RECEPTIVE AND PRODUCTIVE ACADEMIC VOCABULARY KNOWLEDGE IN ENGLISH-MEDIUM INSTRUCTION

Diane Pecorari, City University of Hong Kong

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In collaboration with

Hans Malmström, Chalmers University of Technology

Philip Shaw, Stockholm University

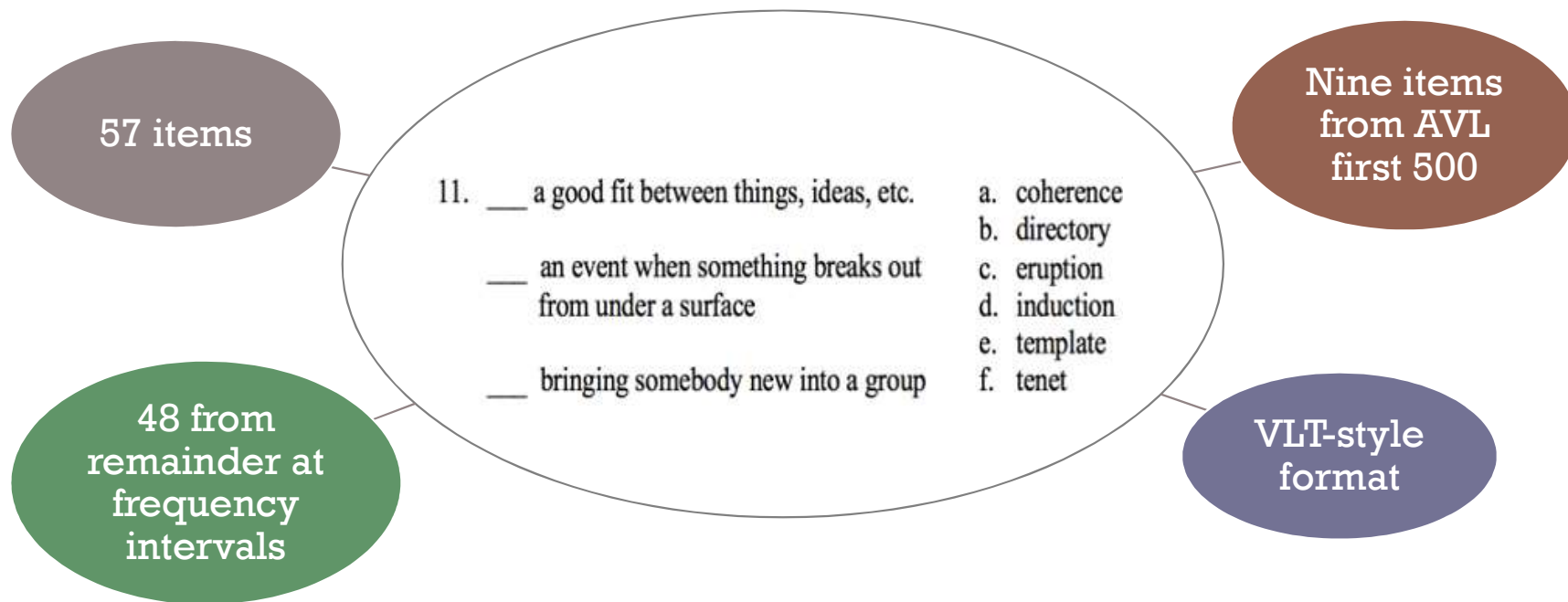# Vocabulary Knowledge and University Study

- Vocabulary knowledge is key to academic success.
- Many words are needed for university study; as many as 10,000 word families? *(Hazenberg & Hulstijn, 1996).*
- University students need:
  - general vocabulary *(e.g., Brezina & Gablasova, 2015).*
  - discipline-specific vocabulary *(e.g., Chung & Nation, 2003; Chung & Nation, 2004; Khani & Tazik, 2013; Mudraya, 2006; Wang, Liang & Ge, 2008; Ward, 2009; Yang, 2015).*
  - academic vocabulary: approximately 10-15% of academic texts *(Coxhead, 2000; Gardner & Davies, 2015).*
- Indications that some students are underprepared for English at university (e.g., Hellekjær, 2009).

A TEST OF ACADEMIC VOCABULARY

The Academic Vocabulary Test *(Pecorari, Malmström & Shaw, 2019)*

based on the Academic Vocabulary List *(Gardner & Davies, 2015)*:

57 items

Nine items from AVL first 500

48 from remainder at frequency intervals

VLT-style format

11. ___ a good fit between things, ideas, etc.

    ___ an event when something breaks out from under a surface

    ___ bringing somebody new into a group

a. coherence
b. directory
c. eruption
d. induction
e. template
f. tenet

The Vocabulary Levels Test

Version 1   The 2,000 word level

1 bake
2 connect   _____ join together
3 inquire   _____ walk without purpose
4 limit   _____ keep within a certain size
5 recognize
6 wander

The Academic Vocabulary Test

11. ___ a good fit between things, ideas, etc.   a. coherence
                                                       b. directory
     ___ an event when something breaks out   c. eruption
         from under a surface   d. induction
                                                       e. template
     ___ bringing somebody new into a group   f. tenet

TYPES OF VOCABULARY KNOWLEDGE

Vocabulary knowledge can be conceptualized across three dimensions :

(Henriksen, 1999)

- Partial versus precise
- Depth versus breadth of knowledge
- Receptive versus productive ability

EXPLORING THE RECEPTIVE-PRODUCTIVE DIMENSION

- Relatively more research on receptive than to productive vocabulary.

