

Improving Spanish pronunciation through asynchronous online modules

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INTRODUCTION

Pronunciation instruction is typically **lacking in language classrooms** [1], despite strong student interest in improving their pronunciation [2], [3].

Two main reasons:

- teachers feel that there is **not enough time** for pronunciation [1].
- many teachers **lack adequate training** in pronunciation pedagogy.

Possible solution:

- online EdTech tools make it possible for students to practice pronunciation asynchronously outside of class.
- the online training can be designed by a single specialist in second language (L2) pronunciation

Goal of this study:

- Examine the effectiveness of two methods of pronunciation instruction:
- High Variability Phonetic Training
 - Shadowing

- These two types of training have been shown to be effective for learning pronunciation [4, 5, 6]; however, this study is one of the first to examine their effectiveness for Spanish.

- RQ1: Is HVPT or shadowing a more effective training for improving Spanish pronunciation?

- RQ2: Do different types of training (shadowing vs. HVPT) lead to different types of improvements in pronunciation? (global vs. local)

METHODOLOGY

Participants

- 74 Intermediate Spanish speakers (all students taking intermediate Spanish)
- Participants were randomly assigned to one of two types of training
- 35 speakers completed the training (and were included in the analysis).

Task

- Participants were recorded at the beginning of the semester (Week 1) speaking Spanish, and again at the end (Week 12).
- In weeks 2-11, they completed 15 minutes of pronunciation training.

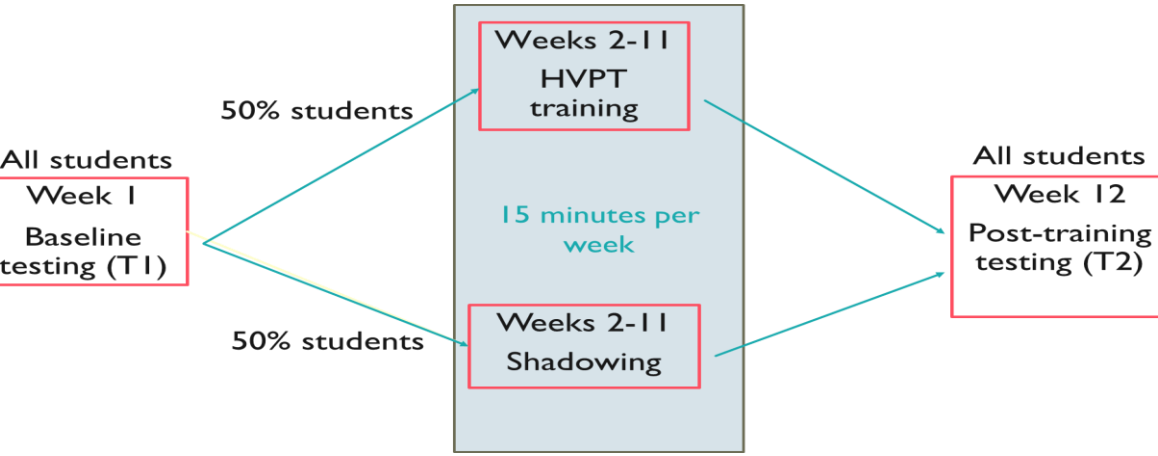


Figure 1. Pronunciation instruction task design.

Analyses

- Global:** Judges listened to Spanish spoken by the students, and rated them on accentedness, comprehensibility, and fluency.
 - Analysis 1:** Reading Passage Analysis
 - Analysis 2:** Free Speech Analysis
- Judges = native Spanish speakers and/or Spanish teachers.*
- Local:** **Analysis 3** - recordings of structures that are hard for Spanish learners to acquire were analyzed for accuracy (β, γ, d, r, lexical stress).

OBJECTIVE OF THE FYAP

- Code the data that has already been collected.
- Extract and perform statistical analyses on the data to establish **which pronunciation method was more effective over the course of one semester.**
- Design a new set of pronunciation training materials** for Study #2 (to be completed at FSU), informed by the results of the statistical analysis.

