Optimising students' exposure to English through non-language subjects

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Outline of the presentation

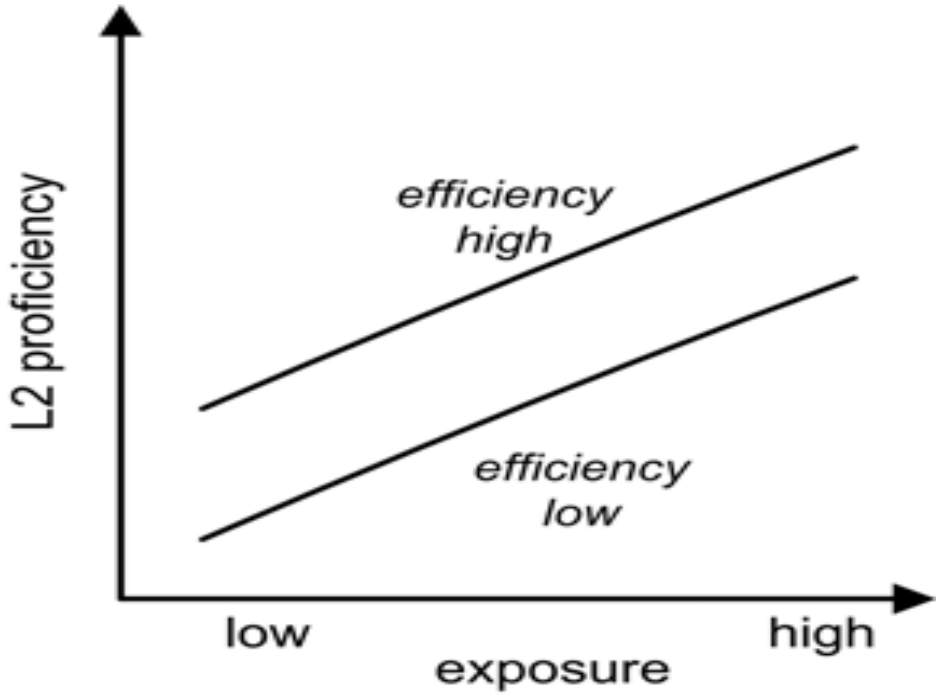
1. Exposure and second language acquisition (SLA)
2. Roles of English language (ELTs) and non-language teachers (NLTs)
3. General, academic and technical English
4. Why vocabulary growth needs serious collaboration between ELTs and NLTs
5. Some practical issues concerning collaboration

1. Exposure and SLA

- Universal agreement that exposure is a necessary condition for SLA
- Input is one type of exposure
- Input has been studied extensively (e.g. Krashen's "comprehensible input")
- For many years, HK schools have tried to provide a "language-rich" environment with a view to improving exposure to L2.

Exposure to L2

Additive Effect (Esser 2006)



2. Roles of ELTs and NLTs in providing exposure

Does EMI simply provide **more** exposure to English?

OR

Is the **type** of exposure provided by ELT and NLT qualitatively different?

2. Roles of ELTs and NLTs in providing exposure

Should we focus on:

Similarities between the English covered by ELT and NLT?

OR

Differences between the English covered by ELT and NLT?

2. Roles of ELTs and NLTs in providing exposure

Ideally, we should do BOTH.

But we need to be clear about where the similarities and differences lie.

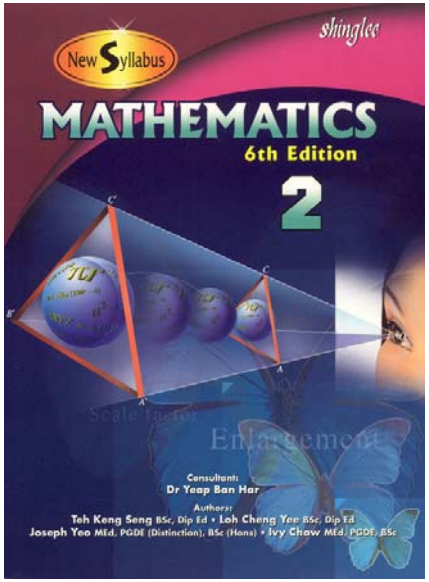
Vive la différence!

Vive le genre!

3. General, Academic and Technical English

EXAMPLE 1:

The language of a mathematics textbook



CLASS EXPLORATION

1. Use positive numbers to represent heights above sea-level and negative numbers to represent heights below sea-level and answer the following questions.

	Answer
(a) Use directed numbers to represent the following heights.	
(i) 6 m above sea-level	+6 m
(ii) 15 m above sea-level	+15 m
(iii) 120 m above sea-level	+120 m
(b) Which of the heights in part (a) is the highest?	+120 m
(c) Use directed numbers to represent the following heights.	
(i) 6 m below sea-level	−6 m
(ii) 15 m below sea-level	−15 m
(iii) 120 m below sea-level	−120 m
(d) Which of the heights in part (c) is the lowest?	−120 m

2. Use positive numbers to represent gains in weight and negative numbers to represent losses in weight and answer the following questions.

	Answer
(a) Use directed numbers to represent the following situations.	
(i) A gain of 1 kg in weight	+1 kg
(ii) A gain of 2 kg in weight	+2 kg
(iii) A gain of 10 kg in weight	+10 kg
(b) Of the gains mentioned in part (a), which is the greatest?	+10 kg
(c) Use directed numbers to represent the following situations.	
(i) A loss of 1 kg in weight	−1 kg
(ii) A loss of 3 kg in weight	−3 kg
(iii) A loss of 8 kg in weight	−8 kg
(d) Of the losses mentioned in part (c), which is the greatest?	−8 kg

