

專屬訂製兒童學習型影片

爸媽的 **瑪卡巴卡** 和陌生人的 **瑪卡巴卡**

對孩子來說很不一樣！

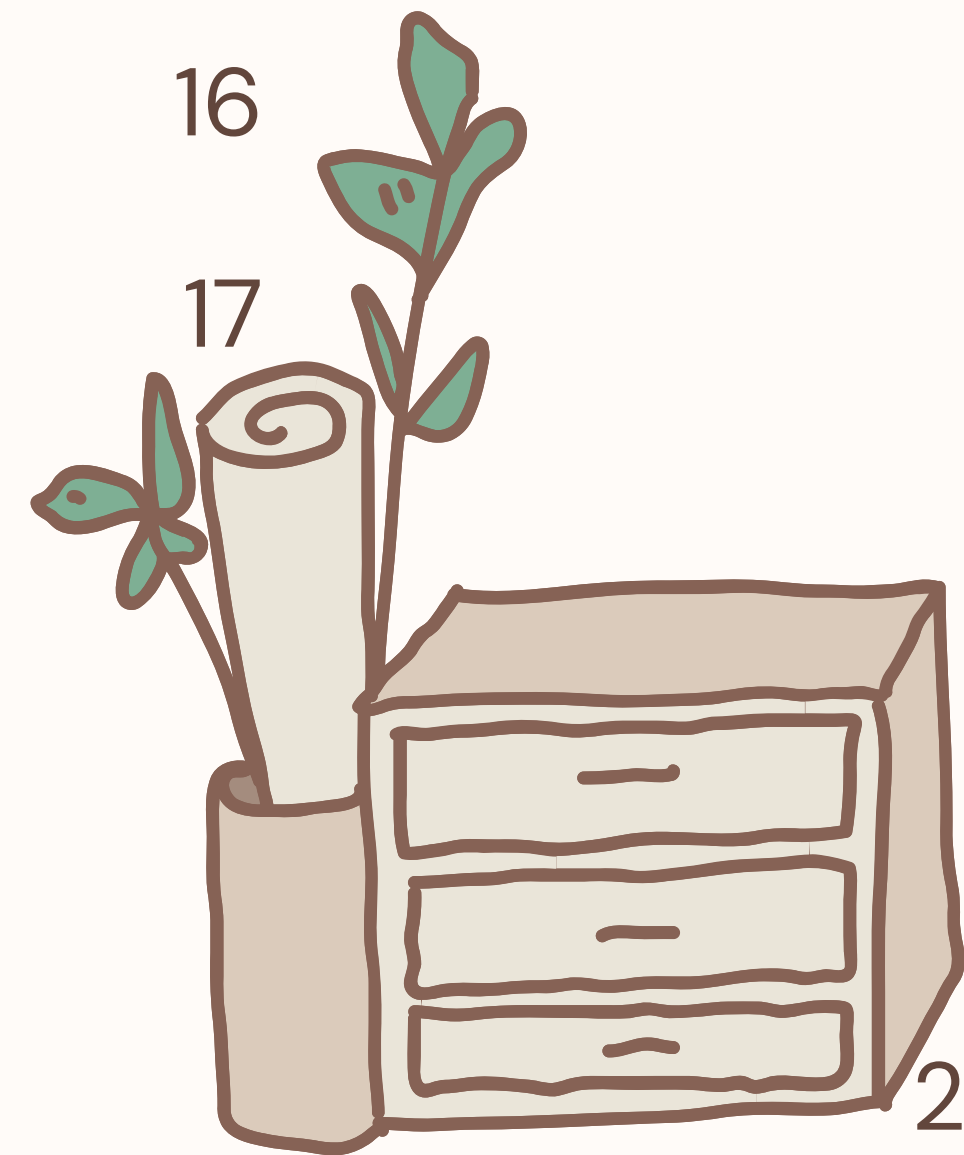
第十組

張肇云、李語霏、洪孝璞、陳昭佑
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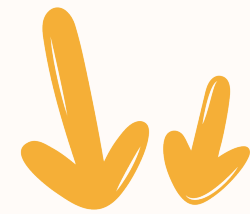
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發想動機:

將心理學知識結合過去生活經驗



想讓孩童能
更幸福且有效的學習~



產品設計:

打造一系列模擬家長語音和臉部的
兒童教學影片

我們能幫家長自由置換自己的臉或聲音！



知識基礎:

嬰兒/小孩在聽到熟悉的聲音時較容易辨認其語句的內容。

因此我們將小孩觀看的學習影片或卡通透過語音和臉部置換的方式，將主角替換為父母/熟悉親人的配音&臉

→ 增進小孩觀看這類影片時的學習效果。

我們發想了兩種特製版本:

