

## THE ROLE OF ORTHOGRAPHY ON THE PRODUCTION OF REGULAR VERBS ENDING IN *-ed* BY BRAZILIAN EFL LEARNERS<sup>1</sup>

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*ABSTRACT: The main objective of this study was to investigate the influence of orthography in the production of vowel epenthesis in the pronunciation of regular verbs ending in -ed by Brazilian EFL learners. According to previous studies, in which the data collection was frequently based on reading tasks, it was hypothesized that the orthographic input would influence the pronunciation of these verbs. Twenty-six participants read and audio-recorded ten short paragraphs containing 91 verbs ending in -ed and 36 contrastive words, and described four pictures using verbs in the past. The results indicated that the production of vowel epenthesis was high in verbs ending in -ed and null in the contrastive words in the paragraph reading task, and higher in the verbs ending in -ed in the reading task than in these verbs in the free speech task. In sum, orthography influenced the production of vowel epenthesis in verbs ending in -ed by Brazilians.*

*KEYWORDS: orthography, regular verbs ending in -ed, Brazilian EFL learners, task*

### 1. Introduction

Baptista (2001) identified the most frequent pronunciation problems of Brazilian learners of English as a foreign language (EFL). Based on her experience as an EFL teacher in Brazil and on some initial research on the acquisition of English pronunciation by Brazilians, she pointed out that Brazilians have difficulty with English initial and final consonants, initial /s/-clusters, vowels, simple past tense *-ed*, stress, rhythm and intonation. In Baptista (2002), she called the attention to the necessity of investigating some of these pronunciation problems, such as the interdental fricatives and the simple past tense *-ed*.

Some studies, briefly summarized in section 2, have investigated perception, production, intelligibility and the effect of instruction on the production of simple past tense *-ed*. However, the data collection of these studies was mainly done by reading aloud some sentences or short paragraphs, which caused researchers to speculate that the orthography/spelling of these *-ed* verbs and the task administered to collect the data would influence the results regarding vowel epenthesis production on the pronunciation of English regular verbs ending in *-ed* by Brazilians.

Taking into account their speculations, the present study investigated the possible influence of orthography and task on the production of vowel epenthesis in the pronunciation of English regular verbs ending in *-ed* by Brazilian EFL learners.

### 2. A summary of previous studies on *-ed*

Previous studies on the production of regular verbs ending in *-ed* with Brazilian EFL learners/speakers have demonstrated that vowel epenthesis insertion is the strategy they most frequently used to deal with the pronunciation of these verbs. Pereira (1994) found that beginners tended to more frequently add an epenthetic vowel in the production of these verbs

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<sup>1</sup> In honor of professor Rosana Denise Koerich, who advised this work and, unfortunately and prematurely, left us on April 2009.

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than the advanced learners. Following Baptista's (2001, 2002) concerns, Delatorre (2005, 2006a, b, 2008) and Delatorre and Koerich (2008) found that the characteristic of the context preceding the *-ed*, such as its sonority, place and manner of articulation, influenced the production of vowel epenthesis in English verbs ending in *-ed* by intermediate and upper-intermediate Brazilian EFL learners. Moreover, Delatorre (2005, 2006a) and Delatorre and Koerich (2008)<sup>3</sup> found that length of the final clusters also influenced the production of vowel epenthesis in verbs ending in *-ed* by these learners<sup>4</sup>.

Frese (2006, 2009) investigated advanced Brazilian EFL learners' perception and production of regular verbs in which the *-ed* was preceded by the oral stops. He found that there was a statistically significant positive correlation ( $r(32) = .90, p < .01$ ) between perception and production of [ɪd], [t] and [d] and that differences in syllable structure of English and BP may interfere in the perception and production of English regular verbs ending in *-ed*, since participants performed better on CVC verbs ending in [ɪd] (CVC occurs in BP) than on CVCC verbs ending in [t] and [d] (CVCC is frequent in English, but rare in BP)<sup>5</sup>.

Gomes (2008), investigating the production of simple past tense *-ed* by 24 Brazilian EFL speakers, found that the production of vowel epenthesis in these verbs decreased as proficiency level increased. She also suggested that input frequency, the storage of words in the lexicon, especially if they are similar in the L1 and in the L2, including spelling and syllable structures, may influence the way second language learners produce words.

