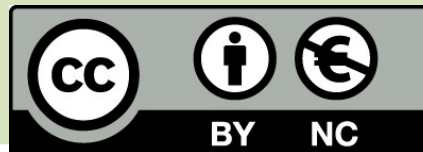




Using the “Framework for Assessment of App’s Usefulness in Pronunciation Learning” to choose a mobile app on European Portuguese

Adelina Castelo

**Universidade Aberta, DH, LE@D-Laboratório de Educação a Distância e eLearning (UID 4372/FCT)
Centro de Linguística da Universidade de Lisboa (UIDB/00214/2020/FCT)**



1. Introduction

CAPT: computer-assisted pronunciation training (e.g., O'Brien, 2018)

- More possibilities of pronunciation training

MALL: mobile-assisted language learning (e.g., Kukulska-Hulme, 2021)

- Formal and informal contexts
- Accessible, portable, 'on-the-move', 'cross multiple contexts'
- Adjusted to learners' personal goals and needs, even directed at challenges of specific learners' groups (e.g., rhotics to Cantonese speakers – see Amorim et al., 2022)

Apps for pronunciation learning?

General properties + specific requirements

Goals:

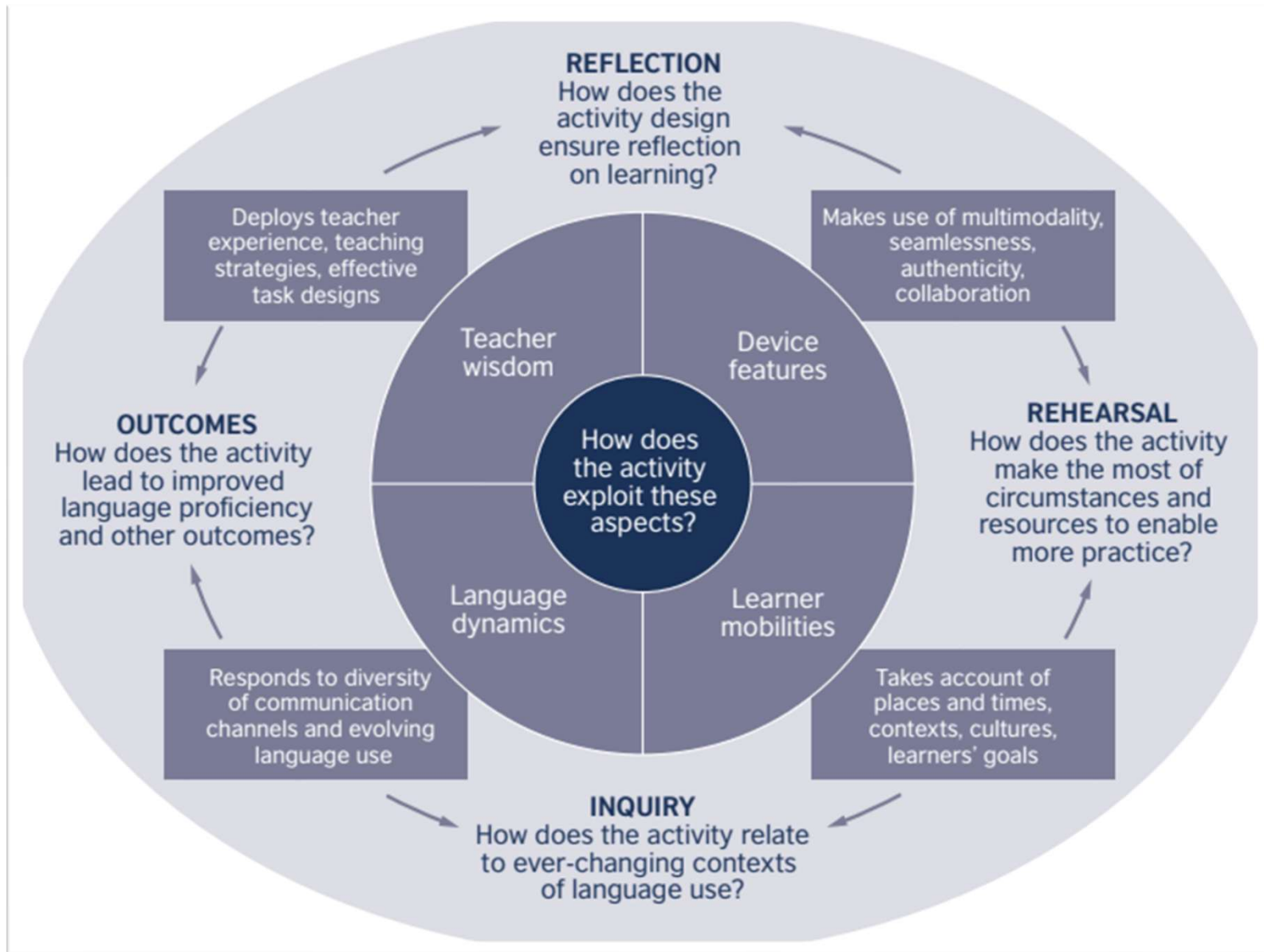
1. Observe the adjustment level to the requirements for pronunciation learning in the apps which are currently available for European Portuguese (EP)
2. Compare it with the results obtained in Castelo (2022a)

