previous literature, the Learner Attitudes Toward English Pronunciation (LATEP) scale was constructed in six-point Likert type format. In order to verify its construct validity, the hypothesized four-solution model underwent Structural Equation Modeling (SEM) analysis through AMOS with a sample-size of 243 advanced EFL learners. The results of the study showed initial poor fit of the LATEP model to the sample data; however, the model was revised by removing seven items from the questionnaire as well as the addition of a correlational path between two error terms. LATEP scale may be applied into various fields of study to fill the inherent gaps in the realm of English language learning.

**Index Terms**—pronunciation, scale construction, validation, learner attitudes, SEM

## I. INTRODUCTION

Pronunciation teaching is by and large sacrificed in language classrooms since teachers tend to view it as useless in comparison to the basic language skills (Elliott, 1995). In this regard, Gilbert (2010) entitles it as “an orphan” in English language classrooms around the world. Teacher training programs were also found to totally neglect pronunciation teaching (Baker & Murphy, 2011; Derwing & Munro, 2005). In addition, pronunciation is marginalized in course books (Gilner, 2008) to the extent that it directly inculcates its triviality in teachers so as to let them omit those parts due to the time limit (Marx, 2005, as cited in Kanellou, 2011). To add weight to the list, pronunciation research has been delegated within the field of applied linguistics (Kelly, 1969). In this regard, Derwing and Munro (2005) noted that there exists generally little published research on the effectiveness of pronunciation instruction despite its apparent role in successful communication.

Despite the dedicated endeavors either from a theoretical or practical perspective, pronunciation continues to be the “Cinderella” (Kelly, 1969) of ELT which has been neglected. Nevertheless, pronunciation instruction is regarded as extremely beneficial from learners' perspective (Barrera Pardo, 2004). Thereby, it is discouraging to find pronunciation as an “orphan” in all domains of EFL/ESL from research and teacher preparation programs to teachers' practices and course curricula employed in class (Kanellou, 2011).

## II. LITERATURE REVIEW

### A. Linguistic Effects of Pronunciation

To a greater or lesser degree, pronunciation is connected with other language skills and sub-skills like a chain. Thus, trying to separate these components is demanding if not impossible. Pronunciation is considered as “an integral part of oral communication” (Morley, 1991, p. 496) since good pronunciation facilitates communication and enhances intelligibility (Varasarin, 2007). Linking pronunciation with grammar and vocabulary, Underhill (2011) maintained that while the two cerebral activities (i.e., grammar and vocabulary) give language its structure and meaning, pronunciation is its embodiment through speaking and writing.

As regards writing, Kelly (2000) rejected the commonly-held view concerning the irregularity of the English spelling system since simply one out of every thousand words has irregular spelling. In addition, a number of these words are amongst the most common ones such as *are*, *said*, *come*, *how*, *what*, and *could*.

Like writing, the ability to read is bound up with phonological skills (Goswami, 2000; Hulme, Snowling, Caravolas, & Carrol, 2005); rich phonological awareness skills mark good readers while poor phonological awareness skills mark poor readers (Goswami, 2000). In fact, pronunciation, spelling, and reading abilities are interconnected through the *orthographic analogies* (i.e., the ability to read new words based on known words for e.g., using “*light*” as a guide for reading “*fight*”) that one employs while reading (Goswami, 2000; Wood & Farrington-Flint, 2002). Consequently, better pronouncers are better readers, better spellers, and more successful in making orthographic analogies.

#### B. Psychological Effects of Pronunciation

An English language learner with a good command of grammatical and lexical proficiency, feels frustrated as soon as he/she encounters communication breakdown due to his/her poor pronunciation (Kelly, 2000). One of the prominent and promising outcomes of a good pronunciation is the feeling of self-confidence since poor pronunciation devalues good language skills and deprives learners of their deserved social, academic and work advancement while good pronunciation tends to make the communication easier and more relaxed and thus more successful (Varasarin, 2007). Owing to the fact that learners apply avoidance strategy to words or phrases they fail to pronounce (Celce-Murcia, Brinton and Goodwin, 2002, as cited in Brawn, 2010), language learners’ communicative competence is extremely limited without sufficient pronunciation skills.

Aiming for a highly perfect and flawless pronunciation may cause great anxiety in perfectionist language learners; thereby, such learners may prefer to remain silent and not participate in group discussions unless they are certain about the meticulous accuracy of their speech (Pishghadam & Akhondpoor, 2011).

#### C. Sociocultural Effects of Pronunciation

Accent is a crucial marker of social belonging since speakers speak in a way to conform to the ethics of the social groups they belong to or desire to belong to (Levis, 2005). According to Rubin (2012), listeners commonly attribute social identity to speakers and consistently make a number of judgments about them based on how they pronounce words and phrases. In his view, such judgments may be about speakers’ ethnicity, social class, enthusiasm, confidence, intelligence, academic success, and even about their physical height.

Accents are inherently attached to social classes along with their sources of pride and respect, as well as their evaluation system (Bourdieu, 1984, as cited in Pishghadam & Sadeghi, 2011). Therefore, speakers may strive for highly valued language forms such as *Standard English* (British accent) and *Received Pronunciation* (American accent) in order to enjoy ‘*linguistic capital*’ (Milroy & Gordon, 2003, as cited in Kerswill, 2007). The immediate appeal for such accents lies in finding better social opportunities. For instance, negative evaluation of speakers due to their accents, may occur in employment interview sessions (Kalin, Rayko, & Love, 1980, as cited in Garrett, 2007).

#### D. Pronunciation from the Theory of World Englishes

The recent spread of the English language from national to international setting requires the same shift in the ELT pedagogical considerations. Owing to the international status of English language, the theory of *World Englishes* has downplayed the necessity of adopting a native-like accent (Hosseini Fatemi & Shahriari Ahmadi, 2010) in favor of mutual intelligibility between listeners and speakers (Kang, 2010).