Following this line of research, Gomes (2009) studied the production of simple past tense *-ed* by 46 Brazilians with different proficiency levels and found that proficiency level affects the production of simple past tense *-ed*, since the more advanced speakers tended to produce less vowel epenthesis than the less proficient. Moreover, Gomes also (2009) found that both phonological environment and word frequency were relevant since more problematic environments found in Delatorre (2006a) also tended to be more problematic in Gomes' study, except for verbs with more frequent codas of sonorants plus the voiced alveolar stop. She attributed it to the number of tokens the learner has access to during the acquisition process which may facilitate the production of sonorant plus voiced stop coda, while codas that were considered less frequent, such as oral stops or affricates followed by alveolar stops, tended to be more difficult for learners because they have fewer examples available to compare. She also pointed out that sonorants and fricatives are more common in codas in their L1, BP, which might have influenced the production of codas in English. On the other hand, she did not find much influence of orthography or syllable structure, which she attributed to problems in the formulation of her hypothesis regarding orthography and with the method of data collection.

Four studies have focused on the influence of treatment on the production and/or perception of regular verbs ending in *-ed* by Brazilians. Alves (2004) and Mariano (2009)<sup>6</sup> investigated the influence of instruction on the production of regular verbs ending in *-ed* and found that Brazilian EFL learners benefited from pronunciation instruction since the production of vowel epenthesis decreased after this period. Moreover, Silveira and Alves (2006), investigating the influence of instruction on the perception and production of regular

<sup>3</sup> Delatorre and Koerich (2008) and Gomes (2008) are available at <http://www.nupffale.ufsc.br/newsounds/proceedings.htm>

<sup>4</sup>For further information on the influence of preceding context and length, check Delatorre (2006a) available at <http://www.tede.ufsc.br/teses/PLLE0360.pdf>

<sup>5</sup> For further information about Frese's study, check <http://tede.ufsc.br/teses/PLLE0372.pdf>

<sup>6</sup> For detailed information about Mariano's study, check <http://www.tede.ufsc.br/teses/PLLE0435-D.pdf>

verbs ending in *-ed*, found that instruction was more effective for perception than for production, which was attributed to the saliency of the vowel that appears when *-ed* follows one of the alveolar stops. They also concluded that, despite the positive effect of pronunciation instruction, participants tended to insert an epenthetic vowel to produce simple past tense *-ed* due to L1 phonological and orthographic interference and differences in syllable structure between the two languages. Finally, Delatorre (2009), investigating the effect of perceptual training on the production verbs ending in *-ed* by two adult beginner Brazilian speakers of English and German, found that perceptual training had apparently helped them to decrease the production of vowel epenthesis from the pre to the posttest. Moreover, participant 2, who seemed to have more knowledge and contact with both German and English, showed higher improvement on *-ed* production, indicating that contact with other foreign languages possibly helped her benefit from the 50 minute perceptual training session administered to each participant.

Delatorre (2010), investigating production and phonological representation of simple past tense *-ed* by these two participants of Delatorre (2009), found that the participant 1, who seemed to be more proficient in both foreign languages, tended to rely less on orthography in both production and phonological representation of regular verbs ending in *-ed* than participant 2.

Fernandes (2009) investigated the intelligibility of simple past tense *-ed* produced by five upper-intermediate Brazilian EFL learners whose speech intelligibility was judged by five European Portuguese (EP) and five Hindi L1 speakers, who rated Brazilians' productions as moderately intelligible. Fernandes observed that Hindi speakers had more difficulty in understanding Brazilians' speech than the EP speakers, which she attributed to the fact that Hindi speakers learn English as a second language whereas EP speakers learn it as a foreign language, like Brazilians. Finally, Fernandes suggested that explicit instruction may help Brazilians to improve their pronunciation of regular verbs ending in *-ed* and sound more intelligible to other L1 speakers learning English.

### 3. The influence of orthography

Regarding the relationship between orthography and phonology in language processing, Ellis (2002) claims that words with letter-sound correspondence induce to fewer errors than words in which orthography and sound are discrepant and the formers are acquired before than the later ones. He also points out that words that have similar spelling and pronunciation in the rhyme induce to fewer pronunciation.

