The role of task-type and orthography in the production of word-final consonants

O papel desempenhado pelo tipo de tarefa e pela ortografia na produção de consoantes em final de palavra

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Resumo

O presente trabalho investiga os efeitos das variáveis *tipo de tarefa* e *ortografia* na produção de consoantes em final de palavra da língua inglesa por brasileiros. Dez participantes, alunos de um curso de inglês, completaram três tarefas: (1) leitura de uma lista de sentenças; (2) leitura de um diálogo e (3) respostas a perguntas. As três tarefas foram gravadas e os itens contendo consoantes em final de palavra foram transcritos para verificar se os participantes utilizam uma vogal epentética para produzir as consoantes em final de palavra do inglês (exemplo: *fog*, pronunciado como ⌈fagi⌋). Também foram comparadas palavras cuja última letra é uma consoante (mad) e palavras grafadas com um –e (não pronunciado) seguindo a consoante (mad*e)*, com o intuito de verificar se a ortografia influencia a pronúncia das consoantes em final de palavra. Os resultados indicam que tanto o tipo de tarefa quanto a ortografia afetam a pronúncia das consoantes investigadas.

Palavras-Chave

Pronúncia, Consoantes em Final de Palavra, Tipo de Tarefa, Ortografia.

Abstract

This paper investigates the effects of *task-type* and *orthography* on the production of English word-final consonants by Brazilian learners. Ten participants, attending a first-semester English course, completed three different tasks: (1) reading a sentence-list; (2) reading a dialog; and (3) answering a set of questions. The three tasks were recorded and items containing word-final consonants were transcribed in order to verify the extent to which these learners resorted to an epenthetic vowel to produce English word-final consonants that are not permitted in Brazilian Portuguese (e.g., *fog*, pronounced as [ˊfagi]). A comparison was also made between words ending in a consonantal grapheme (mad) and words spelled with a final –e (made), in order to assess whether spelling influenced the production of word-final consonants. The results indicate that both task-type and orthography play a role in the production of word final consonants.

Keywords

Pronunciation, Task-type, Orthography, Word-final Consonants.

Introduction

Studies on the acquisition of the phonological component of a second or foreign language (henceforth, L2) have investigated the role played by the learner's native language (L1), age, sound similarity and dissimilarity, more marked or less marked structures, and formal instruction. All these issues are extremely relevant to gain insight on the intricate process of acquiring the L2 sound system, but the present paper is intended to shed light on two issues that are equally important, but less often addressed by interphonology[1] studies: task-type and orthography effects on the production of L2 syllabic patterns. These variables are closely related to test design issues, which need to be taken into consideration if researchers want to ensure that their tests are valid and reliable measures of specific language abilities (BACHMAN & PALMER, 1996). As Nunan (1996) observes, "the problem with elicitation devices… is that one can never be entirely certain that the results obtained have not been determined at least in part by the elicitation devices and instruments themselves" (p. 353).

The specific language ability under investigation here is the production of English CVC (consonant, vowel, consonant) words by Brazilian learners. In other words, the dataset consists of words that end in a CVC syllabic pattern, such as *mad* or *made*. Interphonology research on the syllable has addressed the acquisition of word-final consonants (e.g., YAVAS, 1997; BAPTISTA & SILVA FILHO, 1997; KOERICH, 2002; SILVA FILHO, 1998; SILVEIRA, 2004). A number of these studies have dealt with Brazilian learners of English and the syllable simplification strategies they resort to in order to pronounce syllabic patterns not permitted in Brazilian Portuguese (see the last four studies mentioned in this paragraph). The present study is expected to contribute to this discussion by investigating the production of English word-final consonants by Brazilian learners, and how this process is affected by two important variables: task-type and orthography. The following sections (a) present information about the syllabic structure of English and Brazilian Portuguese (BP) and vowel epenthesis as a

syllable simplification strategy, (b) review previous studies on the effects of task-type on the production of consonant sounds and clusters, and (c) discuss a number of studies that have investigated the role played by orthography on the acquisition of the L2 phonological component.

Production of Word-Final Consonants and Clusters

In English, all consonants except /h/ can appear in syllable-final position. Conversely, in BP only four consonants are permitted in syllable-final position: /r/ (pronounced, depending on regional variety, as a trill, velar fricative, flap, or even retroflex), the lateral /l/, the nasal archiphoneme /N/, and the sibilant archiphoneme /S/ (CÂMARA, 1970; COLLISCHONN, 1996). However, even these are rather marginal in the coda: /r/ tends to be deleted (*comer* "eat" [koɾme]); /l/ is generally realized as the glide [w], or more rarely, as a dark [ɜ][2] (*mal* "bad" [maw] or [maɜ]); /N/ loses its consonantal feature with the preceding vowel diphthongizing and assimilating the nasal feature (*bom* "good" [bõw]); leaving only /S/ as a final consonant phonetically. Due to these constraints on syllable structure, BP speakers tend to resort to vowel epenthesis to break up cross-syllabic consonant clusters in the L1. Thus, words which have not been officially modified to adapt to the constraints of contemporary BP phonotactics,[3] such as *pacto* ("pact") and *advogado* ("lawyer") are pronounced with the epenthetic vowel /i/ or /e/, giving [ɪpakitu] and [adivoɾgadu], respectively.

This very productive L1 process is also known to be a frequent syllable simplification strategy in BP/English interphonology for structures such as (a) initial /s/ clusters (*stop* [isɾtɑpi]), (b) medial clusters (*substitute*: [suɾbistituti], frequently with change in word-stress), (c) final clusters (*faced*: [ɪfejsidɾ/ fejsidi]), and (d) word-final singleton consonants that are not permitted in BP (*map* [ɪmæpi]).

Other syllable simplification strategies employed by Brazilian learners of English have been identified (SILVEIRA, 2002, 2004). The most important ones are substitution (e.g., *page* [pejʒ]) and devoicing (*big* [bɪk]). Although these strategies were also present in the speech produced by the participants of this research, they will not be fully discussed here, since the focus of the present study is the occurrence of vowel epenthesis as a strategy to cope with word-final consonants that are not permitted in BP.

As Major (1986) has already indicated, Brazilian learners may produce two different types of epenthetic vowels when producing English word-final consonants: the typical L1 vowel [i] or another one that results from developmental factors [ə]. The latter is not part of the L1 (BP) vowel system, but it occurs in the interlanguage of learners from other L1 backgrounds, and even with native speakers of English.[4]

Silveira (2004) also found that speakers of certain BP dialects (e.g. from cities located in the south of Brazil) may also produce the epenthetic vowel [e] to deal with illicit English word-final consonants, a strategy that is also found in their L1. Given the difficulty posed by word-final consonants, the present study focuses on Brazilian learners' ability to produce this kind of structure by verifying the extent to which vowel epenthesis is used as a syllable simplification strategy. As this study also intends to examine whether the production of word-final consonants is affected by task type, the next section reviews studies that have assessed the role played by this variable.

Task-Type Effects

For the present study, tasks will be defined following Bygate, Skehan and Swain (2001), who point out that, for research purposes, tasks are systematized procedures that require the participants to use language to achieve a goal, and whose output is used to measure a specific language ability. In the case of the present study, the specific ability under investigation is the production of English word-final consonants, by means of three different tasks.