Timmis (2007) argued that learners’ choice of a particular accent is mainly influenced by their attitude toward that variety. Thus, learners with more positive attitudes toward a specific variety are more motivated to conform to it and they may run the risk of losing their cultural identity. On the contrary, within the context of English as an international language (EIL), the strict adherence to native speaker norms and models is de-emphasized in favor of the promotion of a pronunciation that reflects the speaker’s identity (Coşkun & Arslan, 2011).

Building upon the aforementioned body of literature, Seyedabadi (2014) conducted a qualitative study that captured Iranian EFL learners’ attitudes toward the significance of pronunciation within linguistic, psychological, sociocultural, and world Englishes domains through a relatively large number of interviews. The results highlighted the knock-on effects of pronunciation on such factors. Pronunciation was found to influence the four language skills (i.e., listening, speaking, reading, and writing) to a larger or lesser degree. In addition, pronunciation was believed to play a role in language learners’ self-confidence, willingness to speak, and anxiety. To add weight to the list, she reported that poor pronunciation could be an indicator of one’s lack of sufficient knowledge both in its general and linguistic sense.

In the light of her findings, pronunciation seems to be a necessity for English language learners rather than an extra component of ELT. However, the dearth of studies on the side of English language learners calls for in-depth and comprehensive analyses of their viewpoints regarding such domains. Thus, aiming to fill this gap, the present study addressed the issue quantitatively. To this end, it included two phases. In the first phase, a scale was constructed to measure the significance of pronunciation in English language learners’ perspectives within four major domains of *Linguistic*, *Psychological*, *Sociocultural*, and *World Englishes* that are highly associated with pronunciation ability. Throughout the second phase, the construct validity of the scale was verified through Confirmatory Factor Analysis (CFA). The results of the current study will answer the following research questions:

1. Does LATEP scale enjoy psychometric properties (reliability and validity)?
2. Does LATEP model fit to the data well?

### III. METHODOLOGY

#### A. Participants and Setting

The data collection started in August 2013 and lasted for a month. The sample consisted of 306 advanced EFL learners who were studying *FCE*, *CAE*, and *CPE* courses. Participants were selected on the basis of accessibility from eight private language institutes in Mashhad, a city in north-east of Iran. Owing to the fact that Iranian public system of English language teaching simply follows Grammar Translation Method and fails to address the communicative aspects of language learning, the current study was simply confined to private language institutes. The learners were both male ( $N= 106$ ) and female ( $N= 137$ ) with a range of 19 to 31 years old (Mean= 24.94,  $SD= 3.66$ ). They had studied English for 6 to 13 years (Mean= 7.52,  $SD= 1.942$ ). The majority of the learners either held their Bachelor degree (51.9%) or Master degree (25.5%). Less than half of the participants (40.3%) had foreign travel experience.

#### B. Instrumentation

Based on the previous literature, Learner Attitudes Toward English Pronunciation (LATEP) scale was constructed and then validated through Confirmatory Factor Analysis (CFA).

The questionnaire consisted of two parts. Part one addressed the participants' demographic features and also their educational background including gender, age, educational degree and major, years of studying English, foreign travel experience, and approximate estimation of their contact with native and non-native speakers of English via chat or through films, books, classes, etc. The second part which underwent statistical analyses comprised 39 items exploring the respondents' viewpoints toward the importance of pronunciation in English language learning within four major domains of *Linguistic*, *Psychological*, *Sociocultural*, and *World Englishes*.

#### C. Procedure

Applying the instructions and guidelines of questionnaire design and construction provided by Dornyei (2010), the researchers drafted the questionnaire with 40 items under four dimensions of *Linguistic*, *Psychological*, *Sociocultural*, and *World Englishes*. For each dimension at least six items were developed. Next, joint consultations were held with professors, colleagues, and friends in order to make sure of the content validity of the scale and revise the items. Afterwards, the newly designed questionnaire was subjected to the pilot study to examine the clarity of items, estimate the administration time of the questionnaire, and to further revise the items. At this stage 18 advanced EFL learners were asked to read, answer, and suggest improvement for each item. Based upon their comments, the researchers altered the wording and structure of some items to maintain clarity. Following these preliminary stages, 39 items were retained with some revision and clarification.

After preparing the ultimate version of the questionnaire, 306 advanced EFL learners were asked to fill out the LATEP questionnaire during the class hours by prior arrangement with the teacher and administrators. The administration process took place in the presence of one of the researchers and lasted for at least 8 minutes. The researcher clarified each item upon respondents' request.

### IV. DATA ANALYSIS AND RESULTS

The collected data were entered into SPSS Version 21 software. The items were scored according to the six-point Likert scale ranging from 6 (*strongly agree*) to 1 (*strongly disagree*). Negatively-worded items (2, 3, 6, 9, 26, 28, 33, and 39) were reverse scored in order to achieve a total positively-oriented score.

After checking for the missing data, outliers, and normality status of the sample data through SPSS, construct reliability and validity of the scale were checked through Structural Equation Modeling (SEM) with AMOS. Confirmatory factor analysis was adopted as a hypothesis testing technique to investigate the data obtained from the Likert-type response categories of the newly-designed LATEP scale. Byrne (2010) mentions three distinctive features in SEM that sets it apart from other multivariate procedures. First, "it takes a confirmatory rather than an exploratory approach to the data analysis" (p. 3). Accordingly, contrary to other multivariate procedures that are mainly descriptive by nature (like Exploratory Factor Analysis), SEM can test a hypothesis. Second, while traditional multivariate methods are unable to compute measurement error, SEM presents estimates of error variance parameters. Third, although other multivariate procedures are only based on observed measurements, SEM includes both unobserved and observed variables.

