

Psycholinguistic Sources of English Spelling Errors

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Abstract: *From the point of view of SLA research determining the sources of errors is the most important stage in an error analysis as it involves an attempt to establish the processes responsible for L2 acquisition. As far as psycholinguistic sources of errors are concerned, two major processes are identified, distinguishing interlingual and intralingual errors. Interlingual errors seem to result from L1 interference which refers to those instances of deviation from the norm of the target language which occurs as a result of familiarity with the mother tongue. Intralingual errors, however, are those which result from faulty or partial learning of L2, rather than from language transfer. In order to classify sources of spelling errors, this study has benefited from the classification utilized by James et al. (1993). To this end, a 65-word dictation test, taken from English text book of Persian learners of English in grade one, was administered to 40 learners. Upon the analysis of the spelling errors in the current study the sources of spelling errors are: L1 interference, overgeneralization, ignorance of rule restriction, homophone confusion.*

Keywords: *Psycholinguistic, Spelling errors, Persian learners of English.*

Introduction

Spelling, according to Willett (2003), is a key functional component of writing. Brann (1997) and Mosely (1993) state that spelling has a direct impact on the ability to read and write. In other words, spelling is the key to both reading and writing of the language. Therefore, effective writing depends on effective spelling, and understanding learners' spelling difficulties can help teachers support the development of learners' writing.

Ida (2006) states that unquestionably English spelling is a difficult and complex matter and learners around the world have difficulty getting the letters right. As stated by Fay (1971), English spelling is characterized by the inconsistencies of pronunciations, as well as by the discrepancies in the numbers and combinations of letters used to represent English sounds. Titlestad (1999) also clearly illustrates that English spelling is not phonetic, thus creating difficulties for learners and teachers involved in writing and pronunciation classes.

In fact, when it comes to English spelling difficulty, Persian English language learners are no exceptions. There are, of course, specific reasons for this matter. First, English spelling is highly

irregular which makes it hard to learn for Persian learners. Second, there are significant differences between Persian and English writing systems. These differences also make English spelling hard to learn for Persian learners. Third, according to many studies (Mohammadi, 1992; Khodaverdilou, 1997; Mirhassani, 2003) a majority of Persian learners of English are not able to spell English correctly. According to these studies, it seems that getting enough mastery over English spelling has been a dream for many Persian English language learners at different levels. Finally, there is limited body of research in the acquisition of spelling skills and in spelling errors produced by Persian English Language learners. To fill this gap, this study aims to shed light upon English spelling errors among Persian English language learners, and to investigate their sources.

Review of the related literature

According to Taylor (1986), the error source may be psycholinguistic, sociolinguistic, epistemic, or may reside in the discourse structure. As far as psycholinguistic sources of errors, which concern the nature of the L2 knowledge system and the difficulties learners have in using it in production, are concerned, two major processes are identified, distinguishing interlingual errors and intralingual errors.

Interlingual errors

Based on the assumption that interference occurs across a learner's native language and the target language, we can now proceed to a discussion on what linguists mean by interlingual errors. Interlingual errors seem to result from L1 interference, which is related to the concept of transfer as explained by Lado (1957). L1 interference refers to those instances of deviation from the norm of the target language which occurs as a result of familiarity with the mother tongue or first language. Although the contrastive hypothesis cannot be accepted as accounting for all errors in L2 use, it is nonetheless true that there is a transfer effect from the mother-tongue to the new language. As stated by Schachter and Celce-Murcia (1977), interlingual errors are "those caused by the influence of the learner's mother tongue on production of target language in presumably those areas where languages clearly differ" (p. 443). Also, Dulay, Burt and Krashen (1982) define interlingual errors as "L2 errors that reflect native language structure, regardless of internal processes or external conditions that spawned them" (p. 171).

According to Brown (2000), interlingual transfer is a significant source of errors for all learners. In the beginning stages of learning a second language, learners usually make interlingual errors, because of transfer of L1 onto L2. In this relation, Richards (1979) mentions that interference from the mother tongue is clearly a major source of difficulty in second-language learning, and contrastive analysis has proved valuable in locating areas of interlanguage interference. Regarding to spelling errors, James et al. (1993, pp. 291-300) divides sources of interlingual errors or L1 interference errors into three types: mispronunciation or L1 interference, misrepresentation, and lexical cognate misspelling.