Framework for Assessment of App's Usefulness in Pronunciation Learning (Castelo, 2022a)

- MALL: Kukulska-Holmes, Norris & Donohue (2015)
- Language Apps: Rosell-Aguilar (2017)
- Pronunciation: Castelo (2022b)

2. Background

A Pedagogical Framework for Mobile Assisted Language Teaching and Learning (see Kukulska-Holmes, Norris & Donohue, 2015: 8)



2. Background

Framework for Language Learning App Evaluation (Rosell-Aguilar, 2017: 253)

Language learning

- Reading
- Listening
- Writing
- Speaking
- Vocabulary
- Grammar
- Pronunciation & int.
- Cultural info.
- Use of visual content
- Language varieties

Pedagogy

- Description
- Teaching
- Progress
- Scaffolding
- Feedback
- Quality of content
- Use of media
- Differentiation
- Engagement

User experience

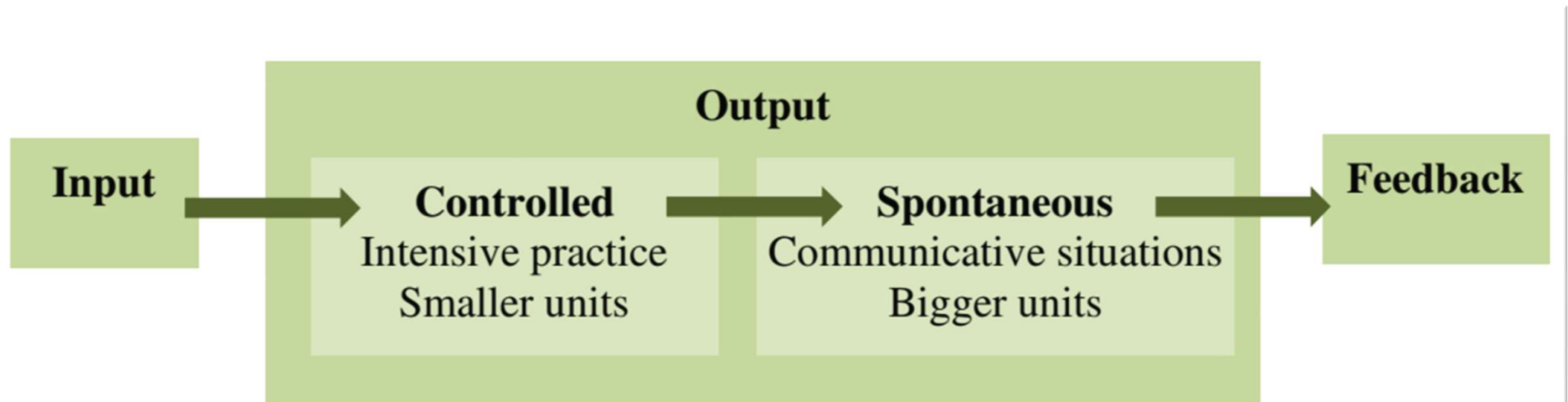
- Interaction
- Interactivity
- Sharing
- Badging
- Price
- Registration
- Advertising