RESULTS – GLOBAL ANALYSIS

Analysis 1: Paragraph reading task

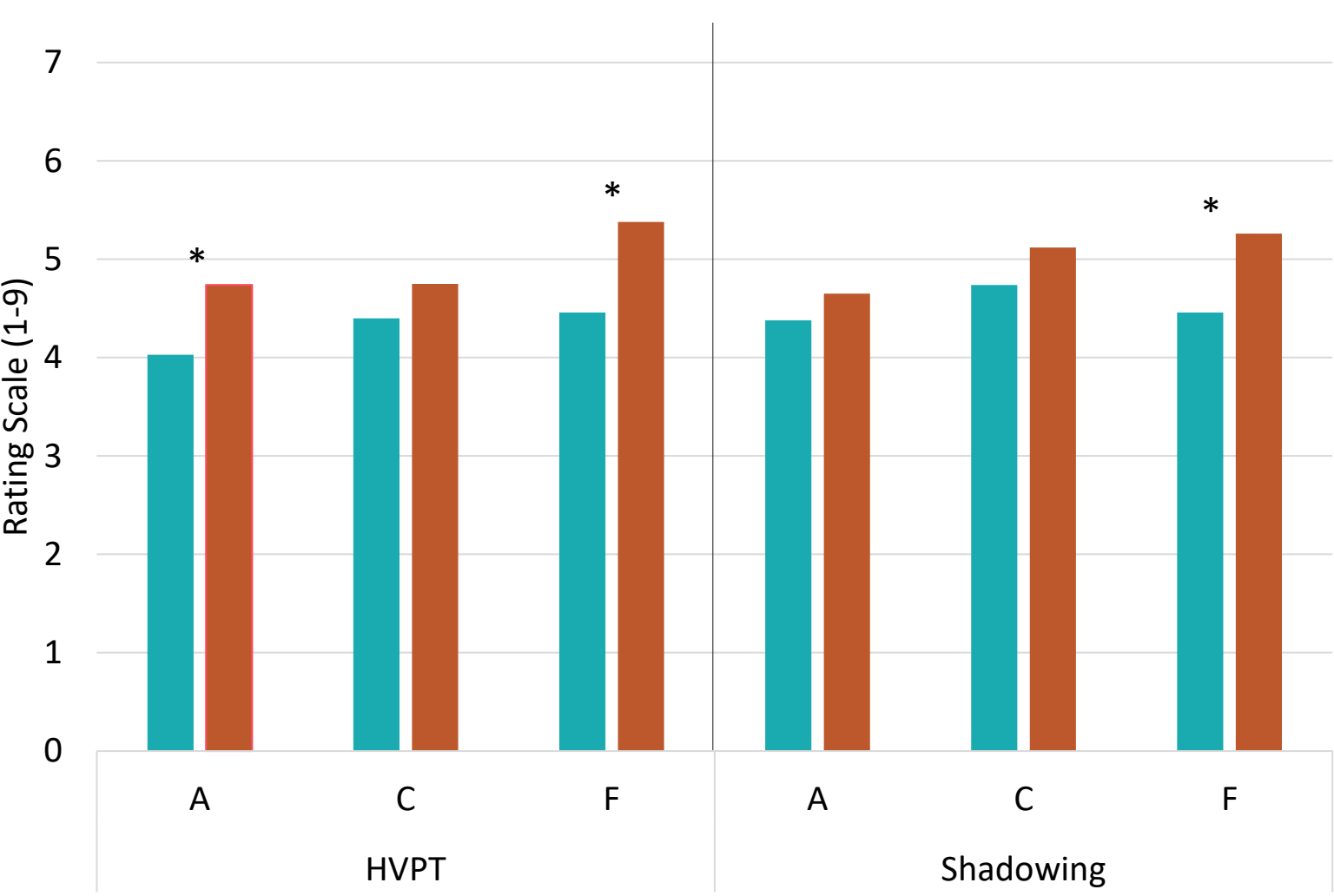


Figure 3. Average accentedness (A), comprehensibility (C), and fluency (F) ratings from the paragraph reading task at T1 (pre-training) and T2 (post-training), grouped by type of pronunciation training. * denotes p<.05.