Intralingual errors

Richards (1971) defines intralingual errors as those which occur as a result of interference from application of general learning strategies similar to those manifested in first language acquisition. According to Keshavarz (2005), intralingual errors are caused by the mutual interference of items in the target language, i.e. the influence of one target language item upon another. Such errors reflect the learner's competence at a particular stage of second language development and illustrate some of the general characteristics of language learning. In fact such errors are similar to errors produced by monolingual children, and result from the learner's attempt to build up concepts and hypotheses about the target language from his/her limited experience with it. Ellis and Barkhuizen (2005) also state that intralingual errors reflect the operation of learning strategies that are universal, i.e. evident in all learners regardless of their L1. James (1998) provides a useful summary of these strategies, the most of which are false analogy, misanalysis, incomplete rule application, exploiting redundancy, overlooking co-occurrence restrictions, and system-simplification. Regarding to spelling errors, James et al. (1993, pp. 301-302) divides intralingual errors or non-interference errors into three types: overgeneralization of an L1 spelling rule, homophone confusion, and letter naming.

In order to classify interlingual and intralingual sources of spelling errors of Persian English language learners, this study has benefited from the classification utilized by James et al. (1993) because this classification is an excellent account of spelling errors within the context of EA which distinguishes among sources of interlingual errors and intralingual errors. Apart from that, according to James et al. (1993), this classification seems to facilitate a plausible description of types of spelling errors. They also suggest that it could be used for raising teachers' and learners' awareness of the kinds of options and decisions that are made in real time during the act of composition (*ibid*).

A review of studies on English spelling errors

Many studies show that second-language learners tend to be interfered by their L1 in the acquisition of English spelling. In this regard, Rodriguez-Brown (1987) investigated L2 spelling of 84 secondary school students learning Spanish as a second language. The result showed that performance in English spelling is a good predictor of performance in Spanish spelling. Ferroli (1991) investigated the relative influence of L1 literacy skills and L2 oral proficiency on students' ability to read and spell in L2. The results showed a positive role of L1 literacy skills and L2 oral proficiency in students' ability to read and spell in L2. Similarly, Odisho's study (1994) indicated the effect of L1 orthography on learning L2 spelling. In short, the results of these studies reveal that students applied whatever conceptual background knowledge they had of spelling in their native language to the spelling task in English.

In addition to an awareness of the L1 influence, the possible effect of the L2 is another important issue. In this regard, a study with 38 Spanish-speaking and 3 English-speaking second and third graders was conducted by Fashola et al. (1996) to examine how Spanish-speaking children spell English words. James et al. (1993) examined the extent to which the ESL spelling of young Welsh-English bilinguals is systematically idiosyncratic. St. Pierre et al. (1995) studied the nature of the spelling lag existing in the development of English spelling in early French immersion students. Al-Jarf (2008) examined the sources of spelling errors that ESL Arab college students make. The results of these investigations make clear that sources such as overgeneralization, ignorance of rules restriction, and incomplete application of rules also account for many errors.

Objectives and research questions

Due to the limited body of research on the acquisition of spelling skills, the types of spelling errors, and the major spelling difficulties for Persian English language learners, this study intends to examine the English spelling of Persian English language learners in general and the following objectives in particular:

1. To determine sources of interlingual errors in the spelling of Persian English language learners.
2. To determine sources of intralingual errors in the spelling of Persian English language learners.

Participants

The subjects of this study were 40 students who were in grade one of the secondary education cycle. The students have 14-16 years of age. They have been learning English for three years in junior high school and have received three hours of English instruction per week. The students' exposure to the English language was limited to the classroom. Therefore, they are able to understand and use English language skills at the basic level of language proficiency.

Instruments

In this study, a word dictation test is selected to collect data because of the following concerns as mentioned by many researchers (Randall, 1997; Masterson & Apel 2000) about norm-referenced tests and writing samples: First, data collected with the use of norm-referenced tests provide little information about students' spelling performance or competence. Second, in writing samples, students with spelling deficits often avoid attempts to spell words that they do not know how to spell.

