

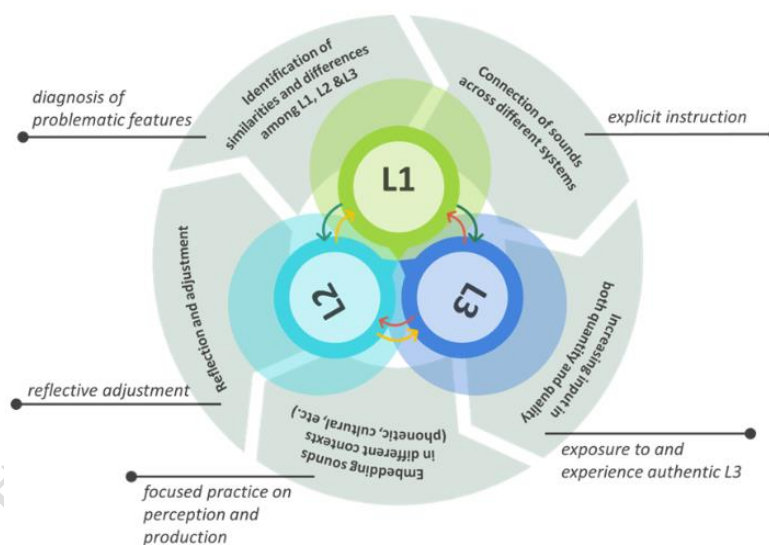
Target students: Secondary school students with Cantonese as their L1, Mandarin as their L2, and English as their L3, or English as their L2, Mandarin as their L3.

Topic: English front vowels /ɪ/ and /æ/

Duration: 40 minutes

Rationale: Research findings from the L3 project indicate that Cantonese speakers tend to replace English sounds /æ/ and /ɪ/ with /e/ and /i/ respectively. Given the complex language backgrounds of the learners in Guangdong and Hong Kong, this lesson makes use of the potential for both positive and negative transfer from these learners' L1 Cantonese and L2/L3 Mandarin when acquiring L3/L2 English pronunciation. The teaching activities are designed following the framework as shown below for these multilinguals to learn their L3/L2 pronunciation. The framework includes diagnosis of problematic features, explicit instruction, exposure to and experience authentic L3, focused practice on perception and production, and reflective adjustment.

A Framework for Integrating Learning Strategies and Mobile Pedagogy
for L3 Pronunciation



<https://corpus.eduhk.hk/L3PLT/index.php/teaching-kit/>

Prior knowledge:

Before the lesson, students have learned

- (1) International Phonetic Alphabet (IPA) symbols
- (2) some terminologies (e.g., diphthong)

Teaching aids and materials:

- (1) PowerPoint
- (2) Videos

(3) Corpus: https://corpus.eduhk.hk/esl_learner_corpus/

(4) AI tools

Murf: <https://murf.ai/>

Speechnotes: <https://speechnotes.co/dictate/>

(5) Worksheets

Objectives:

After the lesson, students are able to

- (1) self-identify their own features for English front vowels
- (2) use text-to-speech AI tools to generate samples containing front vowels for perception practice
- (3) use speech-to-text AI tools to give feedback on their production of front vowels

Procedures:

Stage I: Engage (9 minutes)

Purpose:

- (1) To spark students' interests in the topic
- (2) To build up the context for the whole lesson
- (3) To activate prior knowledge

Step 1 (2 minutes)

T plays an AI-generated video of a short conversation between a customer and a staff member in a hardware store.



[Conversation]

Customer: Excuse me, I need a new 'hemmer'.

Staff: A new 'hemmer'? Do you mean a sewing hemmer?

Customer: No, no. A 'hemmer'. You know, for hitting 'kneels'.

Staff: Oh, I see! You mean a Hummer. That's in our tools section. Follow me.

Customer: Hummer? No, not a car. A 'hemmer'!

Staff: Right, a hammer. H-A-M-M-E-R. It's for hitting nails, like you said.

Customer: Yes, that's what I've been saying. A 'hemmer'!
Staff: (smiling) Got it. Let me show you our selection of... hammers.
Customer: Great! I also need some 'kneels'.
Staff: (pause) Nails. You need nails. This way, please...

Step 2 (2 minutes)

T asks Ss what the customer wants to buy and then lists the words (i.e., hemmer, Hummer, hammer, kneel, nil, nail) that cause misunderstanding in the conversation.

Step 3 (2 minutes)

T plays the video again, highlighting the target words, and asks Ss to pronounce them.

Step 4 (3 minutes)

T introduces the target sounds for this lesson, then lets Ss self-identify their L1 (i.e., Cantonese) and read aloud the given words (e.g., 啤[pe1], 趴[paa1](Cantonese), 拍[pai1], 趴[pa1](Mandarin), pet[pet], pat[pæt]; 敵[dik6], 疊[dip6], 地[di4], did[dɪd], deed[di:d]). T then plays two recordings of these words and has Ss match the sounds with the words.

