

App and Classroom instruction for better pronunciation: some results

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1. Introduction

Language learning

= much practice & time (e.g. Ellis 2005)

Apps

= valuable tools to increase language practice & time, namely through chunking knowledge, gamification, and mobility (e.g. Kukulska-Hulme 2009, Rosell-Aguilar 2017)

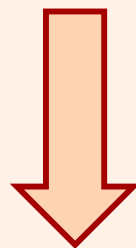
→ effects on learning outcomes (e.g. Heil et al. 2016)

1. Introduction

Apps & pronunciation

- CALL = positive effects on pronunciation (e.g. Thomson 2011)
- Need to know the “**views of clients** [teachers and learners] about what works” in pronunciation teaching

(Levis 2017: 1; see also Alghazo 2015, Couper 2012, Tergujeff 2013)



Goals of this pilot study

1. To assess the impact on pronunciation of a teaching strategy that combines the use of a mobile app and classroom instruction (learning outcomes + students' views)
2. To propose an improved model of the strategy “App+Class = better pronunciation”

2. Methods

Participants

- 12 native speakers of Chinese
- 1st year of Major in Portuguese Language (Portuguese as a Foreign Language)

Context

- **Course:** *Language Laboratory II* (year 1, semester 2)
- **Classroom instruction:** phonetics (phonetic transcription, word stress...); listening comprehension; speaking; pronunciation
- **Topics:** vocabulary & grammar of other courses (e.g. festivities, gastronomy, different verb tenses...)

2. Methods

Procedure

Table 1. The three moments of the pilot study.

| Time 1 | Period of 2 weeks | Time 2 |
|--|--|---|
| <p>Pretest: pronunciation in reading 18 words, recorded in Language Lab Sanako system, in class; later marked by the researcher as:</p> <ul style="list-style-type: none">•Totally correct: 1 point•Only 1 segmental/stress error: 0,5 points•>1 error: 0 points | <p>Homework assignment: use of the app, to be assessed later on vocabulary learning</p> <ul style="list-style-type: none">•SHOPPING: Shopping centre, Other shops•ENVIRONMENT: Town, Architecture•TRANSPORT: Roads, Bus <p>(total: new 36 words)</p> <p>Classes: about the same subtopics & similar vocabulary</p> | <p>Posttest: similar to the pretest (class)</p> <p>Questionnaire on the app assessment: on Survey Monkey (homework assignment); responses to open questions later categorised according to a content analysis</p> |

2. Methods

Selected app: *FunEasyLearn Português (Portugal) Version 5.6.5 - 6000 Words*

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Beginner level (1,000 words; free use)

New words (sound, spelling, meaning)

Several skills – listening, reading, translating, writing

[perception – e.g., Barriuso & Hayes-Harb 2018; Flege 1995]



Architecture of the app

1. TOPICS (15 in total)

e.g. HEALTH, FOOD, TRANSPORT...

2. Subtopics (approx. 8-10 under each topic)

e.g. TRANSPORT – roads, bus, car, bicycle...

3. Activities (7 activities with 4-15 words under each subtopic)

e.g. roads – *map, traffic jam, to drive, to park...*



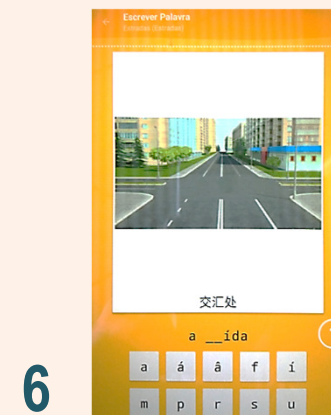
2. Methods

Selected app: *FunEasyLearn Português (Portugal) Version 5.6.5 - 6000 Words*

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Activities

1. **Vocabulary** – 1 image & translation & written & oral word, to memorize
2. **Find Image** – 1 word & 4 translations, to choose the translation and find the image
3. **Choose Word** – 1 image & translation & 2 written words, to choose the word
4. **Listen & Choose** – 4 images & translations & 1 oral word, to choose the oral word
5. **Match Words** – approx. 6 written words & translations, to match
6. **Write Word** – 1 image & translation & letters, to complete the written word
7. **Listen & Write** – 1 image & oral word & letters, to write the word