According to Fender (2008), two main criteria should be used to select the words for dictation test. One is to select words that are familiar and known by students. The second is to select words that correspond appropriate to levels of spelling difficulty. For this purpose, words having these criteria were derived from the English textbook of Persian learners of English in grade one of the secondary education cycle and spelling word lists of learners' final examinations.

Design

Based on the research objectives mentioned above, it can be deduced that this study is a quantitative and descriptive one as the data will be collected at one point in time and it does not propose to use method such as observation, control group and other such research techniques in its investigation of the problem.

Procedures

The word dictation test was administered in a single session and lasted about 30 minutes. It was administered as following steps: first, reading a word to the learners, followed by a three-second pause. Next, reading the context for the learners, followed by a three-second pause. Then, giving the learners a second reading followed by a three-second pause. Finally, asking the learners to write the words they had heard.

The learners' word dictations were then analyzed for identifying and explaining the spelling errors. In this study, every word that deviates from the norms of written Standard English is identified as an error.

Findings of the Study

Findings of the study attributed to the sources of interlingual spelling errors

The sources of interlingual spelling errors according to James et al. (1993) are: L1 interference, misrepresentation, and lexical cognate misspellings. Because of differences between Persian and English writing system, misrepresentation and lexical cognate misspellings were not applied in this study. Upon the analysis of the spelling errors of Persian English language learners in the current study the sources of interlingual spelling errors are:

L1 phonological interference

The current study reveals that some specific differences between the sound systems of English and Persian have affected the spelling ability of Persian learners of English.

Intended Word

Written Word

Example 1: than —————> dan or zan

The example displays that Persian learners alter the grapheme <th> to <z> and <d> as no /ð/ sound exists in Persian. As a result, /z/ and /d/ sounds in Persian which are represented by graphemes <z> and <d> in English, replace the grapheme <th> in the word "than".

Example 2: Intended Word Written Word
 think —————> tink or sink

The example shows that Persian learners of English change the grapheme <th> to <s> and <t> because no /θ/ sound exists in Persian. As a result, /s/ and /t/ sounds in Persian which are represented by graphemes <s> and <t> in English, replace the grapheme <th> in the words "think".

Example 3: Intended Word Written Word
 watch —————> vatch

The example illustrates that Persian learners change the grapheme <w> to <v> since no /w/ sound exists in Persian. As a result, /v/ sounds in Persian which is represented by grapheme <v> in English, substitutes the grapheme <w> in the words "watch".

From the above examples (1, 2 and 3), it can be interpreted the fact that Persian lacks consonants that are available in English, have affected the spelling ability of Persian English language learners. Consequently, when Persian learners spell English words, they cannot help but tending to substitute graphemes <s, t, z, d> for <th>, and <v> for <w>. As such, this is the main reason why spelling errors such as "tink, dan, vatch" are quite common among Persian learners.

L1 syllable structure interference

The differences between L1 and L2 syllable structure is another source of interlingual error that affects spelling ability of Persian English language learners.

Example 4: Intended Word Written Word
 bread [CC-] —————> beread [CVC-]

The example shows that Persian learners of English substitute Persian cluster CVC- for English cluster CC-, since Persian does not permit any initial consonant clustering. The clusters involved are "cl, br, dr, fr, pr and pl".

Intended Word Written Word

Example 5: still [CC-] → ?estill [ʔVCC-]

As seen, Persian learners of English substitute Persian cluster ʔVCC- for English cluster CC-. As Persian syllable does not begin with a vowel, a glottal /ʔ/ is phonologically inserted before a vowel at the beginning of a breath group. The cluster involved is “st”. As examples (4 and 5) show, some of Persian learners’ spelling errors are caused by the differences in the syllable structure of the two languages. The examples show that initial consonant clusters are not permitted in Persian. Therefore, Persian learners substitute Persian cluster CeC- or ʔVCC- for English cluster CC-.