1. 專屬配音卡通
2. 配音+換臉的真人教學影片

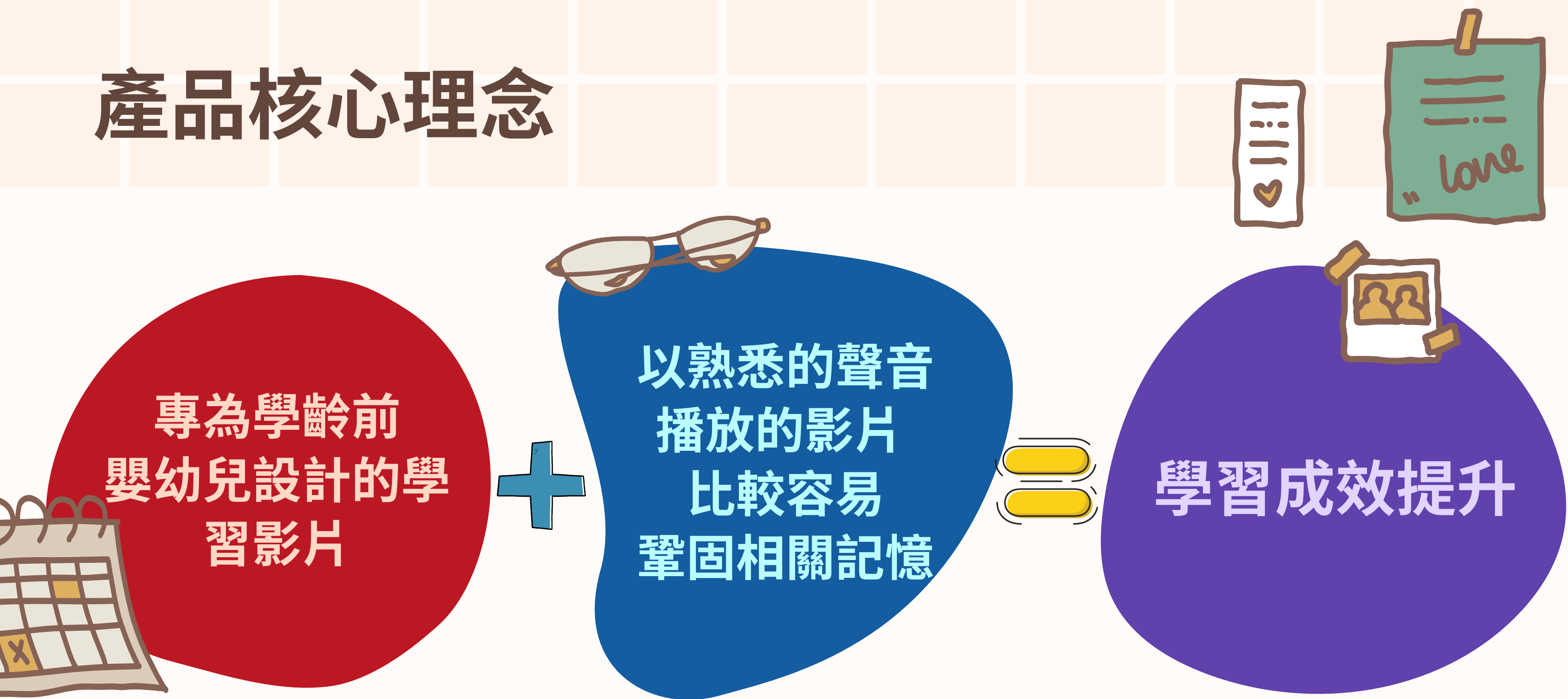


產品一：專屬配音卡通

用組員們的聲音重製了佩佩豬卡通



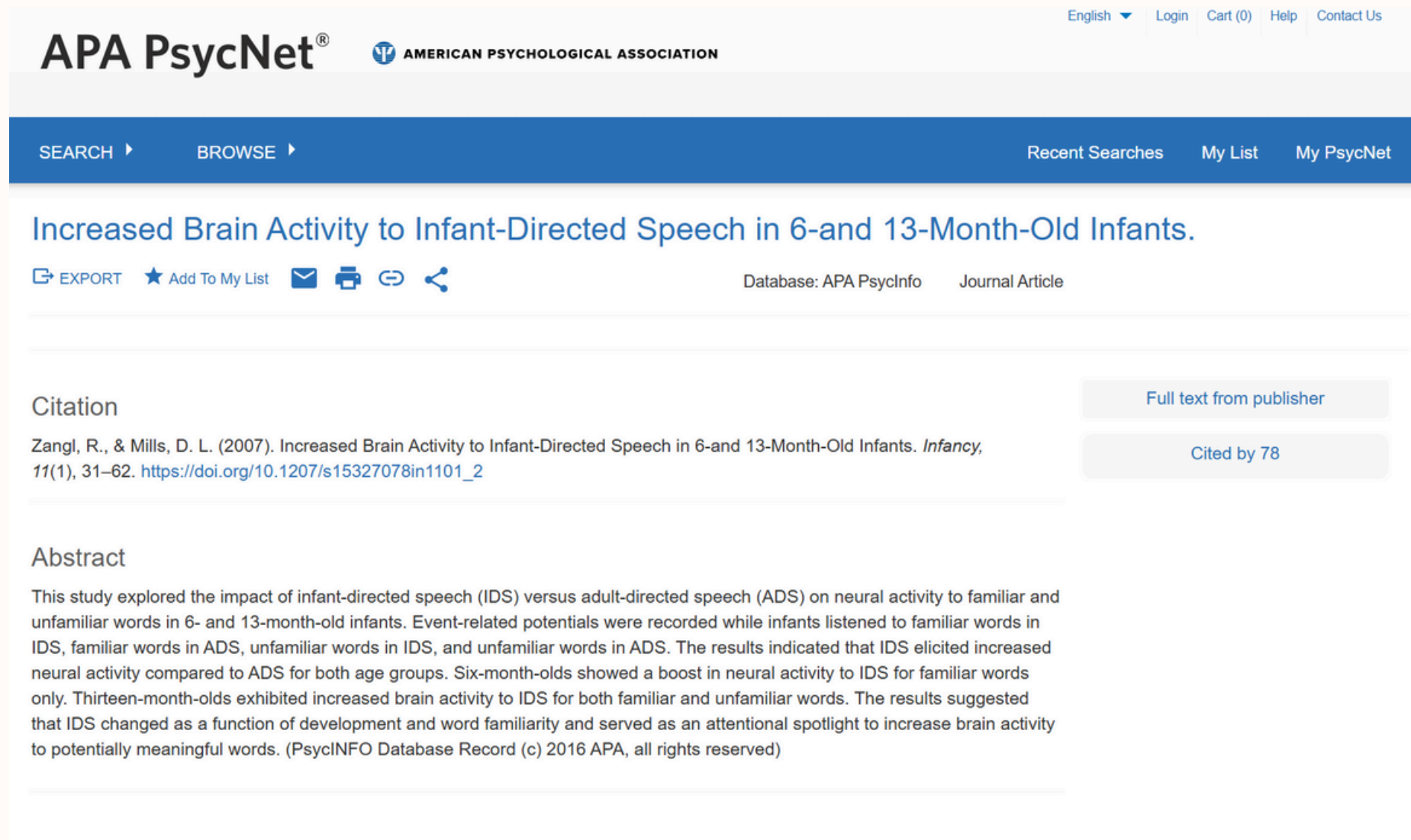
產品核心理念



學習型影片的能效來源-1

通常以IDS呈現

能幫助嬰幼兒提高對語音的注意力、並有助於區分單字。



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Increased Brain Activity to Infant-Directed Speech in 6-and 13-Month-Old Infants.

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Citation

Zangl, R., & Mills, D. L. (2007). Increased Brain Activity to Infant-Directed Speech in 6-and 13-Month-Old Infants. *Infancy*, 11(1), 31-62. https://doi.org/10.1207/s15327078in1101_2

Abstract

This study explored the impact of infant-directed speech (IDS) versus adult-directed speech (ADS) on neural activity to familiar and unfamiliar words in 6- and 13-month-old infants. Event-related potentials were recorded while infants listened to familiar words in IDS, familiar words in ADS, unfamiliar words in IDS, and unfamiliar words in ADS. The results indicated that IDS elicited increased neural activity compared to ADS for both age groups. Six-month-olds showed a boost in neural activity to IDS for familiar words only. Thirteen-month-olds exhibited increased brain activity to IDS for both familiar and unfamiliar words. The results suggested that IDS changed as a function of development and word familiarity and served as an attentional spotlight to increase brain activity to potentially meaningful words. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

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> *Infancy*. 2005 Jan;7(1):53-71. doi: 10.1207/s15327078in0701_5. Epub 2005 Jan 1.

