

A white rectangular card with rounded corners and a black border, centered on a light blue background. The card contains the title 'US vs. UK' and 'STUDENT NEWSPAPER' in blue text, separated by horizontal lines. The authors 'Ashley + Ziyad' are listed at the bottom. The background features a dark blue vertical bar on the left, a yellow paper corner at the bottom left, a blue pen at the bottom right, and a document icon at the top right.

**US vs. UK**

**STUDENT NEWSPAPER**

Ashley + Ziyad

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# Potential Research Questions

## RQ1: Comparative Analysis of 2 Education Systems

- ☐ How does a liberal arts education affect the writing practices of college newspaper journalists, compared to those who do not receive a liberal arts education?



## RQ2: Convergence of writing style

- ☐ Are there any noticeable convergences or divergences in the style or content of articles in the two countries?





# Importance

## US Undergraduate Education System



Broad-based curriculum



Close staff-student relationship



Fully residential campus



Rich out-of-class learning experiences



Active community service



Multi-faceted workplace experience



Strong alumni and community support



Global learning opportunities

### Liberal Arts Education

a well-rounded foundation for future careers or graduate studies

## UK Undergraduate Education System

Year1 - View timetable

[Learning Outcomes, Transferable (Key) Skills, Assessment]

Compulsory modules:

Students will be required to study the following compulsory modules:

COMP1121	Databases	10 credits	Semester 2 (Jan to Jun)	PFP
COMP1211	Computer Architecture	10 credits	Semester 1 (Sep to Jan)	PFP
COMP1212	Computer Processors	10 credits	Semester 2 (Jan to Jun)	PFP
COMP1421	Fundamental Mathematical Concepts	10 credits	Semester 1 (Sep to Jan)	PFP
COMP1511	Introduction to Discrete Mathematics	10 credits	Semester 2 (Jan to Jun)	PFP
COMP1711	Procedural Programming	10 credits	Semester 1 (Sep to Jan)	PFP
COMP1721	Object Oriented Programming	10 credits	Semester 2 (Jan to Jun)	PFP
COMP1911	Professional Computing	20 credits	Semester 1 (Sep to Jan)	PFP
COMP1921	Programming Project	10 credits	Semester 2 (Jan to Jun)	PFP
COMP8001	Placement (Year 1)	credits	01 Jun to 31 Aug	PFP

Optional modules:

Students may study up to a maximum of 20 credits of the following optional modules:

COMP1012	Introduction to Programming	10 credits	Semester 1 (Sep to Jan)	
COMP1021	Introduction to Web Technologies	10 credits	Semester 2 (Jan to Jun)	

Year2 - View timetable

[Learning Outcomes, Transferable (Key) Skills, Assessment]

Compulsory modules:

Students will be required to study the following compulsory modules:

COMP2211	Operating Systems	10 credits	Semester 1 (Sep to Jan)	
COMP2221	Networks	10 credits	Semester 2 (Jan to Jun)	PFP
COMP2321	Formal Languages and Finite Automata	10 credits	Semester 2 (Jan to Jun)	
COMP2421	Numerical Computation	10 credits	Semester 1 (Sep to Jan)	
COMP2611	Artificial Intelligence	10 credits	Semester 2 (Jan to Jun)	PFP
COMP2711	Algorithms and Data Structures I	10 credits	Semester 1 (Sep to Jan)	
COMP2721	Algorithms and Data Structures II	10 credits	Semester 2 (Jan to Jun)	
COMP2811	User Interfaces	10 credits	Semester 1 (Sep to Jan)	PFP
COMP2912	Software Engineering Principles	10 credits	Semester 1 (Sep to Jan)	
COMP2913	Software Engineering Project	10 credits	Semester 2 (Jan to Jun)	
COMP8002	Placement (Year 2)	credits	01 Jun to 31 Aug	PFP

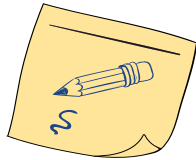
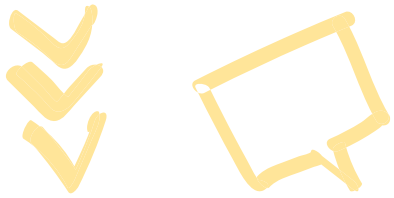
Optional modules:

Students may study up to a maximum of 20 credits of the following optional modules:

COMP2011	Web Application Development	10 credits	Semester 1 (Sep to Jan)	
COMP2121	Data Mining	10 credits	Semester 2 (Jan to Jun)	
COMP2932	Compiler Design and Construction	10 credits	Semester 2 (Jan to Jun)	

### Specialized University System

more focused and targeted towards specific career paths



# Data (1/3)

## Data Collection

- Scraped from a list of UK and US student newspapers on Wikipedia. Exhausting the list for the UK generates 50 feasible newspaper websites to scrape from and random sampling a set of 100 for the US and narrow down to 47 newspapers websites to scrape.
- Scraping for all **97 websites** from 30/03/2023 to 06/04/2023 and cleaning (such as rescraping some time out requests and some articles that lacked the metadata such as dates, authors, titles) from 07/04/2023 to 14/04/2023.

## Summary Statistics

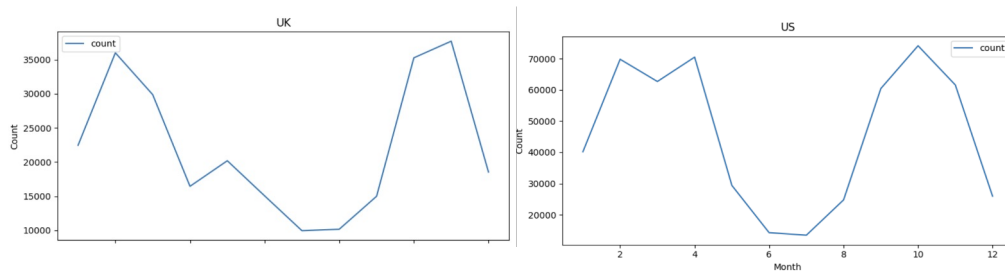


Figure 1. Number of articles by month

Data is cyclic by nature, peaked at the start of Fall and Spring semester

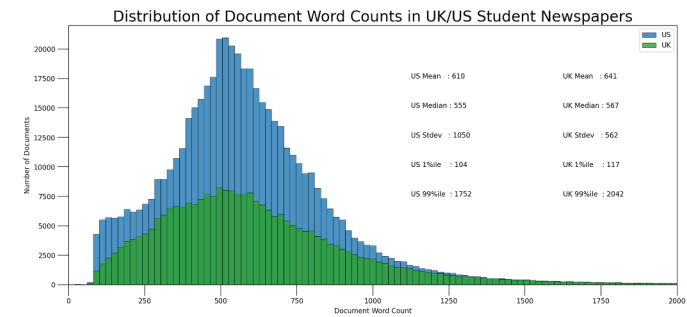
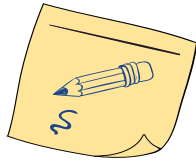
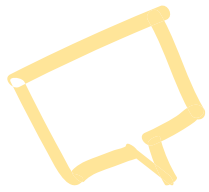