Findings of the study attributed to the sources of intralingual spelling errors

The sources of intralingual spelling errors according to James et al are overgeneralization, ignorance of rule restriction, homophone confusion and letter naming. Because of differences between Persian and English writing system, letter naming was not applied in this study. Upon the analysis of the spelling errors of Persian English language learners in the current study the sources of intralingual spelling errors are:

Overgeneralization

Overgeneralization errors refer to the deviant structures produced by the learner on the basis of his/her limited knowledge of and exposure to other structure of target language. As the result of the study show, large amounts of spelling errors are caused by the inconsistency of English spelling system. In majority of cases, there is no one-to-one correspondence between graphemes and phonemes they represent. Therefore, learners impose certain spelling features on words that do not contain them. For example, Persian learners replace grapheme <k> for a range of spelling representations for the /k/ sound which are <c>, <k>, <ck>, <que>.

The analysis of spelling errors of Persian English language learners reveals that a consonant can be represented by different graphemes. Their manifestations are illustrated in Table 1.

Table 1: English consonants representation and subjects spelling errors.

Consonant Sound	Consonant Representation	Intended Word	Written Word
/k/	<c>, <ck>, <que>	practice ticket mosque	praktice tiket mosk
/f/	<gh>, <ph>	prophet enough	profet enouf

/s/	<ss>, <s>, <ci>, <ce>, <cy>	cities bicycle accident place guess	sities bisycle accident plas gues
/z/	<s>, <se>, <es>	cities visit raise	citiz vizit raiz
/l/	<l>, <ll>	still	stil,
/t/	<t>, <tt>	kettle	ketle
/m/	<m>, <mm>	summer	sumer
/r/	<r>, <rr>	arrive	arive
/d/	<d>, <dd>	address	adress
/silent consonants/	<n>, <g>, <t>, <w>, <gh>, , <d>, <r>	autumn watch wrong foreign night climb Wednesday summer	autum wach rong foren nait clim Wenesday summe

From Table 1, it can be interpreted that the non-phonetic nature of English spelling caused a lot of spelling errors for Persian English language learners because: a. There are different spelling representations used to denote each consonant sound, which means that a given consonant sound is often represented by different graphemes, b. The double consonants that are not distinguishable in pronunciation from the single ones create a lot of problems for Persian learners in spelling English, such as in the words "still, bottle and arrive", c. Some of the consonants that do not represent any sound in a particular word (silent consonant) are another main sources of spelling errors for Persian English language learners, and d. Spelling errors related to silent consonants are the most common spelling errors for Persian English language learners.

The analysis of spelling errors of Persian English language learners also reveals that a vowel can be represented by different graphemes. Their manifestations are illustrated in Table 2.

Table 2: English vowels representation and subjects spelling errors.

Vowel Sound	Vowel Representation	Intended Word	Written Word
/e/	<ue>, <ie>, <ea>, <a>	guess	ges

		friend bread many	frend bred meny
/i:/	<ea>, <ie>, <eo>, <ei>, <ee>	easily believe people receive three	isily belive piple recive thri
/ɪ/	<o>, <e>, <u>	receive busy women	riceive bisy wimin
/silent vowel/	<e>	while arrive bottle	whil arriv bottl

Table 2 shows that there are different spelling representations used to denote each vowel sound, which means that a given vowel sound is often represented by different graphemes. It also shows that some of the vowels that do not represent any sound in a particular word (silent vowels) are another main sources of spelling errors for Persian English language learners, and spelling errors related to silent vowels are the most common spelling errors for Persian English language learners. Table 2 also illustrates that phonemic distinctions are evident in the English /ɪ/ and /i:/ sounds. Such phonemic distinctions are absent in Persian. This creates several problems for Persian learners in spelling English, as demonstrated by the incorrect spellings "belive, wimin" and "bisy". In these cases, Persian learners have substituted the letter "i" for the English /ɪ/ and /i:/ sounds.

Ignorance of spelling rules

This type of error is due to the learner's ignorance of the restrictions of an exception to general English spelling rules. That is, the learner fails to see restrictions of English spelling rules. The analysis of spelling errors of Persian English language learners in the present study show that the ignorance of spelling rules is another source of spelling errors. Consider the examples in Table 3.

