

# VOCABULARY KNOWLEDGE AND LEARNING

Understanding how to support EAL learners in vocabulary study, including those who struggle with specific learning differences

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ENGLISH

How many words are there in English?

- A) 250,000
- B) 500,000
- C) 1,000,000



All of the above.

The Second Edition of the Oxford Dictionary has about 230,000 including 47,000 which are no longer in use.

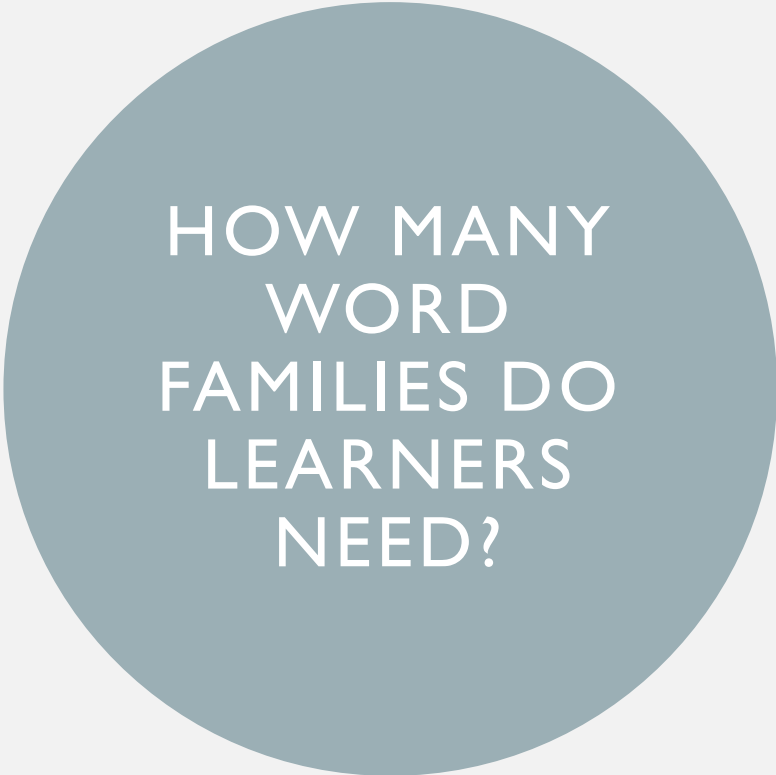
Other researchers estimate 400,000-600,000 and some report 1-2 million

# WORD FAMILIES

*work*  
*worked*  
*working*  
*worker*  
*work it out*  
*work-out*

} Different words or do they belong to the same word family?

- Lexeme (the word you'll find in a dictionary) / Lemmas (words with inflections) / Derivations (different parts of speech) / Multi-word units
- Gould, Nation, and Read (1990) counted 114K word families in Webster's International Dictionary



HOW MANY  
WORD  
FAMILIES DO  
LEARNERS  
NEED?

2-3K to process day-to-day conversation  
5-7K to speak on a wide range of topics  
3-5K to read authentic texts  
8-9K to read on a wide variety of topics\*

\*It's estimated an educated native speaker knows about 20,000 English word families

## PRIORITY WORDS

Some words are more important than others.

2,000 High frequency words account for about 80% of English texts

Hwang & Nation (1995)

Within that group of high frequency words the Dolch List (280 words) and Dolch Noun List (95 words) may account for 50-75% of all words found in children's books and school resources

**Introduce high frequency words!**  
The more words a learner recognizes, the better. Also easier to guess at low frequency words.



WHAT  
WE'LL  
TALK  
ABOUT

- English vocabulary
- What it means to know a word
- Brief look at some research
- Learning and teaching vocabulary
- Individual differences

Aptitude, motivation, self-efficacy and anxiety

First language and age

Specific learning differences

# VOCABULARY IS IMPORTANT

- It's the most commonly used approach to measuring proficiency (**how many words do they know + how well do they know them**)
- It's linked to success across all four skills: Listening, Speaking, Reading and Writing
- The more words they know, the more words they can learn

# INTRODUCTIONS

## **Education**

BA French language and literature (Georgetown University) 2005

MSc in Applied Linguistics and Second Language Acquisition (University of Oxford) 2010

PhD in Applied Linguistics with a focus on vocabulary learning (University of Nottingham) 3<sup>rd</sup> year

## **Work Experience**

I've spent the last 15 years working in the language learning industry: teaching and teacher training, curriculum development for the US Defense Language Institute, English language assessment development for EF and Cambridge Michigan, E-Learning Director for Lingua.ly, consulting for startups Memrise, FlashAcademy. I'm currently a teaching affiliate at the University of Nottingham and I freelance as an author of articles on language learning and specific learning differences.



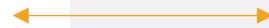
# GROUP TASK I


1. Do you speak or have you ever studied a second language? Which one?
2. What was the hardest thing you found about learning a language?

*Take a few minutes to introduce yourself and share your answers with the table.*



# WHAT DOES IT MEAN TO KNOW A WORD?



apple   
apple (written)

Establishing form-meaning links

THERE ARE  
MORE  
WAYS TO  
KNOW A  
WORD

- Recognize its spoken form
- Recognize its written form
- Be able link form with meaning



Receptive  
Knowledge

**Productive Knowledge**

- Know how to pronounce it
- Know how to spell it
- Know how to use it grammatically
- Know how to use it in different contexts
- Know which chunks of language it is used in
- Know its collocates, synonyms, antonyms etc.

Nation (2001)

→ You can't just jump to collocates!



BREADTH VS.  
DEPTH

We have to teach students **a range of words**

We also have to teach them **more about each word**

تفاحة



**What can you learn about this word?**

What it sounds like. What it looks like. What it means.