Figure 2. Distribution of document word counts

1 percentile documents have less than 100 words



## Data (2/3)

Summary Statistics: 817665 articles containing 490 million words

	file_name	title	author	date	text	link	university	newspaper	country
0	artefactmagazine	What's your vape habit costing the planet?	Stephen Menon	2023-02-02	Although the first disposable vape pens were r...	<a href="https://www.artefactmagazine.com/2023/02/02/wh...">https://www.artefactmagazine.com/2023/02/02/wh...</a>	London College of Communication, University of...	The Artefact	uk
1	artefactmagazine	Bartending and Cocktail Cultures	Yanchao Gao	2023-02-01	Do you know the stories behind the bar you go ...	<a href="https://www.artefactmagazine.com/2023/02/01/ba...">https://www.artefactmagazine.com/2023/02/01/ba...</a>	London College of Communication, University of...	The Artefact	uk
2	artefactmagazine	Rules and Radio	Raïessa Lin	2023-02-02	This mini podcast explores the many rules and ...	<a href="https://www.artefactmagazine.com/2023/02/02/ru...">https://www.artefactmagazine.com/2023/02/02/ru...</a>	London College of Communication, University of...	The Artefact	uk
3	artefactmagazine	Müll: The refill and recycling hub in London	Carrington Saunders	2023-02-01	This creative package explores Müll in Brockle...	<a href="https://www.artefactmagazine.com/2023/02/01/mu...">https://www.artefactmagazine.com/2023/02/01/mu...</a>	London College of Communication, University of...	The Artefact	uk
4	artefactmagazine	Concerns over delays to child surgery	Taysan Ali-Osman	2023-02-02	Surgery is an eerie subject no matter the circ...	<a href="https://www.artefactmagazine.com/2023/02/02/th...">https://www.artefactmagazine.com/2023/02/02/th...</a>	London College of Communication, University of...	The Artefact	uk

Figure 3. Table shows sample of dataframe



## Data (3/3)



### Summary Statistics



Figure 4. Universities student newspaper scraped in the UK

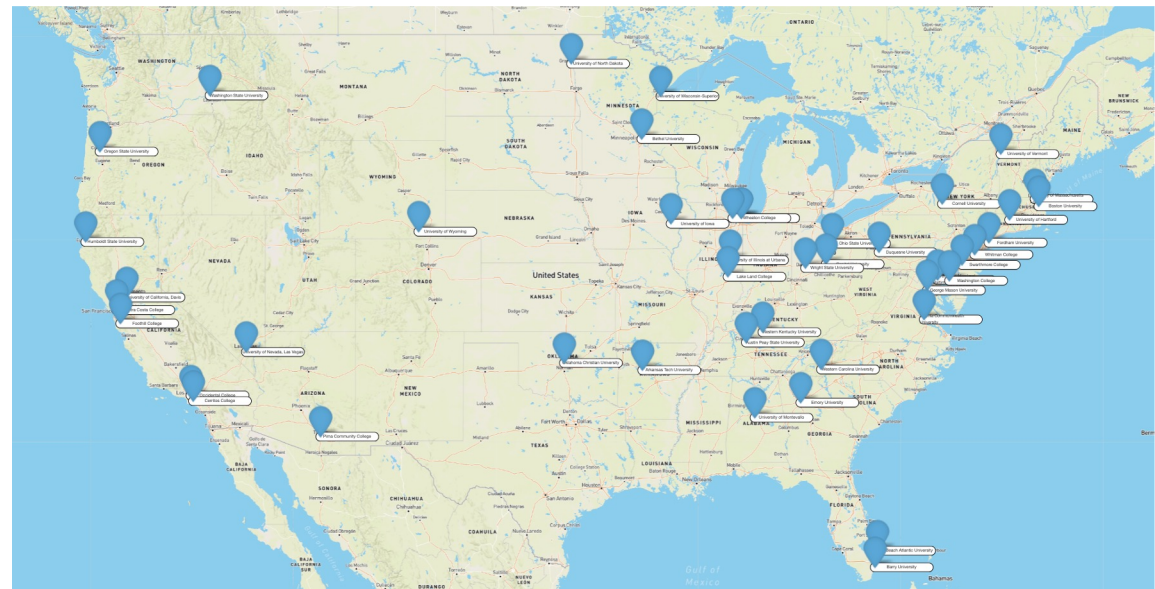


Figure 5. Universities student newspaper scraped in the US

## List of US universities newspapers

university	newspaper
University of California, Davis	The California Aggie
Wright State University	The Guardian
University of Maryland, Baltimore County	The Retriever Weekly
Capital University	The Chimes
University of Montevallo	The Alabamian
Western Carolina University	Western Carolinian
Washington College	The Elm
Oklahoma Christian University	The Talon
Humboldt State University	The Lumberjack
Virginia Commonwealth University	The Commonwealth Times
University of Wyoming	The Branding Iron
University of Hartford	The Informer
Lake Land College	The Navigator News
University of Massachusetts Lowell	The Connector
Occidental College	The Occidental
Boston University	Daily Free Press
University of Wisconsin-Superior	The Promethean
Barry University	The Buccaneer
Cornell University	The Cornell Daily Sun
Troy University	Tropolitan
Contra Costa College	The Advocate
Bethel University	The Clarion
Washington State University	The Daily Evergreen
Pima Community College	The Pima Post

university	newspaper
Palm Beach Atlantic University	The Beacon Today
University of Iowa	The Daily iowan
Duquesne University	The Duquesne Duke
Illinois Wesleyan University	The Argus
Western Kentucky University	College Heights Herald
Wheaton College	Wheaton Wire
Cerritos College	Talon Marks
DePaul University	The DePaulia
Columbia College	Columbia Chronicle
Oregon State University	The Daily Barometer
Fordham University	The Fordham Ram
Fordham University	The Observer
Ohio State University	The Lantern
University of Nevada, Las Vegas	Scarlet & Gray Free Press
Austin Peay State University	The All State
Emory University	The Emory Wheel
Whitman College	The Pioneer
Swarthmore College	The Phoenix
Arkansas Tech University	Arka Tech
Foothill College	The Sentinel
University of Vermont	The Vermont Cynic
University of North Dakota	Dakota Student

