

Topic 1:

Communication of Sustainability of Universities (Social Media: Youtube)



Introduction & Research Question

Research Question

How Universities utilize their YouTube channels to communicate their environmental sustainability initiatives to the public?

Gaps in sustainability communication research

- Extensive research exists on corporate sustainability communication, but there is limited understanding of how universities use digital platforms for sustainability initiatives (Bizerril, 2018; Kaur & Chahal, 2018).
- Despite their influential roles, the effectiveness of universities in this area is not well understood.
- Empirical data on the alignment of these communications with SDGs, particularly SDG 13, 14, and 15, is lacking (Alcántara-Rubio et al., 2022).

Relevance of the topic:

The relevance of studying how universities communicate their sustainability initiatives is underscored by the urgent global need to address environmental challenges, the critical role of educational institutions in promoting sustainability, and the gap in research on the effectiveness of these communications (Jones et al., 2017; Smith & White, 2020).

Effective use of digital platforms by universities can significantly influence public awareness and behavior towards sustainability (Leal Filho & Bard, 200)

Dataset & Method

Data used for the analysis

1. **Dataset:** Five universities' engagement metrics related to environmental sustainability.
2. **Metrics:** Total likes, comments, views, and number of videos.
3. **Collection Period:** January 1, 2020, to June 30, 2024.
4. **Universities and Metrics:**
 - **University of Melbourne:** 231 likes, 9 comments, 51,585 views, 25 videos.
 - **University of Berkeley:** 82 likes, 2 comments, 6,043 views, 7 videos.
 - **University of Stanford:** 490 likes, 44 comments, 118,913 views, 33 videos.
 - **University of Manchester:** 48 likes, 0 comments, 4,871 views, 27 videos.
 - **University of Washington:** 17 likes, 1 comment, 842 views, 12 videos

Data collection and sample

1. Analysis Method:

Quantitative Measures: Likes, comments, views, number of videos.

Tools Used:

- **Pandas:** Data manipulation.
- **Matplotlib & Seaborn:** Visualizations.
- **Numpy:** Numerical operations.
- **Google API Client:** Data collection.

Dataset & Method

2. Visualization: Grouped bar chart with dual y-axes.

3. Validation: Implied through accurate aggregation, no specific techniques detailed.

4. Limitations:

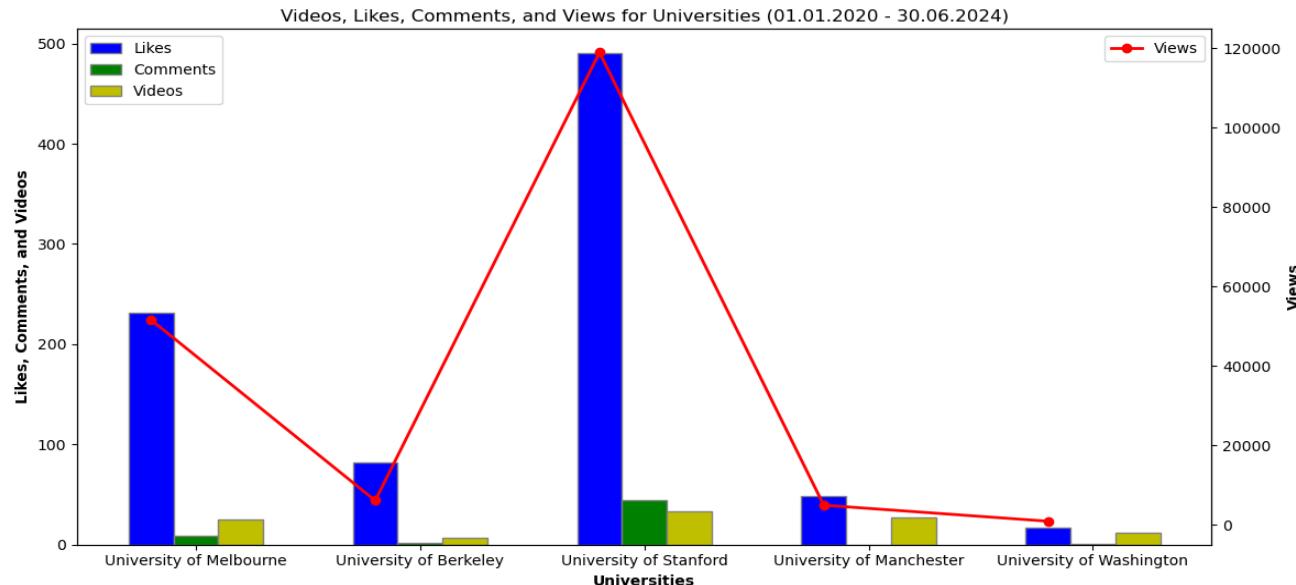
- **Period Bias:** Data from Jan 2020 to June 2024 may be affected by events like COVID-19.
- **Quantitative Focus:** May overlook qualitative aspects (e.g., sentiment in comments).