*What if I had used an Arabic description for meaning instead of an image?*

*What if I hadn't said it out loud?*

# ONE WEEK LATER



Can you recognize its spoken form? (probably)

Can you recognize its written form? (highly unlikely)

Can you link form with meaning? (maybe)

Will you be able to say it? (maybe)

→ ~~Know how to spell it~~

→ ~~Know how to use it grammatically~~

→ ~~Know how to use it in different contexts~~

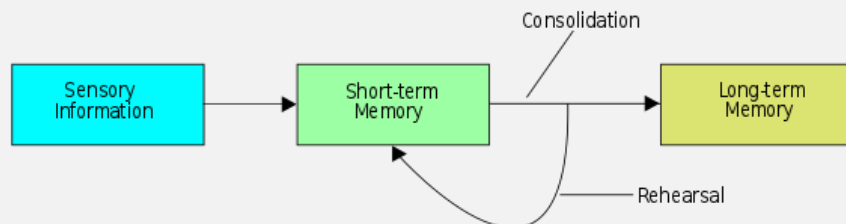
→ ~~Know which chunks of language it is used in~~

→ ~~Know its collocates, synonyms, antonyms etc.~~

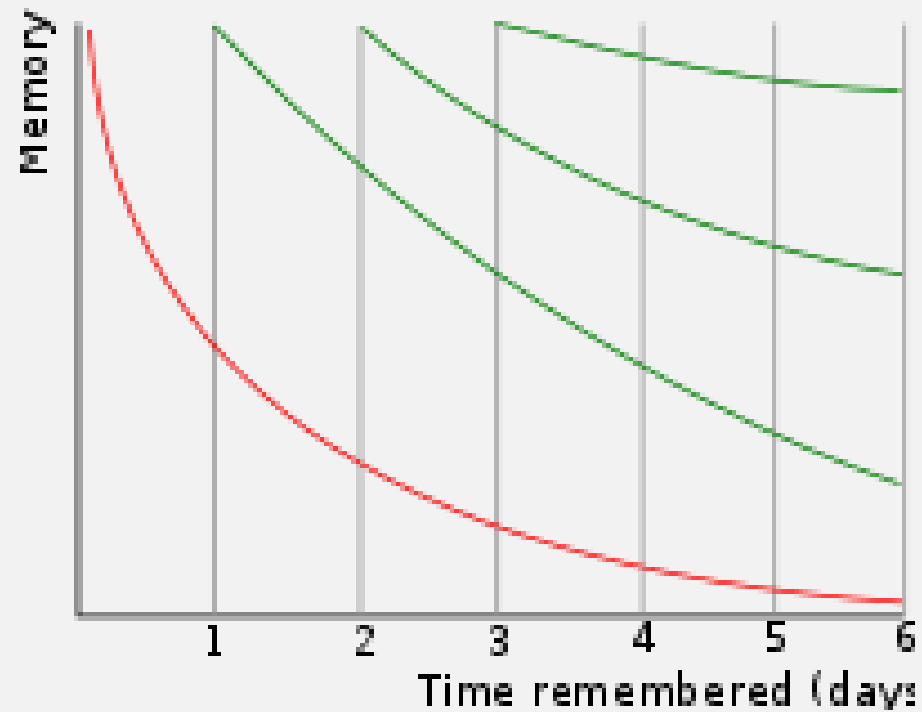
# HOW LONG SHOULD YOU WAIT BEFORE REVIEWING A NEWLY LEARNED WORD?

- Minutes
- • Hours
- Days
- Weeks

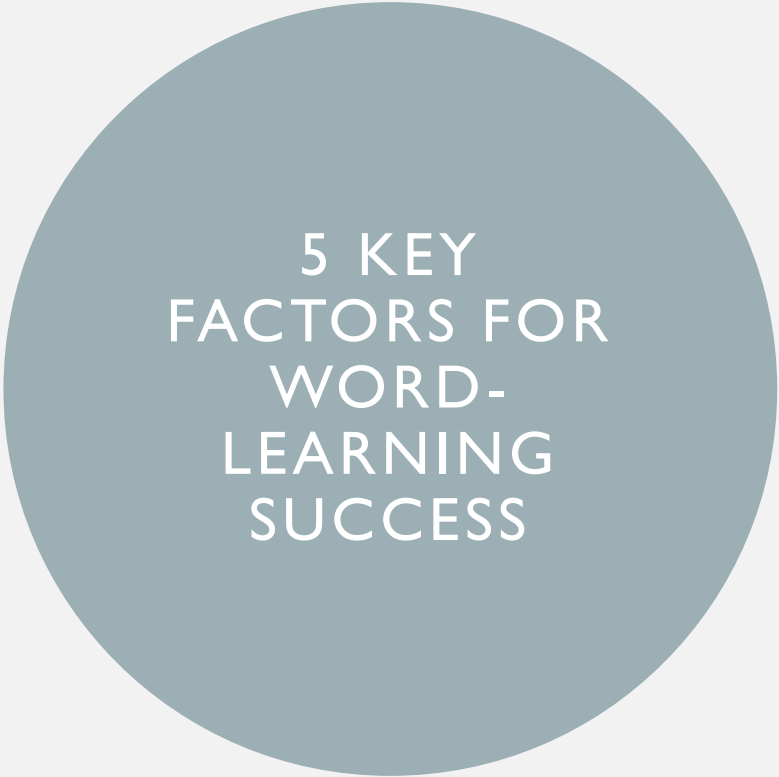
Definitely review in first 72 hours



## The Forgetting Curve



Ebbinghaus (1913)



5 KEY  
FACTORS FOR  
WORD-  
LEARNING  
SUCCESS

- 
1. Input is comprehensible
  2. Repeat exposure
  3. Language is meaningful
  4. Diverse contexts
  5. Opportunities for use



# NO TWO WORDS ARE THE SAME

The learnability of a word (how hard it is to learn) is different for every word, for every learner.

## **Factors that impact on learnability:**

Length/number of syllables

Concrete/abstract

High/low frequency

Phonemes/graphemes it contains

Phoneme/grapheme redundancy

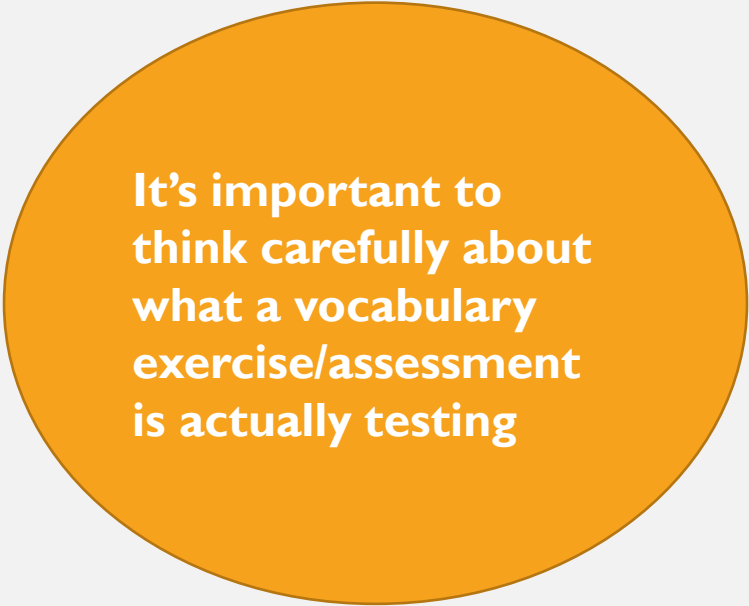
How it is presented/encountered

Meaningfulness to individual learner

## What does an EAL learner need to know in order to be successful ...

- A) choosing the definition in a multiple choice
- B) filling in a blank using a word-bank
- C) completing a gap-fill with no word bank
- D) using a word in an oral response
- E) using a word in writing