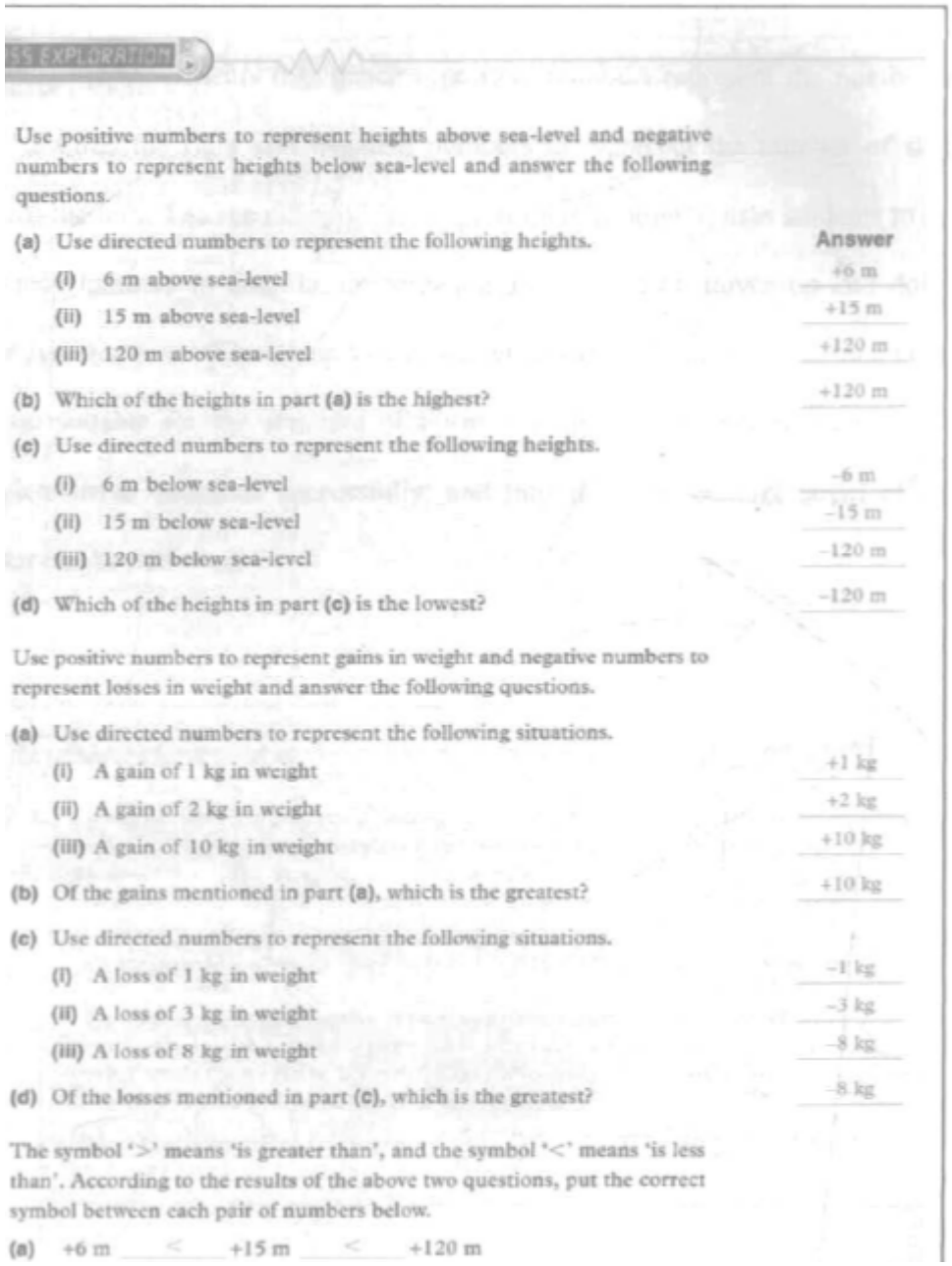
3. The symbol '>' means 'is greater than', and the symbol '<' means 'is less than'. According to the results of the above two questions, put the correct symbol between each pair of numbers below.

(a) +6 m $<$ +15 m $<$ +120 m

(b) +10 kg $>$ +2 kg $>$ +1 kg

(c) −6 m $>$ −15 m $>$ −120 m

ept of positive and negative numbers.



ISS EXPLORATION

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The symbol '>' means 'is greater than', and the symbol '<' means 'is less than'. According to the results of the above two questions, put the correct symbol between each pair of numbers below.

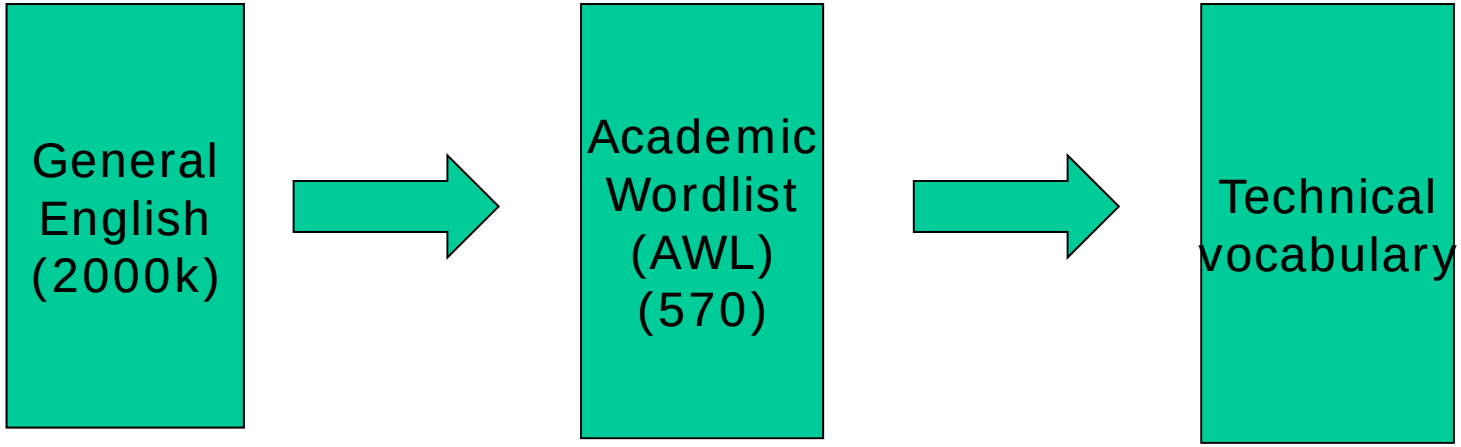
(a) +6 m < +15 m < +120 m

FROM THE TEXT:

Use positive numbers to represent heights below sea-level.

Use directed numbers to represent gains in weight.

Vocabulary in textbooks: general > academic > technical? a realistic sequence?