Technology

- Interface
- Navigation
- Instructions
- Stability
- Gamification
- Support
- Offline work

2. Background

A Framework to Pronunciation Teaching (see Castelo, 2022b)



Integrative approach:

- ✓ implicit & explicit (motor + perceptual + cognitive)
- ✓ motivation & autonomy (psycho-social)

2. Background



Framework for Assessment of App's Usefulness in Pronunciation Learning

(Castelo, 2022a)

5 Criteria (◆):

- 4 criteria for general properties
- 1 criterion for pronunciation-specific properties,
assessed according to 5 subcriteria (★)

| | |
|------------------------|--------------------------------------|
| 4 general criteria | x 5 pentagons max. each ◆ ◆ ◆ ◆ ◆ |
| 5 specific subcriteria | x 5 stars max. each ★ ★ ★ ★ ★ |

2. Background

◆ Pedagogy

Does it offer **quality** of content, **progress** tracking, adequate **scaffolding**, **differentiation**, a meaningful **multimodality**, and **engaging** activities?

◆ Learner factors

Does the app promote **motivation** through **gamification**, **authenticity**, adaptation to **learners' mobility and goals**?

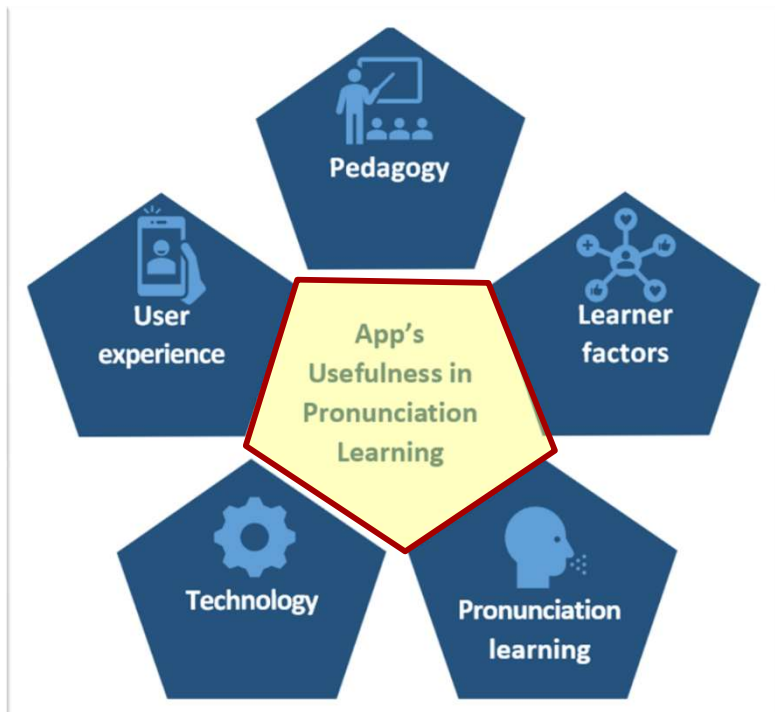
Does it foster the learner's **autonomy** and **reflection** on her/his learning process?

◆ User experience

Does the app foster **interacting** with contents, peer **collaboration**, **sharing** content and **badging**? What is the cost of using the app in terms of **payment**, seeing **ads**, and **registering**?

◆ Technology

Does the app offer an uncluttered and multimodal **interface**, an intuitive **navigation**, clear **instructions**, a **help** section, and **stability**?
Does it really favour **seamlessness**?



2. Background

★ Input

Do learners receive much input, having more **practice/rehearsal**? Does the input show **quality** (e.g., natural) and language **variety**?

★ Controlled output

Does the app offer many opportunities for more **practice/rehearsal** in controlled output?