Second language studies dealing with the influence of orthography on speech involving participants whose L1 and L2 differ in spelling-sound correspondence might give valuable insights into the question of the interaction between the two modes. In this regard, Derwing and Dow (1987) point out that the orthographic knowledge of at least one language that speakers have acquired can confound the pronunciation of untrained learners, even in their L1. Wade-Woolley (1999) also comments that the notion of L1 orthography can interfere with the way learners deal with L2 orthography.

Gholamain and Geva (1999) suggest that the reading process is influenced by phonology, orthography, word recognition, syntax, and semantics, and that phonological processing skills are a prerequisite for the development of efficient word recognition, and for understanding spoken L1 and L2. Furthermore, they point out that one possible cause for children and adults' reading problems is the inefficient conversion of orthographic information into phonological representation in both L1 and L2 since the orthographic information is converted into phonological information.

Regarding their study with children English L1 speakers learning Persian as an L2 in Canada, Gholamain and Geva found that children, who had learned all letters of the Persian alphabet and the letter sound correspondence, were able to read unfamiliar words almost as accurately as familiar words, regardless of length. They concluded that the regularity of Persian orthography facilitates the acquisition of reading skills in L2 Persian.

Wade-Woolley (1999) studied Japanese and Russian L1 speakers learning English as an L2 in Canada and Israel, respectively. She found that poor readers relied on the orthographic system more frequently than on the phonological system and that Japanese participants relied more on orthographic information whereas Russians relied more on phonological information, which she attributed to L1 influence since Russian is closer to English than Japanese and to the fact that “L2 learners tend to process L2 syllable and structures according to their L1 knowledge” (p. 452).

Lessa (1985) considers that the lack of correspondence between speech/sound and writing/letter works as a barrier for Brazilian learners of English. She conducted a study in which orthography was considered a factor of interference in the acquisition of EFL by Brazilians and found that that advanced learners presented less reliance on spelling, whereas beginning students tended to combine the sound system of the L1 with the written forms of the L2. Moreover, she concluded that there was a strong relationship between sound and spelling and that the sound-spelling correspondence was used as a strategy to deal with words, in which the correspondence between sequences of sounds and of letters had not been acquired until that time. Lessa observed that participants’ performance suggested that they accessed the mental representation of the visual form of the words, rather than the auditory form. Moreover, she commented that the difficulty of L2 learners to perceive and produce the sounds of the language was possibly caused by adults’ internalization of the L1 system. The author believed that the use of the same alphabet in both languages had a negative interference on pronunciation since the relationship between written and oral forms in BP and English is different, and errors might reflect L1 interference in L2 pronunciation.

Concerning the influence of orthography on the production of final consonants by Brazilians, Koerich (2002) speculated that the orthographic representation of the CVCe and CVC target words, found in sequences such as, ‘dress became’ and ‘Liz got’ in Baptista and Silva Filho (1997) possibly influenced the production of vowel epenthesis after final single consonants in their study. Furthermore, Silveira (2004), following Koerich’s observation about Baptista and Silva Filho’s study, tested the production of vowel epenthesis in words ending in /p, b, t, d, k, f/ and words ending in these consonants followed by ‘e’. She demonstrated that orthography played an important role on the frequency of epenthesis production after final single consonants because both experimental and control groups produced high rate of epenthesis in words that contained ‘e’.

Silveira (2008), studying the role of orthography on the production of English word-final consonants by an adult Brazilian speaker, concluded that (a) L1-L2 grapho-phonological knowledge transfer, as proposed by Zimmer (2004), (b) the orthographic influence of the grapheme “f”, in the pronunciation of *of*, (c) L1 spelling-sound correspondence in the production of /s/ and /z/, and (d) the use of cognate words, such as *romantic* and *public*, had interfered in the subject’s production of the final consonants. Moreover, words with irregular pronunciation and similar L1 phonotactic rules may have caused some interference in the participant’s pronunciation.

Considering the influence of orthography on the production of vowel epenthesis in verbs ending in *-ed*, the results of studies review below suggest that Brazilian EFL learners tend to rely on orthography to produce them. Pereira (1994) pointed out that orthography had

a strong effect on the pronunciation of these verbs by her Brazilian beginning students since they tended to produce the *-ed* as [ed] in pseudo-verbs, such as *ricked* and *spowed*.

