

# Teaching Intervention on the Pronunciation of Spanish Intervocalic /d/

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## 1. Introduction

Within the communicative foreign language classroom, which is the currently favored approach to teaching Spanish at the university level, little attention is given to L2 Spanish pronunciation instruction. It is generally viewed as unimportant and something that L2 learners will acquire on their own with enough quality input from native speakers. This is apparent in Arteaga's (2000) review of ten first-year Spanish textbooks, which finds that only four attempt to teach pronunciation. Some recent researchers such as Elliott (1995a, 1995b, 1997), González-Bueno (1997) and Morin (2007) have recommended that L2 Spanish learners receive explicit pronunciation instruction to improve the acquisition of target sounds. Zampini (1994), for example, recommends explicit instruction of two Spanish allophones of /d/, which are very difficult for native English speaking Spanish learners to acquire. She postulates that their difficulty is due to interference of the English phonemes that correspond to the Spanish occlusive and approximant realizations of /d/. The present study extends Zampini's work by focusing on explicit pronunciation instruction of intervocalic /d/ to first-year Spanish learners, a population not attested in the literature, and compares the results of oral reading of a level-appropriate text before and after instruction to results obtained from control group students who perform the same reading task, but instead of explicit pronunciation instruction, they receive input from a native Spanish speaker.

## 2. Literature review

There are many studies done on L2 pronunciation and the importance of its instruction in the L2 classroom, which range from ethnographic sociolinguistic studies (e.g., Harlow and Muyskens, 1994 and Hedgecock and Lefkowitz, 2002) to production studies that attempt to convince the reader of the importance of explicit pronunciation instruction (e.g., Elliott, 1995a, 1995b, 1997 and Lord 2005, *inter alia*) and show the development of Spanish sounds in learners (e.g., Face and Menke, 2009, Díaz-Campos, 2004 and 2006). Despite these studies, pronunciation instruction often times is ignored in the communicative classroom, which tends to focus instead on practical communication-based exercises to practice grammar and vocabulary.

Experienced L2 instructors often find that what students think they want in their L2 classroom and what research shows is beneficial to them can be incongruent. However, studies have also shown that students do care about and worry about how they might sound to native speakers. Two ethnographic studies by Harlow and Muyskens (1994) and Hedgecock and Lefkowitz (2002) focus on the social factors that affect pronunciation in the L2 classroom. Harlow and Muyskens surveyed intermediate French and Spanish students and found that students felt more comfortable contributing to a class when they felt more confident in their pronunciation. Though they focused on intermediate-level university students, it is likely that this attitude is present in first-year students as well. They measured

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how the students would rank various goals of their language studies, including in their study 568 undergraduate Spanish students from 13 major universities. The results showed that among the Spanish students, the goal rated number one in importance was speaking ability, number three was self-confidence, number five was survival and number six was pronunciation. Demonstrating the power that anxiety can have over a student in an L2 classroom, Harlow and Muyskens found, in the comments section of the survey, that students consistently expressed difficulty in overcoming the fear and insecurity surrounding making mistakes when speaking in the L2. Further, students in their study rated speaking, vocabulary and pronunciation activities as the top three activities in importance, in that order.

Harlow and Muyskens provide even more evidence for the need to provide students with training and support when it comes to actual L2 production by stating that, “[i]nhibitions and the fear of making mistakes and looking foolish in front of their peers combine to make students resist wanting to actually do activities that force them to speak the language” (147). Similarly, Hedgecock and Lefkowitz performed an ethnographic study of Spanish and French L2 learners to ascertain how prestige and attitude affect oral performance in their respective L2. What they found was that oral performance, including specifically pronunciation of the L2, is not solely affected by input or instruction from the teacher. They discuss how prestige, both covert and overt, influences how students perform in class. Specifically, both forms of prestige can inhibit the production of language as well as the development of target-like structures and pronunciation. In addition, the lack of ability to discern whether their own pronunciation is target-like or not and lack of knowledge of the phonetics of the L2 sound system also affected their performance. While covert and overt prestige are certainly themes worthy of investigation, the ability of students to monitor their own speech and thus pronunciation is directly related to the current study. If students cannot discern what sounds they are producing, it will be difficult for them to model their own speech against a native speaker’s input, which may impede improvements in pronunciation and the acquisition of the L2 phonological system. One cannot acquire something new if there is no awareness that there are differences.