Infant-Directed Speech Facilitates Word Segmentation

Erik D Thiessen¹, Emily A Hill², Jenny R Saffran²

Affiliations + expand

PMID: 33430544 DOI: 10.1207/s15327078in0701_5

Abstract

There are reasons to believe that infant-directed (ID) speech may make language acquisition easier for infants. However, the effects of ID speech on infants' learning remain poorly understood. The experiments reported here assess whether ID speech facilitates word segmentation from fluent speech. One group of infants heard a set of nonsense sentences spoken with intonation contours characteristic of adult-directed (AD) speech, and the other group heard the same sentences spoken with intonation contours characteristic of ID speech. In both cases, the only cue to word boundaries

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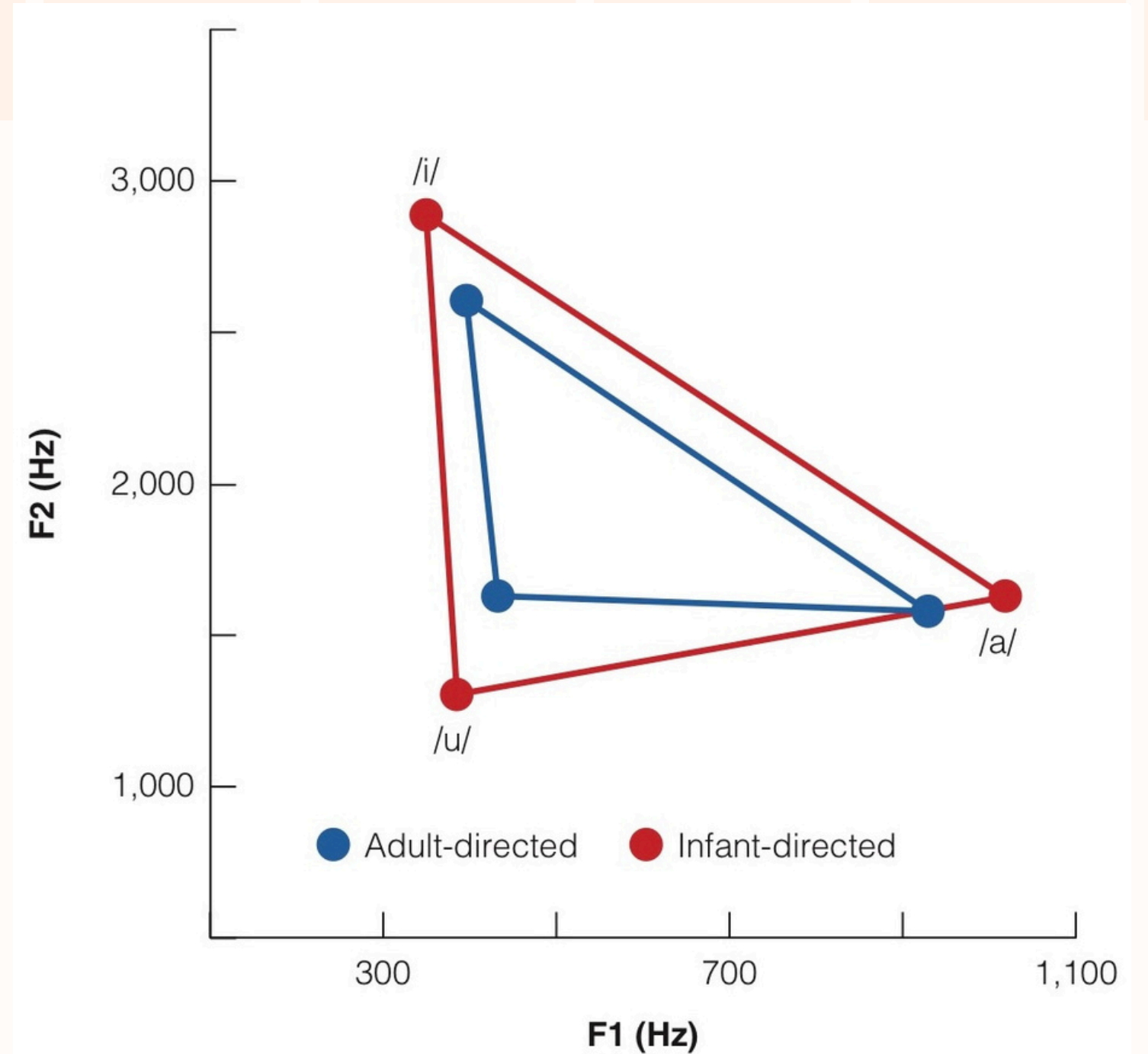
PAGE NAVIGATION

Title & author

補充:什麼是IDS

infant-directed-speech

1. 音調較高
2. 音調範圍較廣
3. 語速較慢
4. 字詞間的分隔更加明顯
5. 經常重複詞彙 ex: 喝水水



學習型影片的能效來源-2

學齡前兒童聽熟悉的聲音 可對於已學過字彙有較好的處理和認識

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Science News

from research organizations

Children understand familiar voices better than those of strangers

Date: October 6, 2014

Source: New York University

Summary: Familiar voices can improve spoken language processing among school-age children, according to a study. However, the advantage of hearing a familiar voice only helps children to process and understand words they already know well, not new words that aren't in their vocabularies.