#### A. Data Screening

Before doing the analysis, missing data, outliers, and normal distribution of the data were checked. Missing data were controlled through expectation-maximization algorithm in which a missing score was replaced by a predictive distribution (Kline, 2011).

In order to identify univariate outliers, all of the scores for a variable were converted to standard scores and a value of  $\pm 3.0$  or beyond was detected as outlier. To mark multivariate outliers, Mahalanobis  $D^2$  was employed. A case was a multivariate outlier if the probability associated with its  $D^2$  was 0.001 or less (Tabachnick & Fidell, 2007). Following this, 63 outliers were identified and removed.

Data requires a normal distribution in order to work properly. Univariate and multivariate normality of variables and factors were assessed by two components of skewness and kurtosis. Values of kurtosis and skewness exceeding  $\pm 2.0$

indicate violation of univariate normality while the kurtosis and skewness values above 5.0 account for violation of multivariate normality (Kunnan, 1998).

Table 1 shows the normal distribution indices of skewness and kurtosis for all the factors of the LATEP scale. As kurtosis and skewness indices are within the range of -2 and +2, they have univariate normal distribution. In addition, all the kurtosis and skewness values are less than 5.0 which show the multivariate normality of the sample.

TABLE 1.  
DESCRIPTIVE STATISTICS FOR THE FACTORS

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Linguistic	243	-.231	.156	1.341	.311
Psychological	243	-.192	.156	-.416	.311
Sociocultural	243	.046	.156	.034	.311
World Englishes	243	-.218	.156	-.175	.311
Valid N (listwise)	243				

### B. Construct Reliability

Owing to the fact that the traditional Cronbach alpha is merely based on simple correlations and fails to account for the measurement error, it tends to understate reliability (Hair, Black, Babin, Anderson, & Tatham, 2006). Therefore, this study employs model-based construct reliability calculated in the SEM analysis in order to sufficiently capture the measurement properties of the newly-designed scale. Construct reliability measures the extent to which a set of observed variables reflect the common latent factors. Its advantage lies under the fact that it accounts for the effects of both latent variables and measurement errors. According to Hair et al. (2006), the equation for calculating construct reliability is:

$$CR = \frac{\left(\sum_{i=1}^n \lambda_i\right)^2}{\left(\sum_{i=1}^n \lambda_i\right)^2 + \left(\sum_{i=1}^n \delta_i\right)}$$

where  $\lambda_i$  is the standardized factor loadings and  $\delta_i$  is the error variance associated with observed variables. A coefficient estimate of .60. to .70 is acceptable while an estimate of .70 or higher indicates good reliability. Table 2 shows the reliability estimates for the four underlying factors of the LATEP scale.

TABLE 2.  
CONSTRUCT RELIABILITY ESTIMATES OF THE LATEP SCALE FACTORS

Factors	Reliability Estimate
Linguistic	.85
Psychological	.82
Sociocultural	.79
World Englishes	.76

### C. Construct Validity

Construct validity of the LATEP scale was assessed by Confirmatory Factor Analysis (CFA). It examined the hypothesized factor structure of the relationships among the variables by determining how well the model fitted the data.

#### 1. Model Specification

Based upon the previous literature, a four-solution model was proposed to capture the pronunciation attitudes of Iranian EFL learners. Fig. 1 displays the hypothesized model of Learner Attitudes Toward English Pronunciation (LATEP).

In order to obtain better results, 39 items of the LATEP scale were combined to make 20 parcels, where each composite is the average of two subsequent items, except for the very last item (RWEs7) which is left intact. The following clues provided by Bandalos and Finney (2001) and Ho (2006), explain why the use of item parcels as indicators was deemed appropriate. First, item parceling reduces the complexity of the model since it makes the measurement model simpler while keeping the structural part intact. Second, owing to the fact that rules of thumb for acceptable fit indices ignore the indicator/factor ratio, some fit indices of the model tend to decrease as the number of indicators per factor increase. Larger number of indicators per factor set the stage for cross-loadings among the indicators which finally results in the overall model misfit. Third, a model with a large number of indicators per factor has more free parameters to estimate hence it requires a larger sample size. Therefore, item parceling contributes to less sampling error and more reliable parameter estimates because of reducing the variable to sample size ratio. Last but not least, item parcels are robust against the violation of normality assumption that underlies the maximum likelihood method used in most SEM computer programs.

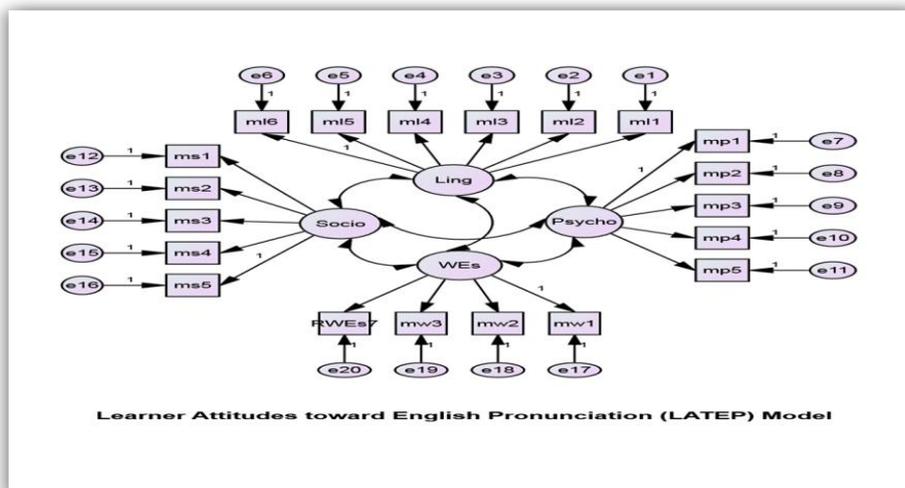


Figure 1. Hypothesized Model of Learner Attitudes Toward English Pronunciation (LATEP)