In addition to lowering the personal insecurity felt by many students, the argument put forth by Morgan (2006) is that the knowledge of dialectal variation that can come with pronunciation instruction can assist L2 learners in both parsing native speech and improving their own pronunciation. This is of benefit to L2 students, who will increasingly be exposed to varied dialects because of the migration of various Spanish-speaking populations all over the world. Not only is this knowledge useful, whether or not the students use the variants presented to them in instruction, but it may also be necessary if students are to increase the rate at which they acquire native-like pronunciation of Spanish.

Various studies have shown that students can and do acquire more native-like pronunciation on their own without explicit instruction, but as seen in Face and Menke (2009), this is a long and slow process, only approaching native-like at the doctoral level of study. Additionally, study abroad does not seem to have much of an impact on the voiced approximant (or fricative, as it is called in other studies) occlusive. Díaz-Campos (2004) found that the voiced fricatives (/b, d, g/) were most difficult for students to acquire in both their home university and a study abroad environment while the other segments showed improvement. In the follow-up of that study, Díaz-Campos (2006), he investigated whether style (formal vs. informal) had an impact on pronunciation. With respect to the voiced intervocalic approximants, he found that informal or conversational style was favored for more target-like production of these segments, but does not tease out how well the participants did with intervocalic /d/ specifically. He also found that the home-study participants improved more than the participants in a study abroad context.

If study abroad does not seem to have an impact on pronunciation, it follows that a course in phonetics and phonology should. Many university-level Spanish programs offer a phonetics or phonology course as a part of the major, but as Lord (2005) argues in her study of the improvement of pronunciation in a phonetics class over the course of the semester, the types of self-analysis and reflection exercises she has employed in her phonetics course could be introduced much earlier and even at the beginning level of study. Even if students cannot produce the sounds in a target-like way, awareness of how they are articulated and the ability to analyze their own production are valuable skills.

However, as previously mentioned, Spanish L2 textbooks often do not include opportunity for pronunciation instruction, which is evidenced in Arteaga's (2000) discussion of the importance of including phonetic instruction in the L2 classroom. She argues that teaching pronunciation and phonetics to beginning L2 students gives them the tools to be able to correctly parse the oral utterances of native speakers of the L2. She also asserts that improvement in target language pronunciation by L2 learners decreases stigma and prejudice on the part of native speaker hearers when the L2 learners try to interact with them. While poor pronunciation may not impede communication all the time, it can produce irritation and certain negative stereotypes on the part of the hearer if he or she is not used to dealing with L2 speakers. She goes on to propose two topics she feels are important to teach in the first-year Spanish classroom, the first being two allophones of /r/, the tap and the trill, and the second being the alveolar [l]. In addition, she recommends that instruction include a description of the Spanish alphabet and some general description of suprasegmentals such as intonation. Moreover, she goes on to articulate three processes that she feels are of utmost importance and should be taught explicitly in the first year, specifically how to correctly articulate Spanish vowels, including the fact that there is no reduction of vowels in this system, spirantization of /b,d,g/, and nasal assimilation. She states that if students do not understand how to make the sounds, they will have a much more difficult time learning to articulate them. Arteaga goes on to suggest that modern textbooks recycle phonetics lessons in each chapter and include strategies that will teach students to monitor their speech and that of others, which will not only improve their pronunciation but also their comprehension skills.

Arteaga goes on to discuss ten popular Spanish textbooks on the market at the time of writing of her article. She describes the minimal and sometimes incomplete approach to phonetics training, or complete lack thereof. It was common for the texts she investigated to stop their training in phonetics after the first few chapters, never to revisit it again. Some used confusing terms, some were inaccurate in their descriptions, and some had no mention of phonetics in either the lab manual or the textbook itself. She is also distressed by the fact that students are not taught to monitor their own speech, and really cannot be taught to monitor themselves without help from the instructor.