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Journal of Child
Language

Article contents

Abstract

Footnotes

References

Talker familiarity and spoken word recognition in school-age children*

Published online by Cambridge University Press: 27 August 2014

SUSANNAH V. LEVI

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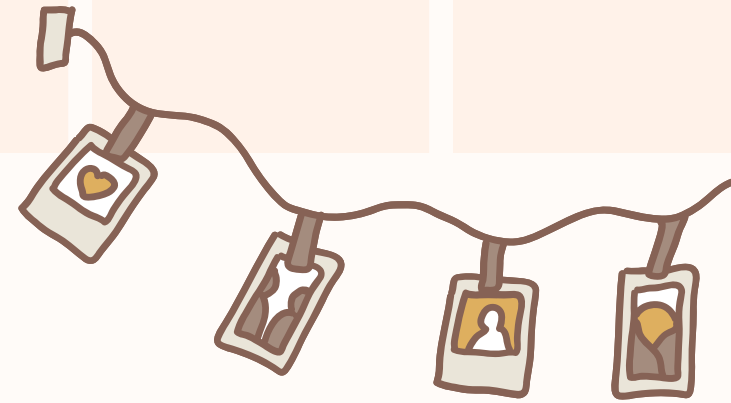
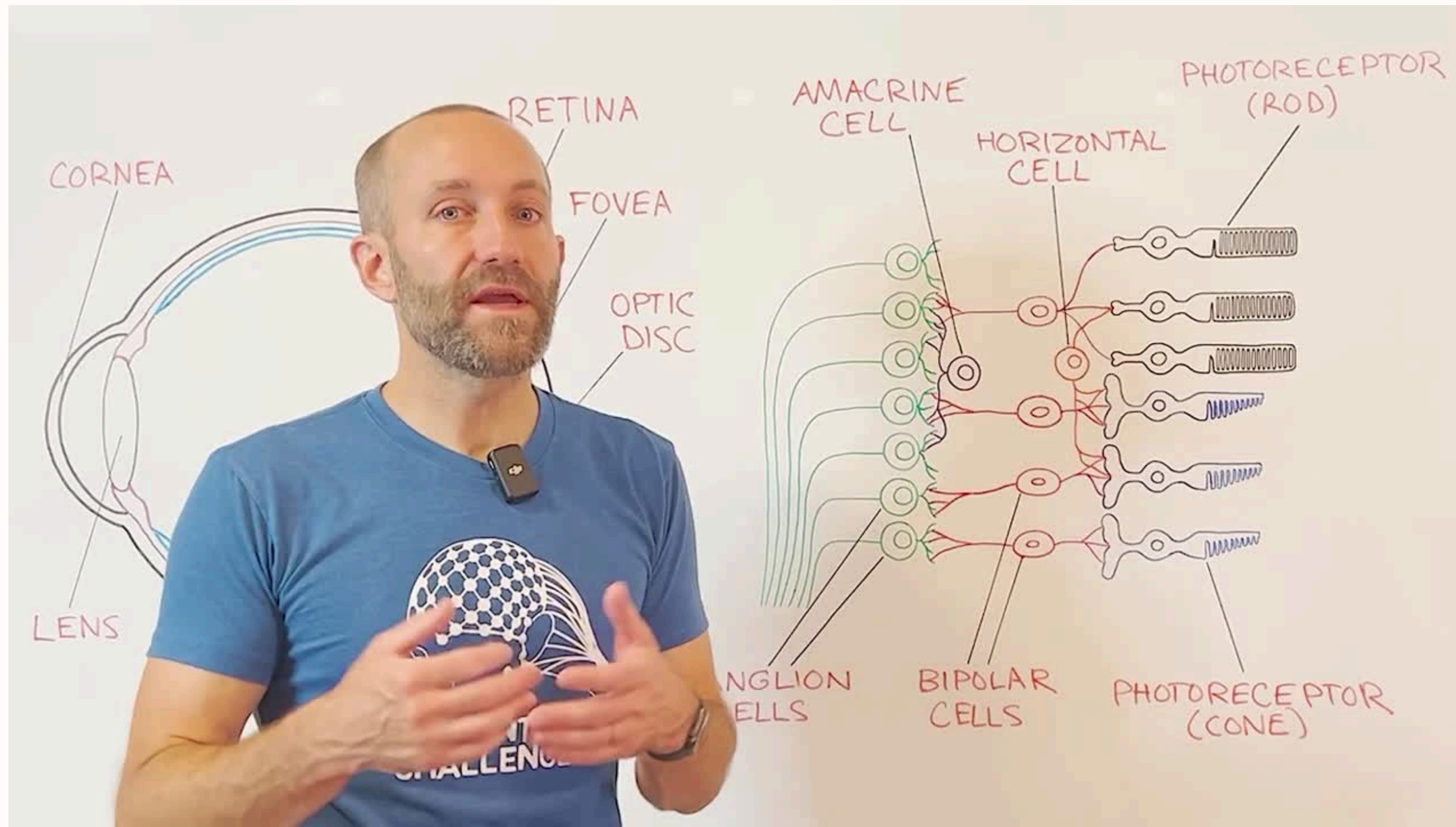
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Abstract