As the figure shows, the structural part of the LATEP model involves four latent factors: *Linguistic* (Ling), *Psychological* (Psycho), *Sociocultural* (Socio), and *World Englishes* (WEs). These latent factors are allowed to be correlated which accounts for the unidimensionality of the LATEP scale. The measurement part of the model explains how the four latent factors are measured by the twenty observed or indicator variables. According to the model, the following indicators measure each of the latent factors; variables ml1 to ml6 (Items 1 to 12) measure *Linguistic* factor, mp1 to mp5 (Items 13 to 22) measure *Psychological* factor, ms1 to ms5 (Items 23 to 32) measure *Sociocultural* factor, and finally, mw1 to RWEs (Items 33 to 39) measure *World Englishes* construct. The model also depicts some error terms (circles entitled as e1 to e20) for indicators which allows for imperfect measurement.

**2. Model Identification**

In order to obtain correct parameter estimates in CFA, the measurement model must be *identified*. Kline (2011) mentions four identification rules for a CFA model: 1) the model degrees of freedom must be at least zero ( $df \geq 0$ ); that is, the number of estimated parameters should exceed or equal the number of data points (i.e., sample moments like variances and co-variances). 2) Every latent variable (including the residual terms) must be assigned a scale; this is usually accomplished by fixing one of its loadings to one. 3) Every latent variable must have a scale of at least two indicators.

Based on the aforementioned rules, the LATEP model appears to meet the identification conditions; obtained degree of freedom is positive ( $df = 164$ ) indicating *over-identification*; AMOS automatically assigns a regression weight of 1 to each latent variable; finally, every latent factor has at least four indicators.

**3. Model Estimation**

Among the estimation methods in AMOS, maximum likelihood (ML) is by far the most popular and recommended one. As Brown (2006, p.73) clearly elaborates, “the underlying principle of ML estimation in CFA is to find the model parameter estimates that maximize the probability of observing the available data if the data were collected from the same population again”. In addition, ML estimates are powerful against the violation of normality assumption (Brown, 2006). In view of these reasons, the present study made use of ML estimation method with AMOS.

**4. Model Evaluation**

After ensuring that the LATEP model was specified and identified properly, goodness-of-fit indices were then examined to assess the acceptability of the model. Table 3 shows the fit indices of the LATEP model. In this study, due to the inherent sample-size sensitivity of Chi-square ( $\chi^2$ ) statistic, the normed  $\chi^2$  ( $\chi^2/df$ ) was considered with a value below 2 deemed as acceptable (Tabachnick & Fidell, 2007). As a result, the obtained  $\chi^2/df$  value of 1.699 shows suitable fit of LATEP model.

TABLE 3.  
MODEL FIT SUMMARY

	$\chi^2/df$	RMSEA	LO 90	HI 90	GFI	AGFI	IFI	CFI
LATEP model	1.699	.054	.043	.064	.898	.869	.797	.787

The Root Mean Square Error of Approximation (*RMSEA*) value for the hypothesized model is .054, with the 90% confidence interval ranging from .043 to .064 which is acceptable by the threshold value of lower than .08 (Byrne, 2010). Interpretation of the confidence interval indicates that we can be 90% confident that the true *RMSEA* value in the population will fall within the bounds of .043 and .064, which represents a good degree of precision.

The rest of the fit measures of the LATEP model are less than the threshold value of .90 (Byrne, 2010) which accounts for the poor fit of the hypothesized model to the sample data; Goodness-of-Fit Index (*GFI*) = .898, Adjusted

Goodness-of-Fit Index (*AGFI*) = .869, Incremental Fit Index (*IFI*) = .797, and Comparative Fit Index (*CFI*) = .787. Hence the obtained results call for the modification of the proposed model.

**5. Model Modification**

Owing to the fact that the results indicated insufficient fit of the hypothesized model to the sample data, post hoc respecification procedures were taken into account to mark the possible areas of misfit in the model. Following this, the modification indices were requested.

As demonstrated in Table 4, the obtained *MI*s for the *Covariances* yield a clear evidence of misspecification caused by the error covariance (e13 ↔ e12; *MI* = 22.692) related to parcels ms1 and ms2. The estimated *parameter change* value declares that if this parameter were included in the model, it would result in an estimated value of approximately .316. Therefore, the estimation of an error covariance between parcels ms1 and ms2 is deemed appropriate.

TABLE 4.  
MODIFICATION INDICES: COVARIANCES

			<b>M.I.</b>	<b>Par Change</b>
e17	<-->	Socio	4.665	-.088
e17	<-->	Ling	9.810	.038
e12	<-->	WEs	4.144	-.031
<b>e13</b>	<b>&lt;--&gt;</b>	<b>e12</b>	<b>22.692</b>	<b>.316</b>
e14	<-->	Socio	5.940	-.099
e14	<-->	Psycho	10.280	.048
e15	<-->	Socio	4.156	-.062
e15	<-->	e13	13.855	-.153
e11	<-->	e14	4.375	-.081
e10	<-->	Ling	7.138	-.025
e9	<-->	e17	12.243	.099
e9	<-->	e14	8.160	.080
e8	<-->	e11	4.354	-.051
e7	<-->	e14	8.572	.105
e3	<-->	e12	5.143	-.106
e5	<-->	e18	5.236	-.075
e5	<-->	e17	5.006	.086
e5	<-->	e10	7.861	-.083
e6	<-->	e4	4.829	.093
e6	<-->	e5	7.143	-.085

A review of the Modification Indices (*MI*s) for the *Regression Weights* (i.e., factor loadings) demonstrated in Table 5, reveals five parameters suggesting cross-loadings (mw1 ← Psycho; mw1 ← Ling; ms3 ← psycho; ms3 ← Ling; ms4 ← WEs; ms4 ← Psycho, ms4 ← Ling) among which the one with the largest *MI* is of concern (ms3 ← psycho, *MI* = 12.035, *Par Change* = .843). The unspecified parameter indicates the cross-loading of parcel ms3 on the psychological factor. Taking this misspecification into account, the researchers decided to omit parcel ms3.