★ Spontaneous output

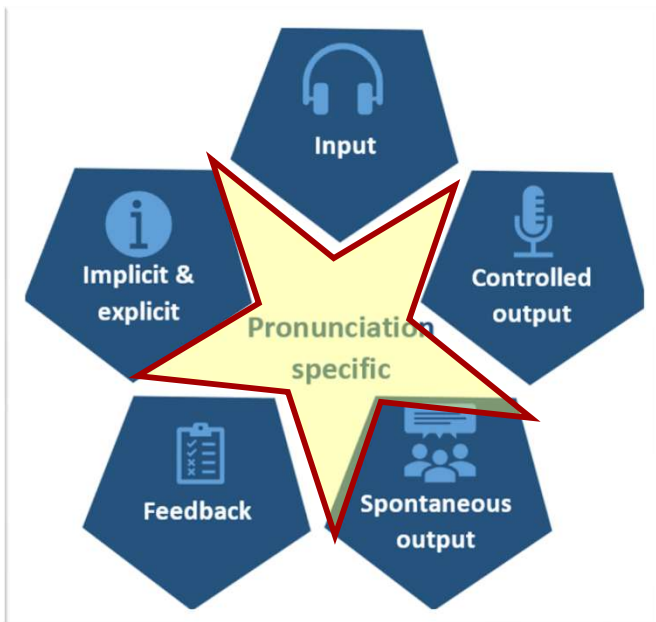
Do learners have (m)any opportunities for more **practice/rehearsal** in spontaneous output? Are they encouraged to seek other users' **collaboration** for completing **dialogic** speaking activities?

★ Feedback

Does the app offer much **automatic** feedback on input and output activities to check the improvement on the **outcomes**? Are there both an adequately **informative** automatic speech recognition system (**ASR**) and **peer** feedback?

★ Implicit & explicit

Does the app foster **implicit** learning, offer **explicit teaching** on pronunciation topics, and encourage **reflection** on the target pronunciation system and **inquiry** about phonetic diversity?



Constitution of apps' corpus

- Search in Google Play (through a PC) on 01/06/2025
- Search term: “Portuguese pronunciation conversation speaking”
- Results: 30 apps

https://play.google.com/store/search?q=Portuguese%20pronunciation%20conversation%20speaking&c=apps&hl=pt_PT&gl=US

- Exclusion: Brazilian Portuguese as target pronunciation (12), English as target language (5), translation Portuguese/English (3), mainly paid (1)



Final corpus of 9 apps

- ✓ Learning of European Portuguese (EP) pronunciation
- ✓ English as vehicular language
- ✓ Android
- ✓ mostly free