In the following paragraphs, I shall briefly review some research findings on the role played by task type. This review will be restricted to studies that examined the acquisition of the phonological component and the variable accuracy.[5]

As Beebe (1988) observes, the debate about whether task type affects performance in the target language was triggered by Dickerson (1974) and Tarone (1985), who carried out research to verify the applicability of Labov's L1 research paradigm in the area of Second Language Acquisition. Dickerson's study on phonological development led her to propose that differences in 'style' (i.e., the degree of formality of the language being produced, which is determined by task type) can account for the degree of accuracy found in L2 pronunciation.

Dickerson's study relied on three tasks to collect data regarding the production of /r/ by 10 Japanese learners: (1) "free" speech, (2) dialog reading, and (3) word-list reading. Her findings indicated that the highest degree of accurate production of the target sound was obtained with the word-list, the most formal style, while "free speech", the least formal style, yielded the least accurate productions. As Beebe (1988) highlights, Dickerson's findings were quite influential, particularly because they are in agreement with the common-sense notion held by language teachers that students' pronunciation seems to be much better with words in isolation, as opposed to words in context. To account for the different degrees of accuracy across tasks, Dickerson suggests that the difference in performance is due to the amount of attention that is paid to speech – more attention is allocated when performing a more formal task, consequently, the outcome is more accurate.

This idea was challenged by Tarone (1985), who found that more formal tasks tend to trigger the use of L1 structures, which might lead to more inaccurate productions. This study investigated the production of English morphological and grammatical forms by 10 native Arabic and 10 native Japanese learners. The data were collected with four tasks: (a) grammaticality judgment test, (b) oral description, (c) oral narration, and (d) oral interview. The researcher found that some structures are produced more accurately when the participant is performing a more formal task, while other structures seem to benefit more from less formal tasks. This interesting debate which was started by Dickerson (1974) and Tarone (1985) has led to several studies that address the effects of task-type on the acquisition of the L2 phonological component. These shall be reviewed in the following paragraphs.

Major (1986) carried out a study with 53 Brazilian learners of English, with varied proficiency levels. He investigated global foreign accent in speech samples produced by these participants, as well as the frequency of vowel epenthesis, i.e., the addition of [i] or [ə] to the end of words. The data were collected by means of 3 different tasks, from the most to the least formal: reading a word-list, reading sentences, and reading a text. The results confirmed the author's prediction. Participants' speech was perceived by native speaker listeners as more accented when they were performing the least formal task (text reading), and as less accented when they were reading the most formal task (word-list reading). Another interesting finding was that the participants resorted to [i] and [ə] more often with the least formal task (text reading: 8.5%), than with

the most formal task (word list: 0.18%). Overall, Major's findings suggest that as task type becomes more formal, the speaker tends to focus more on form and pronunciation tends to be more accurate than with the less formal tasks. These results support Dickerson's predictions. It is important to point out, though, that Major neglected to analyze the dataset regarding the effects of the variable proficiency level, which might have influenced the results.

Edge (1991) relied on three different tasks to investigate the production of English word-final voiced obstruents by 4 English native speakers, 7 Japanese and 7 Cantonese speakers. The three tasks used to elicit data were: (a) telling a story based on pictures; (b) reading a story; and (c) reading a word-list. Her findings indicate that even native speakers of English were likely to resort to vowel epenthesis to pronounce the sounds /b/, /d/, and /g/, especially when the target sound was followed by a pause (e.g., [bigᵊ]). Also, she found that epenthesis is a syllable simplification strategy that is more likely to be employed by Japanese speakers, due to L1 influence, and that the most formal task (reading a word-list) triggered the highest frequency of epenthesis (29,5%) for these participants, while the story-telling and the story-reading tasks yielded low epenthesis rates (4% and 3%, respectively). Edge's study strongly supports Tarone's findings.

Major (1994) conducted a study to test the predictions made by his Ontogeny Model, which claims that L1 "transfer processes decrease over time, whereas developmental processes are at first infrequent, then increase, and finally decrease" (p. 128). The author tested these predictions by investigating the acquisition of English word-initial and word-final clusters by 4 Brazilian learners (beginners) performing two tasks: word-list reading and text reading. The results showed that the learners' production was more accurate in the text reading than in the word-list reading task, thus disconfirming the prediction that the more formal the style, the more accurate the production of the target structure (Dickerson's proposal). As the author observes, these results have to be interpreted with caution due to the limited number of participants and the fact that the two tasks used to elicit data do not differ that much in terms of formality. However, once again, Tarone's proposal is corroborated, and the results for this study question Major's findings in his 1986 study.

Lin (2001) carried out a study with 20 Chinese learners to investigate the hypothesis that, for the acquisition of English word-initial consonant clusters, accuracy rates tend to be similar for both more formal and less formal tasks, and that task type affects only the type of syllable simplification strategy employed

by the L2 learner. For this study, the researcher utilized 4 instruments to elicit data, ranging from most formal to least formal: (a) reading of minimal pairs with phonetic transcriptions, (b) reading a word-list, (c) reading sentences disguised as a grammaticality judgment test, and (d) speaking by means of a structured conversation. In all instruments, the researcher included word-initial clusters, and the participants' productions were analyzed in terms of accurate production of the target clusters or identification of type of syllable simplification strategy (vowel epenthesis, consonant deletion, or consonant replacement). The results indicated that percentages of accurate production were similar for the four task types, and that epenthesis, triggered by the L1,[6] was the most frequent strategy with the more formal tasks (minimal pairs and word-list), while substitution and deletion were the most frequent strategies with the least formal tasks (sentence-reading and conversation). These results confirm the researcher's hypothesis and supports the results of previous studies (EDGE, 1991; MAJOR, 1994; TARONE, 1985) that have challenged the assumption that the more formal the task, the more accurate the production (DICKERSON, 1974).

Alves (2004) investigated the production of the English simple past/past participle morpheme *–ed* by 7 English pre-intermediate students, both before and after receiving instruction on how to pronounce this morpheme. Data were collected in 3 different phases and the researcher verified whether the production of the *–ed* morpheme would vary according to the type of data collection instrument, namely, two controlled activities (story-reading and a grammar judgment test in which the participants were required to analyze pairs of sentences and read the one that they thought was correct), and an interview. Regarding the effects of task type, Alves' study indicates that reading tasks may lead to slightly less accurate pronunciation than interviews if no instruction is provided, but that this relationship is inverse when explicit instruction on the production of the target structure is provided. Even more important is the finding that performance on both types of tasks seems to benefit from explicit instruction. These results add another twist to the debate about the role played by task-type in proposing that the variable formal instruction should be considered.

Finally, Reis (2006) investigated the production of English /θ/ and /ð/ by 24 Brazilian learners (intermediate and advanced). She relied on 3 different tasks to assess the production of the target sounds: (a) reading a story, (b) retelling the story, and (c) reading sentences. The results showed that there is a tendency for the more formal task (i.e., sentence-reading) to yield higher percentages of

accurate production of the target sounds than the less formal task (i.e., story retelling). Moreover, the author found that the effects of task-type were more evident with the more advanced participants than with the intermediate ones. This was demonstrated by the fact that, for the latter, the sentence-reading and the story-retelling tasks were equally difficult, while for the former, the hierarchy of difficulty was as expected (story retelling, story reading, and sentence-reading, from the most difficult to the easiest task). These findings partially support Dickerson's predictions, but they also suggest that task-type difficulties interact with L2 proficiency, a finding that corroborates Nunan's (1996) claim that the appropriateness of task types might be dependent on the participant's L2 proficiency level.