Figure 6. List of US universities students newspapers scraped



## List of UK universities newspapers

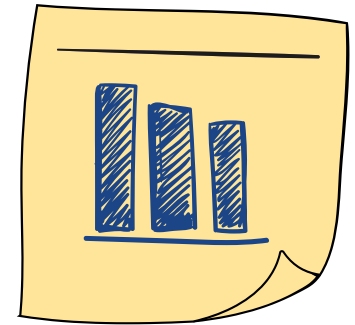
university	newspaper
None	The National Student
None	The Student Pocket Guide
University of Birmingham	Redbrick
Bournemouth University	The BUzz
University of Brighton - The Verse	The Verse
British and Irish Modern Music Institute	LDN Music Magazine (London)
University of Cambridge	Varsity
University of Central Lancashire	The Pulse
Durham University	Palatinate
Durham University	The Bubble
University of East Anglia	Concrete
University of Exeter	Exposé
Falmouth University & University of Exeter	The Falmouth Anchor
Lancaster University	SCAN
University of Leeds	Leeds Student
University of Leicester	Leicester Student Magazine
University of Lincoln	The Linc
University of Liverpool	The Sphinx
University of the Arts London	The Artefact
King's College London	Roar News
London School of Economics	The Beaver
Royal Holloway, University of London	The Orbital (official)

university	newspaper
Royal Holloway, University of London	The Founder (unofficial)
School of Oriental and African Studies	The SOAS Spirit
Queen Mary, University of London	The Print
Manchester Metropolitan University	aah-magazine
University of Manchester	The Mancunion (official)
Newcastle University	The Courier
University of Nottingham	Impact
Nottingham Trent University	Platform Magazine
University of Oxford	The Oxford Blue
University of Oxford	The Oxford Student
University of Oxford	Cherwell
University of Oxford	The Isis
University of Sheffield	Forge Press
University of Southampton	Wessex Scene
University of Southampton	The Edge (magazine)
University of Sussex	The Badger
University of Warwick	The Boar
University of Worcester	The Voice
University of York	York Vision
Queen's University Belfast	The Gown

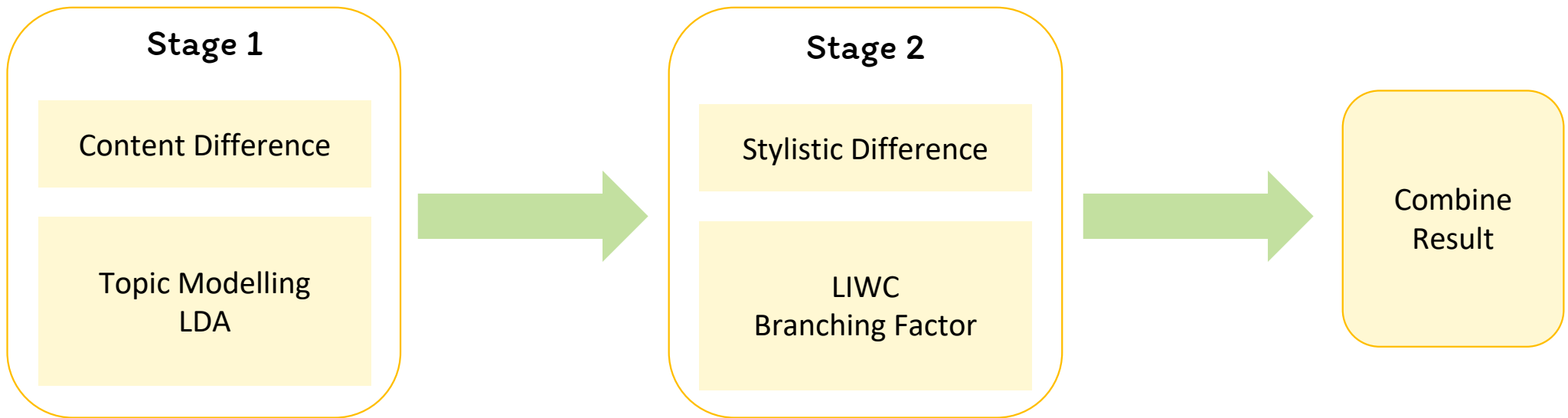
Figure 7. List of UK universities students newspapers scraped