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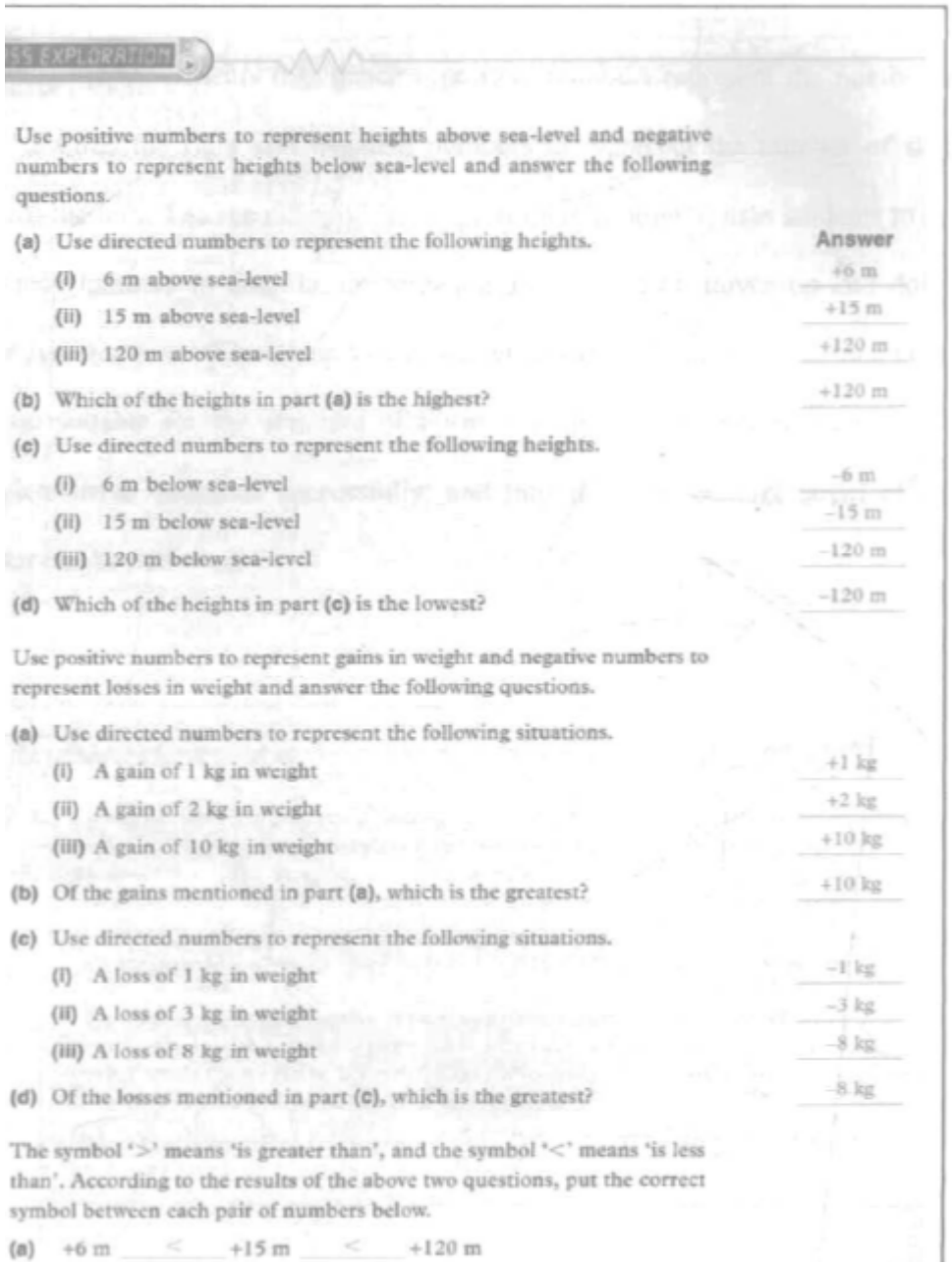

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Use positive numbers to represent heights below sea-level.

Use directed numbers to represent gains in weight.

TECHNICAL WORDS OCCUR EARLY ON

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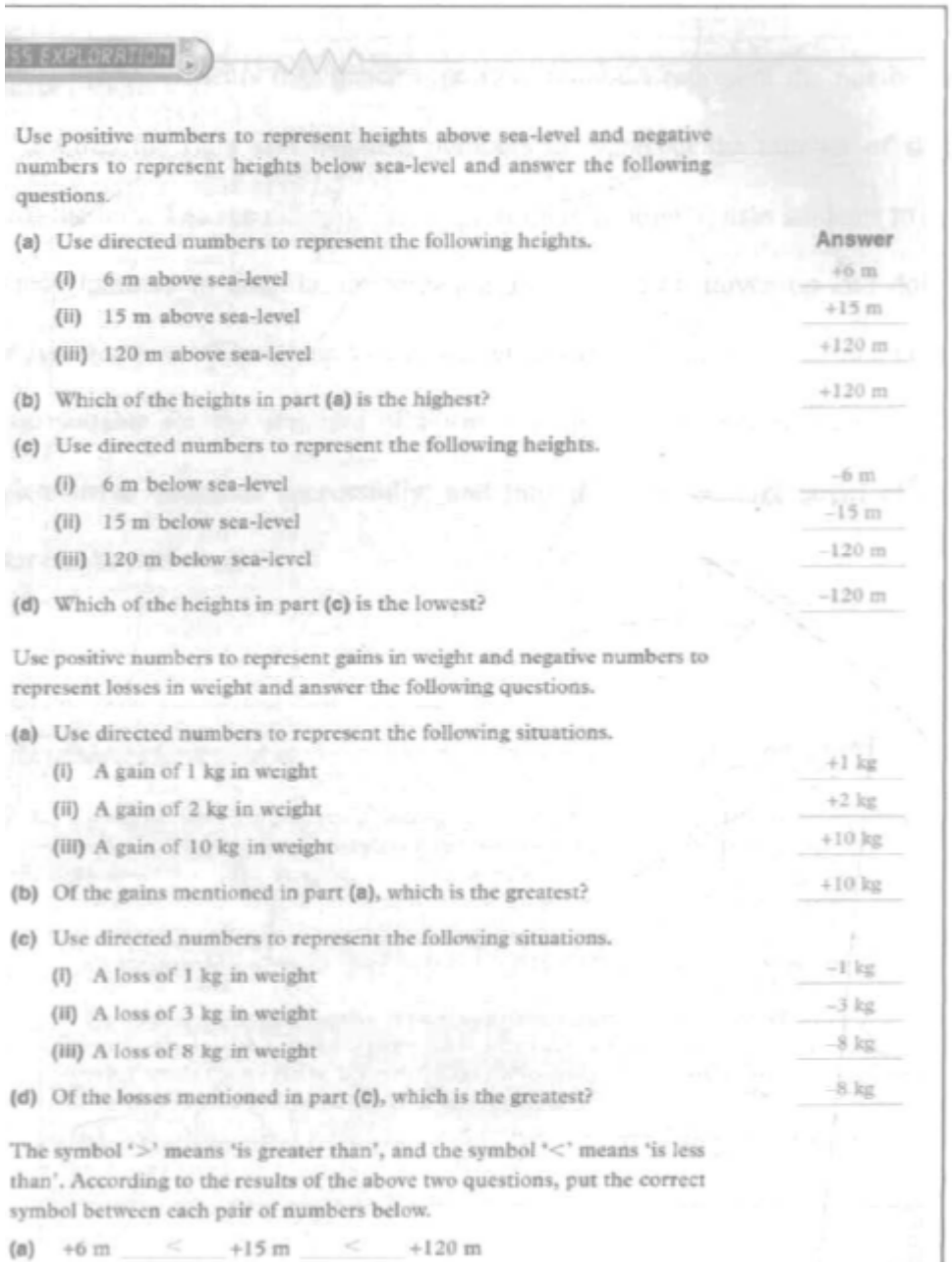