The brief review presented in this section shows that the controversy about the extent to which task formality influences L2 production remains, and that there are three different views on task type effects. First, some researchers propose that less formal tasks lead to less accurate production (DICKERSON, 1974; MAJOR, 1986; ALVES, 2004 (prior to instruction); REIS, 2006 (advanced learners)). Second, there are researchers who believe that more formal tasks lead to less accurate production (TARONE, 1985; EDGE, 1991; MAJOR, 1994; ALVES, 2004 (after instruction)). Finally, there is a third group of researchers who argue that all tasks yield similar performances in terms of accuracy, and that what varies is the kind of non-target structure employed by the test takers when they produce the targets inaccurately (LIN, 2001; REIS, 2006 (intermediate learners)).

Overall, research has indicated that performance tends to vary across tasks, but, as Towell and Hawkins (1994) observe, it is not clear why this happens. Some researchers have attributed task-based variation to the fact that some tasks allow the test taker to focus more on form than on meaning (e.g., SCHMIDT, 1977), and that tasks that concentrate more on form maximize accuracy. However, some studies (TARONE, 1985; LIN, 2001) have questioned this explanation, based on findings that indicate that focus on form versus focus on meaning cannot alone account for variability across tasks, but that a clearer picture is obtained if we consider the interaction between task-type, L1 transfer (EDGE, 1991; MAJOR, 1986; LIN, 2001), proficiency level (REIS, 2006), or even formal instruction (ALVES, 2004). The present study hopes to contribute to the debate about the role played by different task types by investigating the acquisition of English word-final consonants by Brazilian learners (beginners) with three types of task: (a) sentence-reading, (b) dialog-reading, and (c) structured interview.

Effects of Orthography

When investigating task-type effects, researchers have used different criteria to define the construct "formality". On the one hand, some researchers seem to equate different degrees of formality with the length of the input varying from words (most formal), sentences, or texts (least formal). On the other hand, some researchers appear to rely on the nature of the input to define formality. Thus, formal tasks are those that draw on written input and that require reading as a response, while informal tasks are mostly based on aural or pictorial input, which require speaking as a response (interviews or narratives). One question that we need to ask is the extent to which speech samples elicited by means of reading tasks are affected by the presence of orthographic input. As Zimmer (2004, p. 64) alleges, learners activate their knowledge of the L1 alphabetic and phonetic-phonologic systems to some extent when performing reading-aloud tasks in the L2. This activation may account for some deviant productions of L2 sounds, such as when Brazilian learners of English pronounce "ge" as [ʒ] (*page* [peiʒ]).[7]

Zimmer's (2004) claim is corroborated by Young-Scholten and Archibald (2000), who investigated the occurrence of epenthesis as an L2 syllable simplification strategy. In an attempt to explain why epenthesis is more frequent in L2 than in L1 acquisition, and why its frequency varies between and within individuals, Young-Scholten and Archibald (2000) proposed that the effects of task-type and input-type be considered. According to these authors, most L2 learners are literate adults, whose contact with the L2 relies greatly on written material, especially those who are not in a country where the target language is widely spoken. As the researchers point out, these learners' first contact with L2 words tends to involve both written and aural input. This constant access to the orthographic representations of words may lead learners to rely more on L1 spelling and pronunciation correspondences when pronouncing L2 words. The authors also believe that constant exposure to orthographic input could explain why L2 learners (generally adults) resort more often to vowel epenthesis as a syllable simplification strategy than children acquiring their L1, as literacy is expected to trigger the notion of *recoverability*. Thus, L2 learners resort more often to vowel epenthesis because this strategy makes it possible to preserve all the elements of the target word (which can be recovered later), as opposed to strategies such as consonant deletion.[8] Moreover, due to recoverability, tasks that provide adult learners with written input, such as word-list reading or sentence-

reading, are expected to elicit higher epenthesis rates than tasks that do not include written input (e.g., interview, picture description and narration).

Zimmer's (2004) study is one of the few that have investigated the effects of orthography on the acquisition of English syllabic structures by adult Brazilian learners. This large-scale study was carried out using a reading task with words in isolation to verify the extent to which 156 Brazilian learners of English (varied proficiency levels) would transfer L1 grapheme-phoneme processes to read L2 monosyllabic words. The use of an epenthetic vowel with word-final consonants was one of nine processes investigated. The results indicated the occurrence of this transfer process, which tends to diminish as the level of proficiency increases (from beginners to advanced learners). The effects of orthography were also attested by the occurrence of other grapheme-phoneme transfer processes, such as the deletion of [m] and [n] in coda position, followed by the assimilation of the nasal feature by the preceding vowel, and the vocalization of [l] in coda position, thus corroborating Young-Scholten and Archibald's (2000) claims presented in the previous paragraph.

Silveira, R. (2004), based on data elicited by means of a sentence-reading task, tested the hypotheses that the epenthesis rates of the words ending in a consonant followed by *–e* (e.g., *made*) would be different from the rates of the words ending in a grapheme consonant only (e.g., *mad*), both before and after treatment. The consonants tested were /p/, /b/, /t/, /d/, /k/, and /f/. A control and an experimental group of Brazilian learners participated in the study. The results indicated that the orthography factor plays an important role in the frequency of epenthesis in the production of word-final consonants by beginner-level Brazilian learners of English, since the words containing the silent *-e* triggered significantly more epenthesis than those ending in the consonantal grapheme. The same study also showed that spelling caused participants to transfer L1 processes such as the deletion of nasals, with the preceding vowel assimilating the nasal feature (e.g., *noon* [nũ]), and the substitution of alveopalatal affricates for alveolar stops (e.g., *made* [mejdz]). Silveira also found that, after receiving explicit instruction on how to pronounce word-final consonants, the experimental group reduced considerably the epenthesis rates for both types of words, thus indicating that the negative effects of the silent *–e* condition were minimized. These results seem to corroborate Young-Scholten and Archibald's prediction about the effects of orthography on the selection of syllable simplification strategies by adult learners. Nevertheless, this study, like Zimmer's (2004), relied on a single test to collect

the data, a sentence-reading task, and it is not possible to make assumptions regarding the interaction between task type and orthography effects.

Alves (2005) examined the role played by orthography in the pronunciation of word-final clusters of two types: *transparent clusters*, i.e., clusters whose grapheme-phoneme correspondence is consistent (e.g., *fact* [fækt]), and *opaque clusters, i.e.,* clusters for which this correspondence is less consistent (*lived* [lɪvd]). Nine pre-intermediate Brazilian learners were asked to read a list of English words containing both types of clusters. The results indicated that the participants tended to produce the opaque clusters by adding a medial epenthetic vowel (e.g., *lived* [lɪvɪd] in 61.11% of the cases, and that this strategy was hardly used (2.78%) with the transparent clusters (*fact* [fækɪt]), which yielded higher rates of correct production. The author concluded that the preference for the epenthetic vowel strategy is a result of participants' transfer of the L1 grapho-phonological patterns. Alves' (2005) study supports Young-Scholten and Archibald's predictions and add to Silveira's findings with beginner-level learners, in the sense that orthography seems to continue to influence the pronunciation of pre-intermediate learners with a different type of target – clusters formed by the addition of the –ed suffix to the regular verbs in the past tense or past participle.