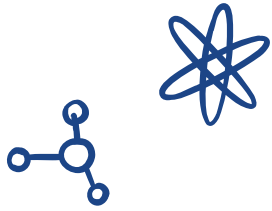
# Methodology



## Preliminary Analysis

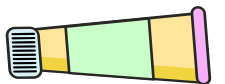
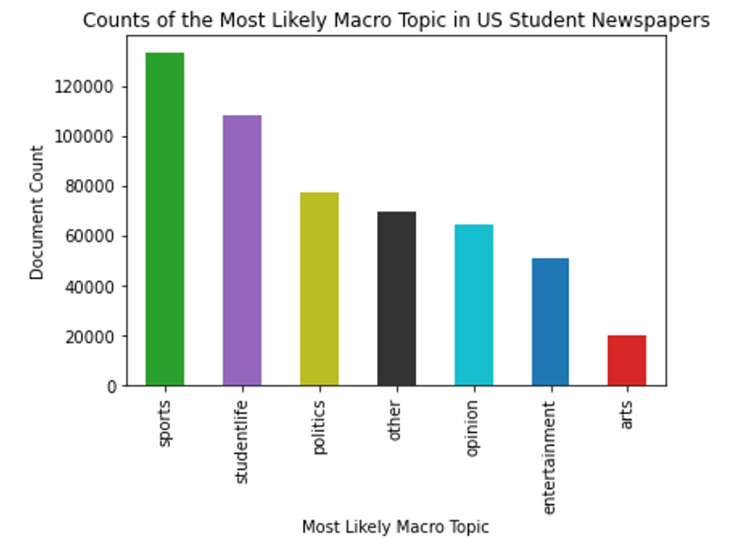
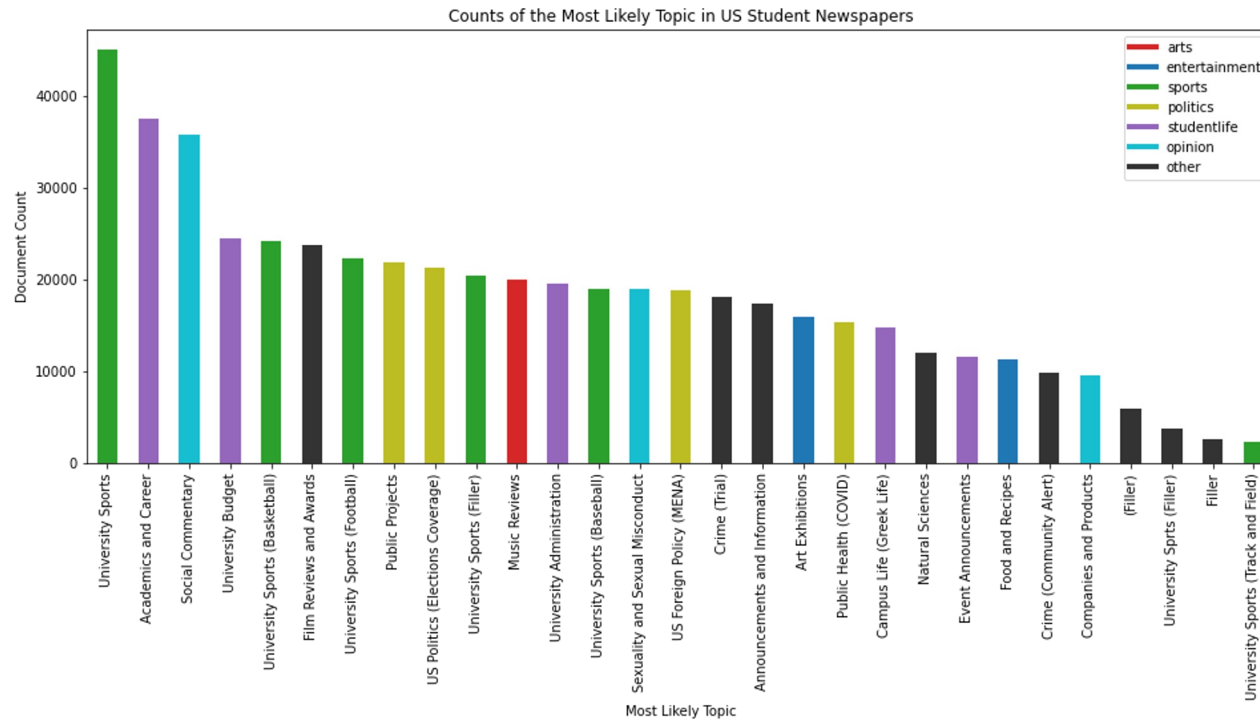


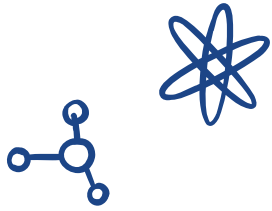
Validation for both stages: Manually read random sample documents from all topics and top and bottom LIWC scores



# Content Difference (1/4)

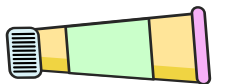
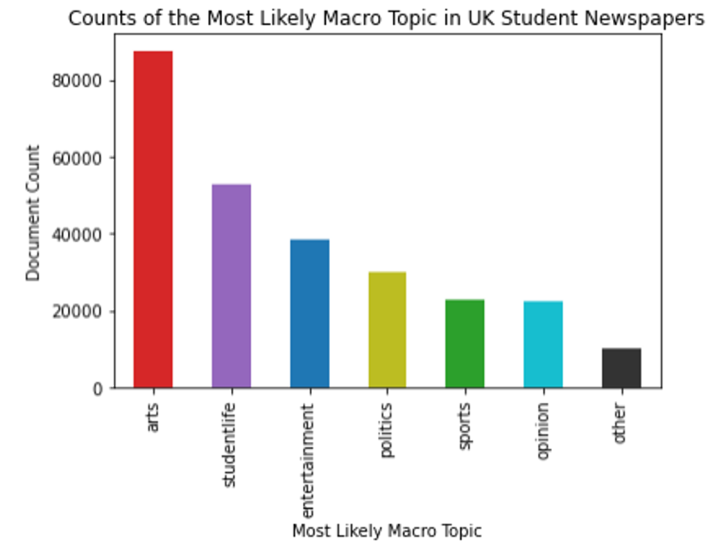
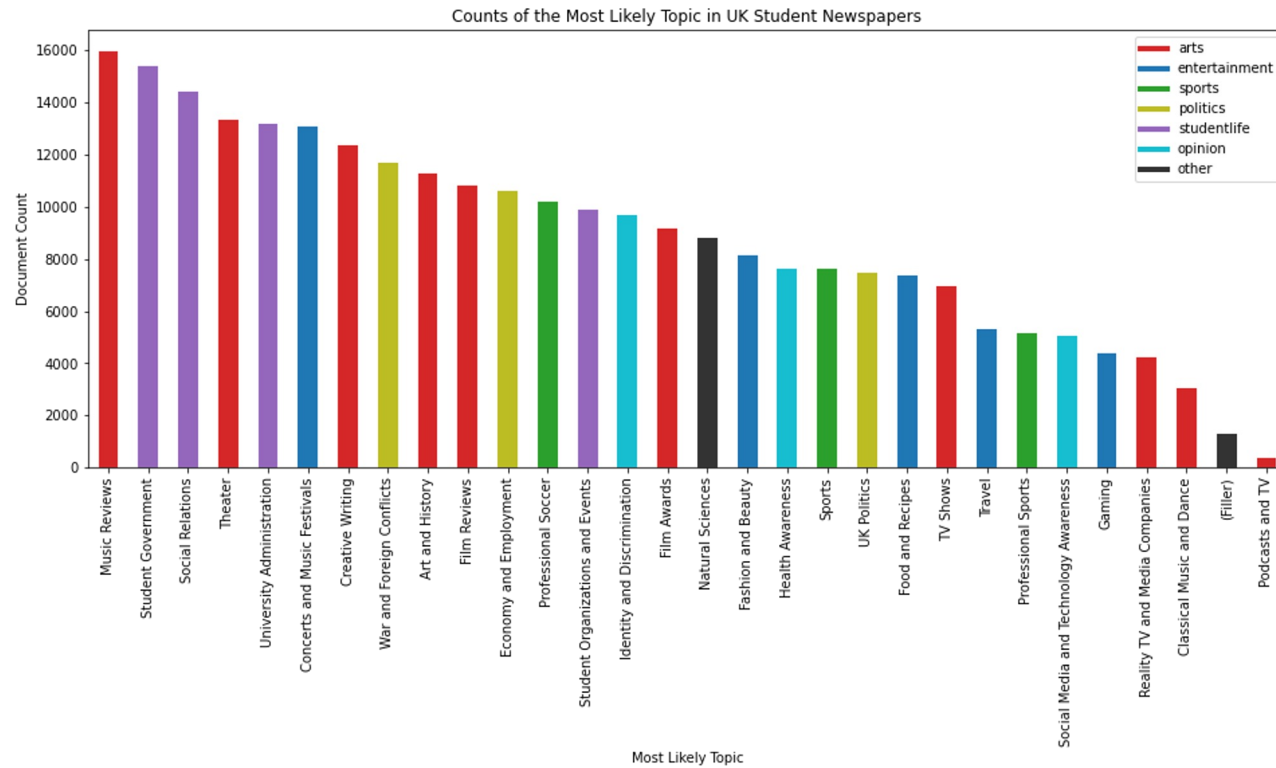
## US Topic Prevalence