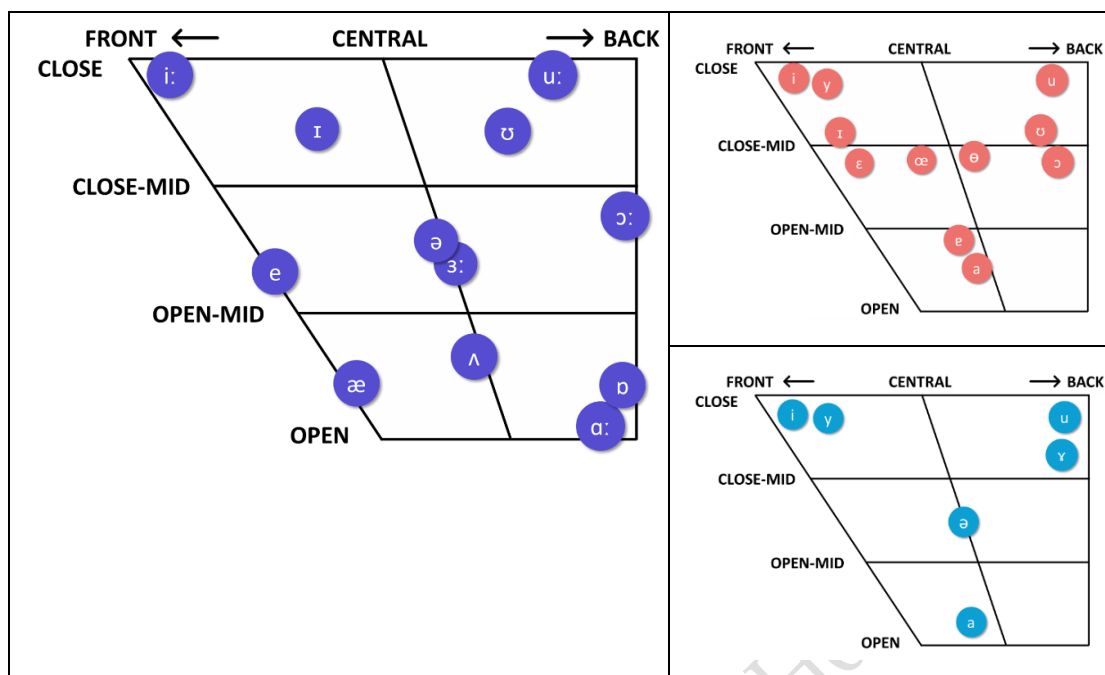
Stage II: Study (20 minutes)

Purpose:

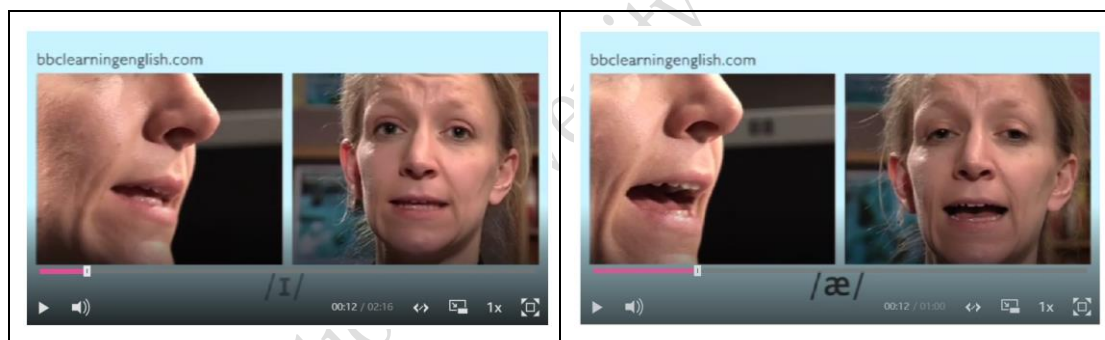
- (1) To raise Ss' awareness on English front vowels /i:/, /ɪ/, /e/, /æ/
- (2) To familiarize Ss with learners' common features on English front vowels
- (3) To let Ss self-reflect their own features for English front vowels
- (4) To compare different pronunciation of the front vowels between learners/themselves and native speakers (both real and AI-generated)

Step 1 (7 minutes)

T gives instructions on articulatory knowledge of English front vowels explicitly, by using visual aids including vowel chart and YouTube videos.



