

Evaluation of Policy Making in Russell Group Universities Employing AI-driven NLP Method

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Abstract

This study explores how Russell Group universities can evaluate their policymaking and strategic decisions by employing AI-driven Natural Language Processing (NLP) methods. Through a large-scale case study based on social media data during the COVID-19 pandemic, the research assesses how university policies-particularly those related to governance, crisis management, and higher education-impact institutional reputation and stakeholder engagement. By leveraging computational social science and machine learning algorithms to detect patterns in public sentiment and stakeholder behavior, the study demonstrates how AI can enhance policy and decision-making within the higher education sector. Additionally, the study sheds light on AI's role in promoting transparency, accountability, and effective reputation management, positioning the Russell Group as a key player in shaping the future of global academia.

Keywords: Russell Group; AI; NLP; policymaking; reputation management; stakeholder engagement; higher education; computational social science; decision-making; crisis management

Introduction

In recent decades, there has been a significant transformation in the organizational structures governing universities. The traditional notion of the university as a republic of scholars has given a way to the emerging concept of the university as a stakeholder organization [1]. Universities need to fulfill the roles of teaching and research [2] as two inseparable components in higher education (HE) [3] by satisfying their stakeholders' expectations [4-8].

The landscape of the education sector starkly reveals a disconnect between performance, reputation scores, and evaluations, and the real-time data tracking systems in place. This misalignment presents considerable challenges, particularly as policies must remain agile to effectively respond to evolving circumstances. The dynamic nature of policymaking necessitates frequent adjustments to accommodate shifting dynamics. In contemporary society, decision-making processes increasingly rely on big data rather than traditional empirical assessments and surveys [9,10]. Researchers emphasize the limitations inherent in traditional methods such as surveys or focus groups, citing prevalent issues like recall bias and question framing bias [11].

Furthermore, the constraints posed by limited historical data can result in a reliance on intuition-driven decisions when historical context is lacking [12]. Such reliance on intuition introduces biases that may undermine the accuracy and reliability of the collected data. This underscores the critical need for the adoption of more nuanced and unbiased approaches in both research methodologies and data sources.

Furthermore, stakeholders exhibit diverse behaviors in response to reputation-related stimuli during crises, resulting in varied individual outcomes due to socio-cognitive processes [13]. This variability complicates the prediction of stakeholder behaviors, particularly when dealing with terabytes of data generated by social interactions during crises. Unlike traditional approaches relying on historical data, the absence of such data significantly limits decision-making adaptability, as past experiences cannot be extrapolated to the unprecedented circumstances [12]. Consequently, the missing aspect is understanding how stakeholders react to the actions and responses of organizations and how organizations should make their policies and strategic plans considering stakeholders' reactions?

Case Study

To provide some context for my notion, let's examine how data-driven policy and decision-making present additional challenges for the Russell Group and its stakeholders in light of the COVID-19 pandemic. The goal of the 24 elite members of the Russell Group is to unite in order to better influence policy decisions as a collective. At the local, national, and international levels, Russell Group universities have a significant impact on society, the economy, and culture. Together, they contribute more than two-thirds of the world-class research produced by UK universities, advancing a variety of fields [14].

Utilizing social media dataset of Russell Group universities' posts as a response to the pandemic, there are a total of 17,507 posts for the whole group. Among these, 13,119 tweets received no comments or interactions, representing 74.10% of the total. This percentage is detailed in Table 1 and illustrated in Figure 1. These preliminary statistics inherently expose the behavioral patterns of stakeholders and their interactions with crisis response efforts at Russell Group universities. The findings suggest a neutral pattern in stakeholder behavior, as indicated by the high percentage of tweets without any comments.

Table 1: The dataset corresponds to the Twitter social platform.