TABLE 5.  
MODIFICATION INDICES: REGRESSION WEIGHTS

			M.I.	Par Change
mw2	<---	ml5	5.394	-.139
mw1	<---	Psycho	5.908	.593
mw1	<---	Ling	11.990	1.262
mw1	<---	mp3	13.455	.323
mw1	<---	ml1	6.666	.162
mw1	<---	ml4	4.525	.119
mw1	<---	ml5	10.230	.225
ms1	<---	ms2	18.976	.287
ms1	<---	ml3	5.609	-.223
ms2	<---	ms1	15.182	.212
ms2	<---	ms4	9.031	-.262
ms2	<---	mp2	4.142	-.214
<b>ms3</b>	<---	<b>Psycho</b>	<b>12.035</b>	<b>.843</b>
ms3	<---	Ling	10.570	1.181
ms3	<---	mp3	14.700	.336
ms3	<---	mp1	14.069	.288
ms3	<---	ml3	5.901	.182
ms4	<---	WEs	4.477	.629
ms4	<---	Psycho	6.981	.500
ms4	<---	Ling	7.830	.792
ms4	<---	mw3	5.525	.134
ms4	<---	ms2	11.591	-.139
ms4	<---	mp3	5.393	.159
ms4	<---	mp2	4.601	.150
ms4	<---	ml1	7.171	.130
mp5	<---	ms1	4.499	.085
mp5	<---	ms3	4.497	-.117
mp4	<---	ml5	8.539	-.158
mp3	<---	mw1	11.106	.131
mp3	<---	ms3	8.205	.114
mp1	<---	ms3	8.685	.150
ml4	<---	ml6	4.383	.179
ml5	<---	mw2	4.719	-.138
ml5	<---	mw1	5.135	.121
ml5	<---	mp4	5.348	-.149
ml5	<---	ml6	6.502	-.165
ml6	<---	ml4	4.384	.097
ml6	<---	ml5	4.797	-.127

The last strategy to pinpoint the areas of misfit was to omit the parcels with low loadings on their related factors. Based on the factor loadings of the LATEP model appeared in Appendix B, three parcels (ml5, mw2, and RWEs7) were removed from the model.

As recommended by Pedhazur (1997, as cited in Ho, 2006), the aforementioned modifications were made sequentially, one at a time, until the fit of the model was confirmed. The results of the post hoc analyses (Table 6) are as follows:  $\chi^2/df = 1.408$ ,  $RMSEA = .041$  (90%  $CI = .023-.056$ ),  $GFI = .934$ ,  $AGFI = .908$ ,  $IFI = .914$ ,  $CFI = .910$ . Consequently, all of the obtained values for the final model shown in Fig. 2 indicated a good fit of the LATEP model to the sample data. Therefore, the construct validity of the model was confirmed through CFA.

TABLE 6.  
REVISED FIT INDICES

	$\chi^2/df$	RMSEA	LO 90	HI 90	GFI	AGFI	IFI	CFI
LATEP model	1.408	.041	.023	.056	.934	.908	.914	.910

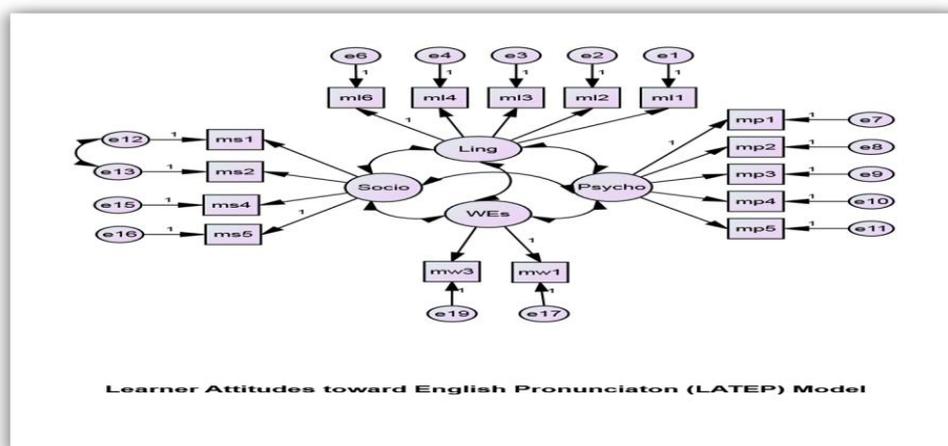


Figure 2. Revised Model of Learner Attitudes Toward English Pronunciation (LATEP)

## V. DISCUSSION

In order to investigate the EFL learners' attitudes toward the significance of pronunciation in English language learning, 39-item scale (LATEP) was designed. Structural Equation Modeling (SEM) was applied to substantiate the construct reliability and validity of the scale in the context of Iranian EFL learners.

The results of the initial LATEP model did not show a sufficient fit to the sample data. Thus, post hoc modification procedures were taken into account to mark the possible areas of misfit in the model. The unspecified error covariance between error terms e13 and e12 might suggest redundancy due to content overlap. The items under these two parcels consisted of similar and related concepts including one's knowledge, social status, social class, and economic status associated with his/her pronunciation (Appendix A, Items 23 to 26). Although easily grasped by educated individuals, these items were found to be confusing for the participants of this study. Great knowledge might endow an individual with a conferring prestige or a prominent social position (i.e., higher social status). In the same way, an awarded higher social status could result in an inevitable shift of one's social class in order to conform to the new context. Likewise, economic status is considered as one of the components of social class. To achieve satisfactory fit, it was essential to include a correlated error term between these two parcels (ms1 and ms2). Verifying the content of the four stated items, it was perceived that the statistical findings were incompatible with Bourdieu's (1991) attributed concept of *linguistic capital* to speakers who use highly valued language forms such as British and American accents.