A different line of investigation was followed by Erdener and Burnham (2005), who conducted a study to examine the facilitative effects of orthography. The authors advocate that speech perception relies greatly on visual input, and that, for literate learners, orthography is one important source of this type of input. Their study addressed the role of orthography as a tool to facilitate L2 speech perception and production. They make a distinction between languages in which the relationship between graphemes and phonemes is more direct (transparent languages, such as Portuguese), and those in which this relationship is not so obvious (opaque languages, such as English). The authors' study with Turkish (transparent L1) and Australian (opaque L1) speakers learning words from Spanish (transparent L2) and Irish (opaque L2) provided support for the claim that the beneficial effects of orthography are more evident for learners whose L1 is transparent, and who are learning an L2 which is also transparent regarding the grapheme-phoneme relationship. However, if these learners are attempting to acquire an L2 whose grapheme-morpheme relationship is opaque, they will be more subject to L1 orthographic interference, which may lead to less accurate production. This is the case for Brazilian learners, and the present study is expected to provide further support to Erdener and Burnham's claims.

Although the number of studies investigating the effects of orthography on L2 production is relatively small, research published so far has provided interesting insights into the interaction between the L1 and the L2 grapho-phonological knowledge. One important issue is that the use of tasks containing written input may trigger performance that is affected by the transfer of L1 grapho-phonological knowledge (YOUNG-SCHOLTEN & ARCHIBALD, 2000). This may lead to the utilization of a syllable simplification strategy that favors recoverability, namely, vowel epenthesis, especially in the case of adult learners (SILVEIRA, R., 2004; ALVES, 2005). Moreover, the effects of orthography seem to vary across different proficiency levels (ZIMMER, 2004), and are likely to be positive or negative, depending on the interaction between the learners' L1 and L2 in terms of opaque/transparent grapheme-phoneme relationship (ERDENER & BURNHAM, 2005).

Statement of Purpose

The previous sections demonstrated the importance of investigating the influence of task-type and orthography on the acquisition of the phonological components. The present study is expected to contribute to this debate by investigating the effects of task type and orthography on the production of English word-final consonants by Brazilian learners. Special attention is given to the use of epenthesis to mitigate pronunciation problems generated by different syllabic patterns between the L1 and the L2. The decision to adopt epenthesis as the focus of this research is based on the fact that the literature points to Brazilians' preference for this type of strategy when pronouncing word-final consonants that are not allowed in Brazilian Portuguese (BAPTISTA & SILVA FILHO, 1997). Three hypotheses guide this research: (a) The production of word-final consonants varies according to task type (sentence-reading, dialog-reading, and guided interview), (b) Each participant demonstrates similar patterns across the three tasks, i.e., the participant that obtains the highest epenthesis rate in task 1 also tends to obtain the highest epenthesis rate in tasks 2 and 3, and vice-versa, and (c) Orthography influences the production of word-final consonants; more specifically, the epenthesis rates of the words ending in a consonant followed by *-e* (e.g., *tape*) would be higher than the rates of the words ending in a grapheme consonant only (e.g., *tap*). Note that no prediction is made concerning the task type that will lead to more accurate productions of the target consonants, due to the controversial results obtained by previous studies.

Method

Participants

A group of 10 Brazilians studying English in the Extracurricular Course (level 1) at the Universidade Federal de Santa Catarina[9] participated in this study. Most of the participants were graduate and undergraduate students pursuing different majors, and a few were junior high students or other people from the community. The textbook on which the entire course was based was *New Interchange I* (RICHARDS, HULL & PROCTOR, 1997), and the group had classes twice a week in the evening for 4 months.

The group consisted of 7 males and 3 females, their ages ranging from 14 to 22 (M=18.88, SD=2.66). The participants received no specific explicit instruction regarding the pronunciation aspects investigated in the present study.

Materials

It is important to point out that the participants had had previous contact with the three research instruments used to collect data regarding the production of word-final consonants. The three instruments had already been used in class, and the rationale for this procedure was that, as the participants had a low proficiency level, they might have felt overwhelmed if they had to perform a task that was not in some way familiar. This could have affected the validity of the testing instruments, since, as Bachman (1990) asserts, test-takers' performance may be affected by the characteristics of the instruments used to elicit data.

Production test 1: Sentence-reading task

The first production test consisted of a set of sentences containing target words with word-final consonants (see Appendix A). This test included 78 sentences, 60 which contained a word with a target final consonant, while the remaining 18 contained nonsense words and were used as distracters. The target consonants included in the sentence-reading test were: /p/, /b/, /t/, /d/, /k/, /g/, /f/, /v/, /dʒ/, /m/, /n/, and /ŋ/. Some of the consonant sounds that can occupy word-final position in English were excluded because they are known to cause additional difficulties for Brazilian learners due to spelling interference or articulation difficulties (/r/, /l/, /ð/, and /θ/). Other word-final consonants were

also excluded due to the low rate of epenthesis that they yielded in a previous study (/ʃ/ and /tʃ/),[10] or low frequency in word-final position (/ʒ/). The sounds /s/ and /z/, (in Portuguese, also pronounced as [ʃ] and [ʒ], respectively, depending on the dialect), were not tested because they occur word-finally in Brazilian Portuguese, and thus are not expected to trigger epenthesis.

The 60 sentences included a total of 60 tokens. Frequency was the criterion adopted to select the words ending in one of the target word-final consonants. This means that the selected words were cognates or thought to be frequent in textbooks for beginners. The frequent word tokens consisted of 6 tokens – 2 different words in 3 different environments – for each of the target consonants /p/, /b/, /t/, /d/, /k/, /f/, /m/, /n/, and 3 tokens – one word in 3 different environments – for each of the target consonants /g/, /ŋ/, /v/, /dʒ/. The 2 different words for each of the former 8 target consonants consisted of one ending in a consonantal grapheme and one ending in the same grapheme followed by a silent *–e* (e.g., the sound /p/ was tested 3 times with the target word *map* and 3 times with the word *tap<u>e</u>*). The inclusion of words containing a silent *–e* was intended to test whether the final silent –e could be an additional difficulty affecting the pronunciation of English word-final consonants, since the final –e is pronounced in Brazilian Portuguese (e.g., *pel<u>e</u>* "skin" [ˈpɛli]). Unfortunately, the sounds /g/ and /ŋ/ could not be tested in the *silent –e* condition, since they do not occur in this context.[11] On the other hand, /v/ and /dʒ/ were tested only in the silent *–e* environment, since they do not occur word-finally in English without a final silent *–e*.

The target consonants of both frequent and nonsense words were tested in the following environments:

1. V__V (between vowels, e.g., "There is a nice clu<u>b o</u>ver there.");
2. V__C (preceded by a vowel and followed by a consonant, e.g., "He goes to the clu<u>b t</u>o dance."), and
3. V__# (preceded by a vowel and followed by a pause, e.g., "I'm going to the clu<u>b</u>.")

The words containing the target sounds (a) were monosyllabic, (b) were considered by the researcher to be of frequent occurrence, even in beginning textbooks, and thus probably at least somewhat familiar to the participants, (c) had no clusters that are prohibited in the L1, and (d) had a vowel preceding the

target consonant (e.g., if the target consonant was /p/, the carrier word could be *pat*, but not *past*). The sentences containing the target words included both statements and questions. They contained a maximum of seven words, to keep pausing to a minimum, and there was an attempt to keep the vocabulary level of the sentences as basic as possible, to try to prevent the participants from stumbling over difficult words. Also, to minimize pauses, the sentences were typed in groups of 10 per page (font 14), so that the participants could take short breaks between pages. Previous contact with these sentences was provided in the middle of the semester (class 13), when the participants read and recorded the same sentences,[12] but received no feedback on their pronunciation.