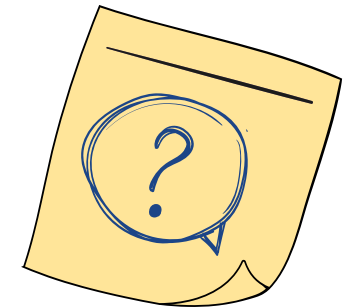


# Content Difference (2/4)

## UK Topic Prevalence



# Content Difference (3/4)



## Fightin' Words (Student Life)

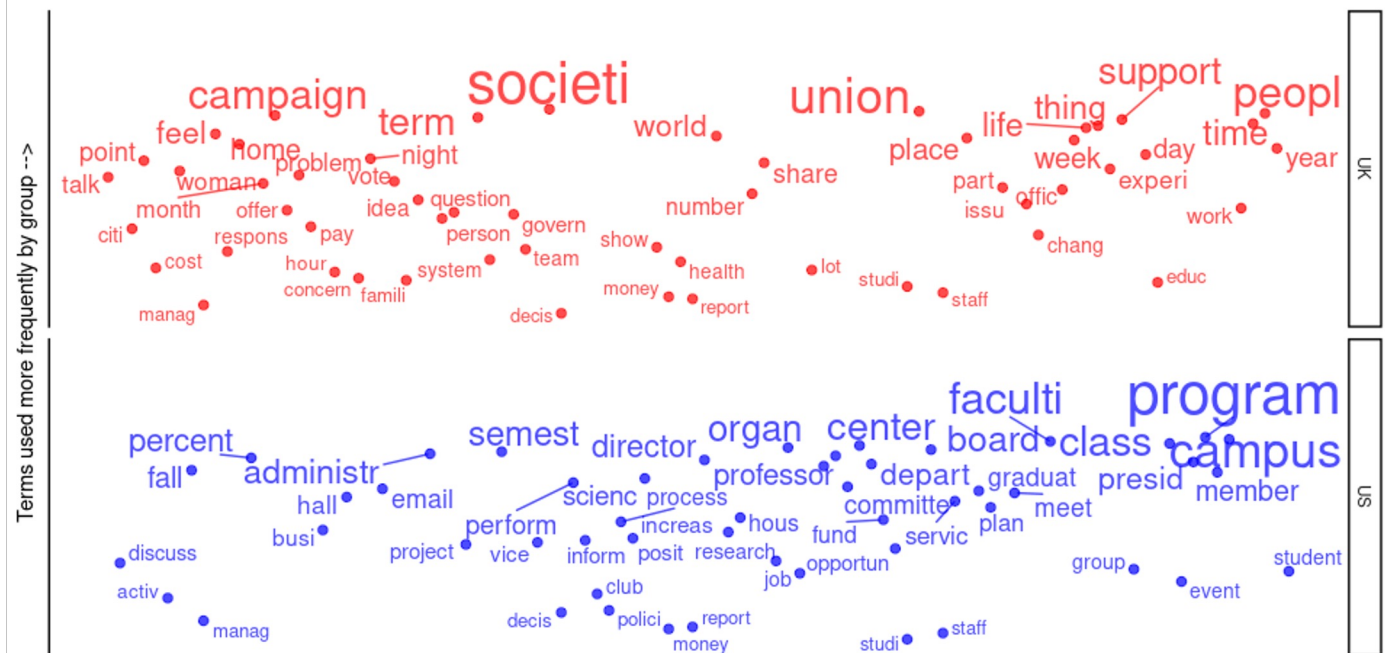
### UK

Greater focus on student government [campaign, vote] and issues relating to social life and relations [life, famili, feel]

### US

Greater focus on academics, career [class, job, opportun], and the university administration [faculti, professor, depart]

Comparison of Terms by Groups



Terms used more frequently overall -->

Group-specific terms are ordered by Fightin' Words statistic (Monroe, et al. 2008)