Adapted vowel charts of English, Cantonese, and Mandarin:
https://corpus.eduhk.hk/english_speaking/index.php/hvpt-eng-v/



1. Vowel /ɪ/:
<https://www.bbc.co.uk/learningenglish/english/features/pronunciation-short-vowels/shortvowel1>
2. Vowel /æ/:
<https://www.bbc.co.uk/learningenglish/english/features/pronunciation-short-vowels/shortvowel7>

According to the vowel charts, T explains that Ss can first pronounce the Cantonese sound /ɪ/, then gradually move the raised part of the tongue back to produce the English /ɪ/ sound. For the /æ/ sound, Ss can start by pronouncing Cantonese /ɛ/ sound, then move to English /e/ sound, and finally lower the jaw to try to pronounce the Mandarin /a/ sound. Besides that, T has Ss pronounce Cantonese /a/ and Mandarin /a/ sounds, paying attention to the slight difference in vowel height that affects the vowel quality.

(Notes: To enhance the explanation, T can add arrow symbols to the vowel chart,

showing the subtle differences between Cantonese/Mandarin sounds and target English sounds. This multimodal demonstration helps students visualize the required tongue position.)

Step 2 (5 minutes)

T plays the recordings containing target front vowels that are pronounced inappropriately by Hong Kong and Guangdong learners in a spoken corpus and lets Ss identify if the sounds are correctly pronounced.

Passage Two (Segmental)

Step 1:

Step 2:

Step 3: ☐ /e/ ☐ /æ/ ☒ /i/ ☐ /u/ ☐ /ʌ/ ☐ /ə/ ☐ /ɒ/

Step 4: ☐ /ɪ /->/eɪ/ ☐ /ɪ /->/ʊ:/ ☐ /ɪ /->/ə/ ☐ /ɪ /->/ɒ/ ☐ /ɪ /->/e/ ☒ /ɪ /->/i:/ ☐ /ɪ /->/aɪ/ ☐ /ɪ /->/ʊ/ ☐ /ɪ /->/ə/ ☐ /ɪ /->/æ/

Passage Two [Search Result]

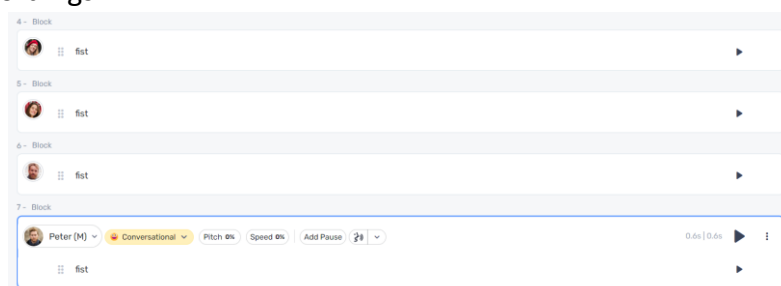
Speaker: HK03	Speaker: HK06	Speaker: HK07
Speaker: HK09	Speaker: HK12	Speaker: HK13
Speaker: HK14	Speaker: HK15	Speaker: HK18
Speaker: HK19	Speaker: HK20	Speaker: ML03
Speaker: ML06	Speaker: ML07	Speaker: ML08
Speaker: ML11	Speaker: ML15	Speaker: ML21
Speaker: ML22	Speaker: ML23	Speaker: ML24

T then shows the annotations provided by the corpus.

Raising his fist (/ɪ /->/i:/) in the air, he ran down to the village shouting 'Wolf , wolf .' As soon as they heard him, the villagers all rushed from their homes, full of concern for his safety , and two of his cousins even stayed with him for a short while.

Step 3 (5 minutes)

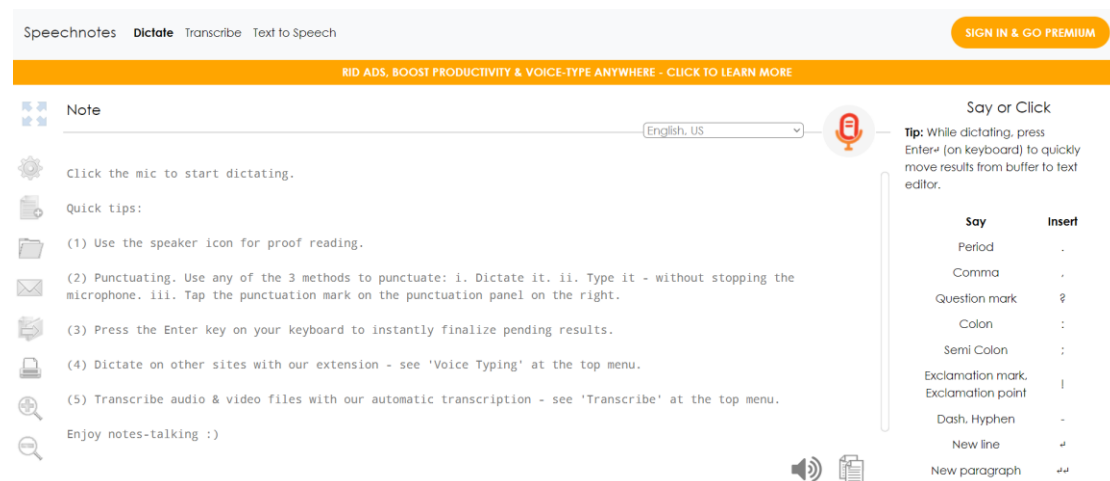
T further introduces the text-to-speech tool 'Murf' where users can create sample recordings using different voices and accents from native speakers, catering to their specific requirements. T generates two recordings of the word 'fist' and lets Ss to listen to recordings.