Production test 2: Dialog reading

A common task required from the students throughout the course was reading aloud dialogs that were used to set the scene for the different topics of each unit of their textbook (*New Interchange I*). Before performing this type of task, the students always listened to the dialog and had a chance to ask questions regarding vocabulary, grammar, or pronunciation.

Despite being a reading task, the second production test was considered to be less formal than the sentence-reading test. When the students were invited to read the dialogs aloud, the recommendation was that they should play the role of one or more characters in the dialog and speak as naturally as possible. Clearly, this was not expected to be a sample of natural speech, but given the limitations posed by the current proficiency level of the participants, this task was expected to yield data that could be considered less formal than the reading of isolated sentences.

The dialog chosen for this activity was taken from the textbook used by the participants (unit 2, p. 11), which means that they had already practiced reading this text before. However, their previous contact with this dialog occurred at the very beginning of the semester (class 5), and the data were collected at the end of the semester (class 29), thus minimizing the effect of task practice.

As the dialog was not designed for this study, no attempts were made to control the type of word-final consonant produced by the participants, or the context surrounding these consonants. The dialog (Appendix B) contained 14 sentences and a total of 27 words ending in some of the target consonants included in the sentence-reading task (words ending in consonant clusters were excluded), as can be seen in Table 1.

TABLE 1
Number of Tokens and Types of Singleton Final Consonants Included in the Dialog Reading Test

	Final consonants						
	/n/	/t/	/p/	/d/	/m/	/v/	total
Number of words	8	11	1	1	5	1	27

Production test 3: Structured interview

Due to the fact that the participants of the present study were beginners, there were serious constraints concerning the type of task that could be used to collect production data. Thus, a guided-interview task was selected to collect production data that did not require reading as the response format, but provided a response that would be relatively close to natural speech. This task consisted of having the participants record their answers to the following questions.

What's your name?
What do you study?
How do you spend the weekend?
What kind of music do you like?
Where do you live?
How good are you at sports?
Do you ever exercise? How often?

All of the questions included in the test were part of the course syllabus and had been previously practiced throughout the course. As the responses for this task were personal, each participant produced a different set of words containing word-final consonants (see Appendix C), and it was impossible to control the type of consonant produced, or even the context preceding or following the target consonants. Once again, only words containing word-final singleton consonants included in the sentence-reading task were considered in the analysis.

Questionnaire

The participants completed a questionnaire written in their native language to provide information about (a) personal characteristics (e.g., name, age, birthplace, and place of longest period of residence), (b) foreign/second language knowledge, (c) previous contact with English, and (d) preferred language skills.

Procedures

The data collection procedures were carried out in a single session. Prior to completing the three tasks that comprise the dataset, the participants were asked to complete the questionnaire used to collect demographic and language background data.

Before recording the production tests, the participants had a brief training session to learn how to operate the lab. In this training session, the participants read orally a short passage in Portuguese. This reading was recorded so that the researcher could use it to identify participants with speech problems that might have affected the data collected for this study.

After finishing the training session, all the participants began to record the guided-interview task. They were allowed to read the questions (either out loud or silently), and plan their answers for two minutes, without taking any notes. After that, they recorded their personal answers for each question, as many times as they felt necessary.

When the guided-interview was completed, the participants began recording the dialog-reading task. Once again, the participants were allowed to record the dialog, or parts of it, as many times as necessary. The participants were told to read the dialog as naturally as possible.

Finally, the sentence-reading task was performed. The participants read aloud and recorded the set of sentences containing the target sounds. They were told that they could read the sentences silently before recording them, and that they could record the sentences as many times as they felt necessary. They were also allowed to stop briefly after reading each set of 10 sentences. Each participant received a different randomized version of the sentence-reading task, in which the same sentences occurred in different orders, to minimize the order effect.

The tasks were recorded on sixty-minute audiocassette tapes, in a Sony LLC-4500MKZ laboratory. Some participants recorded parts of each of the three

tasks more than once and were unable to erase any of the recorded versions, as the laboratory does not allow such a procedure. Thus, a decision was taken to consider only the first production of the words containing the target sounds.

Analysis

The information collected via questionnaire was used to gain knowledge about the participants' profiles, but no specific hypothesis was formulated to address variables such as sex, age and language experience on the acquisition of word-final consonants, due to the small sample size.

For the three production tests, the researcher listened to the words containing the target sounds in order to identify whether the word-final consonant had been followed by an epenthetic vowel or not (e.g., whether a word such as *tape* was pronounced as [ˈtejpi], [ˈtejpə]), or [ˈtejpe]).

A small sample of the dataset (25%) was transcribed again by three different listeners, all of them with previous experience in phonetic transcription, in order to obtain a reliability rate of 90%. Finally, one of the listeners was chosen to check the transcription of 75% of the data, together with the researcher. The second listener transcribed only the final sound of the target words, then this transcription was compared to that made by the researcher. In cases of disagreement, both the listener and the researcher listened to the target words until they reached an agreement.

After the transcription the dataset was inspected to identify the tokens that had been accurately produced. The test tokens were considered as being accurately produced if the participants managed to produce the word-final consonants without resorting to vowel epenthesis, consonant substitution, devoicing, deletion, or any other syllable simplification strategy. This means that productions such as [pɛdʒ], for *page*, were considered as accurate, since the target word-final consonant [dʒ] was not modified; if the participants pronounced the same word as [pejʒ], it was considered inaccurate, since the target consonant was pronounced as [ʒ]. As the focus of this study was on the simplification of (C)VC syllables by means of vowel epenthesis, no specific analysis was performed concerning other types of syllable simplification strategies.

The dataset obtained for this study deals with tests that have different score ranges:

1. Sentence-reading test: minimum score = 0 and maximum score = 60;
2. Dialog-reading test 2: minimum score = 0 and maximum score = 27; and
3. Guided interview: minimum score = 0 and maximum score varied for each participant, ranging from 6 to 15.

Therefore, the raw scores of each test had to be converted into percentages to make them comparable. Statistical tests were run with the help of SPSS for Windows, version 10.0. The probability level of statistical significance was set at .05 in the analyses. The hypotheses tested in this study will be restated in the next section, which also presents and discusses the results of the data analysis.

Results and Discussion

This paper addresses two research questions:

1) Does task type affect epenthesis rates for the production of word-final consonants?

   Hypothesis 1: The participants will obtain different epenthesis rates on the sentence-reading tests, the dialog-reading, and the guided-interview tasks.

   Hypothesis 2: Each participant will present a similar performance pattern on each task, so that the participants with the highest epenthesis rates on task 1 will also obtain the highest rates on tasks 2 and 3**.**

2) Does orthography affect the epenthesis rates for the production of word-final consonants?

   Hypothesis 3: The participants will obtain higher epenthesis rates when pronouncing words graphed with a silent *–e*.

Descriptive statistics were run and they showed that the dataset fails to satisfy the normal distribution assumption, which is probably due to the small sample size. Thus, the statistical procedures performed to test the research hypotheses were all non-parametric, using the percentage values or the ranks of epenthesis rates obtained by each participant, rather than the raw scores, due to the difficulty in comparing tests with different ranges (see Analysis section).