The question remains, then, whether students in a beginning course can acquire target-like pronunciation without explicit instruction. In a psycholinguistic study that attempts to prove that a learner does not need explicit pronunciation instruction to acquire native-like pronunciation in the L2, Trofimovich and Gatbonton (2006) studied whether Focus on Form or Focus on Meaning would have an effect on the accuracy of Spanish L2 learners' pronunciation in their L2. They used these methods in testing pronunciation accuracy because these are the approaches commonly used in a communicative classroom where input is highly valued. The input will either focus on the forms being studied or focus on the meanings more generally, hence the names Focus on Form and Focus on Meaning. They indicate the importance of repetition within the framework and try to show that one does not need explicit pronunciation instruction in order to acquire a native-like pronunciation. However, their study showed that lower proficiency learners are not able to attend to both form and meaning at the same time, with participants performing better in the Focus on Form condition than the Focus on Meaning condition. They postulate that this may be due to the fact that learners may have less capacity in working memory, and these resources are used up first by semantic meaning, leaving few to none for form-related issues. In addition to the results, if their hypothesis is that input and repetition are important, the shortcoming in their argument is that, in many communicative classrooms, a good amount of input that students receive is from their classmates, who may or may not exhibit target-like pronunciation and thus, the desired input.

Further supporting the need for pronunciation instruction, the production study done by Zampini (1994) focused on intermediate Spanish L2 learners, studying second semester and fourth semester Spanish students in order to measure their accuracy in producing /b, d, g/ and their allophones in both formal and informal tasks. The participants were able to produce the occlusive allophones with relative accuracy, and she states this is due to these sounds being present in their L1, English. However, they had considerably more difficulty producing the spirant allophones, especially the approximant allophone of /d/, [ð]. A similar realization is present in English, but instead of being an allophone of /d/, it stands alone as a phoneme. Complicating matters further, English /d/ and /t/, when in post-tonic intervocalic position, either singular or geminate (e.g., "ladder," "lady," "city," "butter"), tend to be realized as a tap/flap that is very similar to the Spanish tap/flap realization of the simple vibrant /r/.

She postulates that interference, specifically negative transfer, of the L1 affects how these students produce Spanish sounds. Because the two sounds [d] and [ð] are separate phonemes in English, it will be more difficult for native English speakers to reorganize the sounds as allophones in the Spanish sound system as they acquire it. She suggests that L2 learners of Spanish would benefit from explicit pronunciation instruction with the allophones of Spanish /d/.

Though Zampini did not provide her participants with explicit instruction and does not show an effect of explicit pronunciation instruction, Elliott (1995a, 1995b) moves in that direction with two studies that measured attitude and pronunciation ability and effect of explicit pronunciation instruction on Spanish L2 learners, respectively. In these studies, he found that a positive attitude toward pronunciation correlated positively with more accurate target pronunciation. The production study found that explicit pronunciation instruction did result in more accurate pronunciation on the part of the students who received instruction. The experimental group showed more improvement than the control group that did not receive any instruction. He concludes from these two studies that explicit pronunciation instruction will improve adult L2 learners' pronunciation in two ways: by fostering positive attitudes toward pronunciation and by improving the students' abilities. He believes that explicit pronunciation instruction, which is lacking in most communicative classrooms, is important to L2 instruction and should be added to the curriculum.

As an extension of his previous two works, Elliott (1997) discussed the effect of pronunciation instruction in detail and found that there was little improvement in pronunciation in free speech, with any improvement noted not reaching statistical significance. However, there was improvement in discrete word production and discrete sentence production, indicating that pronunciation instruction may be helpful on the conceptual level so that students, if they cannot integrate the sounds completely, can at least recognize that there is a difference and incorporate it into practice. Additionally, he does state that one semester may not have been long enough for the instruction to really produce results, especially in the free speech task.

Since most of the literature on pronunciation in the Spanish L2 classroom has shown at least some positive benefit for students, it is perplexing why it is still mostly ignored in the communicative Spanish L2 classroom. The current study, in addition to adding to the body of literature in support of reintroducing pronunciation instruction into the Spanish L2 classroom, also examines the effects of explicit pronunciation instruction vs. native speaker input alone on first-year University students, a population that has not been the focus of previous studies. The research questions to be investigated here are, "Are first-year Spanish L2 learners able to produce the intervocalic approximant Spanish /d/ more accurately after receiving explicit pronunciation instruction than those learners who receive only native speaker input?" "Does students' motivation to produce sounds 'correctly' correlate with improvement in the pronunciation of intervocalic Spanish /d/ over the course of the study?"