Research with adults has shown that spoken language processing is improved when listeners are familiar with talkers' voices, known as the familiar talker advantage. The current study explored whether this ability extends to school-age children, who are still acquiring language. Children were familiarized with the voices of three German-English bilingual talkers and were tested on the speech of six bilinguals, three of whom were familiar. Results revealed that children do show improved spoken language processing when they are familiar with the

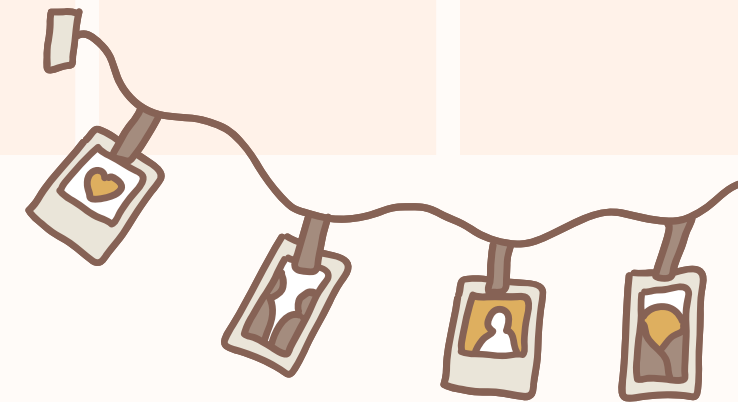
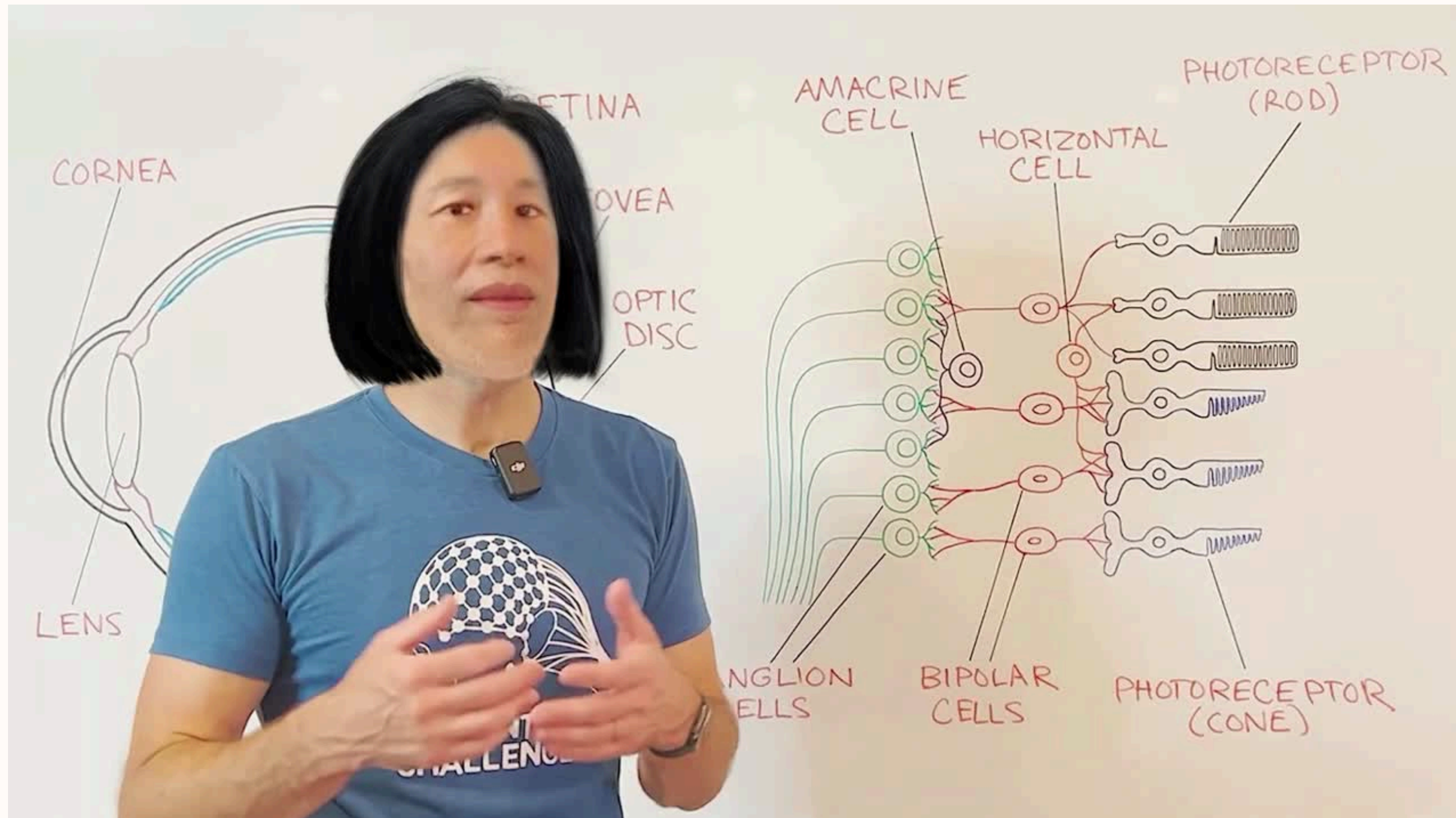
產品二：配音+換臉的真人教學影片