<https://murf.ai/>

Step 4 (3 minutes)

T introduces the speech-to-text tool 'Speechnotes', where users can perform production tasks. Its dictation function converts users' speech into text, helping learners identify if their pronunciation is correct and clear.



<https://speechnotes.co/dictate/>

Stage III: Activate (11 minutes)

Purpose:

- (1) To give Ss opportunities to apply the knowledge they learned in real context
- (2) To encourage sharing of ideas among Ss
- (3) To give Ss chances to appreciate other Ss' performance

Step 1 (5 minutes)

T divides the class into three/six groups and assign each group a task to prepare 3-5 sentences based on the heading (Worksheet 1). T asks Ss to brainstorm the words related to the topic and containing the front vowels /ɪ/ and /æ/.

Production task: Introducing Harry Potter

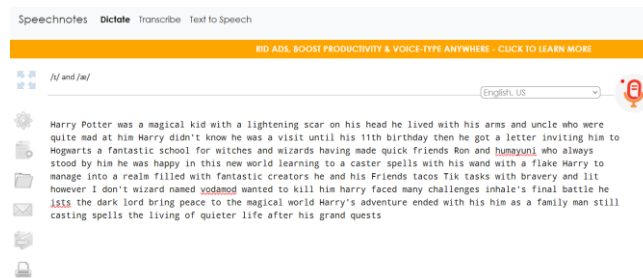
Group 1: Introduction to Harry's World

Group 2: Harry's Life at Hogwarts

Group 3: The Final Battle and Aftermath

Step 2 (4 minutes)

T invites Ss to share their answers and uses Speechnotes to assess Ss' pronunciation.



Step 3 (2 minutes)

T recaps the learned content in this lesson. T then assigns after-class activity to Ss.

After-class activity

1. Use Murf to generate a recording of the answer (either your group work or the sample answer)
2. Use Speechnotes to practice the answer (either your group work or the sample answer)
3. Make notes on the words that are mis-dictated by Speechnotes and further practice these words in isolation and in complete sentences.

Sample answer:

Harry Potter was a magical kid with a lightning scar on his head. He lived with his aunt and uncle, who were quite mad at him. Harry didn't know he was a wizard until his eleventh birthday. Then, he got a letter inviting him to Hogwarts, a fantastic school for witches and wizards.

Harry made quick friends, Ron and Hermione, who always stood by him. He was happy in this new world, learning to cast spells with his wand. With a flick, Harry could vanish into a realm filled with fantastic creatures. But it wasn't all fun and games. The dark wizard named Voldemort, who'd killed Harry's parents, wanted to kill him too.

He and his friends tackled tricky tasks with bravery and wit, facing numerous dangers throughout their school years. In his final battle, he vanquished the dark lord, bringing peace to the magical world. Harry's adventure ended with him as a family man, still casting spells but living a quieter life after his grand quests.

Worksheet 1

Production task

Please focus on the section of Harry's story assigned to your group. List 5 words with /i/ sound and 5 with /æ/ sound related to the topic. Then write 3-5 sentences using these words, based on the points provided for your section.

Part I: Introduction to Harry's World

- Harry's life with his aunt and uncle.
- Discovering he's a wizard on his eleventh birthday.
- Receiving his letter to Hogwarts.

Part II: Harry's Life at Hogwarts

- Making friends with Ron and Hermione.
- Learning magic and casting spells.
- Encountering challenges and creatures.

Part III: The Final Battle and Aftermath

- Facing Voldemort and the final battle.
- Bringing peace to the magical world.
- Living a quieter life as a family man.

[illegible]

Your answer:

[illegible]

Hints

Harry Potter was a magical kid with a lightning scar on his head. He lived with his aunt and uncle, ...

Harry made quick friends, Ron and Hermione, who always stood by him. He was happy in this new world, ...

He and his friends tackled tricky tasks with bravery and wit, facing numerous dangers throughout their school years. In his final battle, ...

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