In Alves (2004), orthography probably had a strong influence on the way Brazilian EFL learners produced the *-ed*, since, according to the author, participants were highly influenced by the mental representation of the written forms of the verbs, inducing the insertion of an epenthetic vowel between consonants, as in [lived] for *lived*. Nevertheless, he also believed that instruction helped his participants to diminish their reliance on orthography since they reduced the production of vowel epenthesis on verbs in which they had more difficulty to deal with before receiving instruction.

To test orthographic influence, Delatorre (2005) asked her nine intermediate-level participants to read paragraphs containing English verbs ending in *-ed* and contrastive words<sup>7</sup>. She found a high rate of vowel epenthesis in the verbs and a very low rate in the contrastive words, indicating that participants relied on the orthography and on the L1 phonological knowledge since they tended to read the *-ed* as [ed]. Alves (2007) also investigated vowel epenthesis production in final monomorphemic and *-ed* clusters /pt, kt, ft, st/ by a mixed group of 32 Brazilian EFL learners and found that beginning and intermediate learners produced epenthesis in both monomorphemic and *-ed* clusters, whereas upper-intermediate and advanced learners produced it only in *-ed* clusters. Alves concluded that /ɪd/ as the input representation for the “ed” influenced the production of epenthesis in *-ed* clusters, that is, orthographic input interfered in their production by Brazilians.

#### 4. The influence of task

Regarding the influence of task, Carlisle (1994) mentions that there is a discussion in interphonology studies regarding the influence of the data collection task on the results obtained. Moreover, he points out that tasks that allow participants to rely more in the form of speech tend to induce a higher frequency of target-like productions than tasks in which participants pay attention to the content. Carlisle also states that “the highest frequency of the target variant occurred in the reading of word lists, the next highest in the reading of texts, and the least frequent in free speaking” (p. 224). He concludes that the more natural tasks of reading a text and free speech are more appropriate to assess learners' real pronunciation.

Beebe (1988), Sharwood-Smith (1994), and Towell and Hawkins (1994) consider that in more formal tasks such as reading, learners pay more attention to form, and produce more target-like language, whereas in less formal tasks, such as telling stories based on pictures or retelling stories based on previous listening, learners tend to convey meaning using a more spontaneous, and less focused on form type of speech, producing more errors. Moreover, Beebe (1988) observes that L1 transfer tends to induce more errors in conversation, when speakers are not so concerned with language form, but with the content. Major (1994) raises another point and mentions that, provided there is no other factor influencing the results, more formal tasks induce more target-like productions than the less formal tasks.

Hansen (2004) studied English codas produced in a word-list reading task and in an interview by two Vietnamese ESL learners in three data collection sessions during a year. The author found that accurate productions were higher in word-list reading than in interview. For

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<sup>7</sup> Words that have the same pronunciation of verbs ending in *-ed* but with different spelling, such as the pairs *stopped, slept; laughed, left; planned, find; played, made*.

example, Hansen mentions that some clusters had 100% of accurate productions in a word-list reading task and 0% of accurate productions in the interview.

Beebe (1987a, b) studied adult Asian speaking learners of English as an L2 and found that participants produced more target-like tokens of initial /r/ in free conversation than in word-listing, contrary to the predictions. She attributed these unexpected results to L1 interference, since the substitution made more frequently is the variant used in formal speech in the informants' L1.

Major and Faudree (1996), studying the production of English obstruents by five beginning Korean ESL learners in text reading and word listing, found that initial and medial obstruents were correctly produced in both tasks whereas the production of final target-like obstruents was higher in text reading than in word listing. The authors pointed out that these results were possibly influenced by the following context since it possibly induced resyllabification, linking the codas with the following onset in the text reading task, and thus increasing the accuracy in the reading task. According to the authors, another possible reason for the increasing accuracy in the text reading task was voicing of the target consonant when it was preceded and followed by voiced consonants, which is a characteristic process in the participants' L1, possibly applied by participants to deal with English obstruents in the reading task.

Data from Brazilian EFL learners, in Major (1986), participants read lists of words and sentences and a text to investigate word-final vowel epenthesis production. The results showed that the frequency of epenthesis increased from word to text reading, and Major attributes that to degrees of attention to speech. Major (1987, 1996) proposes that as style becomes more formal transfer decreases, whereas developmental errors increase and then decrease. Taken together, the results of these studies showed that the frequency of target-like productions decreased as the task became less formal. The results of Major (1999) showed the opposite direction. The study investigated adult Brazilian EFL learners producing initial and final clusters, and found that there were significantly more target-like productions in text reading than in word-list reading, contrary to the predictions. However, Major pointed out that the difference in formality between text reading and word-list reading was possibly not enough to induce large differences.

