

Scoping Exercise II - Computational Analysis

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1 Introduction

Part of the research that I am currently thinking of undertaking for my MRES Thesis is focused around active bystander interventions in the context of violence against women (VAW) activism online. As part of the research, I am thinking of incorporating an investigation into Twitter responses to male and female activists for the prevention of VAW, the negative responses to this support for violence prevention, and online positive bystander action in support of the allies.

2 Problem

To complete the MRES Thesis project there are several tasks which have been identified and which will need to be completed to stay on track within the project time frame (see Appendix A). As my biggest time constraints for this Scoping exercise I have identified:

- the collection of data from Twitter;
- linking connections between posts to keep track of relationships;
- data entry and storage of data; and
- the accumulation of references.

3 Goals

To achieve the goal of completing my thesis on time I will need to think of a technological solution that will help me save time and which will ease the pressure of managing the Twitter data that is to be collected, analysed and reported on. I have identified three tasks which I believe a technological solution can be found or created. They are:

- storage of Twitter content which includes links and associations;
- Twitter content data collection; and
- referencing details for each Twitter post.

4 Decomposition

Once the literature review, guiding questions have been defined, and a methodology has been decided on, I will have a better understanding of the type of data I need to be collecting. The following tasks need to be conducted in order to successfully fulfil the goals stated above. I will need to:

1. Create some guiding principles for data collection.

2. Decide on a way to store the data that is to be collected.
3. Identify the exact information to be collected and stored.
4. Set up somewhere to store data and set up files (spreadsheet/database).
5. Decide on fieldnames for spreadsheet and data entry purposes, and define and document exact information to be captured.
6. Set up validation rules and controlled vocabulary.
7. Create a text format metadata file.
8. Conduct a search and identify examples of Twitter content.
9. Find examples of Twitter content for analysis.
10. Entering data of original tweet.
 - (a) Data entry of original Prevention of violence against women tweet content.
 - (b) Collecting relevant comments of both backlash commenters and positive active bystander commenters in defence/support linked to original tweet for qualitative analysis.
 - (c) Tag keywords to aid in analysis.
 - (d) Collecting data about tweets for quantitative component.
 - (e) Write content analysis notes for qualitative component.
11. Enter details of citation/reference details of Twitter content to be used in the study.
12. Output data in a tidy data format for analysis.
13. Store the RAW data somewhere safe and backup the data.

5 Pattern Recognition

In the list of tasks above there are some clear task groupings which have emerged. They include:

- Tasks 1-7 relate to the planning and initial stages of data collection and storage.
- Tasks 8 -9 relate to searching for and identifying content for the study.
- Task 10 (a-e) relates to the data entry, researcher note taking and identifying relationships.
- Task 11 capturing information to be able to properly reference and track the Twitter content used in the study.
- Tasks 12 and 13 relate to the output of the collected and stored data for analysis.

6 Algorithm Design

Developing the step by step instructions for solving this and similar problems:

1. In the planning stages of data collection (tasks 1-3 and 7) must be developed manually by the researcher and the details of the information in the format of a text document will be stored electronically in a repository for easy access and version control.
2. An easy to use searchable database software program could be developed with a template where fields could be entered to set up the data collection page to the specifications of the researcher developed planning information (tasks 1-3 – docs could be uploaded to database). Task 6, set up validation rules and controlled vocabulary can be included in this process.
3. To action tasks 8-9, which are related to searching for and identifying content on Twitter, I would need to identify if there is software that enables an efficient method of trawling for Twitter content using search terms identified in the data collection and planning stages of this study. If not, I will need to discover if it is possible to create such software easily.
4. Once the stage above is complete I will need to figure out if it is possible to feed data from the original tweet posts and their comments from the original posts directly into the database, or to import data into the database software discussed above.
5. Reference data must also be transferred into the database.
6. There must be capabilities for tagging content or setting up parent/child relationships between Twitter comments and their original tweets.
7. Qualitative analysis of tweets collected must be conducted by researcher, however, there must be a field for the research to make notes on the Tweet record.
8. To manage the output, the database could be set up so that a spreadsheet in CSV format could be downloaded (formatted using tidy data best practice principles).
9. For referencing details, the software could be set up so that reference details auto populate in a field on the database record of the tweet, and a tick box could be included on the record to mark it as content that will need to be referenced/cited in the Thesis report. There could be capabilities for a downloadable reference list from this program.