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(a) +6 m ___ +15 m ___ +120 m

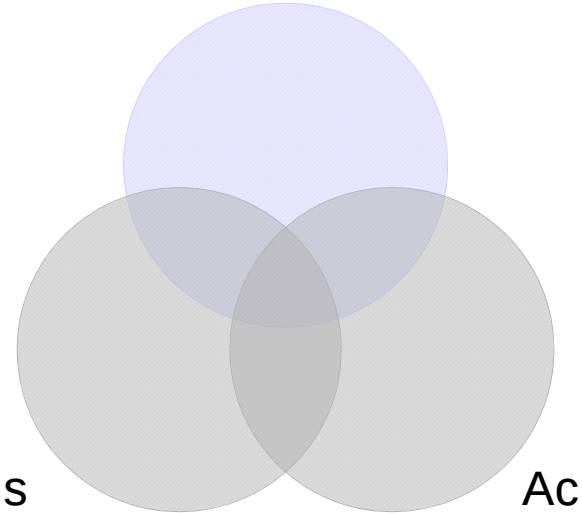
Use positive numbers to represent heights below sea-level.

Use directed numbers to represent gains in weight.

ACADEMIC WORDS OCCUR ALONGSIDE TECHNICAL WORDS

Accept the overlapping of domains in content subjects