Table 3: Subjects' ignorance of spelling rules in English suffixes.

Tapes of English Suffixes	Intended Words	Written Words
-es	studies	studyes
-ing	sitting	siting
-ly	easily	easyly

-er	heavier fatter	heavyer fater
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The data in Table 3 shows that learners have ignored the following rules:

1. When a word ends in -y and is preceded by a consonant, the -y usually changes to -i when you are adding a suffix.
2. When a one-syllable word ends in the CVC combination, it is usually appropriate to double the final consonant when adding a suffix that begins with a vowel.

The above data show the Persian learner's ignorance of restrictions of and exceptions to English spelling rules (adding suffixes), as demonstrated by the misspellings “studyes, siting, easily, heavyer, fater”. It seems that spelling error attributed to ignorance of spelling rules be the results of weak morphological knowledge and rote learning of rules. As most English spelling rules have many exceptions, it's no wonder that Persian learners find it very hard to spell English.

Homophone confusion

Homophone confusion is the result of failure to make fine distinction between two existing lexical items that sound the same but are not spelt the same. The current study reveals that homophone confusion is a source of many spelling errors of Persian English language learners. Consider the examples of homophone confusion in Table 4.

Table 4: Subjects' homophone confusion in English spelling.

Written Word	Intended Word
sit	seat
live	leave
their	there
our	hour
see	sea
hi	high
who's	whose
here	hear
right	write
too/to	two

Based on the present study, it seems that homophone confusion is the consequence of failure to

make fine distinctions between two existing lexical items, that pronounced the same but differ in meaning and spelling. These errors may be due to lack of exposure to the English spelling system, insufficient experience and practice, and the way English words are grouped and presented to the students. It also seems that spelling errors attributed to homophone confusion be the results of weak or fuzzy mental images of words. The present study also reveals that “hear-here” and “write-right” are the dominant homophone confusion spelling errors.

Discussion of the Findings

The following tables show the percentile information of sources of spelling errors, interlingual errors and intralingual errors. As Table 5 shows, the sources of spelling errors are interlingual and intralingual.

Table 5: The percentile information of subjects' sources of spelling errors.

Sources of Spelling Errors	Interlingual Errors	Intralingual Errors	Total
Frequency	130	439	569
Percentages	22.85%	77.15%	100%

Upon analyzing spelling errors of Persian English language learners of this study, the figures offered in Table 5 show the fact that in the present study the number of intralingual errors is far beyond the number of interlingual errors. This may be attributed to the lack of the correct semantic, phonological and orthographic associations between the spoken sounds and the printed symbols in English spelling (Ehri & Wilce, 1987; Treiman, 1993). Interlingual errors in the spelling errors of Persian learners in this study amounted to 130, which constituted about 22.85%, while errors attributed to intralingual errors amounted to 439, which constituted about 77.15% of the overall total number of errors recorded (569). This study supports the view that L1 transfer does not appear to be the major source of errors in learning L2 (Dulay & Burt, 1974; Tran-chi-chau, 1975; Ellis, 2004).

Table 6: Frequency and percentage of subjects' interlingual errors.

Sources of Errors	Interlingual Errors	Total

	L1 Phonology	L1 Syllable Structure	
Frequencies	72	58	130
Percentages	55.38%	44.62%	100%

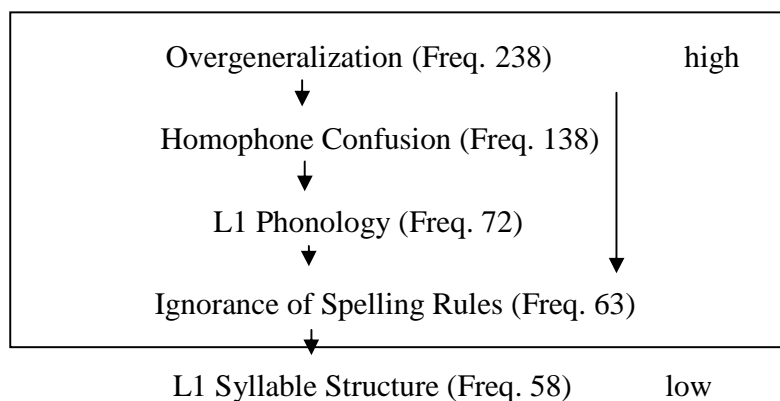
Furthermore, Table 6 shows that Persian English language learners on produced a total of 130 interlingual spelling errors: 72 or 55.38% related to transfer of L1 phonology and 58 or 44.62% related to transfer of L1 syllable structure. The distribution of errors seems to suggest that Persian learners have more problems due to transfer of L1 phonology than due to L1 syllable structure.