- Synonyms (unless images used)
- Recognize meaning of word and most of the words in text
- (B) and how to spell the word -- possibly some grammar
- Pronunciation, grammar, shades of meaning, spoken discourse rules
- Spelling, grammar, shades of meaning, written discourse rules



**It's important to think carefully about what a vocabulary exercise/assessment is actually testing**

There are different degrees of knowing a word. Just because a student gets an answer wrong, it doesn't mean they don't have partial knowledge of the word. The problem is many EAL learners don't know this! They may think they're no good at English and haven't learned anything. That's why it's so important to understand an EAL learner's level, so you can correctly pitch activities and assessment and provide the right kind of support and encouragement.

# HOW DO STUDENTS LEARN VOCABULARY?

## Through direct study

- Contextualized  
*Classroom lessons, outside activities, glossed texts*
- Decontextualized  
*Vocabulary lists, flashcards*

## Through incidental learning

- Exposure via games, encounters in physical environment, guessing from context in reading and listening

# HOW SHOULD WE TEACH VOCABULARY?

We know multi-modal presentation works well

Visual representation of meaning + spoken form + written form  
(can also include video)

**Why does it work?** Diverse sensory input leads to enhanced uptake and retention



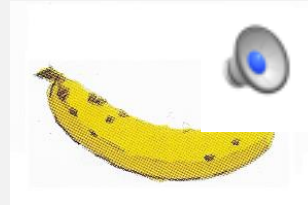
apple

(Bisson et al., 2013; 2014)

HOW LONG WOULD IT TAKE YOU TO LEARN  
40 WORDS IN A FOREIGN LANGUAGE?

# CICERCHIA (2017)

- 32 Native speakers
- Learned 40 words  
(2x a block, 3 blocks) = 6 times  
Image, audio + transcription
- Accuracy went up, response time went down
- Word knowledge retained 5-7 days later



mawz

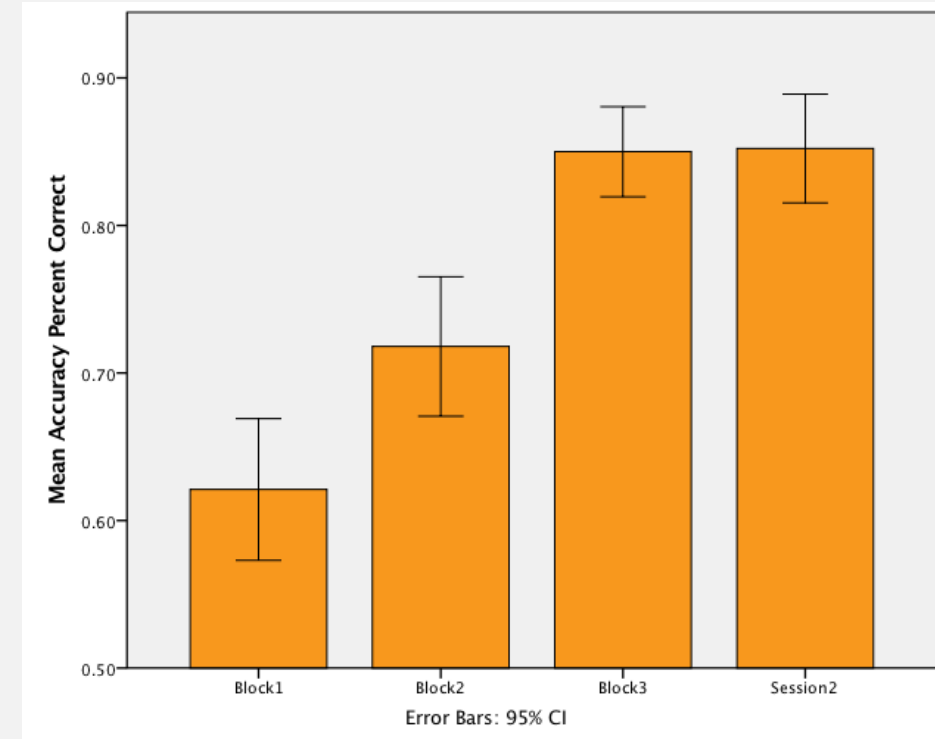
It took my participants 25 minutes to establish basic form-meaning links for 40 Arabic words

## Which factors most impacted results?

Number of letters and number of syllables → Response Time

Number of unfamiliar sounds → Accuracy

Participant Accuracy Blocks 1,2,3 and Session 2



## HOW SHOULD WE TEACH VOCABULARY?

We know it helps to see the written form of the word.