# Content Difference (4/4)



## Fightin' Words (Politics)

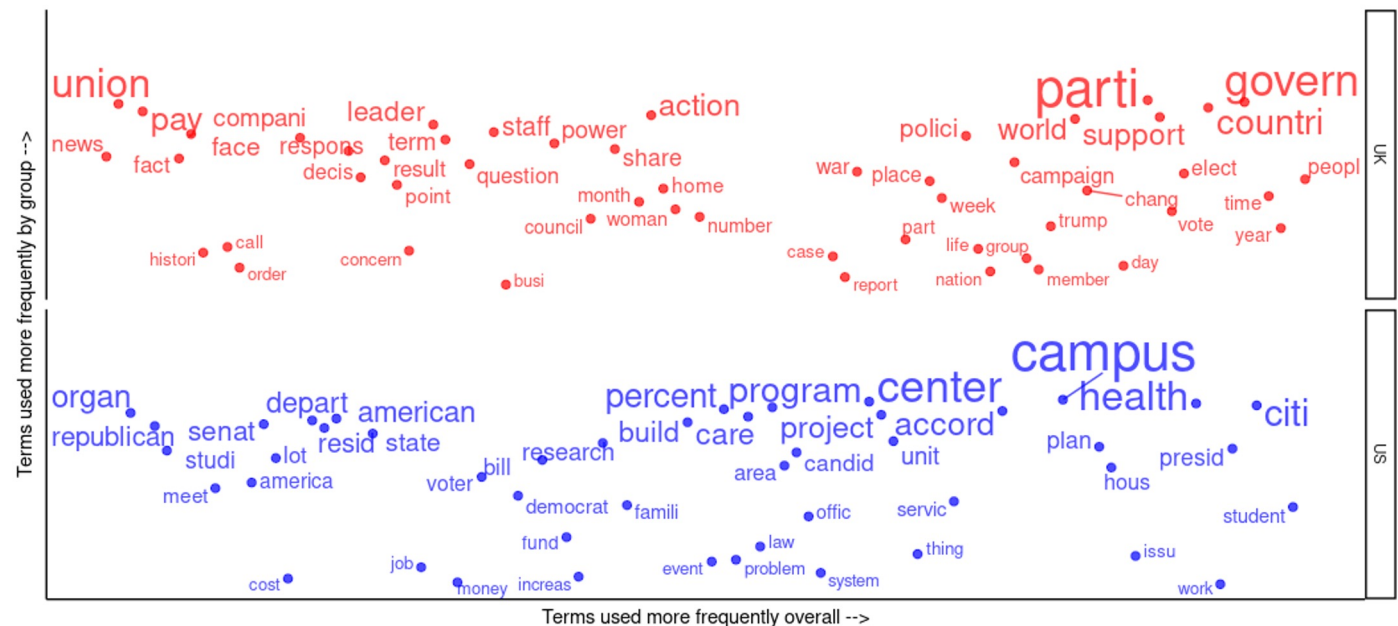
### UK

Greater focus on war and foreign conflicts (less focused on the UK's part in the conflict) [war], and economy and employment [union, pay, compani]

### US

Greater focus on public (city) projects [build, project], elections, foreign policy (talk about foreign events but usually links back to US figures and policies), and public health [health]

Comparison of Terms by Groups



Group-specific terms are ordered by Fightin' Words statistic (Monroe, et al. 2008)



# Stylistic Difference (1/3)



## LIWC Score: Analytical Thinking & Emotional Tone

**Analytical Thinking:** Degree of use of categorical vs dynamic language.

Higher grades ~ greater article and preposition use  
(i.e., references to complexly organized objects and concepts).  
Lower grades ~ greater use of auxiliary verbs, pronouns, adverbs, conjunctions, and negations, indicating more dynamic language (i.e., personal narratives).  
=> Cognitive styles rewarded by higher education institutions (Pennebaker, 2014).

### Emotional Tone:

Positive emotion: love, nice, sweet

Negative emotion hurt, ugly, nasty (Pennebaker, 2015)

*Analytic = 30 + article + preposition - personal pronoun - impersonal pronoun - auxiliary verb - conjunction - adverb - negation*

*Emotional Tone = positive emotions + negative emotions*

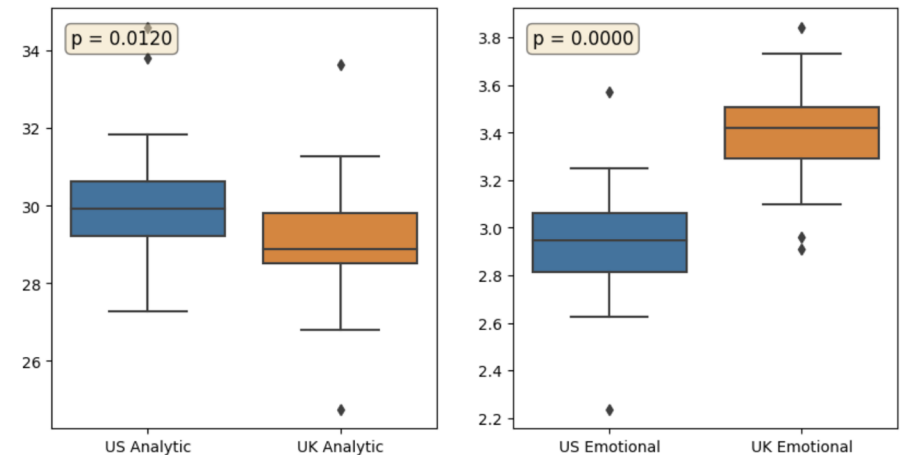
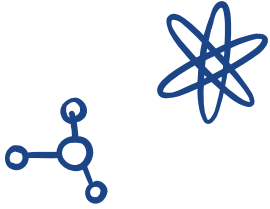