Table 7: Frequency and percentage of subjects' intralingual errors in English spelling.

Sources of Errors	Intralingual Errors			Total
	L2 Inconsistency	Overgeneralization	Homophone Confusion	
Frequencies	238	63	138	439
Percentages	54.21%	14.35%	31.44%	100%

Table 7 shows that Persian English language learners on produced a total of 439 intralingual spelling errors: 238 or 54.21% related to overgeneralization, 63 or 14.35% related to ignorance of spelling rules and 138 or 31.44% related to homophone confusion. The distribution of errors seems to suggest that Persian learners lacked knowledge about English consonants and vowels than about spelling rules or homophones.

The rank ordering of the various English spelling errors of Persian learners in the term of L1 and L2 transfer based on frequency information of sources of spelling errors are outlined in Figure 1.

Fig. 1: The rank ordering of subjects' sources of spelling errors.

The rank ordering of sources of English spelling errors based on their frequency reveals that the most dominant errors made by Persian learners are attributed to the overgeneralization and homophones. This study implies that the subjects of the study who were all in their third year of academic English did not yet have a fixed idea of the English sound system, and they have low spelling proficiency in English spelling. In other words, the results of the current study imply that many spelling problems that Persian English language learners have in spelling English may be due to lack of knowledge of phonology, orthography, morphology, and mental orthographic images. This implies that at secondary school in Iran, spelling receives very little attention in EFL instruction and evaluation. As a result, many phonological and spelling problems that Persian English language learners have in spelling English may be due to a lack of English spelling instruction. The inability to realize the differences between the L1 and L2 sound systems could be the reason behind the occurrence of the interlingual errors. The results of this study imply a real need for enough time, adequate instructions, and teacher knowledge.

References

- Al-Jarf, R. (2008). *Sources of spelling errors in EFL Arab college students*. Saudi Arabia: King Saud University.
- Brann, B. (1997). *The Brann analysis grid for spelling*. Australia P. J. Developments.
- Brown, H. D. (2000). *Principles of language learning and teaching*. Addison Wesley Longman.
- Cronnell, B. (1979). Spelling English as a second language. In M, Celce-Murcia & L, McIntosh (Eds.). *Teaching English as a second/ foreign language*. (pp. 202-208). New Bury House, Rowley, Massachusetts.
- Dildine, D. (1994). *Spelling acquisition in the elementary ESL classroom*. Master's thesis. Arizona State University.
- Dulay, H., & Burt, M. (1974). Errors and strategies in child second language acquisition. *TESOL*