3. Method

2025




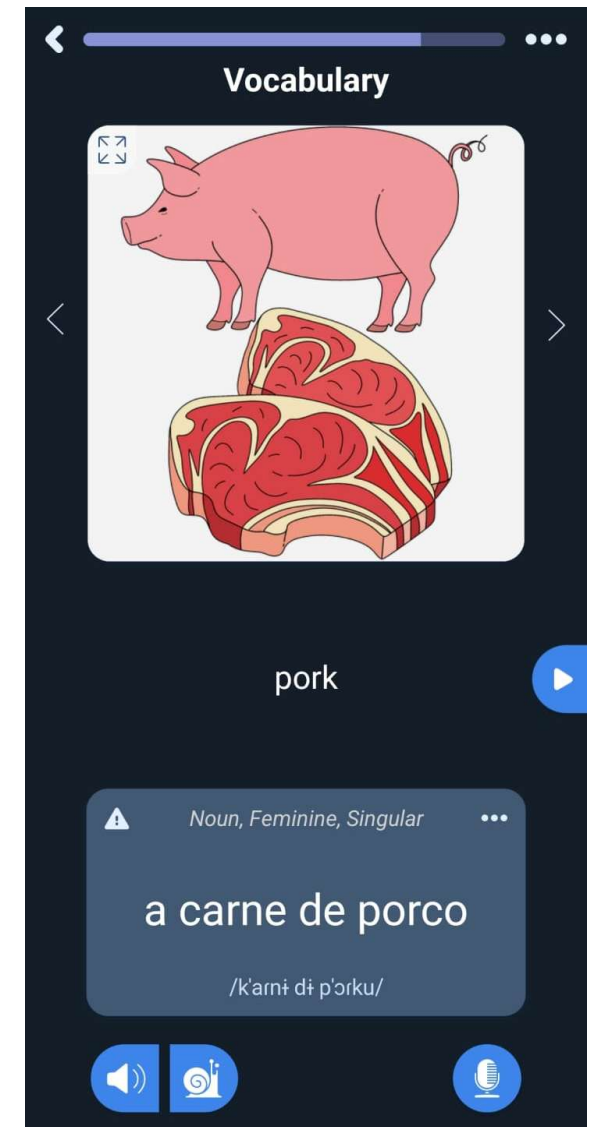
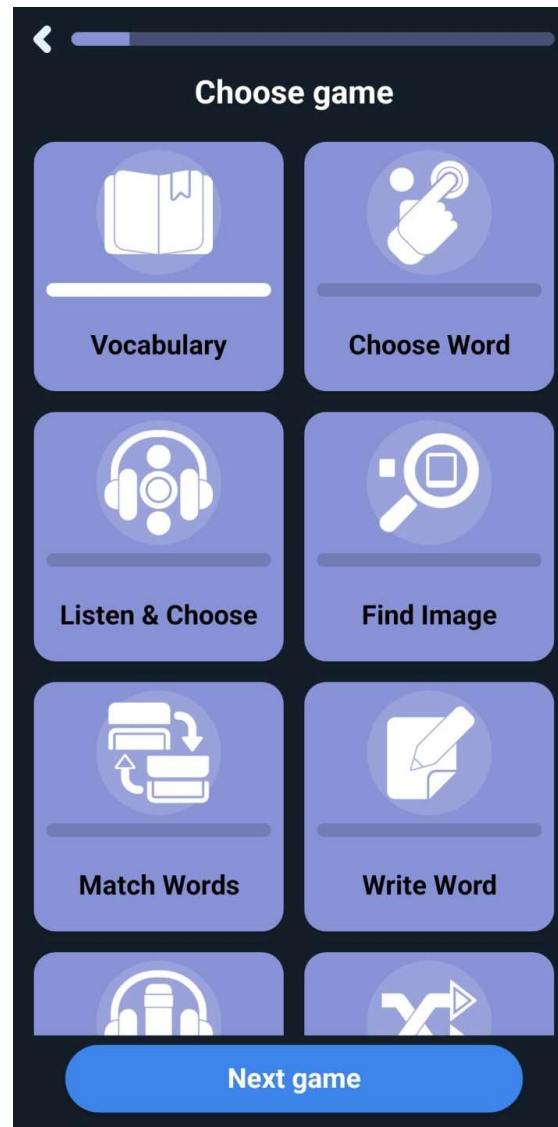
1. FunEasyLearn v.7.8.7 (<http://www.funeasylearn.com/>)
2. Português Fun Easy Learn – 5000 Phrases v.3.3.5 (<http://www.funeasylearn.com/>)
3. Practice Portuguese (<https://www.practiceportuguese.com/>)
4. Poro: Learn Portuguese (<http://porostudio.com/>, nihongo.appsdev@gmail.com, support@porostudio.com)
5. Poro: PT Vocabulário (<http://porostudio.com/>, nihongo.appsdev@gmail.com, support@porostudio.com)
6. Portuguese – Listening Speaking (ivoca.io, nhang.tini@gmail.com)
7. Talkpal (<https://talkpal.ai>)
8. Reword: Portuguese (<https://reword.app/en/de>)
9. Portuguese A1, 2023 (vdedod4@gmail.com, jorihoog@gmail.com)