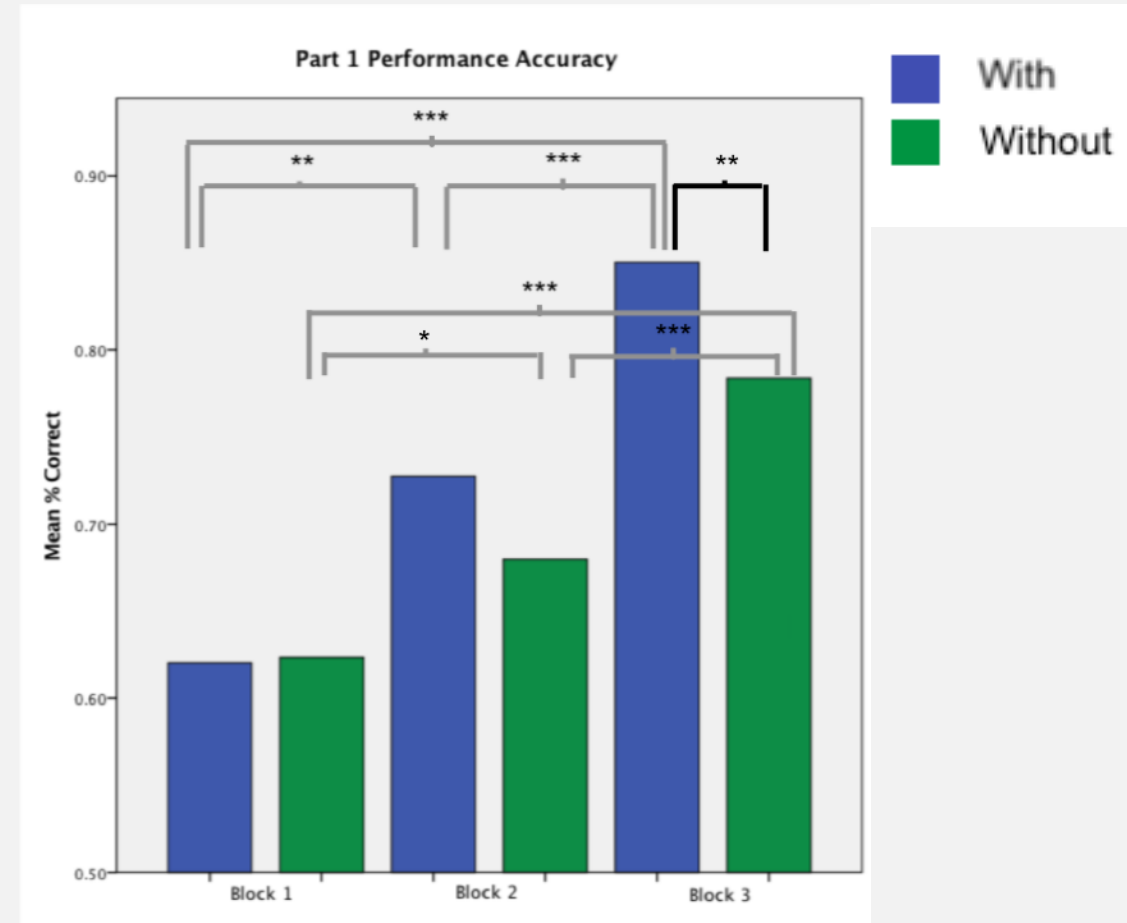
A word's lexical representation has a higher quality when its orthography is specified and its phonological representations are redundant (grapheme- phoneme mappings and spoken form)

Perfetti & Hart (2002)



# CICERCHIA (2018)

- 32 Native speakers
  - Learned 42 words (2x a block, 3 blocks) = 6 times
  - Counterbalanced design with two lists
  - Half learned with transcription, half learned without
  - Productive and receptive measures
- There was a significant increase in participant accuracy for both conditions across the three blocks but learning was easier with text.

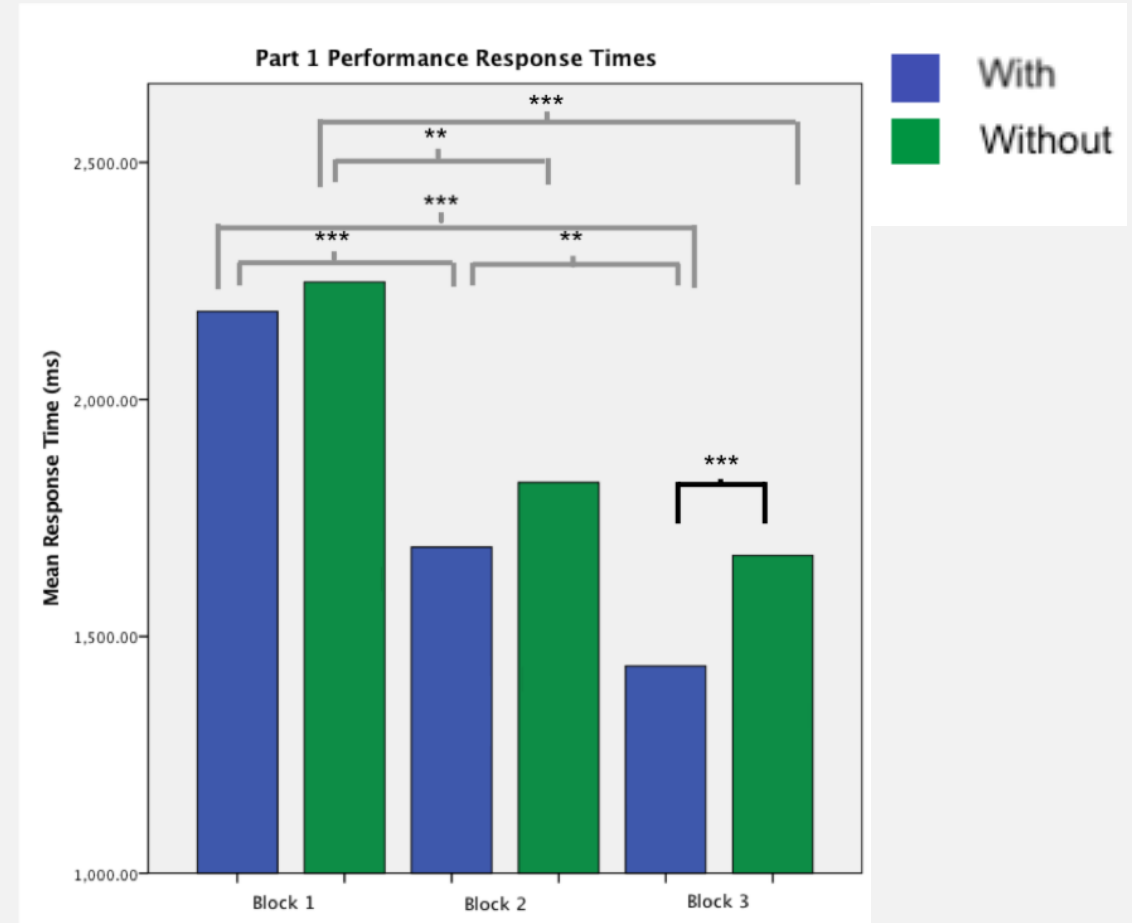


## CICERCHIA (2018)

They were also faster at responding to items they learned with text.