- Quarterly*, 8 (2), 129-136.
- Dulay, H., Burt, M. & Krashen, S. (1982). *Language two*. New York: Oxford University Press.
- Ehri, L. C., & Wilce, L. S. (1987). Does learning to spell help beginners learn to read words? *Reading Research Quarterly*, 12 (1), 47-65.
- Ellis, R. (2004). *Understanding second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (20012). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R., & Barkhuizen, G. (2005). *Analyzing learner language*. Oxford: Oxford University Press.
- Fashola, O. S; Drum, P. A; Mayer, R. E. & Sang-Jin Kang. (1996). A cognitive theory of orthographic transitioning: predictable errors in how Spanish speaking children spell English words. *American Educational Research Journal*, 33 (4), 825-43.
- Fay, L. (1971). Reading and spelling: how are they related? *ERIC Document Reproduction Service No. ED059009*.
- Fender, M. (2008). Spelling knowledge and reading development: insights from Arab ESL learners. *Reading in a Foreign Language*, 20, 19-42.
- Ferroli, L. (1991). Developmental spelling and the transfer of literacy skill among primary grade bilinguals. *ERIC Document Reproduction Service. ED362010*.
- Gass, S., & Selinker, L. (2001). *Second language acquisition*. Routledge Publishing.
- Gay, L. R., & Airasian, P. (2003). *Educational research: competencies for analysis and applications* (Seventh Edition). USA: Merrill Prentice Hall.
- Ida, F. (2006). *English spelling in Swedish secondary school: Students' attitudes and performance*. Karlstads University.
- James, C. (1998). *Errors in language learning and use: Exploring error analysis*. London and New York: Longman.
- James, C., Scholfield, Ph., Garrett, P., & Griffiths, Y. (1993). Welsh Bilinguals' English spelling: An error analysis. *Journal of Multicultural and Multicultural Development*, 14 (4), 287-306.
- Keshavarz, M. H. (2005). *Contrastive analysis and error analysis*. Tehran: Rahnama Publications.
- Khodaverdilou, M. R. (1997). Error analysis on the spelling errors of Iranian high school students. *Roshd Foreign Language Teaching Journal*, 13 (47), 55-59.
- Lado, R. (1957). *Linguistics across cultures: applied linguistics for language teachers*. Ann Arbor, Michigan: University of Michigan.
- Masterson, J. J., & Apel, K. (2000). Spelling assessment: charting a path to optimal intervention. *Topics in Language Disorders*, 20 (3), 50-65.
- Mirhassani, S. A. (2003). *A contrastive analysis of Persian and English parts of speech*. Tehran: Zabankadeh.
- Mohammadi, M. (1992). *English spelling rules and spelling errors analysis*. Tehran: Navid Publications.
- Moseley, D. (1993). *How lack of confidence in spelling affects children's written expression*.

- Wellington, New Zealand: New Zealand Council for Educational Research.
- Odisho, E. Y. (1994). *The alphabet and spelling connection: insights from non- native learners of English*. ERIC Document Reproduction Service No. ED371604.
- Oller, J. W., & Ziahosseiny, S. M. (1970). The contrastive analysis hypothesis and spelling errors. *Language Learner*, 20 (2), 183-189.
- Randall, M. (1997). Orthographic knowledge, phonological awareness and the teaching of English: An analysis of word dictation errors in English of Malaysian secondary school pupils. *RELC Journal*, 28 (2), 1-21.
- Richards, J. C. (1971). A non-contrastive approach to error analysis. *English Language Teaching Journal*, 25 (2), 204-219.
- Richards, J. C. (1974). *Error analysis: perspectives on second language acquisition*. London: Longman.
- Richards, J. C. (1979). Rhetorical and communicative styles in the new varieties of English. *Language Learning*, 29 (1), 1-25.
- Rodriguez-Brown, F. (1987). *Testing the transfer paradigm in second language learning: The case of spelling skills*. ERIC Document Reproduction Service No. ED 336 965.
- Schachter, J., & Celce-Murcia, M. (1977). Some reservation concerning error analysis. *TESOL Quarterly*, 11, 441 – 451.
- St-Pierre, L., & Others. (1995). The influence of French on the English spelling of children in early French immersion. *Canadian Modern Language Review*, 51 (2), 330-347.
- Taylor, G. (1986). Errors and explanations. *Applied linguistics*, 7, 144-166.
- Titlestad, P. J. (1999). The relationship between the spelling of and pronunciation of English in the South African context. *Journal of Language Teaching*, 33 (4), 17-26.
- Tran-Chi-Chau. (1975). Error and explanations. *Applied Linguistics*, 7, 144-166.
- Treiman, R. (1993). *Beginning to spell: A study of first-grade children*. Oxford University Press.
- Warwick, B. (1992). Acquiring literacy in a second language: The effect of book based Programs. *Language Learning*, 41 (3), 375-411
- Willett, L. (2003). *Using spelling data to improve students-learning outcomes: More than just numbers*. Australia-Queensland Studies.