EFFECTS OF EQUAL AND EXPANDING SPACING TECHNIQUES ON EFL LEARNERS' IMMEDIATE AND DELAYED VOCABULARY RETRIEVAL

ROYA KHOII

ELHAM SASANI NEJAD

NAJLA SAFAEE

SALEH GHODRATI

MARYAM PARKI

VOCABULARY IN SLA

Any defect in vocabulary knowledge leads to communication breakdown.

Teachers should employ efficient strategies to enhance vocabulary learning and train autonomous

Knowledge of grammar solely cannot guarantee the conveyance of the message.

HOW MANY WORDS ARE THERE IN THE ENGLISH LANGUAGE?

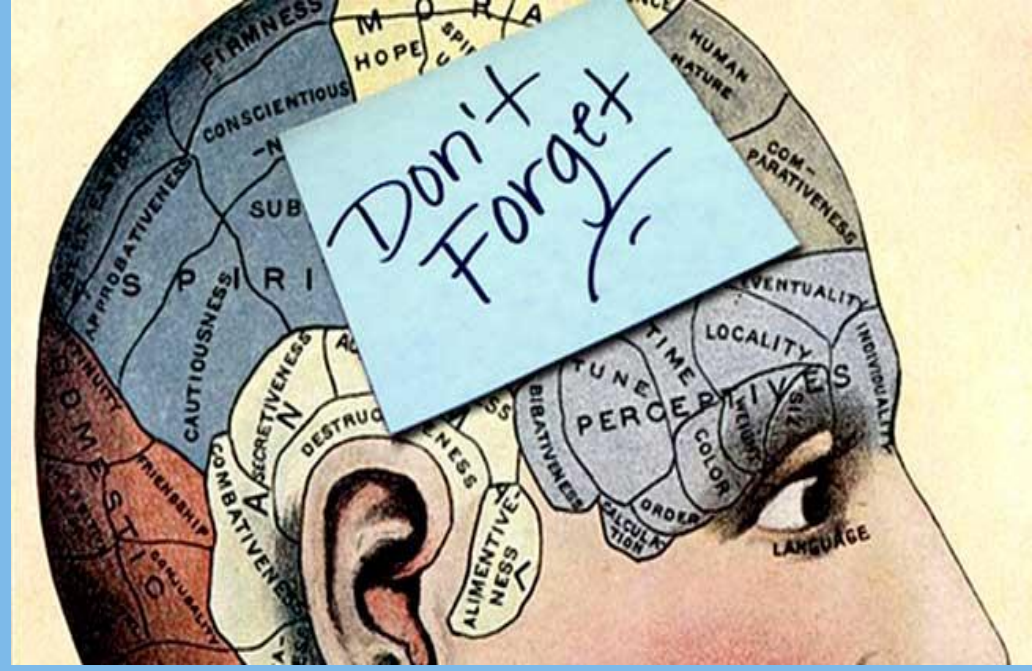
- The ***Oxford*** *English Dictionary*, 2nd edition *(OED2)*: over 600,000 definitions.
- ***Webster's*** *Third New International Dictionary, Unabridged* : **475,000** main headwords, but the Preface estimates the true number to be much higher.
- In **December 2010 a joint Harvard/Google** study found the language to contain 1,022,000 words and to expand at the rate of **8,500** words per year. The findings came from a computer analysis of 5,195,769 digitised books. Others have estimated a rate of growth of **25,000** words each year.

HOW MANY WORDS ARE ENOUGH?

- A large vocabulary to function in English:
  - **8000–9000** word families for reading
  - **5000–7000** families for oral discourse
  - In addition, a number of **word knowledge** aspects need to be learned about each lexical item.
- These figures may seem daunting, but even so, they probably underestimate the learning challenge.

- ✓ **Exposure frequency** plays a key role in vocabulary retention both in L1 and L2 acquisition.
- ✓ **The more frequently** the learners are exposed to a word, the more probable it is for them to **learn** it.