3. Results

Table 2. Pronunciation in word reading without previous practice: results in pretest and post-test.

| | Pretest | Posttest | Difference |
|-----------------------|---------|----------|------------|
| App + Class (6 words) | 56% | 74% | $p=.011$ * |
| App-only (6 words) | 49% | 65% | $p=.041$ * |
| Class-only (6 words) | 52% | 60% | $p=.194$ |
| Total (18 words) | 52% | 66% | $p=.009$ * |

Note: * statistically significant, $p \leq .05$

Related-Samples Wilcoxon Signed Rank Test

3. Results

Table 3. Questionnaire on the app assessment: results.

| Questions | Mean | Mode |
|---|------|------|
| 1. Do you agree with the sentences? | | |
| 1.1. The design and images are pleasant. | 4.00 | 5.00 |
| 1.2. It is easy to use. | 3.92 | 5.00 |
| 1.3. It is interesting and stimulates the desire to continue using. | 4.08 | 5.00 |
| 1.4. The images and information on the words are clear. | 3.92 | 5.00 |
| 1.5. I have learned much by using this app. | 3.92 | 5.00 |
| 1.6. It is useful to learn vocabulary. | 4.08 | 5.00 |
| 1.7. It is useful to learn pronunciation. | 4.00 | 5.00 |
| 1.8. It is useful to develop listening comprehension. | 4.00 | 5.00 |

Note: 1 totally disagree – 5 totally agree

3. Results

Table 4. Questionnaire on the app assessment: results (continued).

| Questions | Responses (Absolute Frequency) |
|---|--|
| 2. What did you learn with the app? | Vocabulary (10), pronunciation (5) |
| 3. Strengths of the app | Convenience (5), content (4), simplicity (2)... |
| 4. Shortcomings of the app | Few vocabulary (3), images (2), dictation (2), none (2)... |
| 5. Suggestions to improve the app | More vocabulary (4), images (2), none (2)... |
| 6. Approximately how much time did you use the app per day? | 6-10min (4), 11-20min (3), 21-30min (5) |

4. Discussion

Goal (1): to assess the impact on pronunciation of a teaching strategy that combines the use of a mobile app and classroom instruction

Results of this study (pronunciation in the posttest and students' views conveyed in the questionnaire)

→ the use of the app has a **positive impact** on words' pronunciation in terms of segments and word stress

Possible reasons for this improvement:

- More time on task
- Higher level of motivation for using a mobile app in the homework assignment and for having feedback on word knowledge
- Awareness of the assessment they would have after this homework.

4. Discussion

**Goal (2): to propose an improved model of the strategy
“App+Class = better pronunciation”**

CLASS: Introduction to the chosen topic (lexical field, specific communicative task, specific phonological structure...)
+ presentation of the homework assignment

HOMEWORK:

- defined and balanced **duration** (not too short or too long? controlled time for intervention studies but not necessarily in the pedagogical practice?)
- engaging **activity** (use different apps for different homework assignments to keep a good level of motivation?)
- delimited **content** in the app (an integration of autonomy and guidance that seems to work well)
- known **purpose** for the homework assignment (assessment of previously announced elements)

CLASS: Use and assessment of the pronunciation skills developed through the homework assignment (controlled or spontaneous speech, general pronunciation or specific sound/structure)

5. Conclusions

Limitations

- Small number of participants
- Short intervention period
- No strict control of the phonological properties of the used words
- No control of time spent with the app by the students
- No data on spontaneous speech

Important finding

- Combination: class instruction + use of app guided by the teacher
→ positive impact on the pronunciation development

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Thank you!



Questions? Suggestions?

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Appendix 2: Words read in the pretest and in the posttest

| | App-only | | App+Class | | Class-only | |
|----------|----------|-----------|-----------|-----------|------------|-----------|
| | Same | Different | Same | Different | Same | Different |
| Pretest | aldeia | catedral | castelo | trânsito | berma | museu |
| | templo | fábrica | escadas | rua | montra | ponte |
| | conduzir | mapa | torre | mercado | apressar | desvio |
| Posttest | (idem) | camião | (idem) | loja | (idem) | rio |
| | | chegar | | teatro | | partir |
| | | saída | | escola | | chegar |