Figure 8. Analytic & Emotional Tone score comparison



# Stylistic Difference (2/3)

## LIWC Score

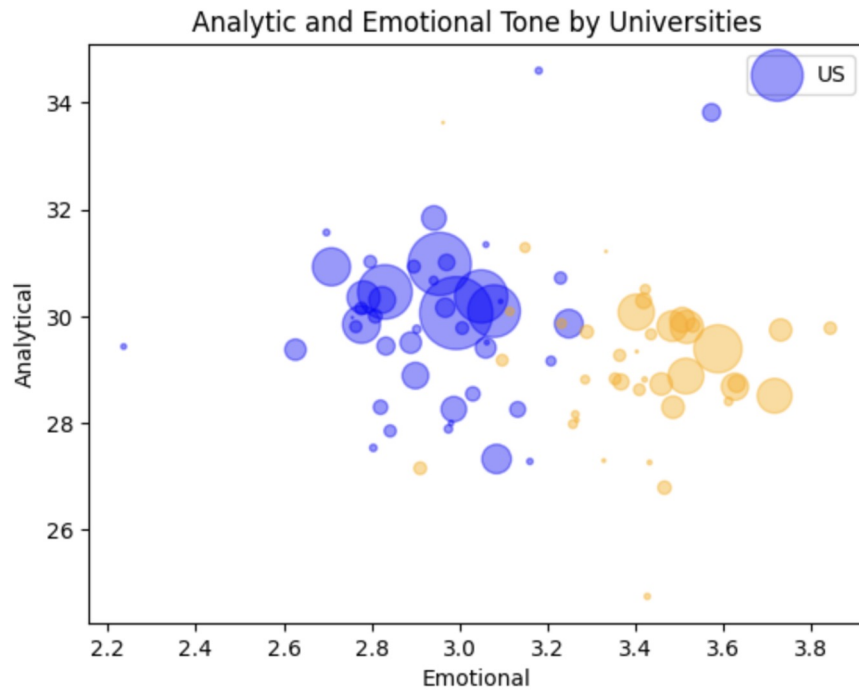


Figure 9. Analytic & Emotional Tone by Universities

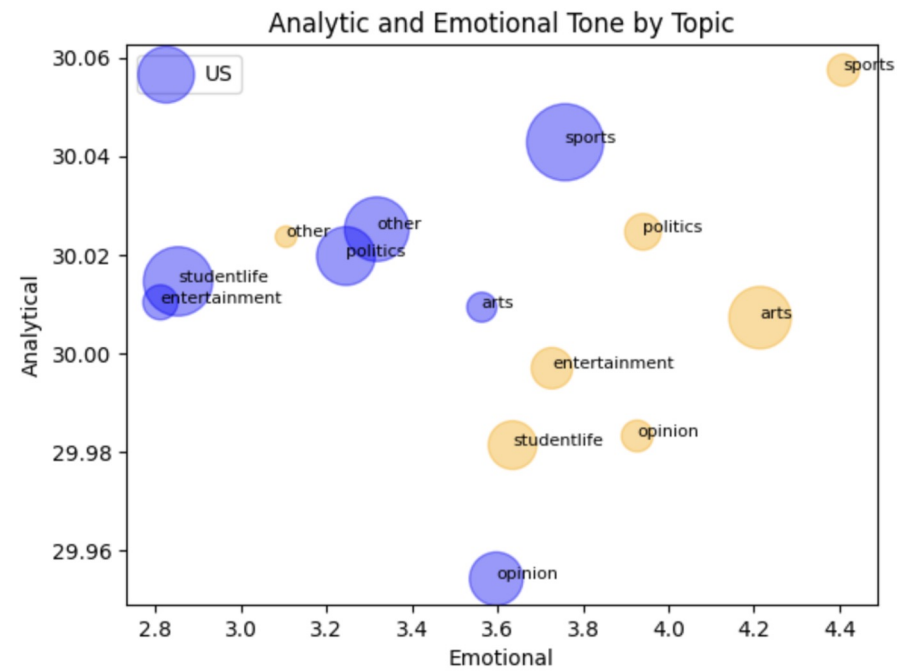
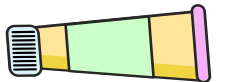
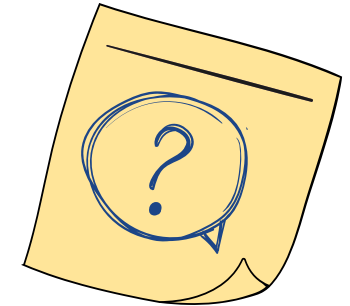


Figure 10. Analytic & Emotional Tone by high-level topic

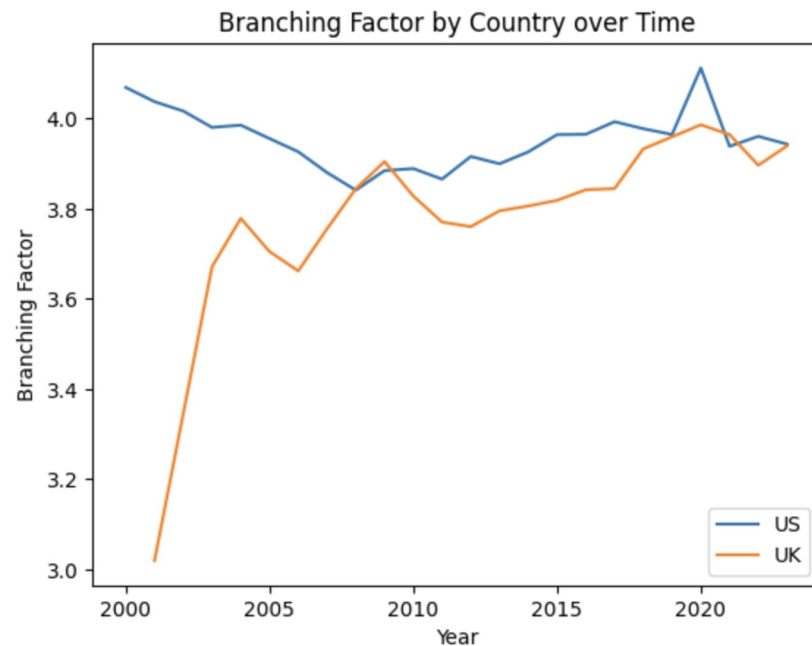




# Stylistic Difference (3/3)

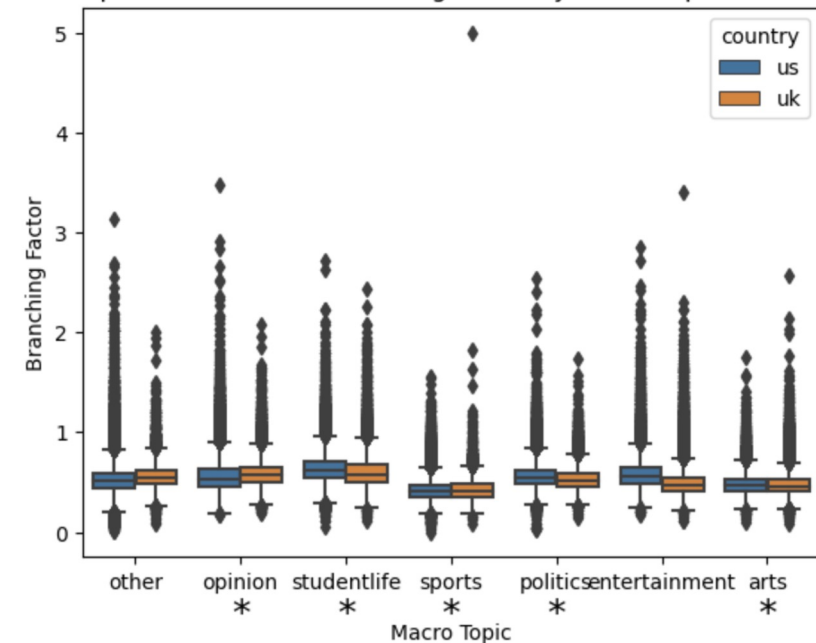


## Readability



There is an increasing trend of concreteness for both US and UK student newspapers over time and the concreteness of articles converge.