3. Method


| 2022 | 2025 |
|--|--|
| <ul style="list-style-type: none">• FunEasyLearn• FunEasyLearn – Phrases• Practice Portuguese• Portuguese – Listening Speaking• Poro: Learn Portuguese | (5 kept) <ul style="list-style-type: none">• FunEasyLearn• FunEasyLearn – Phrases• Practice Portuguese• Portuguese – Listening Speaking• Poro: Learn Portuguese |
| <ul style="list-style-type: none">• Learn Portuguese (appoxis)• Aprenda Português (LEARN L.) | (2 not working any more) |
| <ul style="list-style-type: none">• Portuguese Pronunciation• Tobo PT Portuguese – vocabulary• Learn Portuguese (ASI Edu) | (3 not included in the search results) |
| | (4 new in the search results) <ul style="list-style-type: none">• Poro: PT Vocabulário• Talkpal• Reword: Portuguese• Portuguese A1, 2023 |
| Total: 10 apps | Total: 9 apps |

4. Results

| | |
|---|-----|
|  | |
| Pedagogy | 3 |
| Learner factors | 3 |
| User experience | 3 |
| Technology | 5 |
| ▶ Input | 3 |
| ▶ Controlled output | 4 |
| ▶ Spontaneous output | 0 |
| ▶ Feedback | 3 |
| ▶ Implicit & explicit | 2 |
| Pronunciation learning | 2,4 |
| Total average | 2,9 |



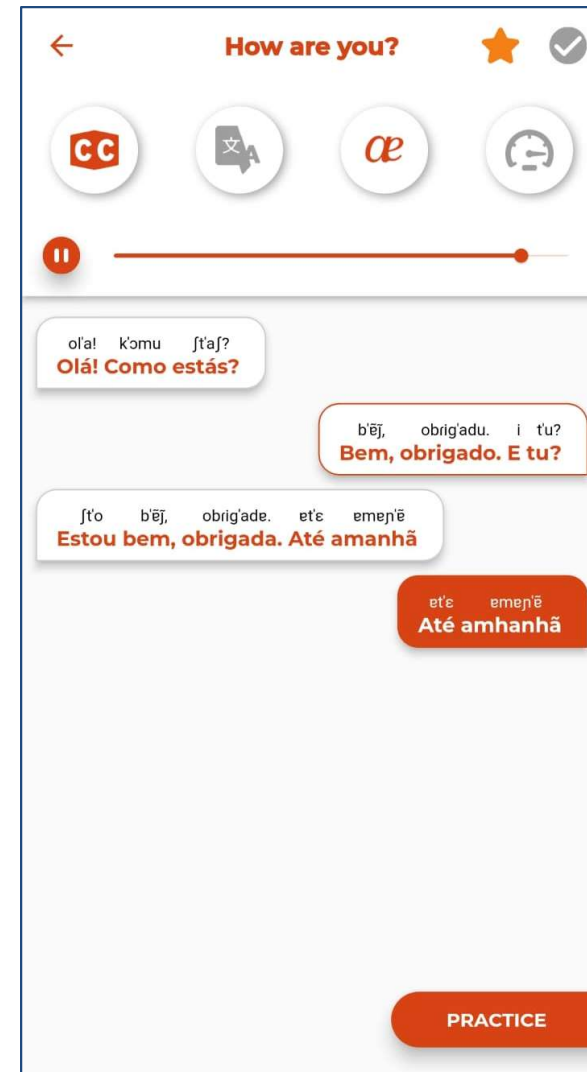
4. Results

| | |
|---|-----|
|  | |
| Pedagogy | 2 |
| Learner factors | 2 |
| User experience | 2 |
| Technology | 3 |
| ▶ Input | 2 |
| ▶ Controlled output | 1 |
| ▶ Spontaneous output | 0 |
| ▶ Feedback | 1 |
| ▶ Implicit & explicit | 2 |
| Pronunciation learning | 1,2 |
| Total average | 1,7 |



The screenshot shows the main menu of the 'PORTUGUESE LISTENING & SPEAKING' app. At the top, there is a settings gear, the app title, and a star icon. Below the title is an 'Upgrade to PRO version' button. The main content consists of several orange rounded rectangular buttons with icons and text:

- COMMON PORTUGUESE SENTENCES**: More than 600 common sentences by topic.
- 6000 ESSENTIAL WORDS** (with an 'Ad' badge): Learn Portuguese with Visual Vocabulary quickly and effectively!
- BEGINNER**: 70 basic conversations for beginners.
- ELEMENTARY**: 40 conversations about topics in daily life for elementary learners.
- INTERMEDIATE**: 40 conversations with familiar people in daily life.
- ADVANCED**: 25 conversations with people in social life, in the office.
- LISTENING TO PORTUGUESE SHORT STORIES**
- LISTENING TO PORTUGUESE NEWS**