### **3. The study**

#### *3.1. Participants*

The participants were 30 students, 15 females and 15 males, at a large, midwestern university who were taking an accelerated first-year Spanish course. Prior to enrolling in this course, students are required to have had at least two years of Spanish in high school and that instruction had to have been not longer than 5 years previous to enrollment in the course, though not all of the enrolled students meet those criteria. Ages range from 17 to late 20's. The students are divided into two mixed-gender groups: Group 1, which consists of 15 students, received explicit pronunciation instruction from a female native-English speaking Spanish instructor, the researcher; Group 2, which consisted of 15 students, received only input from a female native Puerto Rican Spanish instructor. It should be noted that this instructor consciously did not elide intervocalic /d/ when speaking. All students received their primary Spanish instruction using a communicative approach, with both instructors aiming to use Spanish as much of the time as possible, with the ideal being 100% of the time. Since the communicative approach relies on quality and quantity of input in order to assist students in their L2 acquisition, it follows that those students who have a native Spanish-speaking instructor should receive sufficient input to become aware of the phonological differences between English and Spanish and allow them to imitate that native speaker and thus acquire Spanish phonology. I propose that this is not

enough for students to acquire the Spanish sound system, and that explicit instruction is necessary for students to become aware of the differences in the sound systems and begin to acquire the Spanish sound system.

### 3.2. *Materials*

The text used in the current study included a cursory description of the alphabet in the first chapter and then nothing beyond that. This is a problem, because the course the participants were taking skipped over the first chapter. They received no pronunciation or phonetics instruction at all, assuming they had some in high school or previously, since they were to have taken at least two years of Spanish in high school before enrolling in that course. However, even though the text includes phonetics in only the first chapter and that chapter was skipped in the participants' class, the online lab manual does have a section for pronunciation help wherein students can listen to native input and repeat discrete sounds and words. Unfortunately, these exercises are considered supplemental and are not assigned to the students nor are they required for class participation or used in class as a demonstration of phonetics or pronunciation.

At the beginning of the study, which was almost halfway into the semester during the spring of 2010, all the students were brought to a Mac computer laboratory to record themselves reading a short text aloud. A reading task was chosen, despite the findings of Zampini (1994), indicating that her participants were less accurate in a formal reading task than an informal conversation, because it would be difficult to elicit the number of tokens of intervocalic /d/ necessary for analysis from first-year students in a free conversation. Additionally, a reading task would allow for a better analysis as the tokens would be parallel and the phonological contexts in which they appear would be controlled. A reading task would also allow the acquisition of the spirantization rule to be measured rather than their learning of individual lexical items that may have been internalized with the spirant realizations of intervocalic /d/. While the use of only a reading task is one limitation of the current study, the intent is to see if students can process explicit instruction and reproduce what they have been taught in a formal setting.

The reading task was taken from the course textbook the participants were using so as to be sure it was appropriate to their level.

**Recorded reading task:** *Venezuela es un país de contrastes, donde a lo largo de la historia se han mezclado razas y costumbres (prehispánicas, hispánicas y africanas) y se han sucedido formas de gobierno muy diferentes unas de otras. Ha sufrido guerras, la han gobernado presidentes más conservadores y más liberales. También han pasado por su historia héroes como Simón Bolívar o Francisco de Miranda, famosos líderes independentistas. A pesar de períodos de más o menos estabilidad, ha sido un país muy próspero que ha sabido explotar sus recursos, especialmente el petróleo, y por eso nunca ha sufrido de problemas energéticos. En suma, como dijo el famoso escritor venezolano Uslar Pietri, Venezuela ha tenido “una historia peculiar.” –De la Fuente, Martín and Sans (2007), p. 250*

### 3.3. *Procedure*

Before recording, the participants filled out a short background and motivation questionnaire that was adapted from the instrument used in Menke (2010). The questionnaire that all the students completed included questions pertaining to how much attention is paid to pronunciation, grammar and vocabulary, with the latter two factors included as possible foils. Questions on motivation were included to ascertain whether students' motivation to produce sounds “correctly” made any difference in their improvement over the course of the study. Motivation was measured using a Lickert scale of 1-5, where 1 was no attention at all and 5 indicated a lot of attention. Because of the unbalanced nature of the answers (many students chose “neutral” 3 ratings), scores of 4 and 5 were collapsed to signify “a lot” of attention and 1-3 collapsed to mean “little” attention paid to pronunciation.