Descriptive Statistics of Branching Factor by Macro Topic and Country



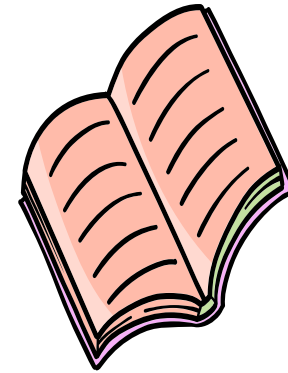
Student Life, Opinion, Sports, Politics, and Arts articles have statistical significance in their concreteness score between 2 corpora.



# Conclusion

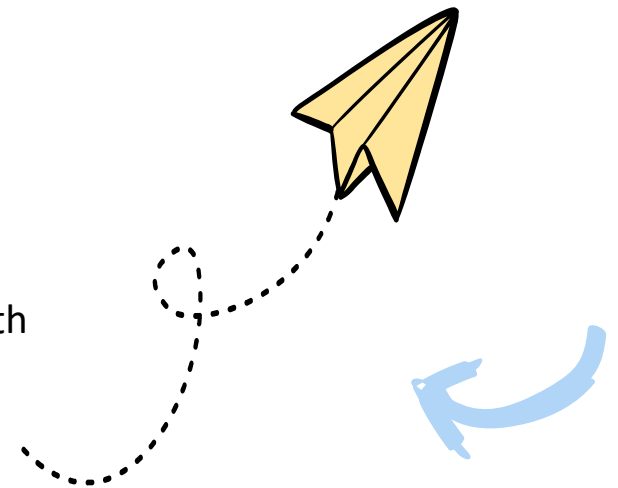
## RQ1: Comparative Analysis of 2 Education Systems

- ❑ Students with liberal arts education tend to use fewer pronouns and distance themselves more from the writing topic in general and across comparable topics.
- ❑ US student newspapers have higher proportion of articles related to student life such as academic, campus sports, and career, while UK student newspapers report more on entertainment or use newspapers as platform for their campaign in student government.



## RQ2: Convergence of writing in longitudinal data

- ❑ Over time, the concreteness of the articles converge between students with and without liberal arts education.





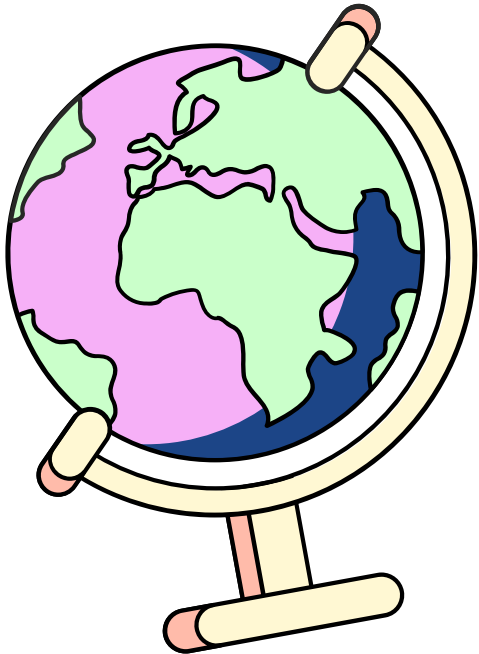
# Limitation

## L1: British English vs. American English

The vocabulary and linguistic styles used in British and American newspapers might differ because of the linguistic differences in British and American English. Some degree in the differences observed might be due to the version of English used in the newspaper.

## L2: Noise from scraping

Some of the documents generated during the web scraping process might have caught some HTML noise and might have been written in a language different than English. However, those documents were generally easily observed during the topic modeling process.





# Future Improvement

## I1: Validation through random US and UK newspapers

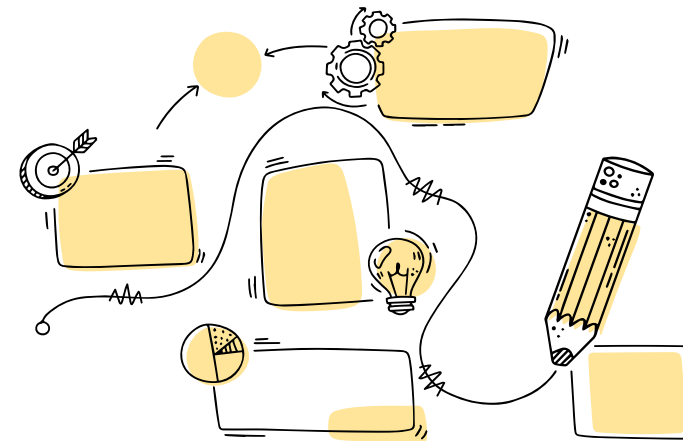
Random sample of articles from different newspapers from the US and UK or just from NY Times and BBC to see whether British English and American English affect LIWC score significantly.

## I2: Surveys with university student newspaper editors

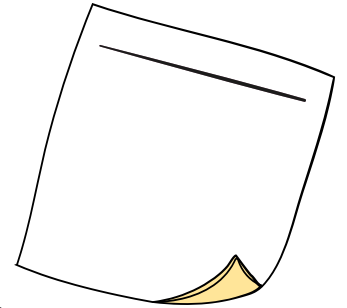
We can contact a number of editors from the list of newspaper that we scrape to understand how they select their published articles to draw some differences.

## I3: Clustering algorithms for higher-level topic

Because of time constraints, we map the topic to higher-level topic through manual selection. However, an unsupervised community detection algorithm will generate more systematic results.



# References



Pennebaker, J. W., Chung, C. K., Frazee, J., Lavergne, G. M., & Beaver, D. I. (2014). When small words foretell academic success: The case of college admissions essays. *PLOS ONE*, 9(12), e115844.

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**THANKS**