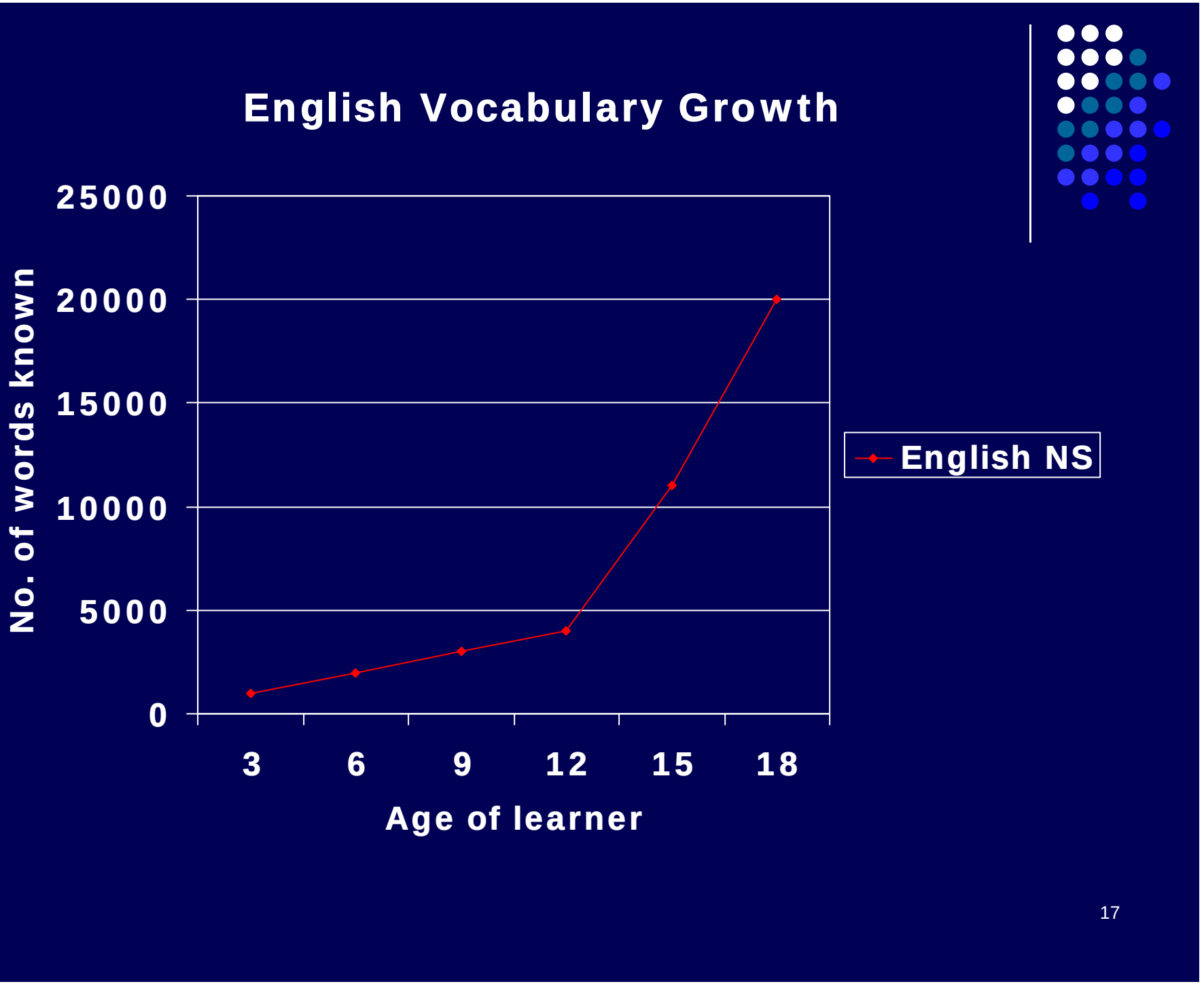
Technical Words



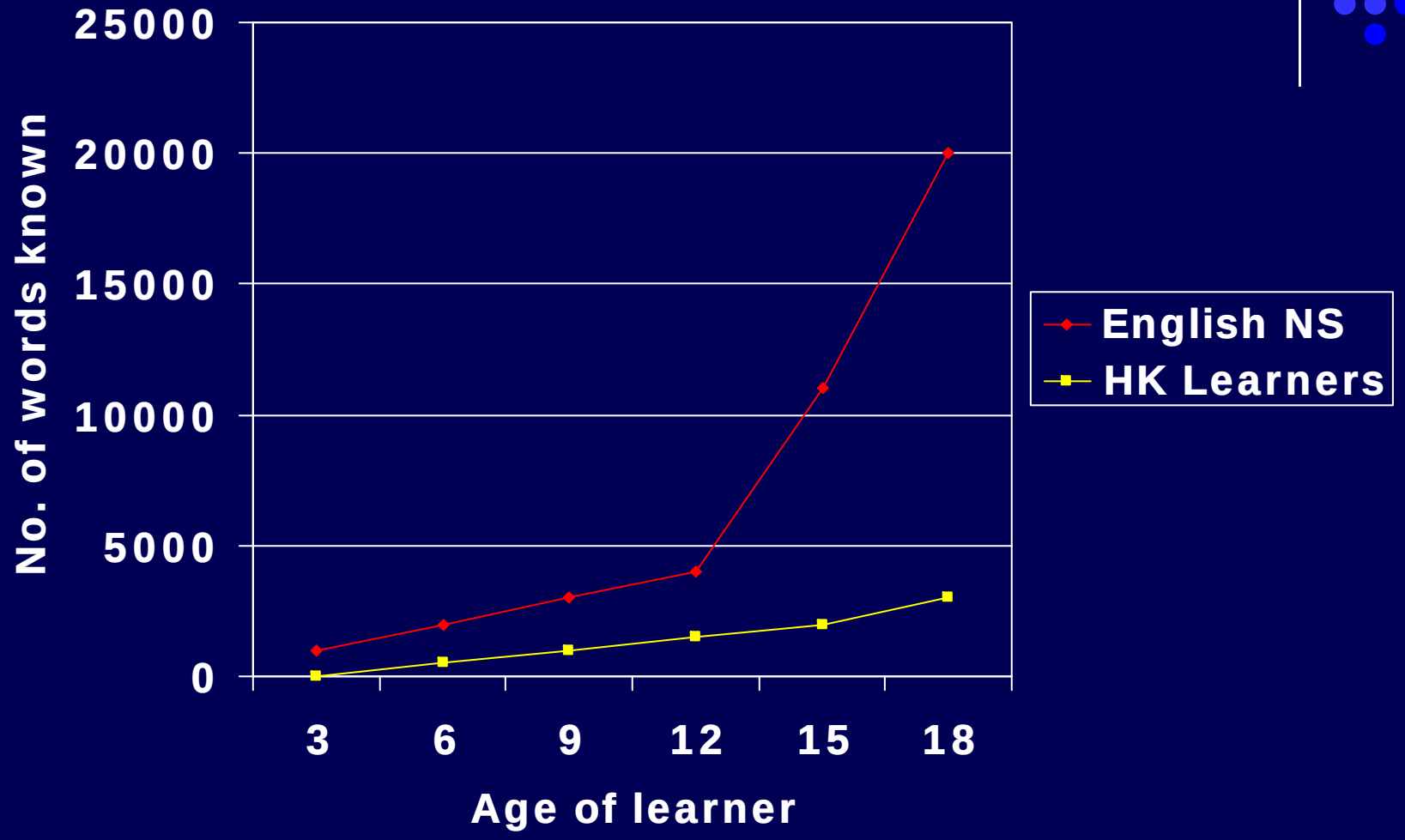
General Words

Academic Words

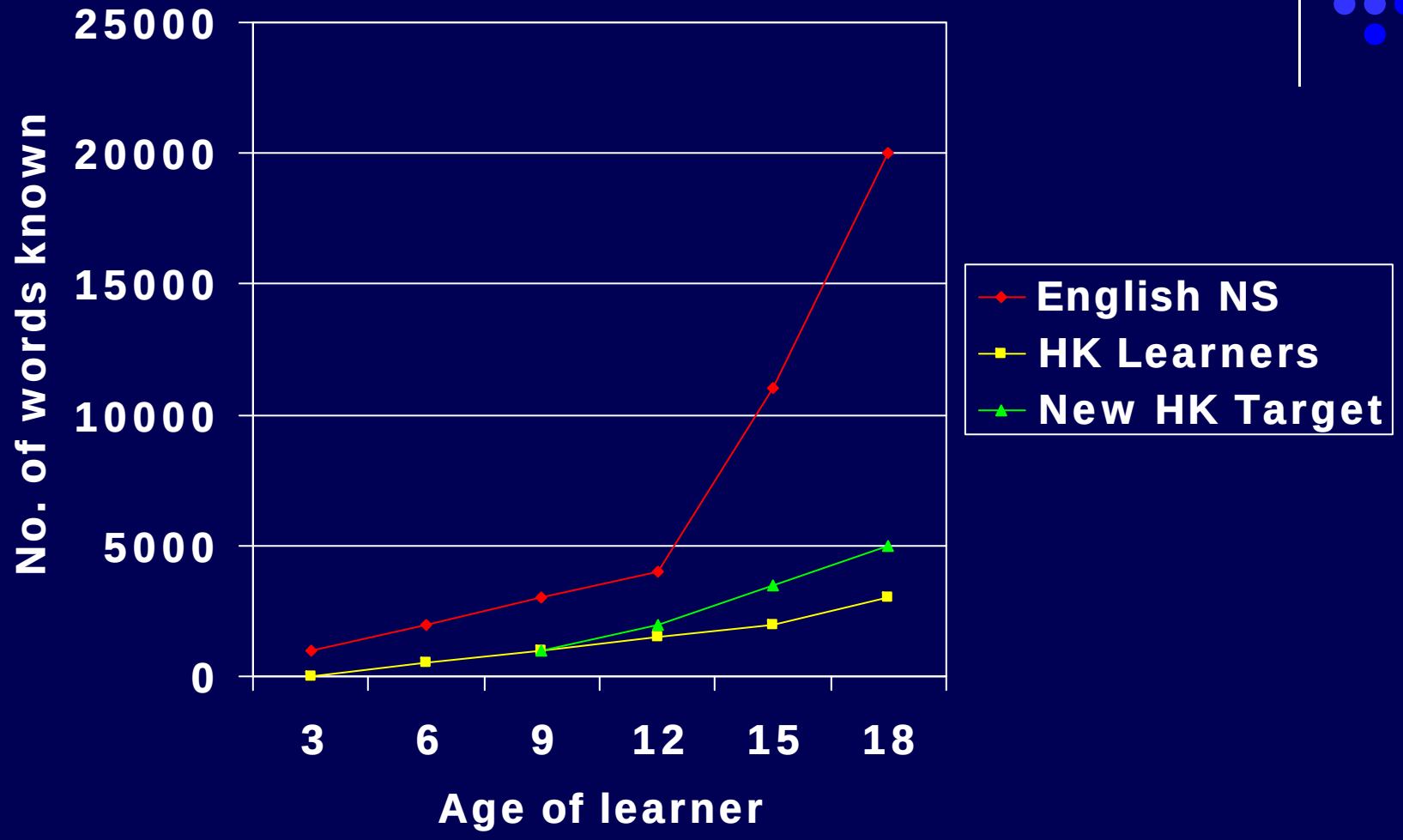
4. Vocabulary growth and NLTs and ELTs


English Vocabulary Growth
25000
20000
15000
10000
5000
0
No. of words known
3
6
9
12
15
18
Age of learner
English NS