The large cross-loading of parcel ms3 on Psychological factor was meaningful. This parcel included items 27 and 28 that were truly found to share psychological as well as sociocultural themes since attitudes are shaped by one's mental and sociocultural constructs. In addition, item 28 was found to be the opposite of item 29 which was clearer. Taking these misspecifications into account, the researcher decided to omit parcel ms3 with its two including items.

The last modification step was to remove the parcels with. Based on the factor loadings of the LATEP model, three parcels (ml5, mw2, and RWEs7) had low loadings on their corresponding factors that were removed from the model. Parcel ml5 comprised items 9 and 10. Item 9 is inconsistent with what previous studies (Engen & Høien, 2002; Walter, 2009) declared regarding the link between pronunciation and reading comprehension. Advanced EFL learners were unable to create a link between their pronunciation ability and their reading comprehension skill. As regards item 10, upon reading this item, respondents might perceive pronunciation as downgrading the role of other skills and sub-skills activated in the speech process such as the knowledge of vocabulary and grammar of the language. Such finding was in contrast with Underhill's (2013) claim on the role of pronunciation in providing the language with volume and body. Parcel RWEs7 was distinguished to be ambiguous and irrelevant to the intended construct. Perhaps its ambiguity would be resolved if it were worded as this: "*the pronunciation of English as an international language belongs to all nations that use it (as the first, second, or foreign language)*".

## VI. CONCLUSION

The value of this LATEP scale lies in its illuminating nature of reflecting the significance of pronunciation in EFL learners' perspectives within four major domains of Linguistic, Psychological, Sociocultural, and World Englishes that are highly associated with pronunciation ability. Thereby, the newly designed and validated scale may be applied into various fields of study in order to fill the inherent gaps in the realm of English language learning. Moreover, several studies could be conducted using this scale to find its objective association with various pedagogical, psychological, sociocultural, and international variables.

Using the LATEP scale, teachers can assess their students' viewpoints concerning the significance of pronunciation in order to consciously determine what to include in classroom curricula. Likewise, material developers would be in-

formed of the English language learners' real needs. Thus, they may be inspired to take into consideration the language learners' wants in order to produce more reader-friendly materials.

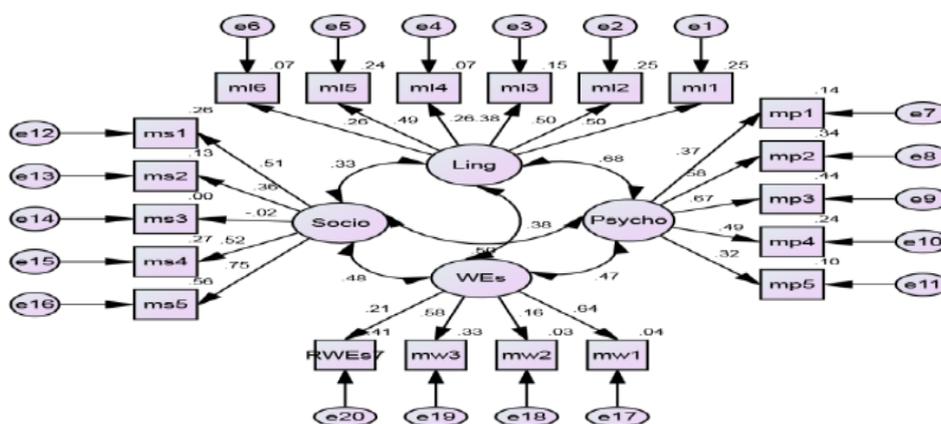
Any scientific study is inevitably faced with some limitations and problems that prevent its triangulation. This research could have yielded different results, if it were not confronted with the following limitations. First, since the study was conducted in Mashhad, the results cannot be safely generalized to other contexts. Second, due to their advanced level of English proficiency, some of the participants were teachers as well as learners of English. Although they were requested to answer the questions from a learner's perspective, it seems less likely for them to draw a clear-cut distinction between their learning and teaching experiences. Thus future studies may account for these shortcomings.

#### APPENDIX A. THE LATEP SCALE: 39 ITEMS

No	Statement	Strongly Agree	Agree	Partly Agree	Slightly Disagree	Disagree	Strongly Disagree
1	Pronunciation is the inseparable part of English language learning.	6	5	4	3	2	1
2	Pronunciation is of less value compared with the main language skills (reading, writing, speaking, and listening).	1	2	3	4	5	6
3	Pronunciation has a trivial (small) effect on learning the basic language skills (reading, writing, speaking, and listening).	1	2	3	4	5	6
4	Pronunciation influences the speaking skill directly.	6	5	4	3	2	1
5	Pronunciation has a mutual effect on listening skill.	6	5	4	3	2	1
6	In English language, the way words are pronounced, is irrelevant to their spellings.	1	2	3	4	5	6
7	Fluent pronunciation increases reading speed.	6	5	4	3	2	1
8	Correct pronunciation improves the quality of reading.	6	5	4	3	2	1
9	While reading a text, correct pronunciation is irrelevant to reading comprehension.	1	2	3	4	5	6
10	Accurate pronunciation is the key to correct speech.	6	5	4	3	2	1
11	Accurate pronunciation increases listening comprehension.	6	5	4	3	2	1
12	Correct pronunciation indirectly enhances the vocabulary size.	6	5	4	3	2	1
13	Accurate pronunciation reduces English language learner's anxiety.	6	5	4	3	2	1
14	Accurate pronunciation raises English language learner's degree of self-confidence.	6	5	4	3	2	1
15	An English language learner's poor pronunciation influences his/her willingness to communicate.	6	5	4	3	2	1
16	Having a standard pronunciation is a motivating factor in English language learning.	6	5	4	3	2	1
17	Having a standard pronunciation gives a sense of self-accomplishment.	6	5	4	3	2	1
18	Correct pronunciation makes communication easier.	6	5	4	3	2	1
19	An English language learner's accurate pronunciation leads to feelings of closeness with native speakers.	6	5	4	3	2	1
20	An English language learner with a poor pronunciation is afraid of being laughed at, so he/she may not participate in group discussions.	6	5	4	3	2	1
21	The aim of learning English pronunciation is to achieve a native-like accent.	6	5	4	3	2	1
22	The aim of learning English pronunciation is just to have a correct and intelligible (understandable) pronunciation.	6	5	4	3	2	1
23	One's knowledge can be judged by his/her good or poor pronunciation.	6	5	4	3	2	1
24	One's good or poor pronunciation indicates his/her high or low social status (one's social or professional position in relation to others).	6	5	4	3	2	1
25	One's good or poor pronunciation indicates his/her social class.	6	5	4	3	2	1

