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Curriculum Research Methods:

Studying Curriculum in Its

Different Forms and Across Levels

- Corpus Linguistics

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Overview

- What is Corpus Linguistics?

- Corpus Linguistics – analytical tools

- How I used Corpus Linguistics in my doctoral research project.

- Corpus Linguistics and curriculum research – benefits and challenges.

- Corpus Linguistics and curriculum research – next steps.

- Roundtable – discussion/questions and/or an activity!

What is Corpus Linguistics?

- Corpus Linguistics (CL) emerged from linguistics – the study of samples (corpora) of language data.

- A corpus is a body of **naturally occurring** language (textual, spoken etc.).

- **Sampled** to be **representative** of a particular kind of language use (depends on type of corpus).

- Textual data are **machine readable**.

- A system of **methods/principles** rather than a theory.

What kinds of analysis does CL permit?

Too many to cover this morning (and I'm not an expert)!

- Descriptive statistics
- Concordance analysis
- Collocation analysis
- Keyword analysis

Descriptive statistics

- **Word frequency analysis** – how often does a word appear?
- **Normalised frequencies** – how often does a word appear per 1,000, 1,000,000 words across different corpora/sub-corpora?

- **Useful for…**getting an initial sense of how terms of interest are used within a corpus.

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Collocation analysis

- **Collocation analysis** explores **co-occurrence** of words – the company they keep.

- In large corpora, collocates are often identified using a statistical approach – using a range of statistical tests – to identify if words appear together more frequently than would be expected by chance.

- **Useful for**…highlighting 'common sense' framings and attitudes (i.e. "read and write", "ladies and gentlemen", "right and wrong") or similar co-occurrence patterns in your data.

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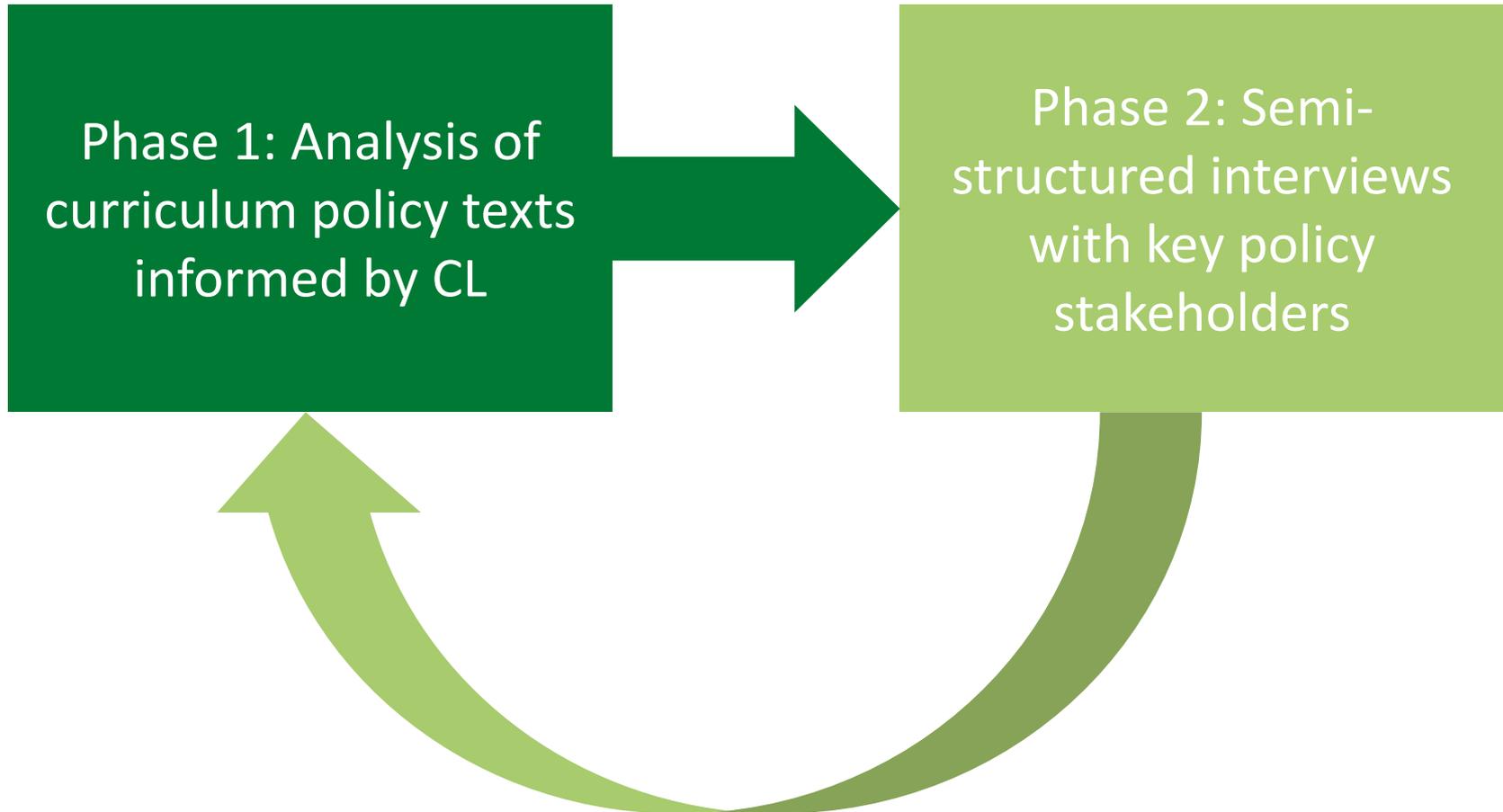BE THE DIFFERENCE

Keyword analysis

- Approach to highlighting what a particular corpus is 'about' (its **genre**).