I found they were significantly more accurate on the immediate post-test for words learned with text – but there was no significant difference between the two conditions in a delayed post-test

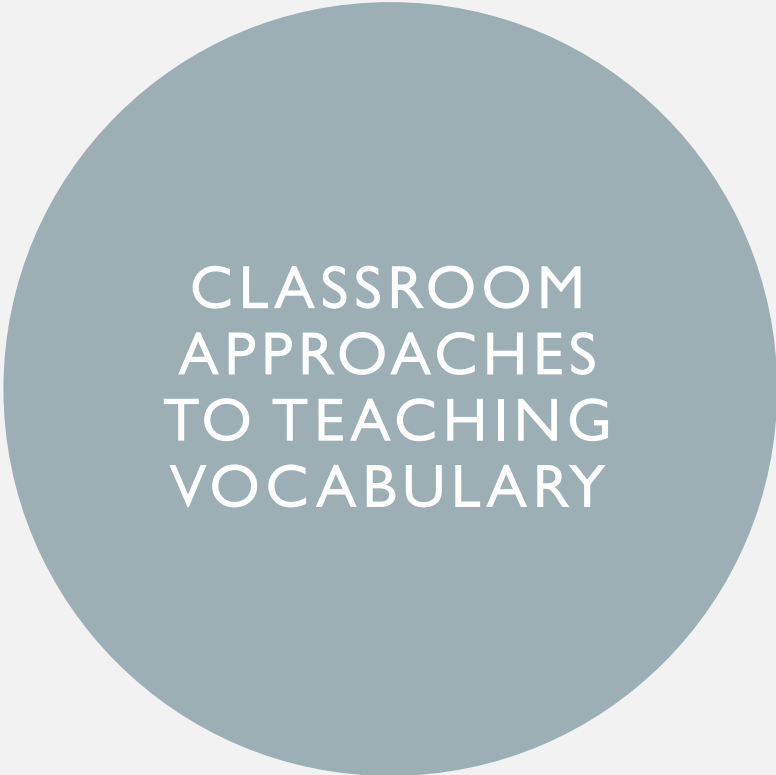
**What does this mean?** Whatever advantage they had from seeing the written form was gone after one week of no contact with the word or language



## WHAT ELSE DO WE KNOW ABOUT TEACHING VOCABULARY?

- We know teaching sets of words containing similar items can be problematic
- We know uptake and retention is better when tasks are engaging
- We know mnemonic devices can be helpful (Keyword Method) particularly when students are in charge of designing them

Avoid teaching a list of words that all start with the same sound!



## CLASSROOM APPROACHES TO TEACHING VOCABULARY

1. Rote learning and memorization
2. Tasked based learning (vocabulary is a product of completing a task)
3. Input enhancement (emphasizing a word with your voice or with a visual attribute)
4. The communicative approach

### **Where do we get the words?**

- Learning a group of words presented in an article
- Learning words that are related in meaning or word type (lists of synonyms, descriptive adjectives)
- Learning words that deal with the same genre/topic (food vocabulary, restaurant vocabulary)

## MORE IDEAS ON EAL VOCABULARY

- Students take responsibility for expanding their English vocabulary by **learning words which are meaningful and useful to them** (word journal/ personal dictionary/ online vocabulary list/classroom word wall/ sharing a word of the day)
- Students are taught to **look for holes in their productive vocabulary** (words they go to say and realize they don't know) and how to fill them!
- Vocabulary is practiced regularly using **spaced repetition systems** (physical or virtual flashcards/ gamified apps)
- Learning is **multi-modal** (listening to songs with their lyrics, watching videos with subtitles, creating image collages to gloss vocabulary lists, using dynamic dictionaries, YouTube word scavenger hunts)

## GROUP TASK 2

*How do you teach vocabulary at your school? Are there any ideas you've tried that work well for your learners? Take a few minutes to share ideas with your table.*




# INDIVIDUAL DIFFERENCES IN EAL LEARNERS

- **Aptitude for language** (aptitude is not fixed)
- **Motivation, self-efficacy and anxiety** (motivation and self-efficacy are the two factors that most correlate with success in learning)
- **First language and L1 literacy** (L1 language processing trends may carry over into L2)
- **Age** (Children and adults learn language in different ways)
- **Specific learning difficulties**

Have you ever heard someone say “‘I’m just not good at languages?’” Aptitude is a natural language learning ability – related to working memory capacity. You may be born with or without it, but you can certainly enhance your aptitude for language through targeted drills!





APTITUDE IS  
ABOUT  
WORKING  
MEMORY

### **The phonological loop**


- We use this to hold lists, for example phone numbers in our head. Some people can hold more digits for longer amounts of time.

### **The visuo-spatial sketch pad**

- When you close your eyes you can still see an image. Some people can hold the image and more of its detail for longer stretches of time before it dissipates.

Baddeley and Hitch, 1974

*We use these mechanisms to learn language. They allow us to trap words in spoken and written input and get them into short-term memory.*



We can enhance our working memory capacity for language through targeted drills.



## MOTIVATION AND SELF- EFFICACY

- Motivation for language learning can be **integrative** or **instrumental**
- **Integrative motivation** is about wanting to speak English so you can integrate with native speakers of that language
- **Instrumental** is about wanting to learn English to earn a grade, access a job or get some kind of a reward
  - Integrative motivation correlates higher with success in language learning
- **Self-efficacy** is about breaking a task down into manageable steps
  - Self-efficacy highly correlates with success in language learning

## HELP EAL LEARNERS STAY MOTIVATED AND BE MORE SELF-EFFICACIOUS

- Learning all of the words in the English language is an impossible goal, **encourage students to keep a vocabulary journal** and work on learning a few new words a day (both in and outside of the classroom)
- **Point them to dictionary and flashcard apps** that can help with self-study
- Give them **high frequency English word lists** to start off, as they'll experience greater listening comprehension and reading fluency gains which helps with motivation
- Teach them **how to find reading material that is at their level** (Five finger rule) and model guessing from context
- Ask them to keep track of when they use a word they know and then **measure their productive vocabulary growth over time – show them how far they've come!**



## ANXIETY AND AFFECTIVE BARRIERS

- Anxiety can cause problems for all language learners, especially EAL students
- It makes it harder to learn new words as mental walls go up and uptake goes down
- It makes it harder to produce language
- It can prevent a learner from demonstrating what they know or what they can do with language
- It has a strong emotional component and can lead to low self-esteem and low confidence
- It creates negative connotations around language and learning