26	Having good or poor pronunciation is irrelevant to one's economic status.	1	2	3	4	5	6
27	The listener develops a positive attitude toward a speaker with a perfect pronunciation.	6	5	4	3	2	1
28	People pay more attention to a speaker with a poor English pronunciation.	1	2	3	4	5	6
29	Perfect pronunciation attracts the listener.	6	5	4	3	2	1
30	If one's pronunciation is good, others respect him/her.	6	5	4	3	2	1
31	Speaker's wrong pronunciation distracts the listener.	6	5	4	3	2	1
32	One's good or poor pronunciation indicates his/her personality and politeness.	6	5	4	3	2	1
33	In my opinion, all English accents are acceptable. For e.g., correct English with Indian accent.	1	2	3	4	5	6
34	In my opinion, a beautiful pronunciation is near to American or British standards.	6	5	4	3	2	1
35	Among different accents of English, I like American accent the most.	6	5	4	3	2	1
36	Among different accents of English, I like British accent the most.	6	5	4	3	2	1
37	"English as an international language" means everybody has to know English and use it.	6	5	4	3	2	1
38	"English as an international language" means people worldwide communicate through English.	6	5	4	3	2	1
39	English as an international language belongs to all nations that use it (as the first, second, or foreign language).	1	2	3	4	5	6

APPENDIX B. STANDARDIZED ESTIMATES FOR THE LATEP MODEL



Learner Attitudes toward English Pronunciation (LATEP) Model

REFERENCES

[1] Baker, A. A., & Murphy, J. (2011). Knowledge base of pronunciation teaching: Staking out the territory. *TESL Canada Journal*, 28.2, 29-50.

[2] Bandalos, D. L., & Finney, S. J. (2001). Item parceling issues in structural equation modeling. In G. A. Marcoulides, & R. E. Schumacker (eds.), *New developments and techniques in structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum Associates, 269-296.

[3] Barrera Pardo, D. (2004). Can pronunciation be taught? A review of research and implications for teaching. *Revista Estudios Ingleses*, 17, 6-38.

[4] Bourdieu, P. (1991). *Language and symbolic power* (J. B. Thompson, Ed.; G. Raymond, & M. Adamson, Trans.). Cambridge, UK: Polity Press.