- Based on a **statistical comparison** between the frequency of a term in your corpus and a reference corpus – a word is key if it occurs more frequently than we'd expect by chance alone.

- **Reference corpus** typically larger and ideally from the same genre.

- **Useful for**... highlighting how typical or untypical your corpus is of its genre.

Concordance analysis

- Brings together **all instances** of a term of interest in a way that permits sorting in a range of ways.

- Helps to uncover both **standard** and **non-obvious** meanings.

- Permits sorting using a range of criteria.

- Concordance lines can be analysed **qualitatively** as a means of verifying or refining statistical observations.

- **Useful for**… triangulating the findings from descriptive or statistical analysis of corpora by exploring how terms are used in context.

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para . #.	Para Pos	H... #.	H... Pos	Sect. #	Sect. Pos.	File	Date	%
1	to allow them to succeed; and Achieving equity: ensuring every child has the same			992	41	51	0	991			0	991	29 - A Delivery Plan for	2016	53%
2	in Scotland to ensure it delivers excellence and equity for all. This plan sets out our programme for			1,035	42	25	01	...4			01	...4	29 - A Delivery Plan for	2016	55%
3	important work to do, to deliver both excellence and equity. I am committed to raising attainment and			110	6	15	0	109			0	109	29 - A Delivery Plan for	2016	23%
4	and Development (OECD) report on Quality and Equity in Schooling in Scotland. This means: a			581	18	50	0	580			0	580	6 - Building the Curriculum	2008	6%
5	out studies such as that which led to the Quality and Equity of Schooling in Scotland report.20 The			16,434	616	34	05	...3			05	...3	8 - Building the Curriculum	2011	83%
6	for Excellence. The OECD report Quality and Equity of Schooling in Scotland raises challenges for			15,406	548	7	05	...5			05	...5	6 - Building the Curriculum	2008	90%
7	particular strengths and weaknesses. (Quality and Equity of Schooling in Scotland) National guidance			7,626	259	4	07	...5			07	...5	6 - Building the Curriculum	2008	46%
8	. As the OECD said in its recent report, Quality and Equity of Schooling in Scotland, curriculum reform			170	5	12	0	169			0	169	6 - Building the Curriculum	2008	4%
9	Most recently, the OECD report Quality and Equity of Schooling in Scotland4 identified many			2,277	66	95	02	...6			02	...6	6 - Building the Curriculum	2008	15%
10	thereby narrow the achievement gap, resulting in equity. The Roles and responsibilities of individuals,			16,679	625	46	05	...8			05	...8	8 - Building the Curriculum	2011	84%

concordance   collocates   plot   patterns   clusters   timeline   filenames   source text   notes

0%

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My doctoral study – how concepts of equity have informed curriculum policy in Scotland

Phase 1: Analysis of curriculum policy texts informed by CL

Phase 2: Semi-structured interviews with key policy stakeholders

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How I used CL

- Exploration of a range of equity-related terms, and the term 'knowledge', within 30 Scottish curriculum policy texts.

- Raw and normalized frequencies across different sub-groupings of the texts.

- Detailed analysis of concordance lines.

- Analysis of co-occurring terms (collocates) for knowledge.

- Identified 3 main framings of equity.

- Identified inconsistency/change over time in these framings.

- Knowledge – conceptual inconsistency and 'bundling' with other terms.

- Forced me to 'pay attention' – to sometimes micro changes (i.e. poverty).

Using CL in curriculum/educational research – examples

Study	Focus	Data
Ayers (2015)	"To examine the discursive strategies deployed by community colleges to sustain legitimacy in an evolving and contradictory institutional environment".	Community college mission statements.
Herbel-Eisenmann, Wagner & Cortes (2010)	"The hidden curriculum of mathematics classrooms".	Transcripts of mathematics classroom observations.
Oancea (2005)	To identify "the main topics, themes and rhetorical features that were characteristics of the criticisms of educational research in Britain during the 1990s".	Newspaper articles, academic journals, books, grey literature.

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CL and curriculum research – benefits/possibilities

- Exploration of a large amount of data.

- Ability to ground research projects in empirical language-based data.

- Highlighting patterns in language use that may otherwise go unnoticed (Brindle, 2016; Herbel-Eisenmann et al 2010; Mulderrig, 2012).

- Potential to use at different levels of the curriculum i.e. meso/micro/nano.

CL and curriculum research – challenges

- Corpus building (Coxhead & White, 2012).

- Corpus size.

- Corpus representativeness.

- Time – corpus compilation and mark-up.

- Corpus comparisons.

CL and curriculum research – next steps?

- More work in this area!

- Potential to use Curriculum Network through EERA to learn lessons and share approaches.

- Training and mentoring/shadowing.

- Corpus building and sharing resources.

- Comparative corpora work – methodological challenges.