The experimental group, Group 1, then received short, explicit pronunciation lessons bi-weekly for five weeks for a total of ten practice sessions. Students worked in pairs or groups of three as well as performing repetitions of the instructor's pronunciation of discrete words as a class. Selected exercises were taken from J. Dalbor, *Spanish Pronunciation: theory and practice*. The exercises focus on intervocalic /d/ within words and across word boundaries, but the difference between intervocalic /d/ and the tap /r/ was introduced to make them aware of minimal pairs and possible miscommunications when pronunciation is not accurate. The instruction was not as extensive as Elliot (1995b, 1997), but this was due to time constraints. The class met three times a week for only fifty minutes per class. The syllabus and course goals were such that there needed to be time afforded for reading, grammar and writing practice, and with students of differing levels of proficiency in one class, it was only possible to spend ten minutes per class on pronunciation. The first session was basic instruction in English regarding how the tap /r/, occlusive /d/, approximant /d/ and orthographic h are pronounced. The additional sounds were included as possible foils and because the researcher deemed them easy enough for the students to acquire or understand at the beginning level so as not to provide too much information at one time while still not revealing the target of the study, intervocalic /d/. Explanations were simple and concise with examples of the differences and similarities of the sounds in both English and Spanish. The focus of the practice exercises was on repetition and paired interaction, with the hope that the students would become mindful of their pronunciation and assist their classmates in the exercises. The students were encouraged to exaggerate the sounds in order to experience the differences in articulation and hear an exaggerated version of each sound. The use of small groups/pairs for most of the exercises was also motivated by the intent to reduce performance anxiety. It was hoped that a pair or group of three would be less intimidating or threatening to students who may experience performance anxiety. The students were also allowed to choose their own partners, hopefully reducing the possibility for anxiety even further. Occasionally, the instructor would read discrete words aloud to the class and ask them to repeat the word as a group. There was little feedback given by the instructor when students were working in pairs due to time limitations and inability to visit each pair and answer questions within the time allotted. The control group, Group 2, did not receive any kind of pronunciation instruction or practice. Instead, they had a native Spanish speaker from Puerto Rico who provided input via her normal lesson plan, which was developed using the same textbook and syllabus as the experimental group. The control group spent the first ten minutes of their class period doing communicative activities rather than pronunciation instruction.

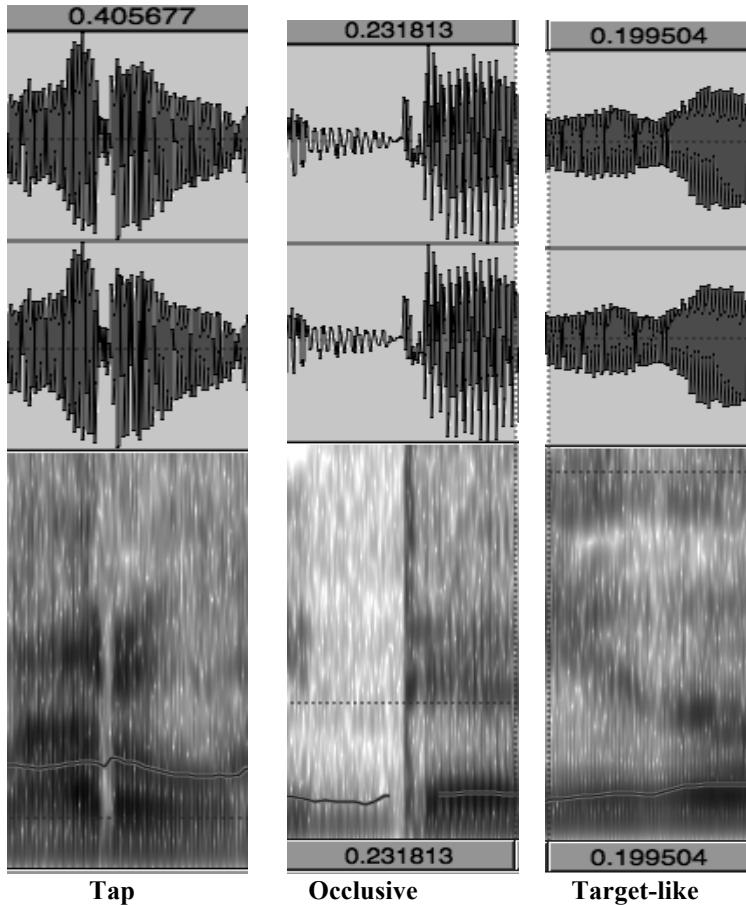
After five weeks, both participant groups returned to the Mac computer lab to record themselves reading the same text as was used in the initial task. The recorded data files were analyzed using Praat software (Boersma & Weenink, 2010) to compare each student's initial recording to their final recording, and then each group's results were compared as a whole to determine whether the explicit pronunciation instruction or the native input had an effect on the participants' pronunciation of Spanish intervocalic /d/ in a reading task.