No	University posts/ tweets	Number of Twitter followers	Number of tweets	Numbers of (Tweets and comments)	Number of tweets without any comments	The percentage of tweets without any comments	Twitter ID account
1	University of York	86.8k	1345	1645	1211	90.03%	@UniOfYork
2	London School of Economics and Political Science (LSE)	133.5k	1247	1347	1120	89.81%	@LSEnews
3	Queen Mary University of London	75.1k	885	1092	793	89.60%	@QMUL
4	University of Manchester	100.7k	853	1787	754	88.39%	@OfficialUoM
5	University of Belfast	61.5k	1062	1384	891	83.89%	@QUBelfast
6	University of Sheffield	133.1k	624	769	511	81.89%	@sheffielduni
7	Newcastle University	54.1k	496	654	391	78.83%	@UniofNewcastle
8	University of Birmingham	137.4k	865	1173	675	78.03%	@unibirmingham
9	University of Bristol	101.4k	592	967	458	77.36%	@BristolUni
10	University Cardiff	92.3k	461	576	352	76.35%	@cardiffuni
11	University of Warwick	94.9k	423	670	323	76.35%	@uniofwarwick
12	University of Cambridge	824.5k	718	1260	548	76.32%	@Cambridge_Uni
13	University of Southampton	64.9k	345	417	263	76.23%	@unisouthampton
14	University of Edinburgh	158.3k	626	843	476	76.03%	@EdinburghUni
15	University College London (UCL)	134.2k	367	520	278	75.74%	@ucl
16	Durham University	62.7k	602	855	444	73.75%	@durham_uni
17	University of Exeter	79.7k	589	847	434	73.68%	@UniofExeter
18	King's College London	149.4k	368	616	263	71.46%	@KingsCollegeLon
19	University of Liverpool	81.4k	554	807	386	69.67%	@LivUni
20	University of Nottingham	98.8k	531	846	366	68.92%	@UniofNottingham
21	Imperial College London	175.2k	1835	2449	1087	59.23%	@imperialcollege
22	University of Glasgow	136.6k	1135	2382	665	58.59%	@UofGlasgow
23	University of Oxford	980.2k	605	1903	256	42.31%	@UniofOxford