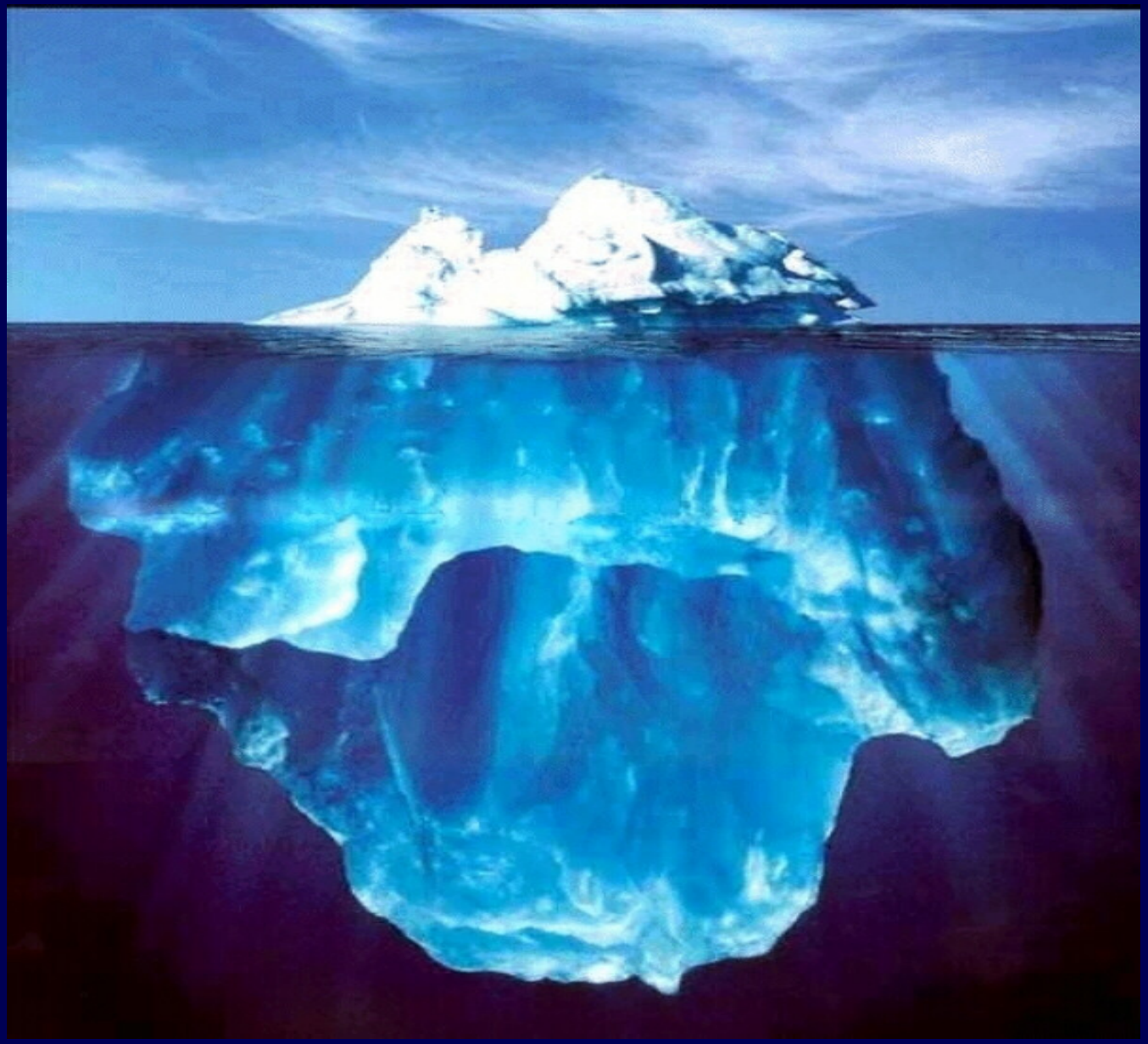
English Vocabulary Growth



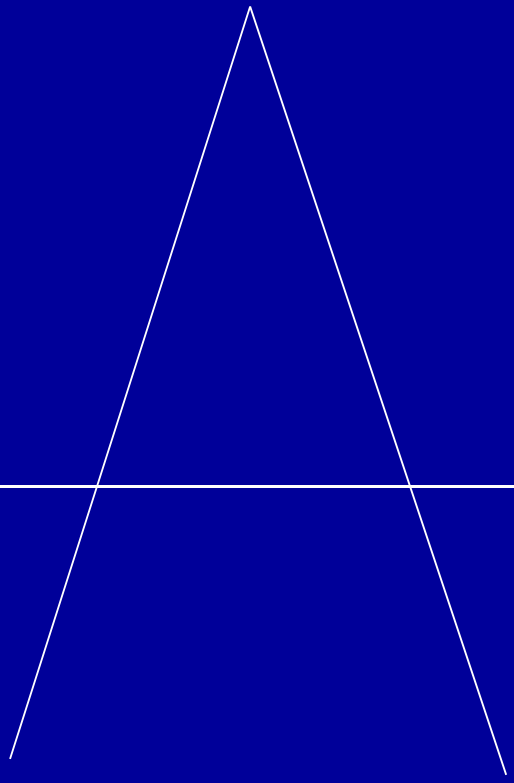
English Vocabulary Growth

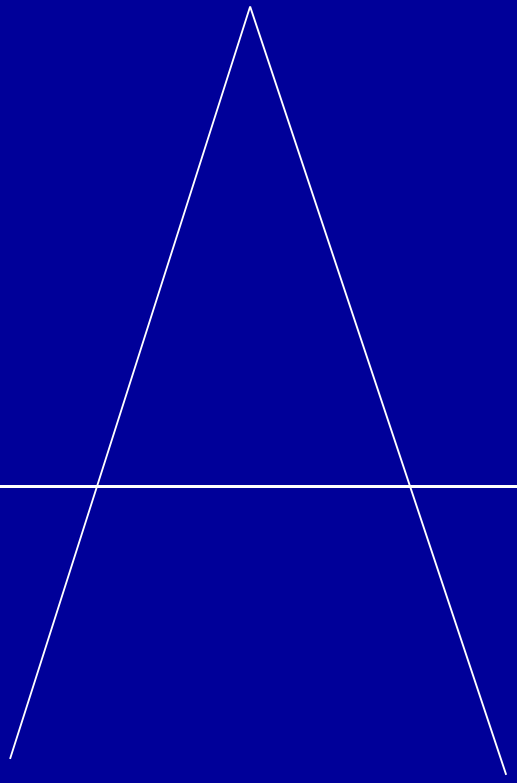


Understanding L2 vocabulary acquisition



The “iceberg” principle?



COGNITIVE PROCESS	Conversational Proficiency	LANGUAGE PROCESS
Knowledge **Comprehension** **Application** **Analysis** **Synthesis** **Evaluation**		**Pronunciation** **Vocabulary** **Grammar** **Semantic meaning**

How is English vocabulary acquired by students in Hong Kong schools?

