Exploring vocabulary in university tutorials and laboratories through corpora and word lists

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Why investigate vocabulary in labs and tutorials?

- No distinction of different kinds of speech events (Dang, 2018a, 2018b; Dang, Coxhead, & Webb, 2017; Simpson-Vlach & Ellis, 2010)
- Lectures (Thompson, 2006)
- Lectures & seminars (Dang & Webb, 2014; Nesi, 2002)
- Student presentations (Hincks, 2003)

- Labs and tutorials involve dialogic interaction. They are important for students' development of
  - understanding of disciplinary content
  - ability to express complex ideas

  (Basturkmen, 2016; Coxhead, Dang, & Mukai, 2017)

How useful are existing word lists to students in tutorials and lab sessions?

Lab corpus		Tutorial corpus	
Biology	30,734	Art	11,303
Chemical Engineering	18,739	Business	185,333
Chemistry	8,061	Communication	6,075
Civil engineering	9,962	Education	87,766
Communication	8,756	Engineering	38,638
Computer science	12,337	English	1,014
Engineering	13,117	History	5,606
Film, theater, music	5,727	Political Science	36,945
Mathematics	6,209	Textiles & Clothing	7,398
Psychology	23,757		
Total	**137,399**	**Total**	**380,078**

Single word analysis

Examined the lexical coverage in these corpora provided by lists of single words :

- Academic Word List (Coxhead, 2000)

- Academic Vocabulary List (Gardner & Davies, 2014)

- Academic Spoken Word List (Dang, Coxhead & Webb, 2017)

Lexical coverage of different academic word lists in the lab corpus and the tutorial corpus

Word list	Labs	Tutorials
Academic Spoken Word List	90.58%	92.35%
Academic Vocabulary List	19.65%	22.73%
Academic Word List	2.52%	3.56%

Percentage of words from each list appearing in the lab corpus and the tutorial corpus

Word list	Labs	Tutorial
Academic Spoken Word List	84%	97.42%
Academic Word List	61%	91.23%
Academic Vocabulary List	41%	66.21%

Multiword analysis

- Created two lists of 4-word bundles
  - One for tutorials (125 items)
  - One for laboratories (183 items)

- Checked these lists of multiwords against
  - Lexical bundles in academic spoken English (Biber, Conrad & Cortes, 2004)
  - Academic Formulas List (spoken) (Simpson-Vlach & Ellis, 2010)

Overlap between the lists of bundles in labs and tutorials with other multiword unit lists

Word list	Bundles in the lab corpus	Bundles in the tutorial corpus
Biber et al.'s (2004) list	20.77%	28.8%
Simpson-Vlach and Ellis's (2010) list	23.50%	24.8%

Where are the main overlaps?

- Stance expressions

  (That/so/what) you need to (know/be/have)

  (To/should) be able to (do)

- Discourse organisers

  – Particularly in topic introductions

    - We/you *are talking about*

    - *Know what I mean*

    - *(if) you look at (the)*

Limitations

- Small scale study using small corpora
- Word lists developed for different purposes being used
- Other available lists not being used
  - e.g. the Academic Collocation List (Ackermann & Chen (2012)
  - Liu's (2012) multiword unit lists from academic written texts
- Sure to be others

Pedagogical implications

There is variation in

- coverage between the single academic word lists
- a number of bundles that overlap between the multiword unit lists

→ Raises the concerns about bringing raw data and word lists into classrooms (e.g., Byrd & Coxhead, 2010; Dang, 2019)

Pedagogical implications

• The Academic Spoken Word List is useful resource to deal with tutorials and laboratories.

• The items which overlap between different lists of multiword units could form a useful core of multiword units for speaking in EAP courses.

• The remaining items in the tutorial and laboratory lists would be useful for preparing for speaking in those events, depending on the avenue of future studies for students.

• The lists of multi-words in labs and tutorial developed in this could be used to inform the development of materials and textbooks for EAP learners who are heading for either the hard or soft sciences.

Future research?

- Larger-scale replication?
- Developing and trialling materials for EAP courses and tracking learning/effectiveness?
- Other ideas?

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Further information

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