THE ROLE OF MEMORY IN VOCABULARY ACQUISITION

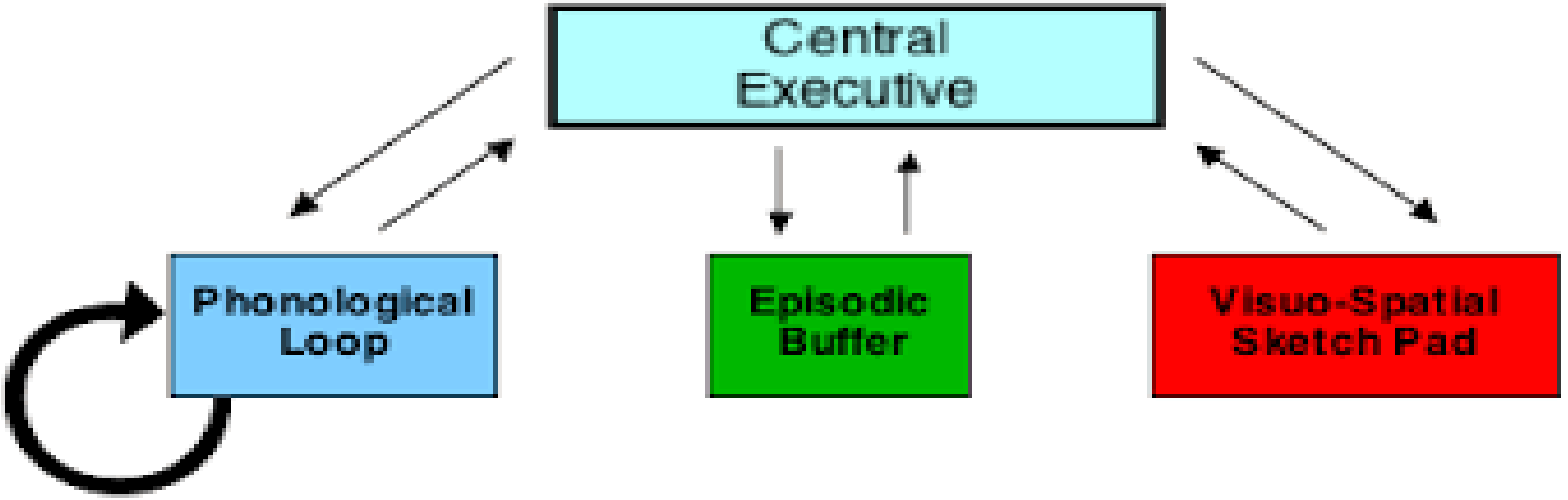


Recent studies on vocabulary learning underscore the significance of inter-word connections and repetition for better retrieval and, thus, learning of a word.

Working Memory

A complex storage system which is responsible for the temporary maintenance of task-relevant information while performing cog

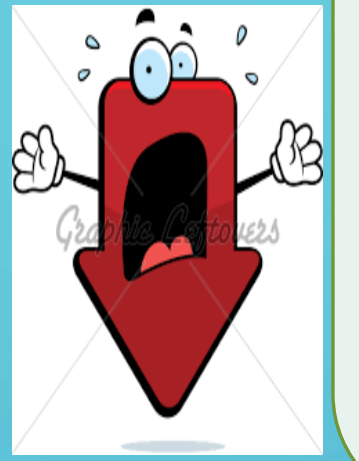
BADDELEY'S WM MODEL



Learning occurs in WM, and repetition and rehearsal can facilitate learning as they can transfer the learned knowledge from WM to LTM

Central executive

directs attention to a word that needs to be processed.



Phonological loop (PM)

stores auditory and phonological information + includes the capacity to rehearse noticed input at a subvocal level: particularly important for lexical processing.

Visuo-spatial sketchpad

processes visual information.

Episodic buffer

stores, integrates, and manipulates various information

SPACED REPETITION

Spacing is presenting some material to the learners, waiting for a time interval, and presenting it again, be it a few repetitions or many.

In a study comparing equal (3-3-3-3) and expanded spacing (0-1-3-8) conditions, Landauer and Bjork (1978) concluded that expanded spacing led to higher retrieval.

Nakata (2015) found no significant differences between the effects of using equal and expanding conditions in his study of 128 Japanese college students who studied 20 English-Japanese word pairs.

RESEARCH QUESTION

Are there any differences between the effects of equal and expanding spacing techniques on EFL learners' immediate and delayed vocabulary

PARTICIPANTS

60 A2 EFL Learners (18–40)

EX1

Digital Flashcards

Expanding Spacing

EX2

Digital Flashcards

Equal Spacing

C1

Wordlist

Expanding Spacing

C2

Wordlist

Equal Spacing

PROCEDURE (PRE-TESTS)

Homogeneity Test

- A2 Level Achievement Test
- Interview

Vocabulary Test

- A list of 50 B1 level vocabulary items were given to the participants and 20 unknown words were chosen.