### 3.4. Results

The reading task included 30 tokens of /d/, with 21 instances of intervocalic /d/ both within words and across word boundaries, and 4 where /d/ follows /s/. The rest of the tokens occurred after the nasal /n/, where one would expect an occlusive pronunciation and were thus eliminated from further consideration. Recorded data were analyzed with Praat software (Boersma & Weenink, 2010), first to identify the tokens and classify each as either "non-target" or "target-like." See Figure 1 for graphical representation, screen shots from the Praat acoustic software, of examples of tokens that were classified as a tap, an occlusive and what were considered "target-like." The tap and occlusive realizations were collapsed into the category of "non-target" realizations, while the approximant or fricative realizations were classified as "target-like." Next, the number of each type of token for each participant was calculated to find the percentage of target-like productions of intervocalic /d/ out of total productions of intervocalic /d/. The realizations of intervocalic /d/ were classified and calculated in the same way for both the pretest and posttest. Tokens were discarded in the case of the student making a misstep while reading the text or uttering the wrong word, i.e. "tiendo" instead of "tenido" or in the case of stuttering. If the student produced the correct cluster of sounds, i.e. "ido" or "ado," the

token was accepted, even if the previous segments were incorrect, i.e. “sifrido” instead of “sufrido” because the target sound was maintained in its expected environment. Because these participants were first-year students, there was considerable difficulty reading the text during the pretest, even though it was done approximately halfway into the semester. The reading proved easier during the posttest, which was close to the end of the semester.

**Figure 1**



Because the number of intervocalic /d/ productions varied from student to student due to reading errors or stuttering, in order to calculate the improvement and obtain the statistical analysis, the total number of realizations of any type of intervocalic /d/ was counted for each participant. After this total was determined, then each realization was classified as described previously, either “target-like” or “non-target-like,” with the total number of “target-like” productions used to determine the percent of the total number of realizations of intervocalic /d/ that were produced “correctly.” This was deemed the best way to compare the number of productions between students in the experimental group and the control group because of the discrepancy in the total number of realizations among students and between groups. That is, it would give a more accurate picture of the improvement (or lack thereof) over the course of the study. If number of target-like productions out of 21 possible productions were used, the picture would not be as accurate.

Table 1 shows the means of the scores of improvement for each group, experiment and control, within each motivation category, “little” and “a lot,” meaning “little” attention paid to pronunciation or “a lot” of attention paid to pronunciation. It should be noted that one student’s data was excluded from the analysis because her headset was not used properly, and this fact was not discovered until the end of the allotted recording time. The experimental group showed improvement in the production of intervocalic /d/, as can be seen by the average value of 21.85% improvement for those in the

experimental group who answered that they pay “little” attention to pronunciation and the average value of 25.17% improvement for those in the experimental group who pay “a lot” of attention. The control group did not show improvement; the mean improvement score for the participants in the control group is negative for both the “little” and “a lot” groups, with score being more negative for the “a lot” condition. These results show that attention was not a significant factor in improvement in pronunciation of intervocalic /d/ for these learners. In addition to these average scores, the number of “target-like” realizations of intervocalic /d/ out of the total number of realizations of any kind of intervocalic /d/ are shown for each group within each motivation factor. Even though it appears that, within the experimental group, the students who paid more attention to pronunciation scored better than those who did not pay attention to pronunciation, these differences were not significant.

**Table 1** Untransformed raw data

Motivation	Group	Mean % change	Number of students	Number of target-like intervocalic /d/ pre-test	Number of target-like intervocalic /d/ post-test
little	experiment	21.8580	5	23/102 total	43/97 total
	control	-1.0040	5	7/92 total	7/93 total
	Total	10.4270	10		
a lot	experiment	25.1670	10	48/202 total	97/200 total
	control	-1.8811	9	38/173 total	37/181 total
	Total	12.3547	19		
Total	experiment	24.0640	15	71/304 total	140/297 total
	control	-1.5679	14	45/265 total	44/274 total
	Total		29		

When categorizing the pronunciations, in general, it was found that there were few target-like productions of an approximant in the pretest as well as several cases of tap/flap [ɾ] production instead of the occlusive. The tap productions tended to occur when the student was uttering a word very rapidly, similar to the tap that occurs when native English speakers utter words such as “butter” or “city.” Unexpectedly, many students produced a tap following /n/, but not consistently, and again, usually when the speech was rapid<sup>1</sup>. There was a general tendency to produce a tap realization of /d/ in participle words ending in –ado and –ido. When /d/ was encountered intervocalically across word boundaries, speed of speech came into play. If the student was speaking more rapidly, there was a tendency to produce a tap, but when he or she was speaking slowly and/or more carefully, an occlusive /d/ was often the result.