Construct	HVPT					Shadowing				
	T1	T2	Difference	p	d	T1	T2	Difference	p	d
Accentedness	4.0	4.7	0.7	.019	0.6	4.4	4.7	0.3	.285	0.27
Comprehensibility	4.4	4.8	0.4	.184	0.3	4.7	5.1	0.4	.165	0.35
Fluency	4.5	5.4	0.9	.006	0.7	4.5	5.3	0.8	.001	0.98

Table 1. Results of a paired samples t-test comparing the T1 (pre-training) and T2 (post-training) accentedness, comprehensibility, and fluency ratings from the paragraph reading task, grouped by type of pronunciation training.

Analysis 2: Free speech task

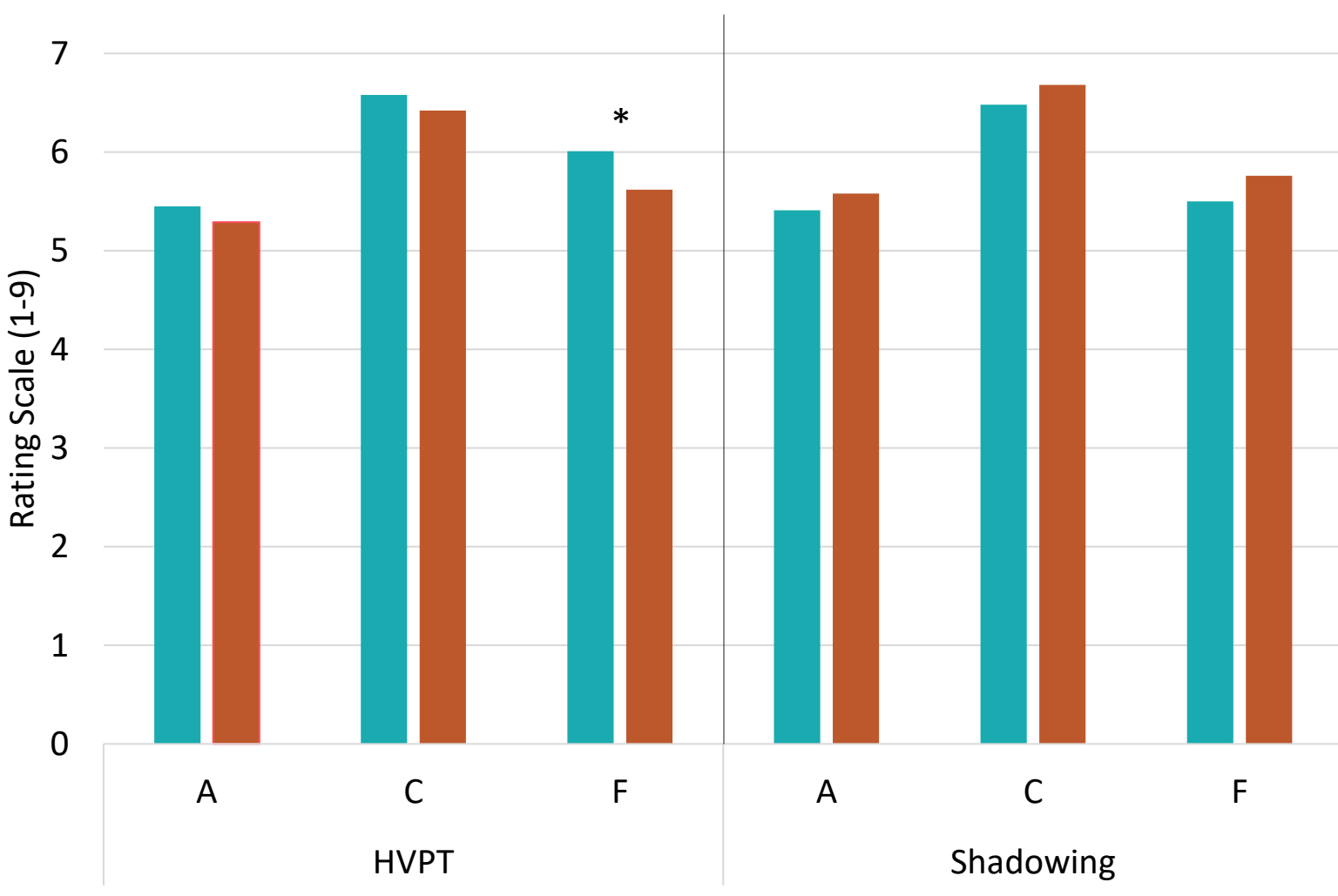


Figure 4. Average accentedness (A), comprehensibility (C), and fluency (F) ratings from the free speech task at T1 (pre-training) and T2 (post-training), grouped by type of pronunciation training. * denotes p<.05.

Construct	HVPT					Shadowing				
	T1	T2	Difference	p	d	T1	T2	Difference	p	d
Accentedness	5.5	5.3	-0.2	.494	-0.17	5.4	5.6	0.2	.576	0.14
Comprehensibility	6.6	6.4	-0.2	.579	-0.14	6.5	6.7	0.2	.445	0.20
Fluency	6.0	5.6	-0.4	.021	-0.62	5.5	5.8	0.3	.406	0.21

Table 2. Results of a paired samples t-test comparing the T1 (pre-training) and T2 (post-training) accentedness, comprehensibility, and fluency ratings from the free speech task, grouped by type of pronunciation training.

EXAMPLES – PRONUNCIATION PRACTICE



Figure 2. Examples of each type of pronunciation practice.