Material

- A wordlist of 20 words with their definitions and example sentences were prepared.
- 20 digital flashcards were prepared with the word written on one side and the related picture and definition on the other side.

DESIGN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Ex. 1	O1	X1		X2					X3							X4													X5			O2	O3	
Ex. 2	O1	X1							X2							X3							X4							X5			O2	O3
C. 1	O1	X1		X2					X3							X4													X5			O2	O3	
C. 2	O1	X1							X2							X3							X4							X5			O2	O3

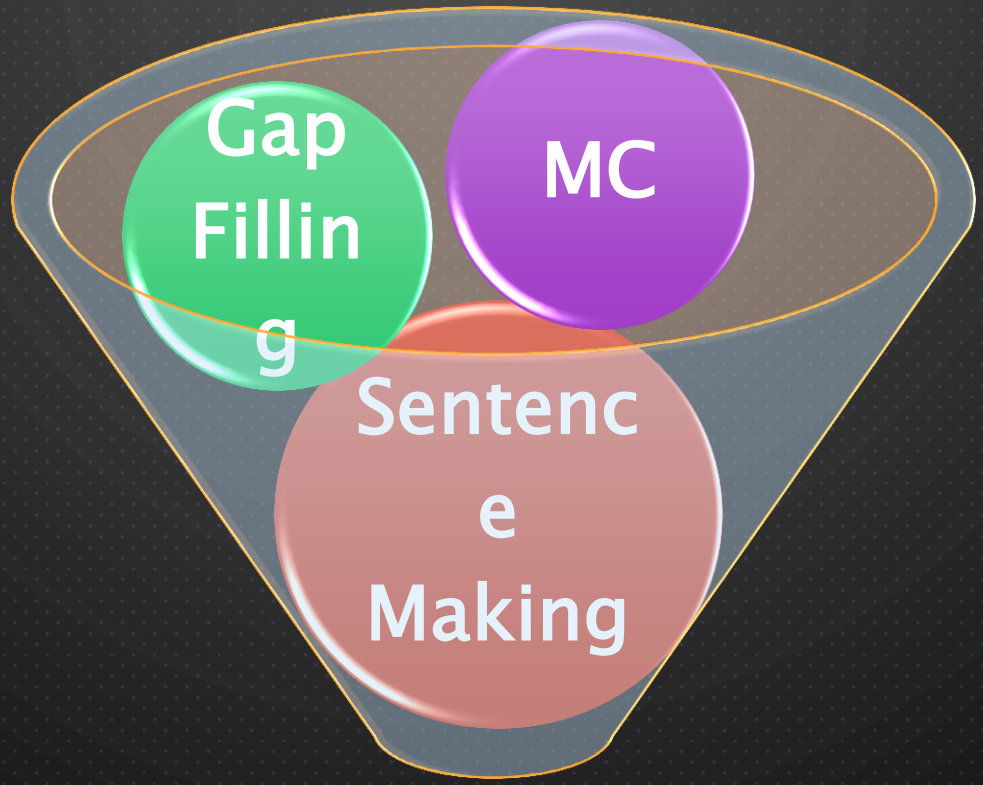
Ex1: Experimental Group 1 (Digital Flashcards, Expanding Spacing)
Ex2: Experimental Group 2 (Digital Flashcards, Equal Spacing)
C1: Control Group 1 (Wordlist, Expanding Spacing)
C2: Control Group 2 (Wordlist, Equal Spacing)
O1: Homogeneity Achievement Test and Interview
O2: Multiple Choice Vocabulary Test
O3: Gap Filling Vocabulary Test
Frequency: 5 times
Expanding: 0, 2,5, 7, 13

DELAYED TESTS

After a two-month interval, five members of each group were randomly selected and given three delayed multiple choice, gap filling, and three sentence making tests to determine the degree of their retrieval of the target 20 words.