The screenshot shows a listening practice screen titled 'How are you?'. It features a back arrow, a star icon, and a checkmark icon. Below the title are four circular icons: a Creative Commons license, a text-to-speech icon, a play button, and a refresh icon. A progress bar is visible. The audio content is displayed in two speech bubbles:

o'la! k'omu f'taf?
Olá! Como estás?








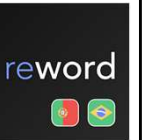

b'êj, obrig'adu. i tu?
Bem, obrigado. E tu?

f'to b'êj, obrig'ade. et'e eme'jê
Estou bem, obrigada. Até amanhã

et'e eme'jê
Até amanhã

At the bottom right, there is a red button labeled 'PRACTICE'.

4. Results

| |  |  |  |  |  |  |  |  |  |
|------------------------|---|--|---|---|---|---|---|---|---|
| Pedagogy | 3 | 3 | 4 | 2 | 3 | 3 | 5 | 2 | 2 |
| Learner factors | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 2 |
| User experience | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| Technology | 5 | 5 | 4 | 3 | 3 | 2 | 5 | 3 | 4 |
| ▶ Input | 3 | 3 | 4 | 2 | 2 | 3 | 4 | 1 | 3 |
| ▶ Controlled output | 4 | 4 | 1 | 1 | 1 | 4 | 3 | 1 | 1 |
| ▶ Spontaneous output | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| ▶ Feedback | 3 | 3 | 2 | 1 | 1 | 3 | 4 | 0 | 1 |
| ▶ Implicit & explicit | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Pronunciation learning | 2,4 | 2,4 | 1,8 | 1,2 | 1,2 | 2,2 | 3,4 | 0,6 | 1,2 |
| Total average | 2,9 | 2,9 | 2,6 | 1,7 | 1,8 | 2,3 | 3,7 | 1,3 | 1,8 |

5. Discussion

2022 (Castelo, 2022a)

- Points' average (general): **2,3** **1,8**
- Points' average (pronunciation): **1,8** **1,4**

• **3 most useful mobile apps to learn the EP pronunciation** (despite their limitations):

- *Talkpal* (3,7)
- *FunEasyLearn* (2,9)
- *FunEasyLearn Phrases* (2,9)

- *FunEasyLearn* (2,9)
- *FunEasyLearn Phrases* (2,9)
- *Learn Portuguese Conversation* (2,2)

5. Discussion

- **One app closer to the ideal properties for pronunciation learning:**
 - Talkpal (score: 3,7)
- **Most apps with several limitations:**
 - Very artificial speech, intonation problems, some BP and other varieties
 - Phonetic transcription errors or no transcription at all
 - Mainly memory/repetition and writing-related exercises (although gamified and already including audios for words/sentences at different speed rates)
 - No activities for spontaneous output

5. Discussion

- **Main aspects to improve when designing apps for this purpose:**
 - **Input** quality (words and dialogues, natural EP speech, correct intonation, varieties identified as different, listening comprehension and discrimination tasks)
 - **Controlled output** (encourage learners to repeat)
 - **Spontaneous output** with learners' communities or chatbots
 - **Feedback** quality (effective ASR systems, identification of pronunciation difficulties)
 - **Explicit instruction** (explanations, correct phonetic transcription)

Limitation

- Some possible subjectivity in assessment
- need to create a more detailed scoring system or define a rubric

Further research

- More research to assess real effects of using the apps in learners' pronunciation outcomes
- Development and testing of an app that fully aligns with the ideal properties

Some advantages of language mobile apps (vs. GenAI chatbots)

- Follow a structured progression
- Make tracking progress easier
- Often allow offline use
- Contribute to ecological sustainability due to their low power use

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Thank you!



Questions? Suggestions?

adelina.castelo@uab.pt