		ELT and/or NLT?
From teachers' explanations?	YES	✓ ELT+NLT
From extensive reading of stories?	NO	n/a
From reading expository texts?	YES	✓ NLT
From formal exercises focused on words?	YES	✓ ELT

How much vocabulary do L2 students learn from reading?

- Finally some empirical evidence of the low extent of vocabulary gains from L2 reading
- Claims about number of encounters required to learn a new word vary between 6 and 20
- Just “reading” is not enough.

Extensive reading revisited

- Disappointing gains from reading of novels (Horst 2000)
- Far more vocabulary is learned if the same text is read several times (Horst & Meara 1999)

Insights from genre: some text types are better than others

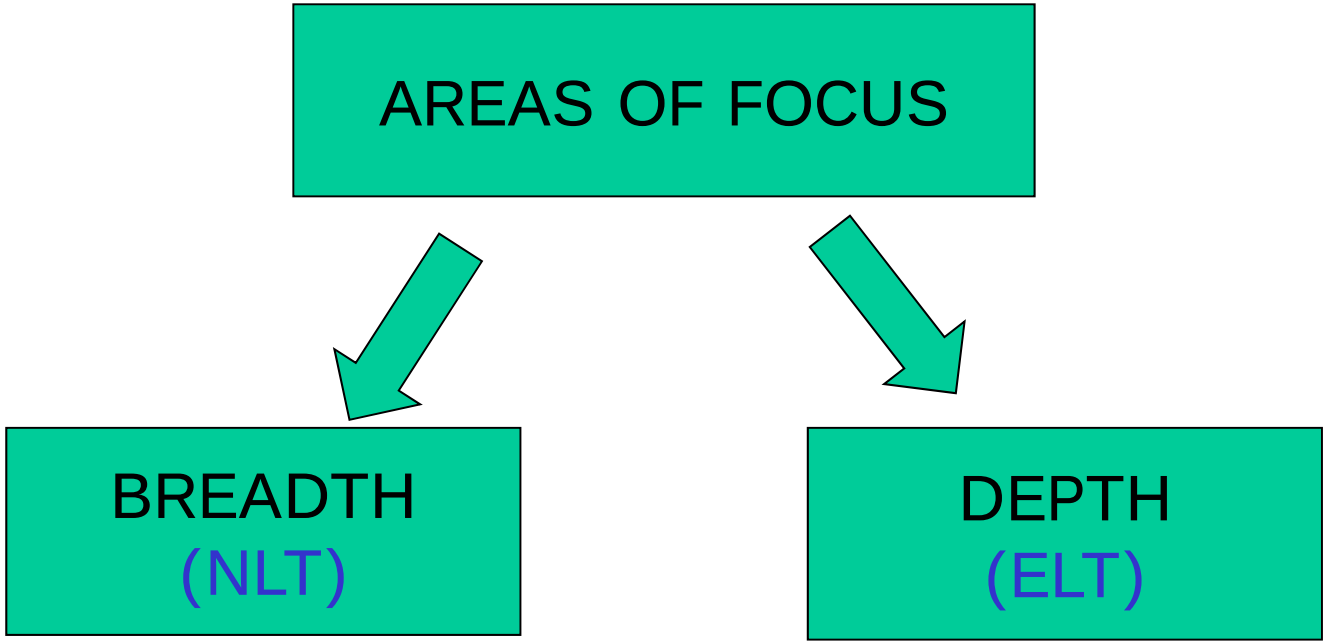
- Expository texts provide greater repetition of key lexis than narrative texts.
- Success reported with primary learners who read more expository texts (Gardner 2004).
- Mathematics/science textbooks repeat key technical and academic vocabulary in a systematic way and provide “repeated encounters”.

Key priorities in vocabulary teaching

1. Providing multiple exposures to target words (mainly NLT)
2. Cognitive ‘elaboration’ of the form-meaning relationship (mainly ELT)

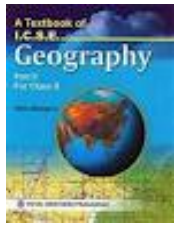
Two key considerations

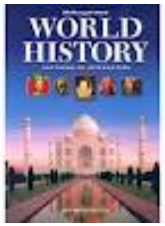
Complementary roles of NLT/ELT



EXAMPLE 2:

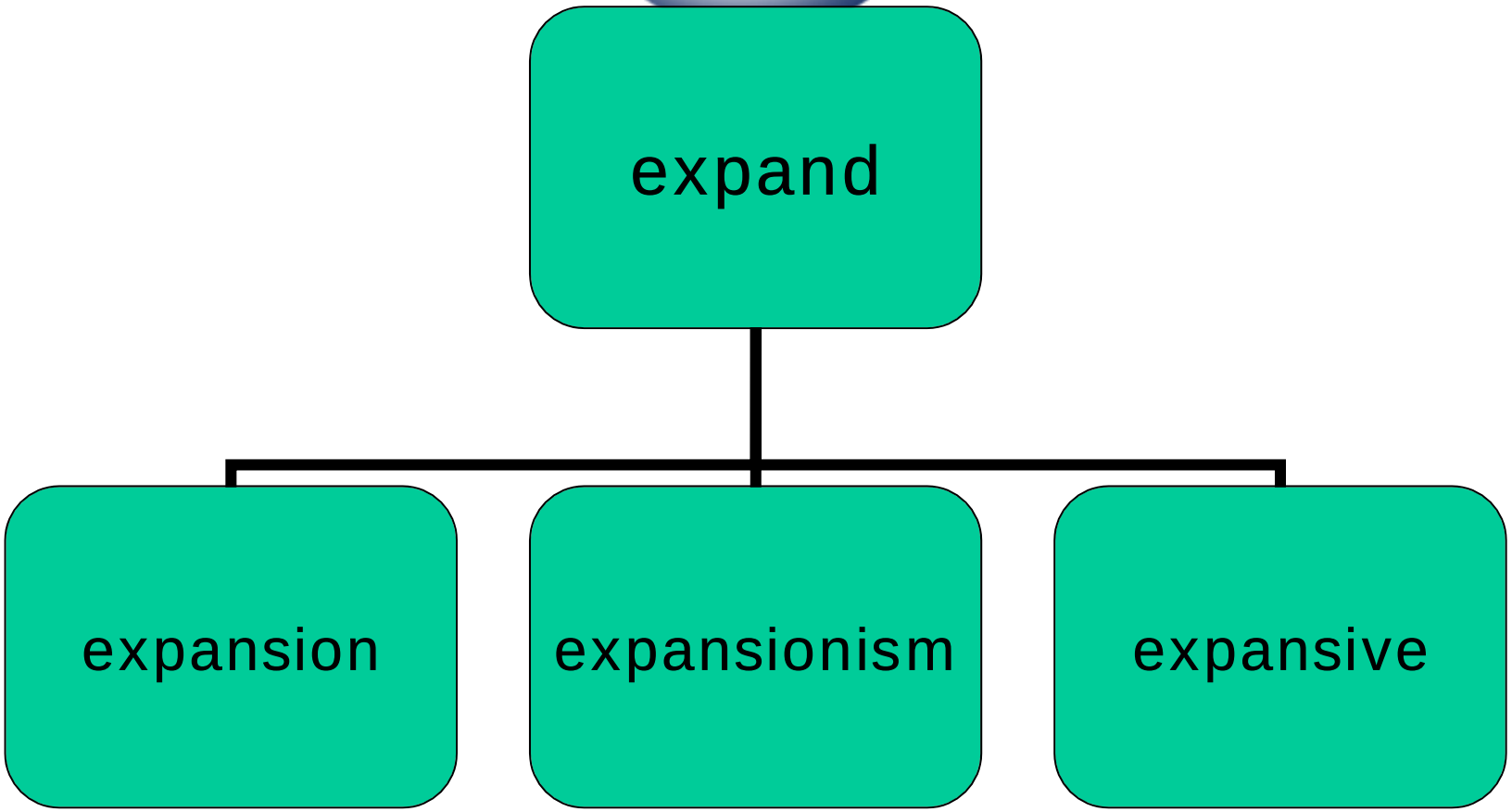
The language of humanities textbooks





Exploring different forms of words

Morphology



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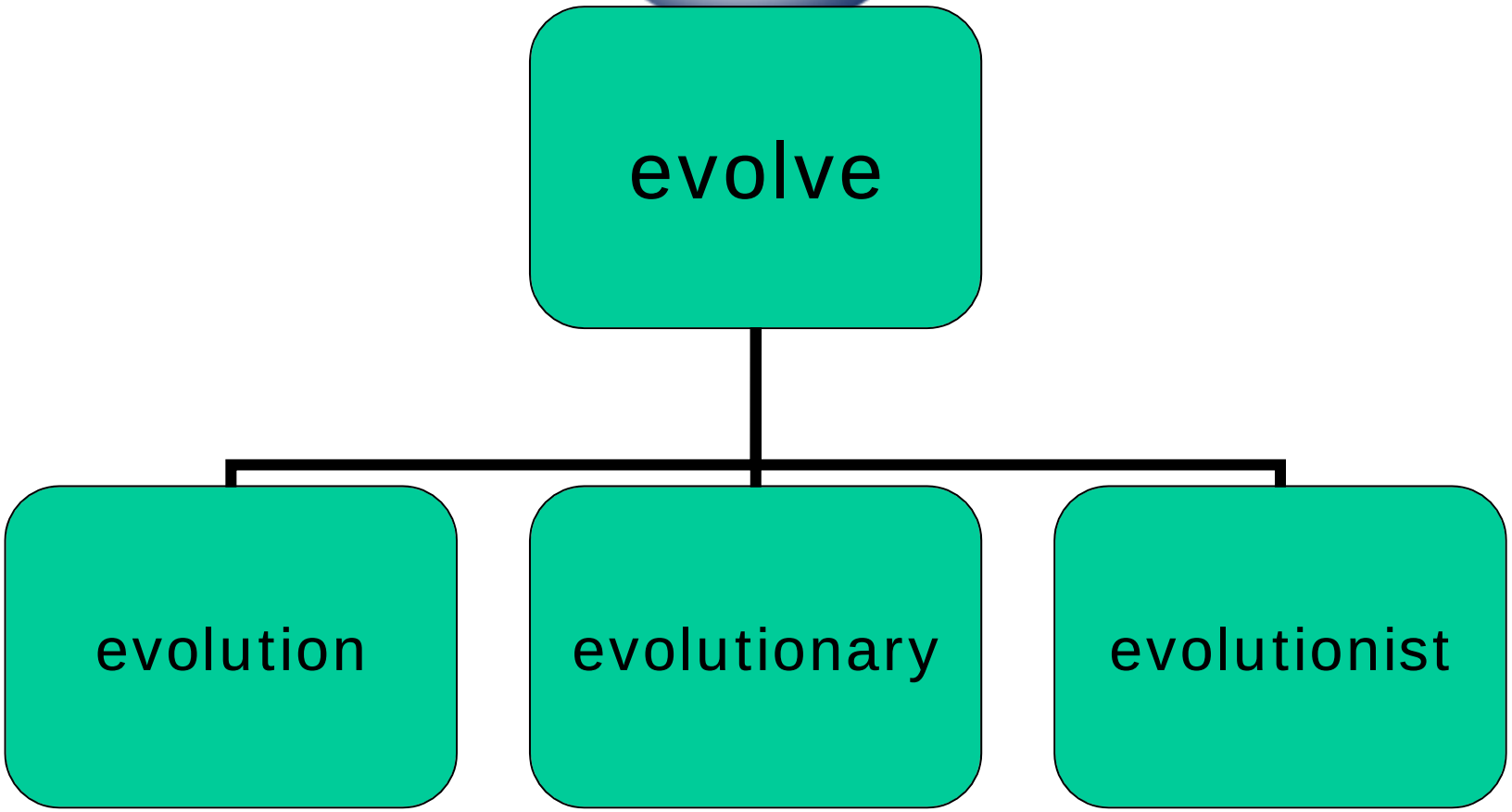

The war *destroyed* many factory buildings. This _____ ruined the economy.

Hitler *suppressed* anti-Nazi parties. The _____ of opposition parties lasted for several years.

The war *destroyed* many factory buildings.

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Principles for handling vocabulary

- Avoid meaningless transformation and repetition exercises.
- Provide helpful contexts.
- Deliberately expose the students to different forms of the key words.
- Contexts help with collocation.

Collocational awareness in geography

adjective	***activity***	***action***	***problem***
commercial	logging	damages	forests
		emit	pollutants
			landslides
global			

Key theoretical notions of the HK Vocabulary Curriculum Project

1. Providing multiple exposures to target words
2. Cognitive ‘elaboration’ of the form-meaning relationship
3. Greater instructional intervention in the vocabulary learning process

5. Practical collaboration between ELT and NLT

1. Set up a Language-across-the-Curriculum (LAC) Committee
2. Share texts.
3. NLTs need to know the discourse of their own subject and its linguistic features. Make sure ELTs are made aware of these.
4. ELTs need to know the texts used to teach content subjects and their characteristics. Refer to them in regular English classes.

Vive la différence!

Respect different discourses!