# 5 WAYS TO REDUCE ANXIETY FOR EAL LEARNERS

1. **Teach vocabulary through language play activities** → Language learning is easier when it's contextualized and there's no pressure to perform. Design offline activities where they have to work with the spoken and/or written form of a word to create something new or play a game
2. **Give them more time to answer and avoid putting them on the spot** → For example, ask a question and say you'll return to it later, develop a hand signal and let the student signal you when he or she is ready to respond.
3. **Hold class discussions on fun/popular subjects** → Get students to contribute their own ideas and then have a weekly discussion session on their chosen topics. The goal is to have learners forget they are using a new language and capitalize on their passion as a motivator for spoken language production (For example, favorite or most hated foods). Write key vocabulary words they can use on the board and say them aloud to start the session so they already have some language to work with. Make a list of new words that come up and underscore the value of their contributions.
4. **Assign writing activities that can be completed on the computer** → Anxiety over letter-shape formation and spelling can get in the way of productive language use, but writing on the computer is great because mistakes are easily corrected without the stigma of erasers or red pen. Give them a word bank and some starter phrases to get them going.
5. **Remind them language is flexible and communicating meaning is key** → If a student is worried about making mistakes it can cause anxiety that gets in the way of productive language use. Self-correction will come about naturally as they progress in proficiency



FIRST  
LANGUAGE  
INFLUENCE

**First language**

L1 language processing trends may carry over into L2 e.g. *vowel blindness in L1 Arabic learners*; direction, alphabetic/non-alphabetic, amount of cognates, similarity of phonemic inventory

**L1 literacy skills** (L1 vocabulary size can influence L2 vocabulary, L1 reading skills can carry over into L2, this includes contextual guessing skills for learning new vocabulary)

→ If you're a strong reader in your first language, you're also more likely to be a strong reader in your second language.

## GROUP TASK 3

How do younger language learners (pre-puberty) and older language learners (teens/adults) differ? Who do you think is the better language learner? Take a few minutes to discuss with your group.





AGE

**Contrary to the popular ‘children are sponges’ belief, children need a lot of repeat exposure and targeted input to learn language – and they’re not necessarily better than older learners**

- Except for when it comes to pronunciation (Critical Period Hypothesis)



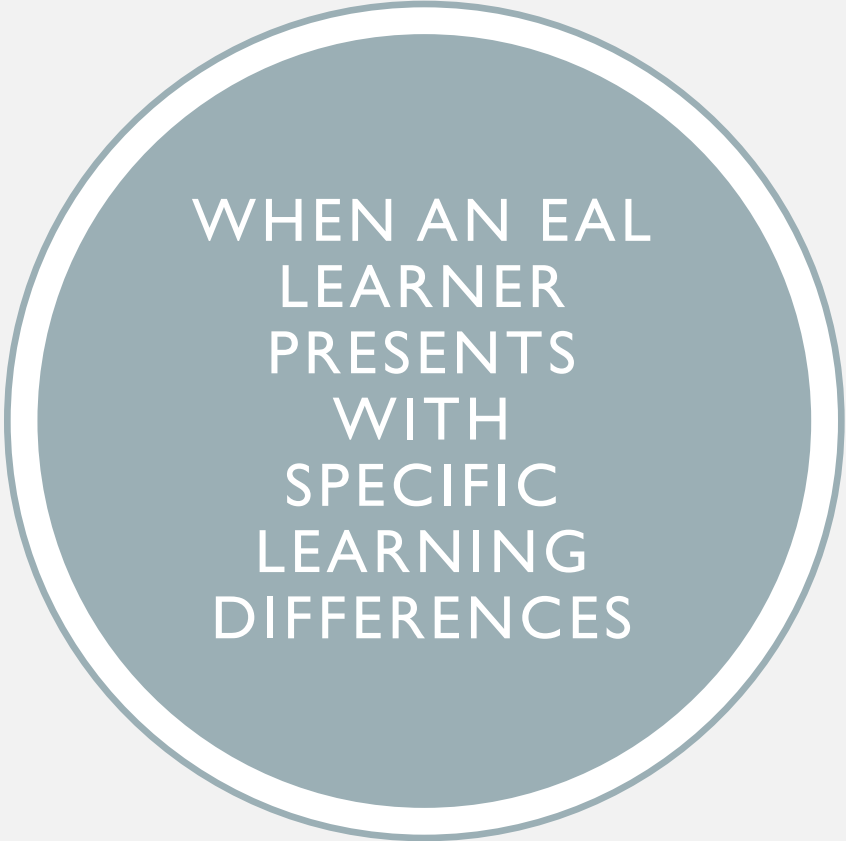
# YOUNGER VS. OLDER

## **Younger language learners**

- Kids learn for survival – if they don't need something they'll drop it
- Focus on spoken word forms - listening and speaking skills
- Could be learning the word and its meaning at the same time
- Learn through implicit vs. explicit means
- Not afraid to make mistake
- Use more simplified syntax

## **Older language learners**

- Able to learn in classroom through deliberate study (you can give them lists to learn)
- Learn written word forms as well – reading and writing skills
- May already have a large LI vocabulary
- Can apply explicit language learning strategies
- More likely to self-monitor
- Can use higher forms of language and more complex syntax



WHEN AN EAL  
LEARNER  
PRESENTS  
WITH  
SPECIFIC  
LEARNING  
DIFFERENCES

- **Dyslexia** affects reading and spelling ability and can also impact on memory
- **Dysgraphia** affects writing ability
- **Dyspraxia** affects motor skills planning and sequencing, writing by hand, speaking (apraxia)
- **ADHD** affects attention span, may impact on spelling, reading and writing ability
- **Auditory Processing Difficulties** can impact on listening comprehension and auditory memory

*“Opaqueness” is how easy it is to break words down into their component sounds and how well those sounds match up to letters and letter combinations. English is opaque and thus quite hard for students with dyslexia; others languages like Spanish, German and Italian may be easier.*

# EAL LEARNERS W/DYSLEXIA



ATTRIB: By Totesquatre - Own work, CC BY-SA 3.0,  
<https://commons.wikimedia.org/w/index.php?curid=17217287>