24	University of Leeds	123k	379	835	174	45.91%	@UniversityLeeds
Total			17507	26644	13119	74.10%	

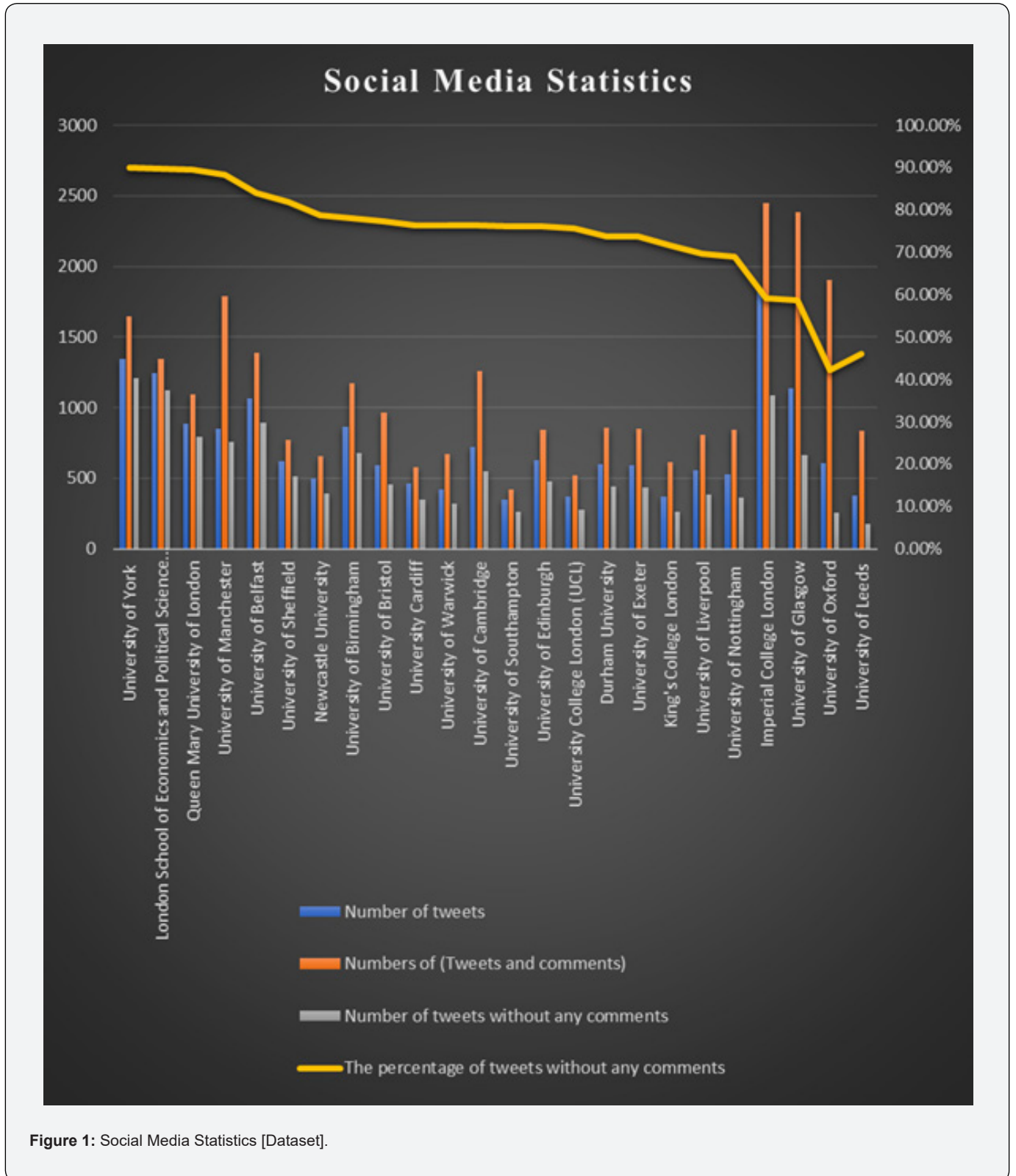


Figure 1: Social Media Statistics [Dataset].

Conclusion

This study demonstrates the significant potential of AI-driven Natural Language Processing (NLP) methods to enhance policymaking within Russell Group universities. Our findings reveal a disconnect between the 17,507 social media posts analyzed and the low engagement levels, with 74.10% of tweets receiving no comments or interactions [15-20]. This indicates a neutral stakeholder response, highlighting the need for universities to refine their communications strategies to better align with stakeholder interests. The research underscores the importance of adopting data-driven approaches in policymaking, especially during crises where traditional methods may be inadequate. By utilizing AI and machine learning, universities can identify patterns in public sentiment and stakeholder behavior, facilitating timely and informed policy responses [21-30]. This not only promotes transparency and accountability but also positions Russell Group universities as proactive leaders in higher education. As universities navigate crisis management and stakeholder engagement complexities, integrating AI methodologies will be crucial for adaptive policymaking. By embracing these technologies, Russell Group universities can enhance their policy influence and resilience in an evolving academic landscape [31,32].