- Receptive vocabularies are larger *(e.g., Fan, 2000; Laufer, 1998; Pétursdóttir, 2013; Schmitt, 2008; Schmitt, 2014).*

- The size of the receptive-productive gap varies *(e.g., Laufer & Paribakht, 1998; Webb, 2008).*

- The measure used affects results *(Schmitt, 2014; Webb, 2008).*

- Receptive and productive may be fundamentally different domains *(Nemati, 2010; Ozturk, 2015).*

- Little work on productive academic vocabulary use (exceptions: *Durrant, 2016; Malmström, Pecorari & Gustafsson, 2016; Malmström, Shaw & Pecorari, 2018; Nizonkiza, 2016; Pétursdóttir, 2013).*

- More needs to be understood about this domain.

MEASURING PRODUCTIVE KNOWLEDGE

Controlled productive vocabulary: the Productive Vocabulary Levels Test

(Laufer & Nation, 1999).

Free productive vocabulary: Lexical Frequency Profiling

(Laufer, 1998; Laufer & Paribakht, 1998; Laufer & Nation, 1995; Šišková, 2016).

Version A   2,000 level

1 I'm glad we had this opp_____ to talk.
2 There are a doz_____ eggs in the basket.
3 Every working person must pay income t_____.
4 The pirates buried the trea_____ on a deserted island.

OUR FOCAL GROUP

- Master's students at a prestigious Swedish university of science and technology.

- International and local students (Swedish L1) represented.

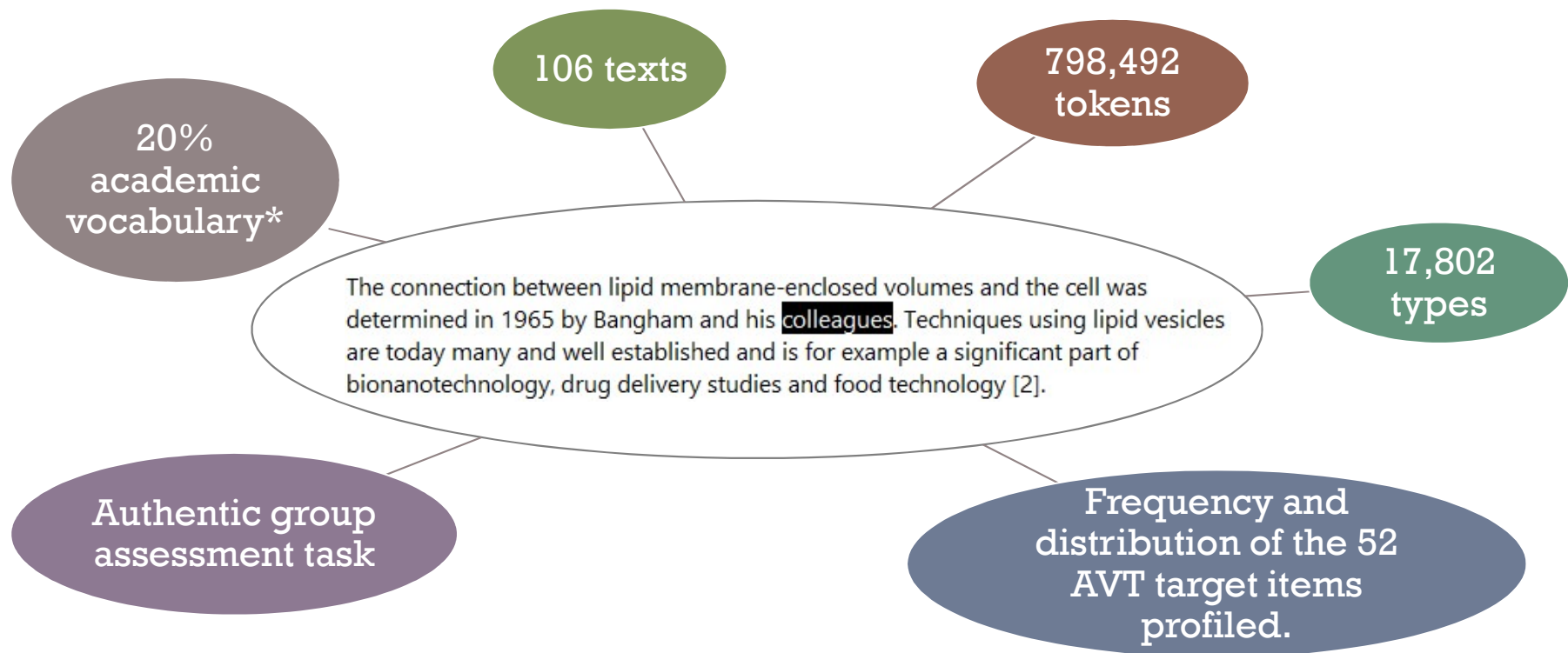- Different but comparable individuals participated in different parts of the study.