原始影片



產品二：配音+換臉的真人教學影片

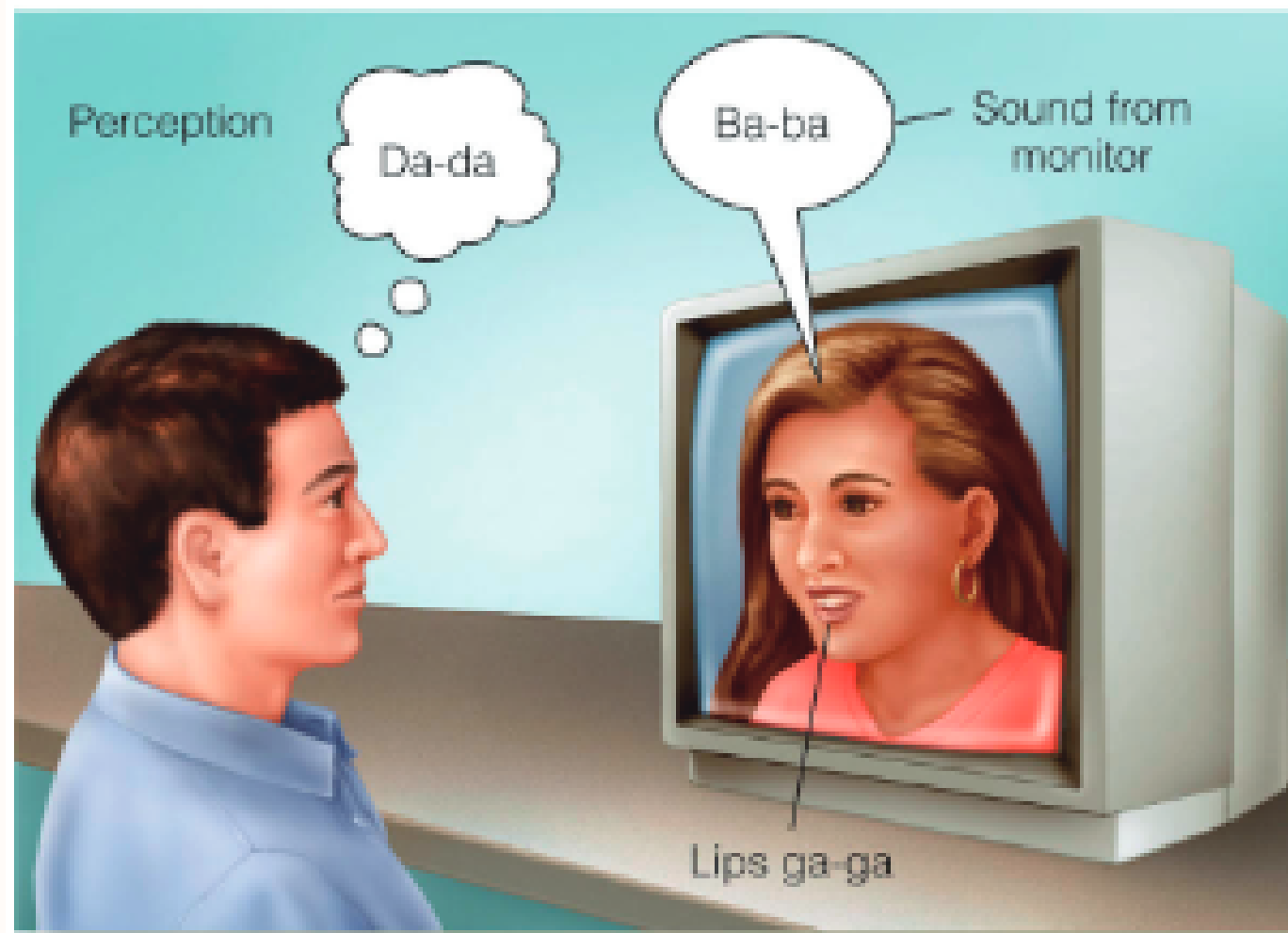
我們置換了素玲老師的聲音來製作講解 visual pathway 的影片



產品核心理念

對語音的知覺不僅仰賴語音刺激 也會受視覺訊息所影響

McGurk & MacDonald (1976)



McGurk effect

audio-visual speech
perception

學習型影片的能效來源

關於語言學習 熟悉的臉和熟悉的聲音一樣重要

Supporting Communication for Infants and Toddlers

As an infant and toddler caregiver, you also become an infant's and toddler's language and communication partner. Infants grow from turning their heads and responding to familiar faces and voices to being able to express their thoughts, feelings and experiences in words as toddlers. This amazing development occurs primarily through the interactions and experiences created by adult caregivers who use communication and language with infants and toddlers in responsive and meaningful ways throughout the day. Take a moment to think about the responsive care you provide and the ways it affects infants' and toddlers' language and communication development.