RESULTS – LOCAL ANALYSIS

Analysis 3: Word reading task

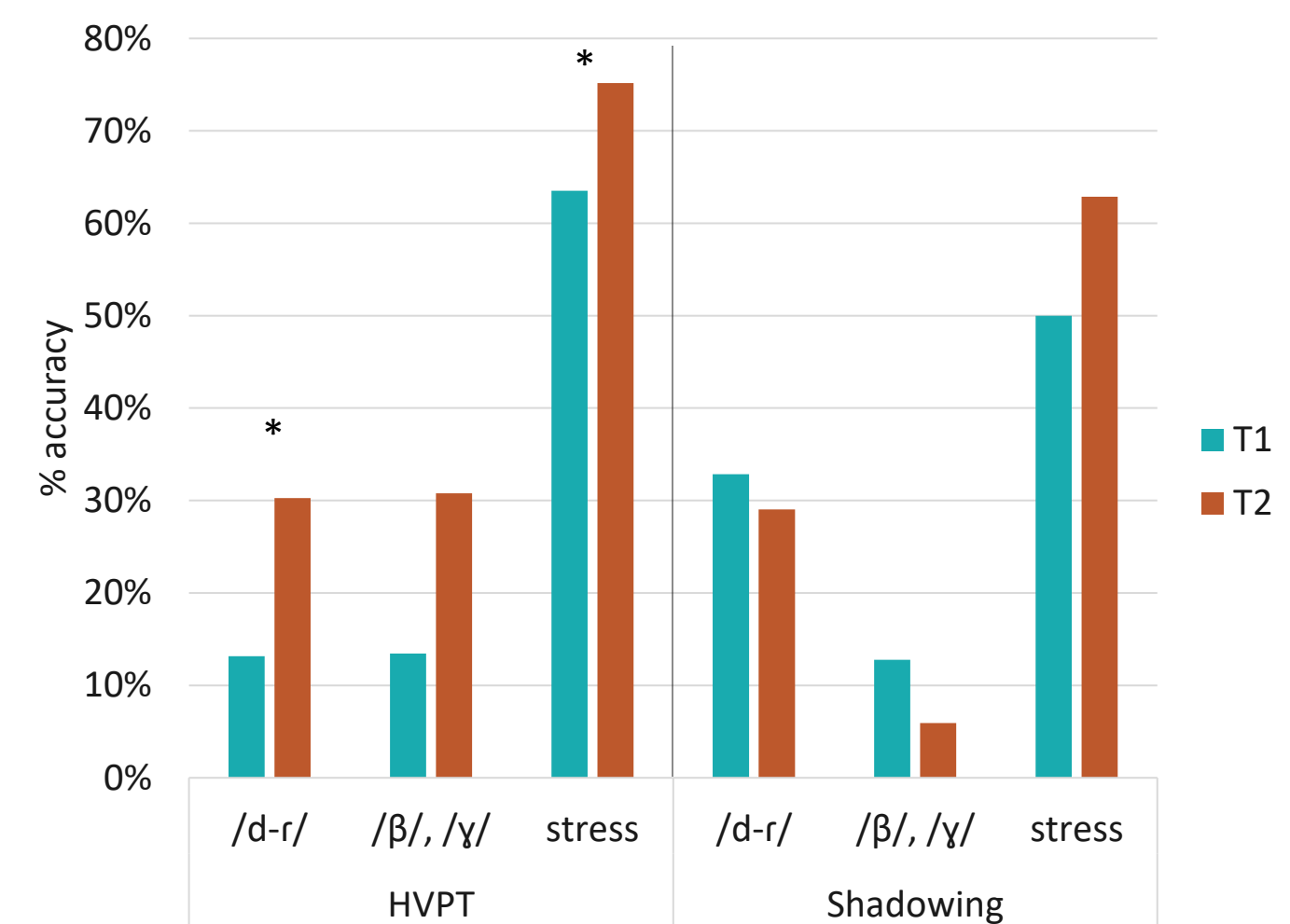


Figure 5. Average % accuracy scores from the word reading task at T1 (pre-training) and T2 (post-training), grouped by type of pronunciation training. * denotes p<.05.

Structure	HVPT					Shadowing				
	T1	T2	Difference	p	d	T1	T2	Difference	p	d
d-r	13%	30%	17%	.027	0.10	33%	29%	-4%	.609	-0.2
β, γ	13%	31%	18%	.105	0.72	13%	6%	-7%	.229	-0.51
stress	64%	75%	11%	.044	0.96	50%	63%	13%	.061	0.87

Table 3. Results of a paired samples t-test comparing the T1 (pre-training) and T2 (post-training) % accuracy scores from the word reading task, grouped by type of pronunciation training.

DISCUSSION

- Results suggest **both types of pronunciation practice are effective**– HVPT and shadowing resulted in improved performance, but improvements were dependent on what was being measured.

- HVPT: improvements in both individual structures and the global measures, but also difficulty with fluency in free speech.

- Shadowing: only showed improvements in the global measures (primarily fluency), more so than the HVPT.
- both types of training are necessary, to improve **different aspects of pronunciation.**

ADDRESSING FYAP GOAL

FYAP goal 1: determine which method was most effective.

- Both methods are effective and will continue to be used.

FYAP goal 2: design new pronunciation training materials informed by my experimental results

- Improvements for d, r were minimal, and non-existent for β, γ. Therefore, I have increased the number of tokens that learners will listen to, and added an additional speaker to the HVPT training.
- Improvements were not observed in all areas. So I have increased the number of weeks of training (10->12), to see if this will further improve effectiveness.

IMPLICATIONS AND FUTURE WORK

Implications

- The results provide further evidence for the efficacy of HVPT pronunciation [4, 5]; this is one of the only studies to investigate HVPT for Spanish.
- Spanish programs may benefit from using this type of training, given that students can complete it on their own time. But, more research is required.
- Questions for my upcoming study**
 - Will beginner learners improve similarly to the intermediate speakers from the study presented here?
 - To what extent does pronunciation change over three semesters?
 - Is the improvement dependent on training performed in the beginner level?

References

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