Koerich (2002) collected data through a sentence reading task and a directed speech task divided into two parts. In the first part, participants talked about themselves using a list of questions to guide their speech, and in the second part, they were asked to re-tell a story after listening to it with the aid of pictures. The rates of epenthesis in word-final consonants in the reading and in the directed speech task correlated significantly ( $p < .05$ ), showing lack of task effect. Considering individual differences, Koerich comments that participants who produced more vowel epenthesis in one task were the ones who produced more epenthesis in the other task, as well, which reinforces the lack of influence of the task *per se*.

Alves (2004) and Delatorre (2005) studied the influence of task – reading and speaking – in the production of codas found in the pronunciation of *-ed* verbs. Alves did not find homogenous results regarding the influence of task-type since instruction seemed to have played a role on the production of verbs, eliminating the possible difference in the results between these tasks. However, Alves mentioned that he had difficulty to collect free speech data even meeting the participants a number of times since they constantly produced verbs using the 'ing' form or in the present tense. Finally, Delatorre's results did not follow the same tendency observed in Alves since her participants produced 85.16% of epenthesis in the text reading task and 68.75% in the free speech task ( $p < .05$ ), also contradicting the

predictions that more formal styles (reading) induce less error than less formal styles (speaking).

## 5. Method

### 5.1 Hypotheses

Following Lessa (1985), Pereira (1994), Alves (2004), and Delatorre (2005), hypothesis one predicted the influence of orthography on the production of English verbs ending in *-ed* by Brazilians and hypothesis two, based on Carlisle (1994) and Major (1986, 1987, 1994) predicated that the type of task employed in the data collection would influence epenthesis production on regular verbs ending in *-ed* by Brazilians.

### 5.2 Participants

Participants of this study were 26 Brazilian EFL learners, 11 male and 15 female, from the upper-intermediate level of the English extracurricular course at UFSC, whose age varied from 15 to 68 at the moment of the data collection and from 7 to 34 as the age they started studying English. Five of the participants lived in an English speaking country for a short period of times. However, these individual differences did not seem to have interfered in the results of the study since all the participants followed the same tendency.

### 5.3 Procedures for data collection and analysis

This study had the reading and the free speech tasks to collect the data. Regarding the reading task, participants read and audio-recorded ten short paragraphs that described events, such as the 2004 Olympic Games and the September 11<sup>th</sup> terrorist attack, or short unreal stories written by the researcher. They contained a total of 91 monosyllabic verbs<sup>8</sup> ending in *-ed* and 36 contrastive words in which the coda or the rhyme was pronounced as /pt, kt, ft, st, nd, ld, rd, kst, eɪd/ used in order to identify the possible influence of orthography in the pronunciation<sup>9</sup>.

For the free speech task, participants audio-recorded their report of the sequence of the events they saw in four pictures using verbs in the simple past<sup>10</sup>. All the verbs produced in both the reading task, including ones that were not used to gather the data for the influence of orthography, were used in order to analyze the possible influence of task on the production of vowel epenthesis on English verbs ending in *-ed*. At the end of the data collection session, that took place at the Language Laboratory at UFSC, participants answered a profile questionnaire in BP.

Regarding the data analysis, participants' recordings were analyzed by three different raters, that is, the researcher and two other experienced EFL teachers and researchers in the area of English pronunciation. The three raters analyzed the *-ed* verbs regarding (a) the production or absence of an epenthetic vowel in their pronunciation, (b) their production in present tense, or (c) their replacement by another word. The two first analyses were compared

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<sup>8</sup> Monosyllabic verbs were used to avoid possible interference of other variables, such stress placement and shifting, as pointed out by professor Rosana D. Koerich (2004, personal communication).

<sup>9</sup> For further information about the texts, the list verbs and contrastive words, check Delatorre (2006a).

<sup>10</sup> For further information about free speech task, check the hard copy of Delatorre (2006a) available at UFSC central library.

and than the tokens in which there was not agreement between the two first raters were analyzed by the third rater. Thus, this third analysis was compared with the previous ones and if there was agreement between this analysis and one of the previous ones, it was accepted, but if there was disagreement among the three analyses, the researcher analyzed the tokens again and chose one of the analyses. This fourth analysis was made to avoid losing data since some data were lost because the verb was produced in the present tense or replaced by another word. The statistical analysis was made using the Chi-square test.