It is worth noting that several students actually decreased in accuracy from the pretest to the posttest in both the experimental and control groups. Those students tended to overproduce the occlusive realization in the posttest. This could be due to very careful speech, anxiety, or individual learning differences. Additionally, one student in the control group was audibly ill on the day of the pretest. Her speech was slow and “lazy,” which means she tended not to fully close the articulators of the mouth on many of the sounds. It follows that her pronunciation on the posttest would be more true to her actual pronunciation capabilities and/or habits, showing more realization of the occlusive. On

<sup>1</sup> The realizations of /d/ in these contexts were visually very similar to the tap realizations that occurred intervocalically based on the spectrograms as well as aurally similar to a tap/flap. This tap realization was unexpected as it has not been known to occur in this context in English or in Spanish.

the other hand, the participants knew pronunciation was the target of the research<sup>2</sup>, so perhaps they felt that they should be very clear in their speech. However, this does not explain the overuse of occlusives for those who decreased in accuracy in the experimental group. These students had received pronunciation instruction, and therefore should have known when to produce the occlusive and when to produce the approximant. Again, anxiety, careful speech or individual learning differences could be a factor in this result.

There were two students in the experimental group who did not improve very much or at all. One achieved exactly the same score on each test, and the other improved slightly. They both started out with relatively high scores on the pretest in comparison to other students in both groups. Even though their high initial scores may have affected the posttest results, their data was left in the dataset because it is more representative of the variance in learning and in student capabilities in an L2 classroom. The results of the statistical analysis, which was a two-way, between subjects ANOVA performed in SPSS, presented in the ANOVA table in Table 2, show a clear difference in improvement scores between the control group and the experimental group (p-value for Group  $p = 0.004$ ), even with the outliers. The ANOVA table also shows that there is no significant difference between the groups when the levels of motivation are added in (Group \* motivation  $p = 0.795$ ). Additionally, Table 2 confirms that the motivational category of attention paid to pronunciation is not significant with a p-value of 0.880, which is well above the  $p < 0.05$  level of significance.

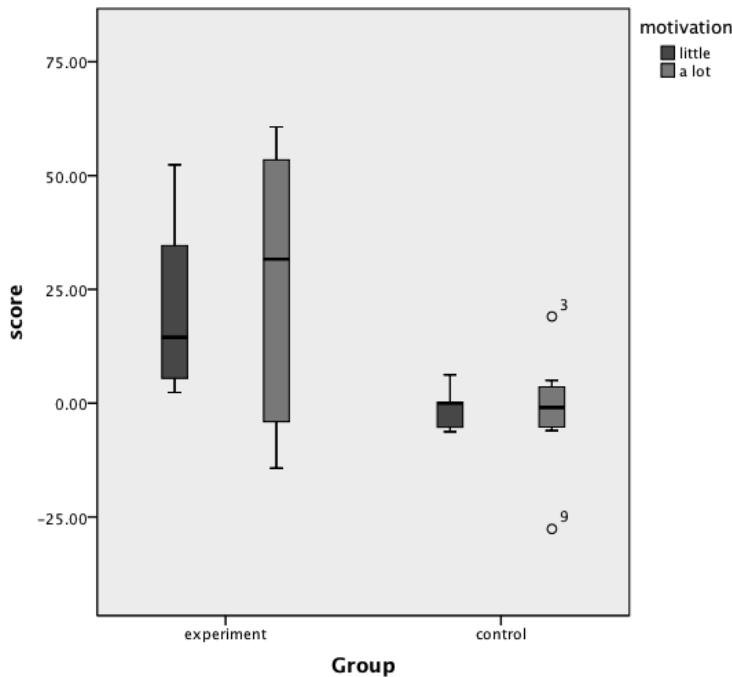
**Table 2**

Tests of Between-Subjects Effects			Dependent variable: score			
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
Corrected model	4796.500 <sup>a</sup>	3	1598.833	3.827	.022	
Intercept	3188.176	1	3188.176	7.632	.011	
Group	4076.213	1	4076.213	9.757	.004	
motivation	9.678	1	9.678	.023	.880	
Group * motivation	28.675	1	28.675	.069	.795	
Error	10444.036	25	417.761			
Total	19203.564	29				
Corrected Total	15240.537	28				

a. a. R Squared = .315 (Adjusted R Squared = .232)

The graphical representation in Figure 2 further illustrates that there is a difference in improvement between the experimental and control groups. It also reinforces that there is not much of a difference when we look at students' motivation to pronounce the target language "well" or "properly."