- ✓The ANOVA results revealed **no significant differences** between the mean scores of the word list memorization and digital flash-card groups, both in equal and expanding spacing conditions.
- ✓Both groups had significantly **improved** their word knowledge.
- ✓It is noted that the **expanding spacing wordlist group** obtained

DELAYED TESTS

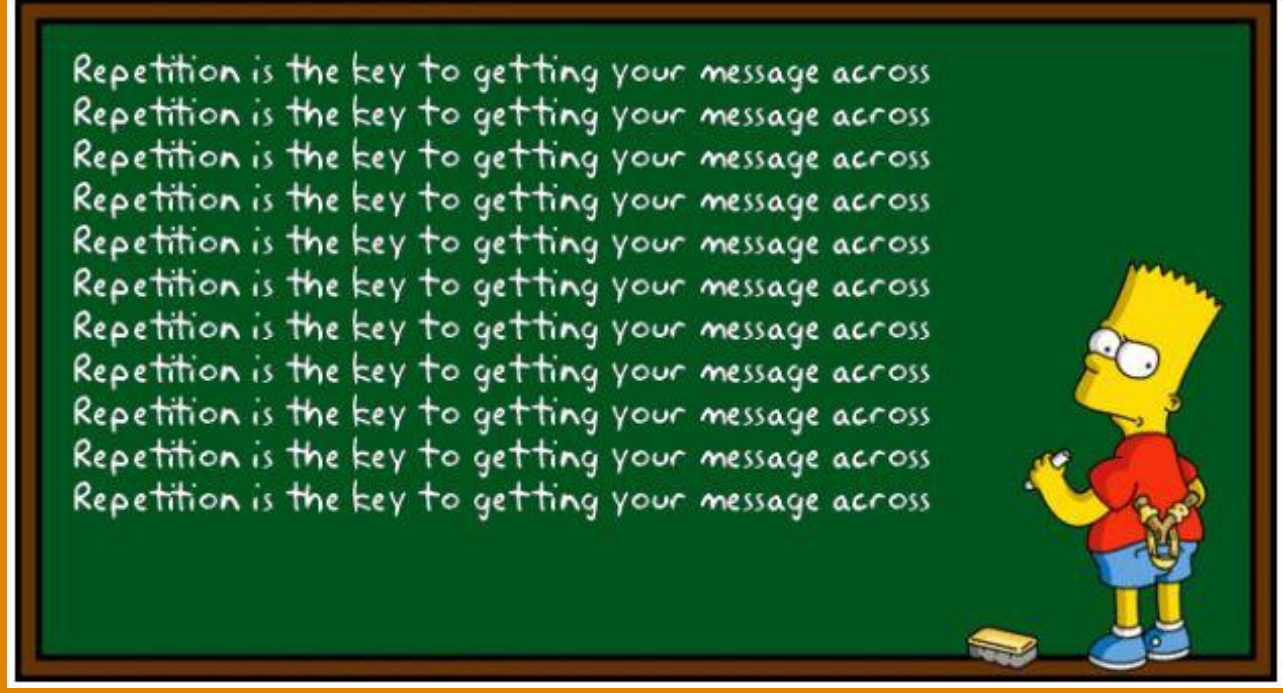


No Statistically significant difference between the mean scores of the four groups

CONCLUSION

There was no statistically significant difference between the participants' mean scores on the immediate and delayed vocabulary posttests, suggesting that their uptake of the 20 words in all four groups had immediately turned into acquisition giving credence to the efficiency of repetition.

Regardless of the types of recycling technics and the spacing conditions in each group, the participants had the same amount of retrival.



Once more, the results highlight the significance of repeated exposure to data in vocabulary learning.

DISCUSSION

Given the results of this study and many others, it seems that, even in crowded classrooms lacking modern facilities, students can learn new words effectively only by employing some simple techniques like wordlist memorization provided that they have enough exposure to input.

Similar studies also accentuate the role of abundant exposure through employing various techniques. In a study about word retention, Carpenter and Kelly (2012) highlighted the fact that retrieving information on a test benefits learning and concluded that exposure to tests can vastly contribute to the successful retrieval of vocabulary.

Another study by Karpicke et al (2008), comparing the effect of exposure to tests with that of studying, demonstrated that repeated retrieval practice enhanced long-term retention, whereas repeated studying produced essentially no benefit. They demonstrated the critical role of retrieval practice in consolidating learning and emphasized retrieval as a useful tool for learning.

Thanks

A Minion!