- [5] Brawn, J. R. (2010). Teaching pronunciation gets a bad R.A.P.: A framework for teaching pronunciation. Hankuk University of Foreign Studies. Seoul, South Korea.
- [6] Brown, T. A. (2006). Confirmatory factor analysis for applied research. New York, NY: The Guilford Press.
- [7] Byrne, B. M. (2010). Structural equation modeling with AMOS: Basic concepts, applications, and programming (2nd edn.). New York, NY: Routledge.
- [8] Coşkun, A., & Arslan, A. (2011). EIL and foreign accent in ELT. *English for Specific Purposes World*, 31.10, 1-6.
- [9] Derwing, T. M., & Munro, M. J. (2005). Second language accent and pronunciation teaching: A research-based approach. *TESOL Quarterly*, 39.3, 379-397.
- [10] Dörnyei, Z. (with Taguchi, T.) (2010). Questionnaires in second language research: Construction, administration, and processing (2nd edn.). New York, NY: Routledge.
- [11] Elliott, A. R. (1995). Foreign language phonology: Field independence, attitude, and the success of formal instruction in Spanish pronunciation. *The Modern Language Journal*, 79, 530-542.
- [12] Engen, L., & Højen, T. (2002). Phonological skills and reading comprehension. *Reading and Writing: An Interdisciplinary Journal* 15, 613-631.
- [13] Garrett, P. (2007). Language attitudes. In C. Llamas, L. Mullany, & P. Stockwell (eds.), *The Routledge companion to sociolinguistics*. New York, NY: Routledge, 116-121.
- [14] Gilbert, J. B. (2010). Pronunciation as orphan: What can be done? *TESOL SPLIS*, 7.2, 1-5.
- [15] Gilner, L. (2008). Pronunciation: A review of methods and techniques. *Journal of the School of Foreign Languages, Nagoya University of Foreign Studies*, 35, 93-108.
- [16] Goswami, U. (2000). Phonological and lexical processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & Barr, R (eds.), *Handbook of reading research* (vol. 3). Mahwah, NJ: Lawrence Erlbaum Associates, 251-267.
- [17] Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (6th edn.). Upper Saddle River, NJ: Prentice Hall.
- [18] Ho, R. (2006). Handbook of univariate and multivariate data analysis and interpretation with SPSS. Boca Raton, FL: Chapman & Hall/CRC.
- [19] Hosseini Fatemi, A., Shahriari Ahmadi, H. (2010). To teach or not to teach: On the didactic aspect of accent training in the EFL Classroom. *The Iranian EFL Journal*, 6.3, 28-44.
- [20] Hulme, C., Snowling, M., Caravolas, M., & Carrol, J. (2005). Phonological skills are (probably) one cause of success in learning to read: A comment on Castles and Coltheart. *Scientific Studies of Reading*, 9.4, 351-365.
- [21] Kanellou, V. (2011). The place and practice of pronunciation teaching in the context of the EFL classroom in Thessaloniki, Greece. Ph.D. dissertation, Cardiff University, Wales.
- [22] Kang, O. (2010). ESL learners' attitudes toward pronunciation instruction and varieties of English. In J. Levis, & K. LeVelle (eds.), *Proceedings of the 1st Pronunciation in Second Language Learning and Teaching Conference*. Ames, IA: Iowa State University, 105-118.
- [23] Kelly, G. (2000). How to teach pronunciation (J. Harmer, ed.). England: Longman.
- [24] Kelly, L. G. (1969). 25 centuries of language teaching. Rowley, MA: Newbury House.
- [25] Kerswill, P. (2007). Social class. In C. Llamas, L. Mullany, & P. Stockwell (eds.), *The Routledge companion to sociolinguistics*. New York, NY: Routledge, 51-61.
- [26] Kline, R. B. (2011). Principles and practice of structural equation modeling (3rd edn.). New York, NY: The Guilford Press.
- [27] Kunnan, A. J. (1998). An introduction to structural equation modeling for language assessment research. *Language Testing*, 15.3, 295-332.
- [28] Levis, J. M. (2005). Changing contexts and shifting paradigms in pronunciation teaching. *TESOL Quarterly*, 39.3, 369-377.
- [29] Morley, J. (1991). The pronunciation component in teaching English to speakers of other languages. *TESOL Quarterly*, 25.3, 481-520.
- [30] Pishghadam, R., & Akhondpoor, F. (2011). Learner perfectionism and its role in foreign language learning success, academic achievement, and learner anxiety. *Journal of Language Teaching and Research*, 2.2, 432-440.
- [31] Pishghadam, R. & Sadeghi, M. (2011). Home culture attachment and access to social/cultural capital: A case of Iranian English foreign language teachers. *African Journal of Social Sciences*, 1.3, 56-65.
- [32] Rubin, D. (2012). The power of prejudice in accent perception: Reverse linguistic stereotyping and its impact on listener judgments and decisions. In J. Levis, & K. LeVelle (eds.), *Proceedings of the 3rd Pronunciation in Second Language Learning and Teaching Conference*. Ames, IA: Iowa State University, 11-17.
- [33] Seyedabadi, S. (2014). Iranian EFL learners' attitudes toward the Cinderella of language teaching, construction and validation of LATEP scale: A mixed-method study. Master's dissertation, Ferdowsi University of Mashhad, Iran.
- [34] Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (5th edn.). Boston, MA: Pearson Education.
- [35] Timmis, I. (2007). The attitudes of language learners towards target varieties of the language. In B. Tomlinson (ed.), *Language acquisition and development: Studies of learners of first and other languages*. London: Continuum, 122-139.
- [36] Underhill, A. (2011). Pronunciation: The Cinderella of language teaching. *Humanizing Language Teaching*, 13(5). <http://www.hltmag.co.uk/oct11/cse02.htm> (accessed 24/12/2013).
- [37] Underhill, A. (2013). Pronunciation, the Cinderella of ELT, and the two princes. NATESOL Teachers' Conference (May 18th). Salford, Greater Manchester. [http://www.natesol.org/conference\\_2013\\_22.html](http://www.natesol.org/conference_2013_22.html) (accessed 22/12/2013).
- [38] Varasarin, P. (2007). An action research study of pronunciation training, language learning strategies and speaking confidence. Ph.D. dissertation, Victoria University, Thailand.
- [39] Walter, C. (2009). Teaching phonology for reading comprehension. *Speak Out!* 40, 4-7.
- [40] Wood, C., & Farrington-Flint, L. (2002). Orthographic analogy use and phonological priming effects in non-word reading. *Cognitive Development*, 16, 951-963.

**Samaneh Seyedabadi** holds both her BA in English Language and Literature and her MA in TEFL from Ferdowsi University of Mashhad, Iran. She is currently teaching English at private language institutes in Mashhad, Iran. Her areas of interest include language skills, psychology, and sociology of language learning.

**Azar Hosseini Fatemi** was born in 1951 in Mashhad, Iran. She got her BA degree in English Language and Literature from Ferdowsi University of Mashhad, Iran. She has received MA degree in TEFL from New Mexico, State University, USA in 1980, and Ph.D. degree from Panjab University, India. Her field of interests is research, teaching and learning a second language, and sociolinguistics.

She is an Associate Professor of TEFL at Ferdowsi University of Mashhad, Iran. She has 29 years of teaching experience at university level. She has published more than 20 articles in different journals. In addition, Dr. Hosseini Fatemi is the executive manager and a member of editorial board of "Ferdowsi Review, An Iranian Journal of TESOL, Literature and Translation Studies".

**Reza Pishghadam** has a PhD in Teaching English as a Foreign Language (TEFL). He is currently on the English faculty of Ferdowsi University of Mashhad, Iran. He is now associate professor of TEFL and teaches socio-psychological aspects of language education. Over the last five years, he has published more than 120 articles and books in different domains of English language education and has participated in more than twenty national and international conferences.

In 2007 he was selected to become a member of the National Association of Elites of Iran. In 2010, he was classified as the distinguished researcher in humanities in Iran. Dr. Pishghadam introduced the idea of "Applied ELT" in 2011 as a new paradigm in second/foreign language studies, giving the field of English language teaching and learning a new breath of life. His major research interests are the psychology and sociology of language education.