<sup>2</sup> The participants were aware that pronunciation in general was the target of the research, but they were not made aware that intervocalic /d/ was the particular focus of the analysis.

**Figure 2**

### 3.5. Limitations

In addition to the small sample size, there are other possible confounding variables that were not taken into consideration: previous vacation experience in a Spanish-speaking environment or country, whether languages other than English are spoken in the home (one student in the experimental group spoke Tagalog in the home<sup>3</sup>), anxiety levels with respect to producing language in the L2, how much Spanish had been taken in high school or at any post-secondary level, whether this is the only foreign language spoken by the participants and length of time from last Spanish class. Some of these variables, such as languages spoken in the home, previous vacation experience in a Spanish-speaking country, length of time Spanish was studied, and native (first) language were included in the questionnaire administered to the participants of the current study, but the answers were so homogenous in nature (i.e., all students but one spoke only English in the home, all students had only spent one or two weeks on vacation in a Spanish-speaking country, and all of the participants considered English to be their first language) that they were not considered in the analysis of the current study. In addition, future research may want to consider a scale of 1-4 in any Lickert scale measurement of social factors to avoid the dilemma of “neutral 3,” which proved to be a problem with some of the questionnaire responses that measured motivation.

## 4. Conclusions

It was shown that explicit pronunciation instruction does have a positive effect on first-year Spanish students' ability to produce target-like intervocalic /d/, and that even abundant input from a native speaker may not be enough to promote the acquisition of native-like pronunciation. These findings have implications for both acquisition and Spanish (and all L2) pedagogy in that it has been shown that first-year students can learn, at the least, to produce the approximant /d/ in a formal reading task, indicating that they may be able to produce it in spontaneous speech in the future. While they did not have to try to produce the target-like pronunciation in spontaneous speech, it is likely that these

<sup>3</sup> This student was kept in the dataset because he did not claim Tagalog as his native or first language and because the exclusion of his data would be less indicative of the naturally occurring variation in student body in a real classroom in which this instruction should take place.

participants will be able to recognize this allophone when they hear it and possibly incorporate it into their spontaneous speech in the future with more practice. It is important for beginning students to receive explicit instruction with regards to phonetics and pronunciation, including as Derwing, Munro & Wiebe (1998) showed, prosodic features, to improve their L2 pronunciation. In addition, such instruction may increase their confidence while speaking and improve their listening comprehension. Anecdotally, the students in the experimental group were enthusiastic about their pronunciation instruction and practice and expressed great interest in producing the sounds “correctly.” Arguments that teaching explicit pronunciation is a waste of time or does not fit into a communicative classroom thus do not hold, as the benefits to the students are tangible. González-Bueno (1997) incorporated five to ten minutes of explicit pronunciation instructions into her lesson before launching into communicative activities with success, and without hindering the communicative goal of the lessons. The fact that such little time per lesson was effective in her study as well as the current study may be compelling evidence that not much time is needed for students to gain benefits from explicit instruction, whether it is communicative in nature or not.

However, further research is needed to determine if these positive effects are reproducible in other first-year classrooms, perhaps with students who have had no previous experience with Spanish, and also with students over time to determine whether they are able to incorporate this instruction into their free speech. Elliott (1997) indicated that one semester of instruction may not have been enough time for students to fully integrate the instruction. Providing explicit instruction may possibly speed up L2 learners’ abilities to incorporate the L2 sound system into their repertoire of L2 speech at a faster rate. This would also be worthy of further investigation, if students could be followed over time to determine whether those who receive explicit pronunciation instruction are able to produce L2 sounds in spontaneous speech sooner than those who do not.

In short, pronunciation instruction is an important aspect of L2 instruction which is largely ignored in the Spanish L2 classroom, but which can have significant positive effects on L2 learners as they acquire a second language.

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