Table 2 summarizes the results obtained for the 3 tasks. As this paper investigates the production of word-final consonants and focuses on syllable

simplification by means of vowel epenthesis, the frequencies need to be interpreted with caution because the higher the percentage, the less accurate the performance.

TABLE 2
Percentages of Tokens Produced with an Epenthetic Vowel for all Tasks

Sentence				**Dialog**				**Interview**			
Partic.	Ep.	tokens	%	Partic.	Ep.	tokens	%	Partic.	Ep.	tokens	%
S2	5	60	8	S4	0	27	0	S9	0	6	0
S6	6	60	10	S8	0	27	0	S7	3	14	20
S10	7	60	12	S9	1	27	4	S4	3	13	23
S5	11	60	18	S2	1	27	4	S6	2	8	25
S7	12	60	20	S5	1	27	4	S8	4	15	26
S8	12	60	20	S10	1	27	4	S5	4	15	27
S4	13	60	22	S7	3	27	11	S3	4	13	31
S9	14	60	23	S6	4	27	15	S10	5	13	38
S3	29	60	48	S3	5	27	19	S2	6	15	40
S1	40	60	67	S1	8	27	30	S1	4	9	44
total	**149**	**600**	**25**		**24**	**270**	**9**		**35**	**121**	**29**
median			20				4				26.5

Table 2 shows that the highest epenthesis rates were yielded by the guided-interview (29%, median=26.5), followed by the sentence-reading task (25%, median=20), and then the dialog-reading task, which yielded the lowest rates (9%, median=4). Apparently, the epenthesis rates obtained for the guided-interview and the sentence-reading tasks are quite similar, contrary to the rates for the dialog-reading task, which are much lower than for the other tasks.

Hypothesis 1 stated that the participants would obtain different epenthesis rates across tasks. A Friedman test[13] was run and it showed that indeed, the performance of the participants was significantly different across tasks (X^2=10.40, p=.006), thus supporting hypothesis 1. In order to verify which tasks yielded significantly different rates, 3 paired-sample Wilcoxon tests[14] were run. The results show that the difference between the sentence-reading and the interview tasks was not statistically significant (Z=-.66, p=.56), whereas the difference between the sentence-reading and the dialog-reading tasks was significant (Z=-2.59, p=.009), as well as between the interview and the dialog-reading tasks (Z=-2.70, p=.007).

The hierarchy of difficulty obtained for hypothesis 1 for the different tasks challenges the claim that the less formal the task, the higher the degree of inaccurate production (DICKERSON, 1974; MAJOR, 1986; REIS, 2006). Although the results indicate that the least formal task, the guided-interview, generated the highest epenthesis rates, it also shows that the most formal task (sentence-reading) yielded similar epenthesis rates. Furthermore, the sentence-reading task yielded significantly higher epenthesis rates than the dialog reading, which was considered less formal than the former task. Thus, the present study raises the question of whether L1 transfer is more pervasive with more formal tasks (TARONE, 1985; EDGE, 1991; LIN, 2001). As the results indicate, the instrument that relied the least on written input (guided-interview), and that elicited relatively natural speech data, yielded the highest epenthesis rates. Furthermore, there was a considerable difference in the percentage of epenthesis between the sentence and the dialog-reading tasks, both of which rely solely on written input, and elicit reading data.

As the measure of inaccurate production for this study is production of vowel epenthesis, and this is a syllable simplification strategy also found in the participants' L1, these results challenge the claim that L1 transfer is more likely to occur with elicitation instruments that rely on reading, which enables test takers to transfer their knowledge of the L1 grapheme-phoneme relationships when reading aloud in the L2 (YOUNG-SCHOLTEN & ARCHIBALD, 2000; ZIMMMER, 2004). At this stage, the present study is unable to provide a conclusive answer to this question, given that only one L1 transfer process was analyzed (vowel epenthesis as a syllable simplification strategy). Moreover, as all the participants were beginners, they predominantly resorted to the typical L1 epenthetic vowel /i/ with all tasks. As mentioned in the introduction section, other types of L1 transfer processes are present in the dataset and these could be analyzed to verify the extent to which L1 transfer is more recurrent with reading tasks (more formal) than with speaking tasks (less formal).

The dataset was also analyzed in terms of the rate of accurate production of the target consonants. The results displayed in Table 3 allow a comparison between the total rates (a) for accurate production of the word-final consonants, (b) for epenthesis, and (c) for the other syllable simplification strategies grouped together (e.g., substitution, devoicing, deletion). Analyzing the dataset in terms of accurate production of the target consonants reveals that the dialog-reading task (77%) favors higher rates of accurate production, followed by the sentence-

reading task (59%), and the guided-interview (49%). Once again, this result questions Dickerson's claim in terms of the hierarchy of task difficulty, because although the least formal task yielded less accurate performance, the most formal task did not trigger the highest accuracy rates. The results also show that other syllable simplification strategies are slightly more frequent in the guided-interview (less formal), thus challenging Tarone's assumption that L1 transfer occurs more often with more formal tasks.

TABLE 3
Frequency of Accurate Production, Epenthesis and other Syllable Simplification Strategies

	Accuracy		Epenthesis		Other strategies		total
	n	%	n	%	n	%	
Sentence	351	58	149	25	100	17	600
Dialog	208	77	24	9	38	14	270
Interview	59	49	35	29	27	22	121

A brief inspection of the other syllable simplification strategies employed in the dataset reveals that the sounds that were modified more often are /t/, /d/, /n/, /ŋ/, and /dʒ/, and that L1 transfer accounts for the way most of these sounds were modified. For example, the sounds /t/ and /d/ were palatalized (*cat* [kætʃ], *mad* [mædʒ]); and /n/ was vocalized (*clean* [klĩ]). Therefore, these results offer partial support for Young-Scholten and Archibald's (2000) and Zimmer's (2004) claim, since they show the pervasiveness of transfer of L1 grapheme-phoneme correspondence into the L2. However, L1 transfer is not restricted to tasks that require reading as the response format, as predicted by these researchers; rather, it is extensively found in a task that yield relatively natural speech sample (the guided interview).

Hypothesis 2 stated that the participants would display a similar performance pattern across tasks, which would indicate that the three tests pose a similar level of difficulty for each participant regarding the production of word-final consonants. For the present dataset, this prediction could be verified by checking if each participant occupied a similar ranking for frequency of epenthesis across tasks.

The results displayed in Table 2 above can make this comparison easier, since the participants' performance is displayed according to their ranking order for each task, from the lowest epenthesis rates (best performance) to the highest

(worst performance). Three ranking order Spearman correlations[15] were run and came out non-significant (p>0.5), yielding very weak correlation coefficients (dialog/interview: rho=.315, dialog/sentence: rho=.299, and sentence/interview: rho=-.076), which shows that hypothesis 2 is not supported. In other words, the participants' performance patterns varied across tasks, which can be exemplified by participant S2, who obtained one of the highest epenthesis rates for the interview (40%), but the lowest rate for the sentence-reading task (8%). Another example of how the participants' performance varied across tasks is participant S9, who managed to produce no epenthesis at all with the least formal task (interview: 0%), and yet very often resorted to epenthesis with the most formal task (sentence-reading: 23%). These findings also show that individual differences may also interact with task type, which indicates that task difficulty may be related to learning style. In other words, while some learners may perform better on a particular task type, others may find the same task more challenging (BACHMAN, 1990).