- **Multi-sensory learning is key** (hearing a word, seeing the word, and if possible doing something involving movement)  
*Examples: Multi-sensory typing program (TTRS), tracing/drawing the word*
- **Can benefit from ‘overlearning’** (don’t be afraid to suggest drills, self-study apps that give them extra exposure and practice with the word (FlashAcademy))
- **Focus on phonology** (introduce minimal pairs, invest in an English phonics programs, phonics support in learner’s LI can also be helpful)
- **Teach sight words** (sounding out words can be really difficult and often learning to sight read may be the best approach for learners with dyslexia)
- **Allow the use of a computer/tablet** (access to spell-check, auto-complete)
- **Prioritize intelligibility vs. accuracy** (praise intelligibility in language use and avoid calling attention to incorrect grammar)

# DYSLEXIA AND RIGHT BRAINED THINKING

Left :  
Clusters of cells, stations with interconnecting networks (focusing in) Good at sequencing, analytics, language, math, morphology (word building), syntax (grammar)



Right :  
Cells more evenly distributed, connections across larger areas (big picture thinking), dominant for non-literal and emotional thinking, **VISUAL-spatial** imaging, **MUSIC**

EAL learners with dyslexia

## MORE CLASSROOM TIPS FOR EAL LEARNERS WITH DYSLEXIA

- **Start with speaking and listening** → Having knowledge of a word's spoken form makes it easier to learn its written form
- **Teach songs** → Helps with phonemic awareness, plays to their strengths. Let them choose the songs they want to learn (good for motivation) and have them look-up any lyrics they don't understand
- **Encourage them to illustrate their vocabulary notes**
- **Play video clips with English subtitles** → Reading and hearing English words at the same time strengthens sound/letter mapping and is great for visual learners
- **Avoid asking them to read aloud in front of peers** → This can be de-motivating for learners with dyslexia who struggle with decoding both in their L1 and L2
- **Create opportunities for creative language play** → Ask them to illustrate and tell a story based on a set of English words, write a poem, or develop some song lyrics

## EAL LEARNERS WITH DYSGRAPHIA

- Avoid worksheets with lots of small boxes and circles in which they have to provide answers
- Encourage them to write on a tablet or computer whenever possible
- Make writing utensils or graph paper with directional arrows to remind them which direction to write in (popsicle sticks)
- Be aware productive knowledge of a word may show up only in spoken form – they may know how to spell it but still not be able to write it

## EAL LEARNERS WITH DYSPRAXIA

- Help them stay organized and keep track of the vocabulary they are learning and the words they need to review
- Design activities that allow them to work with spoken language when writing by hand creates anxiety
- Provide thick markers or pen/pencil grips and/or allow them to type on a computer when handwriting is physically painful
- Depending on if speech production is a problem, you may have them practice spoken language production in front of a mirror
- Break words down into component phonemes and practice saying the word starting from the last phoneme and building up to the whole word



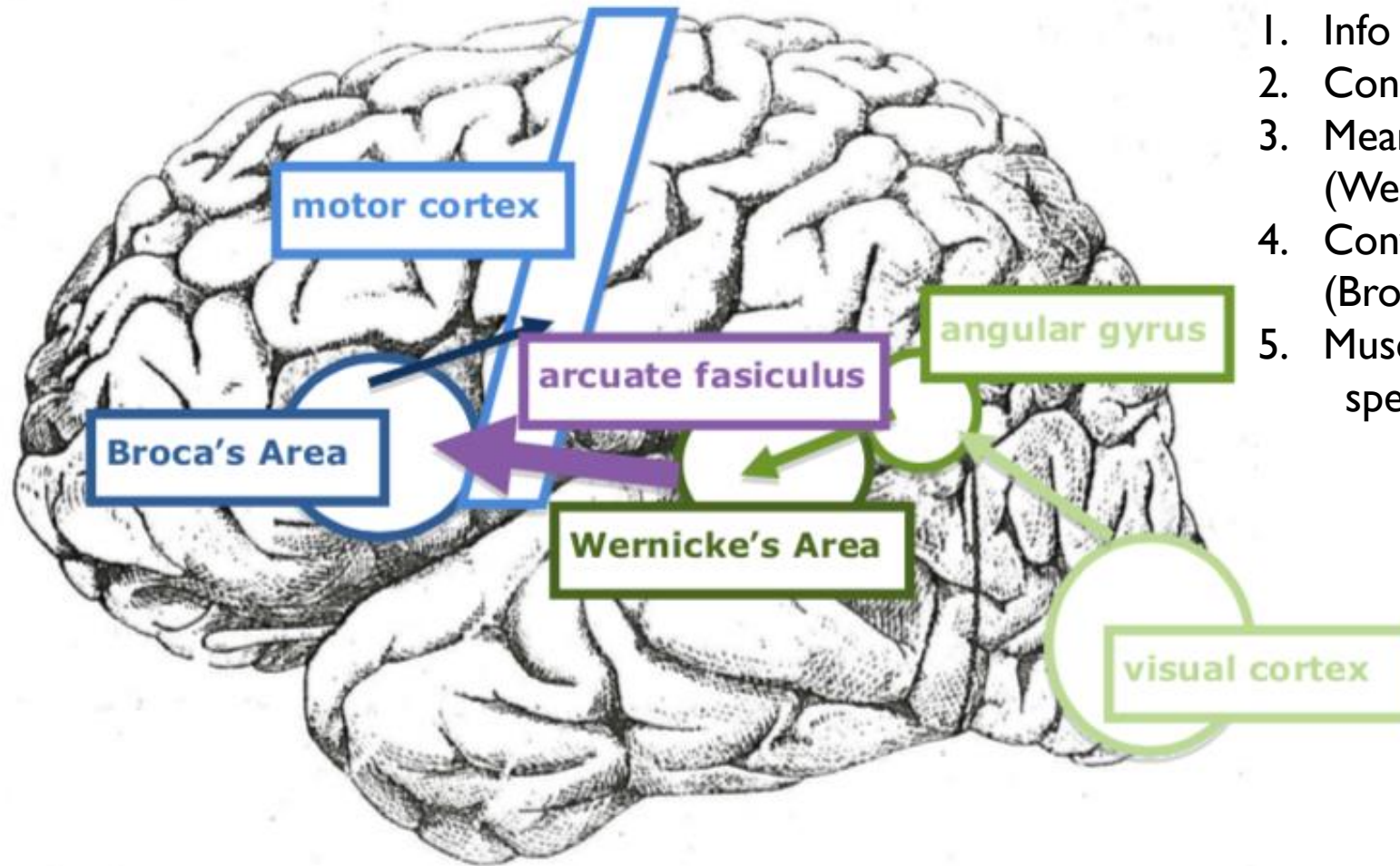
# ATTENTION DIFFICULTIES

- Learning through context requires noticing - which can be harder for a student who struggles with attention difficulties
- Call a learner's attention to key vocabulary presented in context (in speaking: use volume, gesture, repetition; in writing: underline, bold, italics)
- Limit the number of words a student is responsible for learning in one sitting
- Create tactile learning opportunities (tracing and saying a word, using letter blocks to spell it out, playing language games that involve movement)
- Some studies have suggested 50% of learners who are diagnosed with ADHDs also struggle with APDs