RECEPTIVE VOCABULARY KNOWLEDGE

- Mean AVT score 69.2%.

- Scores ranged from 26.3% to 92.9%.

- The average word was known by 69.2% of the test-takers.

- 14 words were known by at least 90% or more of test takers:
  - commitment, creation, colleague, assembly, accuracy, migration, reproduction, maximize, coordinate, aid, hybrid, degrade, safeguard, lag

- 15 words were known by fewer than half of test takers:
  - rationale, invoke, manifest, contest, tenet, prerogative, adherent, typology, aggregate, procure, decode, expediency, ubiquity, unanimity, modus

A CORPUS OF ENGINEERING ASSESSMENT WRITING

106 texts

798,492 tokens

20% academic vocabulary*

The connection between lipid membrane-enclosed volumes and the cell was determined in 1965 by Bangham and his colleagues. Techniques using lipid vesicles are today many and well established and is for example a significant part of bionanotechnology, drug delivery studies and food technology [2].

17,802 types

Authentic group assessment task

Frequency and distribution of the 52 AVT target items profiled.

*Malmström, Pecorari & Gustafsson, 2016

CORPUS ANALYSIS

- Of 52 items tested on the AVT, 26, or 50%, occurred never or almost never.
  - *(18 were unattested in the corpus)*
  - *(8 occurred in only one text each)*
- 3 most frequently occurring words:
  - accuracy, drawback, assembly
- 5 texts contained 0 academic words (types).
- 26 texts contained five or fewer types.
- The highest usage was 23 types.

A NEW PRODUCTIVE ACADEMIC VOCABULARY TEST

1. Throughout his life he showed the qualities of dedication and comm_____ .
2. After the defeat of the dictator came the cre_____ of a democratic state.
3. She is lucky to work with pleasant col_____ .
4. Fortunately, a nurse came to his ai_____ .
5. This is another argument which you can invo_____ in support of the rule.

PVLT format

52 items

Items (almost) identical with AVT.

Extensively piloted, not (yet) validated

CONTROLLED MEASURE OF PRODUCTIVE KNOWLEDGE

- Administered to ca. 200 MSc Engineering students (results for 103 analysed to date).

- Following Webb (2008), two marking conditions:

  - Strict condition: answer must be in correct form with no significant misspellings

  - Relaxed condition: if the answer unambiguously aims at the target word, errors of form (e.g. verb form instead of noun, plural instead of singular) are overlooked.

PRODUCTIVE (STRICT MARKING)

- Mean PAVT score 34.6%.

- Scores ranged from 1.9% to 86.5%.

- The average word was known by 34.6% of the test-takers.

- 1 word was known by at least 90% or more of test takers:
  - hybrid

- 36 words were known by fewer than half of test takers:
  - colleagues, invoke, manifest, frontier, rationale, reproduction, susceptible, spontaneous, informed, disciplinary, multiplying, intensified, precludes, contest, safeguard, drawbacks, induction, prerogative, adherent, typology, lagged, disintegration, standardisation, paraphrase, procure, predate, aggregating, affiliated, miscellaneous, empathetic, homogeneous, permissive expediency, exclusivity, ubiquity, unanimity, modus

PRODUCTIVE (RELAXED MARKING)

- Mean PAVT score 47.1%.

- Scores ranged from 1.9% to 90.4%.

- The average word was known by 47.1% of the test-takers.

- 3 words were known by at least 90% or more of test takers:
  - migration, maximize, hybrid

- 25 words were known by fewer than half of test takers:
  - invoke, manifest, frontier, rationale, reproduction, susceptible, informed, disciplinary, precludes, contest, induction, prerogative, adherent, typology, lagged, disintegration, procure, predate, affiliated, miscellaneous, permissive, expediency, ubiquity, unanimity, modus

COMPARING THE RESULTS

Score	Receptive	Controlled Productive (Relaxed)	Controlled Productive (Strict)	Free Productive
Highest	92.9%	90.4%	86.5%	44.2%
Average	69.2%	47.1%	34.6%	--
Lowest	26.3%	1.9%	1.9%	0

AVL Types	Attested in Student Texts
Most	9
Average	2.4
Fewest	0

DOES IT MATTER?

- For academic success. . . .

  o Necessary to understand a high proportion of words to achieve overall comprehension of a text (e.g., 98%, Hu & Nation, 2000).

  o AVL items cover 15% of academic texts (Gardner & Davies, 2015).

  o Average receptive score: 69.2%

  o An oversimplification? Reading time and comprehension are related (Busby, 2018; Busby & Dahl, in preparation; Shaw & McMillion, 2008).

  o What happens in the real world?

  o Any disadvantage may not be evenly spread.

DOES IT MATTER?

- For language learning . . .
  - In an EMI setting, language learning is one objective.
  - The receptive/productive gap raises questions about how effectively this happens.

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Thank you for listening!