Finally, the role played by orthography was investigated by testing hypothesis 3, which proposed that students would obtain higher epenthesis rates with words spelled with a silent *–e*. Regarding the sentence-reading task, for this analysis only 8 target consonants were considered, because, as stated in the Methods section, not all of the word-final consonants allow the comparing of words ending in a consonantal grapheme with words ending in a silent *–e*. Thus, a total of 480 tokens were analyzed (8 consonants X 3 tokens X 2 types of orthography X 10 participants). For the other tasks, due to the limited number of tokens produced, a decision was made to use all the words that contained any of the 12 consonants present in the integral version of the sentence-reading task, provided they satisfied the condition of ending in a word-final singleton consonant.

Table 4 displays the general results regarding orthography for each task, as well as for the 3 tasks combined. As it can be seen, words containing a silent *–e* triggered higher epenthesis rates for the 3 tasks, thus offering support for the predicted orthography effect. In order to verify if orthography affected the participants' performance on the three tasks, 3 Wilcoxon tests were run. The tests comparing the frequencies of epenthesis for the words spelled with a final consonant grapheme and those ending in a silent *–e* showed significant differences for two tasks: sentence-reading (z=-2.67, p=.007) and dialog-reading (z=-2.39, p=.01). However, no significant difference was found for the comparison with the interview task (z=-1.599, p=.11).

TABLE 4
Frequency of Epenthesis in Relation to Orthography

	Interview		Sentence		Dialog		Total	
	No -e	***-e***	***No -e***	***-e***	***No -e***	***-e***	***No -e***	***-e***
N	92	29	240	240	220	50	552	319
epenth.	23	12	23	68	13	11	59	91
%	25	41	10	28	6	22	10	28
median	22.5	41.6	13.9	25	2.1	20		

These results partially confirm hypothesis 2, showing that the silent *–e* condition has a stronger effect on tests that rely on written input. This is in agreement with the proposal that transfer of L1 grapho-phonological correspondence is more likely to occur when learners perform reading tasks (YOUNG-SCHOLTEN and ARCHIBALD, 2000; ZIMMER, 2004; ALVES, 2005). However, even if not significant, transfer of L1 grapho-phonological correspondence into the L2 recurred considerably with the interview task, in which the percentage of epenthesis with the silent *–e* words (41%) was nearly twice that obtained with words ending in a consonantal grapheme (25%). The fact that this difference in percentages was not significant is probably due to the limited number of tokens produced by the participants for the guided interview (only 121, compared to 600 for the sentence-reading task, and 270 for the dialog-reading task).

All in all, the findings regarding the effects of orthography indicate that this variable certainly influences the production of word-final consonants, not only with the reading tasks, but also with the speaking task. However, it is important to point out that even the speaking task used in this study provided the participants with some written input (the questions), and this might partially explain why orthography seems to lead participants to resort to vowel epenthesis more often with the words graphed with a silent *–e*, since some of the words produced by the participants were present in the questions (e.g., *name*, *like*). Another plausible explanation for orthography effects with the interview task – as proposed by Young-Scholten and Archibald – (2000) is that, as the participants were adult learners in a foreign language learning context, their first contact with L2 words tends to include access to written input. Thus, these participants are expected to have orthographic representations for the words they have already learned, and they are likely to rely on these orthographic representations to pronounce these words.

Conclusion

The present study was designed to provide answers to questions regarding the effects of task type and orthography on the production of English word-final consonants by Brazilian learners. In reference to task difficulty, it was found that the least formal task (a guided interview) triggers more L1 transfer (as measured by the rates of epenthesis), thus leading to less accurate production. Nevertheless, this pattern was not observed for two reading tasks that had been regarded as being different in terms of degrees of formality: sentence-reading (more formal) and dialog-reading (slightly less formal). Thus, further research is necessary to investigate (a) whether the dichotomy formal vs. informal style can account for different performance across tasks, (b) whether relying on the input length (word, sentence, text) to establish a hierarchy of task difficulty is an efficient procedure, and (c) if a criterion such as task familiarity could be a better alternative to establish whether a task would be regarded as more or less difficult by the learner. The results also showed that task difficulty varies within participants, which implies that individual differences and learning style also interact with task type. This explanation finds support in Bachman's (1990) proposal that performance on any type of test depends on the combination of several factors, among which are task characteristics and test takers' attributes.

In addition to focusing on the contrast formal/informal style, the present study addressed another task feature – the type of input provided by the task. More specifically, the effect of orthography on the pronunciation of word-final consonants was investigated by contrasting the production of words ending in a consonantal grapheme and words ending in a silent *–e*. The results strongly corroborate previous research in the sense that the words spelled with a silent *–e* triggered higher epenthesis rates for the three tasks. This also indicates that even for tasks that do not provide test takers with extensive written input (the guided-interview), orthography tends to play an important role regarding the transfer of L1 grapho-phonological knowledge. Further support for this claim is offered by a brief inspection of other syllable simplification strategies employed by the participants, which reflect the transfer of L1 grapheme-phoneme correspondence into the production of L2 word-final consonants.

On the whole, the results seem to indicate that task difficulty is not adequately predicted if one simply takes into consideration the notions of degree of formality (in terms of the type of response required: reading versus speaking,

or length: word, sentence, or text). Another important factor is whether the task relies on written input. When collecting L2 production data, or speech samples in the classroom, researchers and teachers need to be aware of the fact that tasks that provide written input may lead to more L1 transfer, because of the participants' knowledge of spelling and sound correspondences in the L1. However, this study suggests that the pervasiveness of negative L1 transfer may apply even to tasks that provide limited written input, such as guided-interviews, owing to the fact that adult learners' first contact with L2 words tends to rely on written input (YOUNG-SCHOLTEN & ARCHIBALD, 2000).

There is a bright side to the findings reported here, as educators and researchers very often resent the fact that they need to rely on reading tasks to collect oral production samples. We assume that reading tasks are unreliable instruments to gain insights into the learners' oral performance, due to the level of formality of such tasks. What this study shows is that a sentence-reading task can yield similar results to those obtained by means of an interview task, with the advantage that the former allows careful control of many intervening variables and maximizes the chances of participants producing a reasonable number of test tokens. On the other hand, even a dialog-reading task, which might be regarded as more familiar and thus less difficult than other tasks, can minimize the occurrence of L1 negative transfer. In this sense, dialog-reading can be regarded as a useful tool to practice pronunciation when the teacher is concerned about providing students with controlled practice, in which focus on form is the objective.

One question that remains unanswered, though, is why the dialog-reading task (relatively formal) triggered less L1 transfer than the other tasks and yielded higher rates of accurate production for the word-final consonants. One could speculate that individuals who participated in this study had extensive practice with dialog reading on their English course, and that part of this practice included (a) receiving aural input (the dialogs were recorded on a CD and the participants listen to the recording twice), (b) practicing reading the dialogs aloud, and (c) receiving feedback on their pronunciation. This extensive practice with dialog-reading may account for their better performance on the dialog reading task. Nevertheless, this issue deserves further investigation, because one could argue that the participants also had access to aural input for the questions used in the guided-interview task, practiced how to ask and answer them, and received feedback on their pronunciation, and even so, very often continued to resort to vowel epenthesis, and obtained lower rates of accurate production of word-final consonants.