References

- Bleiklie I, Kogan M (2007) Organization and governance of universities. *Higher Education Policy* 20: 477-493.
- Schlesinger W, Cervera A, Iniesta MÁ (2015) Key elements in building relationships in the higher education services context. *J Promotion Manage* 21(4): 475-491.
- Chan Fong Yee F (2014) Reflections on teaching and research: Two inseparable components in higher education. *Teachers & Teaching* 20(6): 755-763.
- Agrey L, Lampadan N (2014) Determinant factors contributing to student choice in selecting a university. *J Educ and Human Devel* 3(2): 391-404.
- Angulo-Ruiz F, Pergelova A, Cheben J (2016) The relevance of marketing activities for higher education institutions. In *International marketing of higher education*. Springer p. 13-45.
- Broekemier GM, Seshadri S (2000) Differences in college choice criteria between deciding students and their parents. *J Marketing for Higher Educ* 9(3): 1-13.
- El Nemar S, Vrontis D, Thrassou A (2020) An innovative stakeholder framework for the student-choice decision making process. *J Business Res* 119: 339-353.
- Germeijs V, Luyckx KG, Notelaers L, Goossens, Verschueren K (2012) Choosing a major in higher education: Profiles of students' decision-making process. *Contemp Educ Psychol* 37(3): 229-239.
- McAfee A, Brynjolfsson E, Davenport TH, Patil D, Barton D (2012) Big data: the management revolution. *Harvard Business Rev* 90(10): 60-68.
- Power DJ (2014) Using 'Big Data' for analytics and decision support. *J Decision Syst* 23(2): 222-228.
- Peterson RA, Wilson WR (1992) Measuring customer satisfaction: fact and artifact. *J Acad Marketing Sci* 20(1): 61-71.
- Yu S, Qing Q, Zhang C, Shehzad A, Oatley G, et al. (2021) Data-driven decision-making in COVID-19 response: A survey. *IEEE Transac Comput Soc Syst* 8(4): 1016-1029.
- West B, Hillenbrand C, Money K, Ghobadian A, Ireland RD (2016) Exploring the impact of social axioms on firm reputation: A stakeholder perspective. *British J Manage* 27(2): 249-270.
- Russell Group U (2024) Our universities. Russellgroup, UK.
- Abdullah HO, AL-Abrow H (2023) Predicting positive and negative behaviors at the workplace: Insights from multi-faceted perceptions and attitudes. *Glob Business Organizational Excellence* 42(4): 63-80.
- Berry GR (2010) Improving organizational decision-making: Reframing social, moral and political stakeholder concerns. *J Corporate Citizenship* 38: 33-48.
- Cattaneo M, Meoli M, Paleari S (2016) Why do universities internationalize? Organizational reputation and legitimacy. In *University evolution, entrepreneurial activity and regional competitiveness*. Springer pp. 327-346.
- Coombs WT (1999) Information and compassion in crisis responses: A test of their effects. *J Public Relations Res* 11(2): 125-142.
- Coombs WT, Holladay SJ (2011) An exploration of the effects of victim visuals on perceptions and reactions to crisis events. *Public Relation Rev* 37(2): 115-120.
- Ellul N, Capocchi L, Santucci JF (2015) Big data decision making based on predictive data analysis using DEVS simulations. *Proceedings of the 3rd ACM SIGSIM Conference on Principles of Advanced Discrete Simulation*.
- González-Bailón S, Lelkes Y (2023) Do social media undermine social cohesion? A critical review. *Social Issues Policy Rev* 17(1): 155-180.
- Huang F, Crăciun D, de Wit H (2022) Internationalization of higher education in a post-pandemic world: Challenges and responses. *Wiley Online Library* 76: 203-212.
- Imran S, Alam K, Beaumont N (2014) Environmental orientations and environmental behavior: Perceptions of protected area tourism stakeholders. *Tourism Management* 40: 290-299.
- Jin X, Wah BW, Cheng X, Wang Y (2015) Significance and challenges of big data research. *Big Data Res* 2(2): 59-64.
- Kwok L, Lee J, Han SH (2022) Crisis communication on social media: what types of COVID-19 messages get the attention? *Cornell Hospitality Quarterly* 63(4): 528-543.
- Liu K, Liu Y, Kou Y, Yang X, Hu G (2023) Formation mechanism for collaborative behavior among stakeholders in megaprojects based on the theory of planned behavior. *Building Res Information* 51(6): 667-681.
- McNamara A (2021) Crisis management in higher education in the time of covid-19: The case of actor training. *Education Sci* 11(3): 132.
- Oikonomou V, Van der Gaast W, Türk A, Fruhmann C, Sartorius C, et al. (2014) Understanding Policy Contexts and Stakeholder Behavior for Consistent and Coherent Environmental Politics. *Synthesis of the results of the APRAISE project*.
- Othman AF, Yusoff SZ (2020) Crisis communication management strategies in MH370 crisis with special references to situational crisis communication theory. *Int J Acad Res Business Soc Sci* 10(4): 172-182.
- Pucciarelli F, Kaplan A (2016) Competition and strategy in higher education: Managing complexity and uncertainty. *Business Horizons* 59(3): 311-320.

31. Tetenbaum T, Laurence H (2011) Leading in the chaos of the 21st century. J Leadership Studies 4(4): 41-49.
32. Wenzel R, Van Quaquebeke N (2018) The double-edged sword of big data in organizational and management research: A review of opportunities and risks. Org Res Method 21(3): 548-591.



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