## 6. Results and discussion

### 6.1 The influence of orthography – HYPOTHESIS 1

Hypothesis one predicted that the production of vowel epenthesis would be influenced by the orthographic representation of the verbs ending *-ed*. Table 1 displays the results for this comparison.

**Table 1: Rates of epenthesis production by class of word in paragraph reading task**

	<i>verbs ending in -ed</i>	<i>contrastive words</i>
N <sup>o</sup> prod	1,105	822
N <sup>o</sup> Epen	794	0
% Epen	<b>71.85%</b>	<b>0%</b>

The results displayed in Table 1 followed the expected tendency of vowel epenthesis production as a strategy Brazilian EFL learners use to deal with the pronunciation of regular verbs ending in *-ed* as found in previous studies of Alves, Delatorre, Fernandes, Frese, Gomes, Mariano, Pereira and Silveira and Alves briefly summarized in section 2. Regarding hypotheses of the present study, results displayed in Table 1 strongly supported hypothesis one since none of the participants produced any vowel epenthesis in the contrastive words, whereas they produced 71.85% of vowel epenthesis in English verbs ending in *-ed*, corroborating the results of Delatorre (2005) and Alves (2007) in which these verbs were more frequently epenthesized than the words used in the comparison with them. Thus, the results of the present study yielded a highly significant difference attested by the chi-square test ( $\chi^2(1, N = 1,927) = 1,004.57, p < .0001$ ).

Results of this study and the results of Alves (2007) and Delatorre (2005) demonstrated that verbs ending in *-ed*, in which the relationship between sound and spelling is not consistent, induced a higher rate of epenthesis than contrastive words, in which sound and spelling have a more direct relationship. Thus, these results reinforce Ellis' (2002) claim based on the correspondence between sound and spelling, in which that words that have a consistent sound-spelling correspondence induce fewer mistakes than words in which this correspondence is not so clear or direct.

Another point raised by Frese (2006, 2009) and Gomes (2008) is the influence of L1 syllable structure on the production of simple past tense *-ed* since participants tended to produce the CVC syllable frequently found in BP when they add an epenthetic vowel to the preceding context of *-ed*. Gomes (2009) and Silveira (2008) go in this direction pointing out that L1 phonological and orthographic knowledge may influence the way learners deal with L2 orthographic and phonological systems, inducing them to produce vowel epenthesis to deal

with the pronunciation of L2 words. Moreover, Alves (2004), Lessa (1985) and Wade-Woolley (1999) pointed out that this reliance on L1 knowledge and on the visual input is especially true for adult L2 learners, as the participants of the present study who were adult Brazilian EFL learners. The mental representation of the spelling of English words, possibly interpreted from the point of view of L1 parameters induced the participants to pronounce the /l/ and the /b/ in some clusters found in verbs such as *walked* and *climbed*<sup>11</sup>, as well as to inadequately pronounce verbs such as *laughed*, *coughed*, *judged*, as [lauged], [kɔtʃied] and [dʒudʒet], respectively, reinforcing the claim that orthography is a relevant factor affecting the production of *-ed* endings by Brazilian learners of English as a foreign language. Moreover, this analysis made here in this paragraph goes in the same direction of those of Delatorre (2010) and Gomes (2009) which suggest that more proficient learners tend to not influence their mental representation of regular verbs ending in *-ed* by the orthographic representation of these verbs.

Alves (2007), Delatorre (2005) and Pereira (1994) observed that their participants tended to produce the past tense of the verbs as [ed], what they attributed that to the influence of orthography. In the present study [ed] was the most frequent pronunciation of the *-ed* ending, as well. It seems reasonable to state that the pronunciation of the vowel as the BP [e] is highly influenced by spelling, as Koerich (2002) suspected for Baptista and Silva Filho's study on the production of English final consonants by Brazilians and Silveira (2004) found for the pronunciation of these consonants by her Brazilian participants learning English as a foreign language.

## 6.2 The influence of task – HYPOTHESIS 2

Based on Carlisle (1994) and Major (1986, 1987, 1994), hypothesis two considered that a more formal task (text reading) would induce less epenthesis than a less formal task (reporting sequences of events depicted in pictures). The results for this hypothesis are presented in Table 2.

