

Understanding the changing resource behaviors of small academic entities in view of emerging pedagogical trends: A methodological contribution

Mr. Gerard Said Pullicino

The myth of the 50 words of snow

- “Eskimos have 50 words for ‘snow’” is a false statement
- The Eskimo language only has 7 words for snow, but since it is a language that combines words, like German, Eskimos often create compound words instead of using adjectives.
- Several artificial languages have been created exploring the concept of ‘Linguistic Relativity’, as it is believed that language could reinforce prejudice.

Artificial languages

- Láadan was invented specifically to determine if the development of a language aimed at expressing the views of women would shape a culture (<https://laadanlanguage.com/>)
- Lojban was proposed as a speakable language for communication between people of different language backgrounds, which can express concepts unambiguously.

Does language mediate student's choice of studies?

- Our courses are based in most part on a course prospectus that tags courses semantically
- Each course is a collection of units, which are described by unit descriptors, which are again tagged semantically.
- MCAST's course descriptors and unit descriptors are in English.
- How and why do students choose to identify and follow a particular course?

Sapir-Whorf hypothesis

- Language mediates thought, therefore students will identify with words they understand.
- The structure of a language affects its speakers cognition
- Counterargument is Language 'universalism'. Since people speak multiple languages can all understand logic and mathematics.
- The linguistic debate continues.
- The current trend with 'woke' language could revive this argument?

How do we study this?

- Grounded Theory was chosen as a good tool to include qualitative insight from teachers and students.
- Research is based on Glaser's insights...all is data, from qualitative interviewing to quantitative data derived from experiments that include large scale IT interventions.
- No fixed sampling strategy adopted, an initial set of qualitative interviewees was set with coding and constant comparison between interviews being the main empirical control system.

A 'different' literature review

- The methodology being presented here is a different way of carrying out a literature review.
- The idea is to carry over the Glaserian 'all is data view' and the idea of limiting bias into the analysis of literature.
- By using the method outlined in the paper being presented, the implicit interpretative bias of reading and agreeing with an author could be limited by the statistical analysis of the words used in specific papers.

Research methodology 2

- By using computer aided reference management tools and MAXQDA, a topic dependent set of dictionaries were created.
- A keyword search was used to find relevant research for two topics relevant to the main research theme.
- Papers were then imported into Zotero, a reference management tool
- Zotero was used to generate an RIS file that could import correctly referenced papers into MaxQDA

Methodology

- Based on the selection of 4 research papers which fell under the category of 'Education' as well as another 4 research papers which fell under the category of 'Company Resourcing'
- A dictionary of common terms for 'Education' and 'Values' was set up.
- Word frequency tables were calculated using MaxQDA for both sets of documents based on the relative number of times the words from the Education and Values category appeared.

Findings

- The word combinations and vocabulary used in the two different categories are very different.
- Based on this analysis, papers from different subject domains use different constructions to explain similar concepts.
- MaxQDA is a powerful tool to perform automated text analysis on a large corpus of texts to identify patterns in words that are relevant to specific topics.

Reason for findings

- There seems to be a link, based on the admittedly small sample, between the vocabulary and dictionary used and the topic that is being analyzed semantically.
- This link could be a key to understanding how students choose to identify with a particular choice of subject
- More data is needed to study this phenomenon. Initial qualitative analysis of interviews with lecturers seems to indicate that there is a pre/post COVID distinction.

Possible future experiments

- Analysing the MCAST CSR program to understand what keywords and skills students self-select.
- Understanding the quantitative match between students enrolled to the apprenticeship scheme and the skills related to the jobs they choose.
- Qualitatively interviewing students in practical courses carefully

Result

- It is hoped that if a clear link is established between the keywords describing a particular topic, and the sense of belonging / affinity that students tend to prefer, a better way of classifying courses and units can be found that can allow students to easily identify their career path.
- This would, in turn, make it easier for students to apply for courses that lead to jobs they like.
- It would also make it easier for smaller schools to design courses that can fulfill specific niches for specific students