A final point should be made about the role played by orthography. In 1975, W. Dickerson made a case for the importance of teaching spelling and pronunciation correspondence to L2 learners. However, as Erdener and Burnham's (2005) study indicates, the beneficial effects of orthography are subject to the transparent/opaque relation. Therefore, following this line of reasoning, speakers of transparent L1s (e.g. Portuguese) are more likely to benefit from specific instruction on grapheme-phoneme relationships when learning languages that are equally transparent, but not when learning more opaque languages, such as English. In these cases, Erdener and Burnham suggest that pronunciation instruction should rely on auditory and visual cues provided by the speakers' face and lip movements.

Nevertheless, it is this researcher's belief that even learners that come from a transparent L1 background can benefit from instruction on the relationship between spelling and pronunciation when learning a language that is more opaque. In this case, instruction should focus on helping learners avoid transferring inappropriate L1 grapheme-phoneme patterns into the L1, as well as on helping them to recognize the patterns that are adequate for the L2. Furthermore, as highlighted by Ellis (1990), providing explicit instruction (or negative feedback) can contribute to L2 acquisition by increasing awareness about how the target language differs from the L1, especially in contexts where learners have limited exposure to the L2 and rely to a great extent on classroom instruction.

Notes

[1] That is, studies investigating the acquisition of the L2 phonological component.

[2] See Collischonn (1996) and Monaretto, Quednau and Hora (1996).

[3] Other words, such as *batismo* ("baptism") and *acidente* ("accident") have officially lost the offending consonants, the letters "p" (/p/) and "c" (/k/) respectively, dispensing the necessity of epenthesis.

[4] As Edge (1991) observes, although not very common, the occurrence of an epenthetic vowel [ə] is also found in the speech of native speakers of English when they produce words such as *big* [bɪgə] in an emphatic way or followed by a pause.

[5] There has been a considerable number of studies investigating task-type effects on speech production with an emphasis on other variables such as fluency and complexity (e.g., ROBINSON, 1996; DERWING & ROSSITER, 2003; IWASHITA,

MCNAMARA & ELDER, 2001; SILVEIRA, M.C.K., 2004). However, these studies will not be reviewed here due to the limited scope of the present study.

[6] As Lin (2001, p. 686) notes, speakers of Mandarin Chinese frequently resort to epenthesis when producing monosyllabic words, which is due to the preference for disyllabic words in their L1.

[7] For a complete list of the correspondence between the alphabetic and the phonetic-phonologic systems of English and BP, see Celce-Murcia, Brinton, and Goodwin (1996) and Scliar Cabral (2001), respectively.

[8] The notion of recoverability is also discussed in Weinberger (1994), who argues that the occurrence of vowel epenthesis is directly connected to the possession of functional and phonotactic knowledge. Thus, the fact that vowel epenthesis is more frequent in adult learners' production of L2 sounds than in children's production of L1 sounds is due to the adults' awareness about the functional and phonotactic knowledge of the L2. This kind of knowledge leads advanced learners to resort to syllable simplification strategies that minimize ambiguity and maximize recoverability (e.g. listeners would probably find it harder to recover the original word "same" if the speaker deleted the final consonant [sej] instead of adding a vowel to the coda [sejmi]).

[9] The Extracurricular Courses are the language service courses offered at Universidade Federal de Santa Catarina. Level 1 students might be real or false beginners regarding their English proficiency. Most of these students have had previous contact with English in junior high and/or high school, since English is very often the compulsory foreign language taught in school.

[10] Results from a pilot study (SILVEIRA, 2002a) yielded the following epenthesis rates: /ʃ/: experimental group = 7.4% for the pre and posttests; control group = 0% for the pretest and 7.7% for the posttest; /tʃ/: experimental group = 14.8% for the pretest and 0% for the posttest; control group = 2.6% for the pretest and 5.1 for the posttest.

[11] The letter "g", when followed by an "e" is pronounced as /dʒ/, and /ŋ/ is always represented by the spelling "ng" without "e".

[12] These participants were the control group of a previous study (SILVEIRA, M. C. K., 2004).

[13] Non-parametric option for a One-Way ANOVA with repeated measures. Variables: interview, dialog, sentence.

[14] Non-parametric option for a paired-sample t-test. Variables paired: interview/dialog; interview/sentence; sentence/dialog.

[15] A non-parametric alternative for Pearson correlation. Variables: percentages of epenthesis for the 3 tasks.

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Appendices

A – Sentence-Reading Test

I want the map.
The map is over there.
The map can help.
Do you have the tape?
I have the tape and the CD.
I need a new tape too.
I'm going to the club.
There is a nice club over there.
He goes to the club to dance.
I want to buy a cube.
The cube is black.
He'll buy the cube tomorrow.
I have a cat.
Would you like a cat or a dog?
The cat looked sad.
You are late.
He is late everyday.
You can't be late today.
He is mad.
I am mad about you.
Mad people go there.
Where is it made?
It is made of glass.
I made some coffee.
See you next week.
This is the best week ever.
This week may be sunny.
What can I take?
I can take a photo.
They take the bus to school.
I bought a bag.
I forgot my bag again.
The bag can be mine.
It is a nice roof.
Paint the roof and the walls.
The roof has a problem.
I saw your wife.
His wife is working.
My wife left last week.
Who do you love?
I love all kinds of food.
Your love can help people.
I read one page.
I write a page everyday.
Open your book to page ten.
He cleans this room.
The room is nice.
I reserved a room for you.
What is your name?
I can't read the name again.
His name can't be correct.
Can you clean?
He is going to clean everything.
It is a clean house.
The weather is fine.
He is a fine actor.
The police officer is a fine person.
Does he sing?
They sing every weekend.
I can sing something nice.
(Sentences with distracters):
I saw a vit.
The vit is open.
A vit can be there.
They can sid.
The boys sid everyday.
They sid for life.
He has a pite.
The pite and the car are nice.
Bring the pite now.
Do dogs mide?
The ladies mide and cry.
The train will mide to the city.
I can't see the gock.
The gock is mine.
They need the gock now.
We want to sike.
They sike everyday.
I will sike some for you.

B – Dialog Reading Test

A: How do you spend your day, Helen?
B: Well, on weekdays I get up around ten. Then I read the paper for an hour and have lunch at about noon.
A: Really? What time do you go to work?
B: I start work at three.
A: And when do you get home at night?
B: I get home pretty late, around midnight.
A: So, what do you do exactly?
B: I'm a TV announcer. Don't you recognize me? I do the weather report on KNTV.
A: Gee, I'm sorry. I don't watch TV.

C – Words containing target word-final consonants produced by each participant in the Guided Interview task

S1	Name	I'm	Studying	Like	I'm	Living	In	Good	Week						
S2	Name	Nutrition	Sleep	Like	Pop	Music	Romantic	Music	Live	In	Not	Good	Have	Week	Gym
S3	Name	Mechanic	At	Like	Rock	Music	Am	Living	In	Am	Good	Week	In		
S4	Name	Sleep	Late	On	Like	Rock	Living	In	Not	Am	Not	Good	Week		
S5	Name	Nutrition	In	Sleep	Out	Night	Club	Like	Pop	Music	Live	In	Not	Good	Week
S6	Name	Am	Like	Rock	I'm	Live	In	Good							
S7	Name	In	Sleep	Like	Rap	Rock	Electronic	Music	Living	In	Not	Good	Am	Like	
S8	Name	Sleep	Noon	Then	Read	Book	Ride	On	Like	I'm	Living	In	Not	Bad	Good
S9	Name	Like	Rap	Live	Can	Week									
S10	Name	I'm	Studying	In	I'm	Sleep	Like	Live	In	I'm	Good	In	Week		