5. Recommendations:

- Further validation (manual verification, inter-rater checks).
- Include qualitative measures (sentiment analysis, topic modeling).

Results

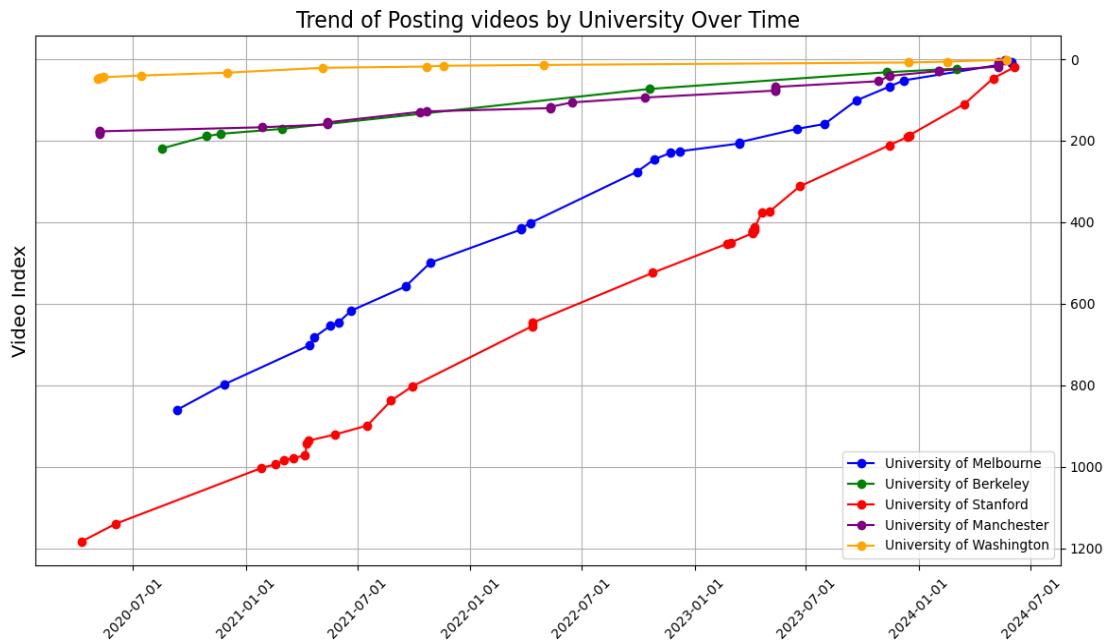
1. Engagement Metrics of Universities on Environmental Sustainability



- The combination chart compares the total number of videos, likes, and comments (bar graphs) and the total views (line graph) for each university.
- The University of Stanford leads with the highest number of views, likes, comments, and videos, indicating strong audience engagement.
- The University of Washington shows the least engagement across all metrics.

Results

2. Consistency of Posting Environmental Sustainability Videos Over Time



- The time series plot shows the posting trends of environmental sustainability videos from 01.01.2020 to 30.06.2024.
- The University of Stanford and the University of Melbourne show a consistent increase in posting frequency over time, suggesting active engagement in sustainability content.

Discussion and Outlook

Discussion:

- **Content and Engagement:** Stanford University consistently uploaded more sustainability content (2020-2024) with higher engagement (views, likes) than other universities.
- **Audience Interaction:** Views were the most common, likes followed, and comments were the least frequent, indicating room for improving viewer engagement.
- **University Ranking:** Higher-ranked universities (e.g., Stanford, University of Washington) had more extensive sustainability initiatives compared to lower-ranked ones.

Outlook:

- Universities should enhance engagement by encouraging more comments and discussions on YouTube.
- Leveraging best practices from higher-ranked institutions can help smaller universities improve their sustainability initiatives.
- Future research should explore strategies to increase audience engagement and the impact of digital communication on public awareness.

Reference List

1. Alcántara-Rubio, L., Valderrama-Hernández, R., Solís-Espallargas, C., & Ruiz-Morales, J. (2022). *The implementation of the SDGs in universities: a systematic review*. *Environmental Education Research*, 28(11), 1585-1615.
2. Bizerril, M., Rosa, M. J., Carvalho, T., & Pedrosa, J. (2018). *Sustainability in higher education: A review of contributions from Portuguese Speaking Countries*. *Journal of cleaner production*, 171, 600-612.
3. Jones, P., Comfort, D., & Hillier, D. (2005). *Corporate social responsibility and the UK's top ten retailers*. *International Journal of retail & Distribution management*, 33(12), 882-892.
4. Leal Filho, W., Vargas, V. R., Salvia, A. L., Brandli, L. L., Pallant, E., Klavins, M., ... & Vaccari, M. (2019). *The role of higher education institutions in sustainability initiatives at the local level*. *Journal of cleaner production*, 233, 1004-1015.

Thank you for your time!

Any questions?