# AUDITORY PROCESSING DIFFICULTIES

- Students with APDs can struggle with memory for auditory information and may need to hear a word many times over to learn it
- Provide written text and visual cues to support word form and meaning acquisition, these students may not learn a word from exposure to its spoken form alone
- Ensure a student has access to high quality English recordings that can be reviewed in a quiet space
- Take care to speak at a normal speed, as too quickly or too slowly can change how the phonemes in a word are delivered

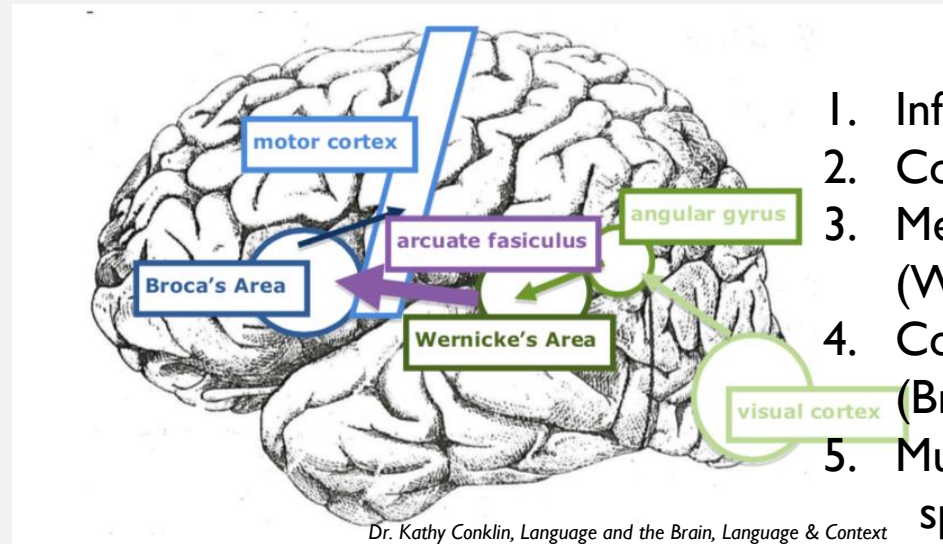
These are the language processing steps that take place when a student is asked to read a vocabulary word aloud:



1. Info from eyes processed
2. Connected to a word's lexical entry
3. Meaning and pronunciation activated (Wernicke's Area)
4. Converted into articulatory info (Broca's Area)
5. Muscle movements coordinated for speech

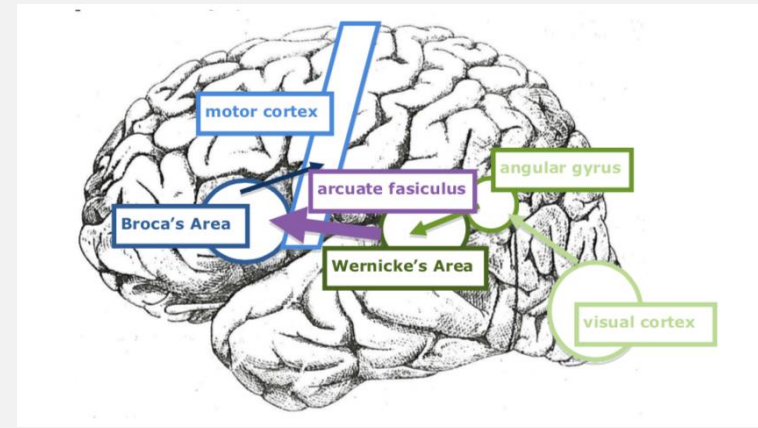
## GROUP TASK 4

Where is an EAL learner with A) *Visual Processing Difficulties* B) *Dyspraxia* and C) *Dyslexia* most likely to struggle? Is providing a written list the best way for these students to learn vocabulary? What would be better?



1. Info from eyes processed
2. Connected to a word's lexical entry
3. Meaning and pronunciation activated (Wernicke's Area)
4. Converted into articulatory info (Broca's Area)
5. Muscle movements coordinated for speech

# ANSWERS



- A) The learner with **Visual Processing Difficulties** will most likely struggle with Step 1. Activities: Show them how to access text-to-speech and encourage them to repeat the spoken form of a word to learn it; Help them learn a word's spelling by reciting letters out loud; Work on English letter-shape recognition using letter outlines, puzzles, apps;
- B) The learner with **Dyspraxia** will most likely struggle with Step 5. Activities: Break a word into phonemes and have the student practice saying each sound on its own, building up to the whole word; Have fun saying the word at different speeds, in different voices
- C) The learner with **Dyslexia** will most likely struggle with Step 2. Activities: Print a word in a large size in dyslexia-friendly font (consider caps vs. lowercase and colored paper); provide spoken form and drill whole word recognition; Have them create a collage of magazine images that help them link written and spoken form; Help them develop a mnemonic device to link written form with meaning

## A FEW MORE THINGS TO KEEP IN MIND

- It's easier for an EAL learner to learn language that's **meaningful** to them, acquired in a **multi-sensory way**, and presented **in context**
- **Repeat exposure** is the best way to ensure receptive knowledge of a word
- **Productive use** is important and assists with retention (the more students use a word the less vulnerable it is to decay)
- **Every word helps**, this includes vocabulary learned in and outside of the classroom (the more words you know, the more you can learn)
- **Teach vocabulary learning strategies** to enable an EAL learner to make the most out of his or her exposure to English outside of the classroom

THANK YOU!

ANY QUESTIONS?

**Also, feel free to get in touch:**

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