**Table 2: Rates of epenthesis in words ending in *-ed* in both tasks**

	<i>paragraph reading task</i>	<i>free speech task</i>
N <sup>o</sup> prod	1,780	123
N <sup>o</sup> Epen	1,391	76
% Epen	<b>78.14%</b>	<b>61.78</b>

As Table 2 demonstrates, the results followed an opposite tendency from the initial predictions, that is, the rate of epenthesis in the more formal task (reading) was higher – 78.14% - than in the less formal task (free speech) – 61.78%. A Chi-square test attested the statistical significance of the difference ( $\chi^2$  (1, N = 1,903) = 17.57,  $p < .0001$ ). In another

<sup>11</sup> The verbs *walked* and *climbed* were produced in the reading task. However, the verb *climbed* was not used in the comparison between verbs ending in *-ed* and contrastive words because the final cluster /□□/ did not occur in the contrastive words used in this study. The /l/ and the /b/ are not pronounced in these verbs (Giegerich, 1992)

words, these results did not support hypothesis two, based on Carlisle's (1994) and Major's (1986, 1987, 1994) claims, going in the opposite direction of Beebe's (1988) Sharwood-Smith's (1994) and Towell and Hawkins (1994) comments that the more formal task of reading would induce learners to produce less errors than the less formal task of speaking due to attention paid to form in the former and to meaning in the latter. Nevertheless, these results corroborate those of Delatorre (2005) reinforcing the claim that orthography has a strong influence on the production of vowel epenthesis in English verbs ending in *-ed* in the reading task, and suggesting that the influence of orthography and its implications discussed above overrules the influence of attention on production verbs ending in *-ed* in free speech task. The results of the present study also corroborate those of Major and Faudree (1996) for the production of final obstruents by Korean speakers of English.

These results, together with the results of Beebe (1987a, b), which suggested a possible transferring of L1 stylistic variation seem to indicate that the discussion about the influence of task types on the outcomes expected has to take into account the characteristics of the linguistic object under investigation, not only in terms of the target language, but also, and very importantly, the possibilities of L1 transfer.

As Koerich (2002) observed, it is difficult to collect experimental data in a substantial amount of pertinent samples in natural speech. Alves (2004) also pointed out that he had difficulty to collect data of free speech even meeting his participants in a very frequent basis, and using two different types of tasks – interviews and oral activities in the classroom to elicit the production of simple past tense *ed* in free speech, which was very difficult to carry out in the present study. Furthermore, Alves (2004) as well as Pereira (1994) observed that participants tended to produce the target *-ed* ending verbs in the '*ing*' form or in the present tense instead of the expected way of simple past, rather epenthesized or not. Despite the instructions given in the present study and the situation created, that would favor reportings/descriptions in the past, the same tendency of Alves's and Pereira's studies was observed here. It is important to notice that the three studies used different materials to collect the data – interviews and class activities in Alves' study, questionnaire in Pereira's study, and picture reporting/description in the present study. The productions of regular verbs ending in *-ed* by Brazilians seem not to be dependent on task, but rather dependent on orthography working as a reference from the point of view of L1 orthography-pronunciation association patterns.

## 7. Conclusion

The main conclusion obtained from the present study is that orthography plays an important role on the production of simple past tense *-ed* by Brazilian EFL learners. Moreover, this is also possible to point out that this strong orthographic interference is influenced by the reading task, which possibly induces learners to use their L1 orthographic, phonological and syllable structures to deal with L2 words that do not have a clear sound-spelling correspondence. On the other hand, L2 words that have a clear sound-spelling correspondence, as the contrastive words used in the present study, tend to be less problematic for Brazilian EFL learners regarding their pronunciation. Another important conclusion obtained from the present study is that it is very difficult to collect free speech data regarding the production of simple past tense *-ed*. Thus, this is the researcher's responsibility to decide collecting data in more natural way using free speech tasks.

Studies taking into consideration the production of regular verbs ending in *-ed* by speakers of other L1s would be interesting to check the possible influence of the variables investigated here as well as the influence of another variables. Regarding teaching, EFL

should introduce explicit instruction and/or perceptual training on the production of simple past tense ed wall as L1 and L2 characteristics such as syllable structure and orthography, in their classes in order to help their students to be more intelligible to speakers of different L1s learning English and to its native speaker.

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