The handout, *More Than Baby Talk*, outlines ten practices that support language and communication skills of infants and toddlers. The table below highlights the practices that are presented and defined within the handout. In addition, you will find the research evidence supports the use of each practice along with strategies and ideas for using the practice with infants and toddlers.

Kriegstein (2005)

發現聽到熟悉的人的語音

會同時活化 STS 與 FFA

陌生人的語音則不會活化 FFA

顯示語音與臉孔知覺是互有連結的。



產品的SWOT分析



S

優勢

- **親密感提升**：父母的聲音能帶來情感連結，讓孩子更有安全感和興趣。
- **個人化體驗**：以熟悉的聲音進行教學，更能滿足個別需求。
- **學習投入度高、學習效果好**：熟悉的聲音能有效吸引孩子的注意力，提升學習效果。

O

機會

- **家長教育重視程度上升**：隨著少子化，家長更加重視孩子學習，希望孩子贏在起跑點
- **AI迅速發展**：AI未來能更精確處理和改良父母聲音的表現。
- **市場同類競品少**：搶占市場先機

W

劣勢

- **製作成本增加**：錄製和處理父母聲音的流程較繁瑣
- **技術要求高**：需精準同步聲音和內容，確保教學效果

T

威脅

- **市場競爭**：教育市場充滿其他創新產品的挑戰
- **用戶接受度**：部分家長可能對技術應用於教育有疑慮

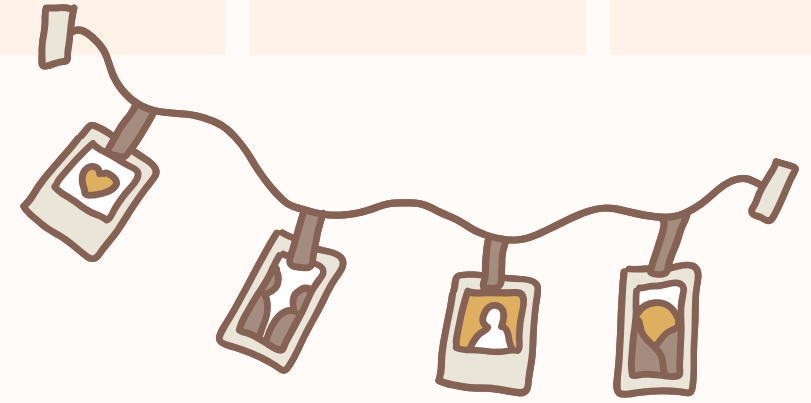
未來展望

前期:

先和知名兒童學習型影片合作
進行置換聲音或臉部的服務

後續:

再開發我們獨家設計的教學影片
AI建模技術提升人臉置換精確性！



The End

Thank You for Listening



知覺第十組

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兒童教學影片

我們能幫家長自由置換自己的臉或聲音！



4



產品一：專屬配音卡通

用組員們的聲音重製了佩佩豬卡通

