For the Longest Time: Continuity and Change in One Teaching-Related Subreddit

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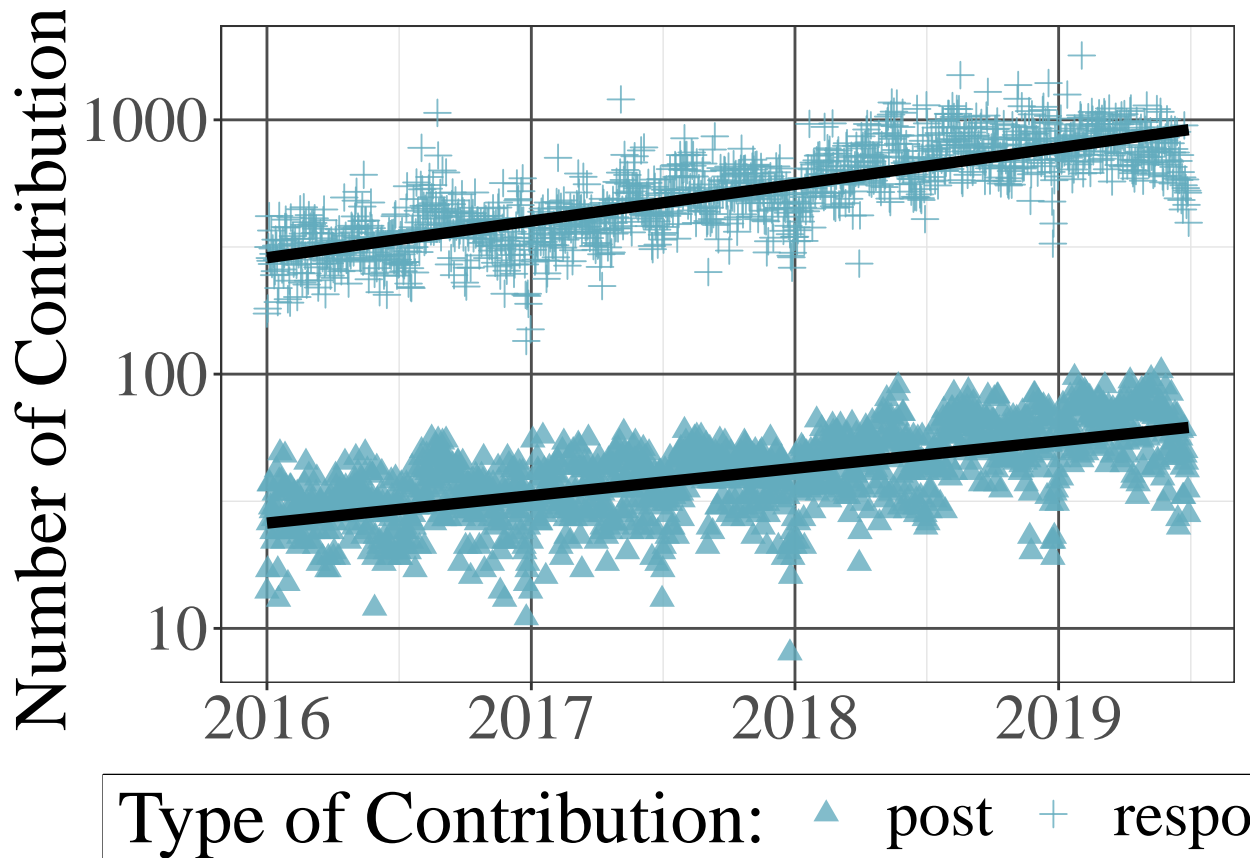
01/24/2020

Contents

Get set up

This section loads the data and packages and starts to process the data, but doesn't calculate any statistics or create any results.

1. Load packages

2. Set up settings for sharing

3. Set timeframe

4. Load subreddit posts

5. Load subreddit responses

6. Load subreddit subscriber history

7. Create a merged dataframe of posts and responses for both subreddits.

Analysis and Results

Figure 1. Contributions to r/Teachers and r/education each day from January 1, 2016 through June 30, 2019

```
## [1] "From the r/Teachers subreddit, we collected 696660 contributions from 55148 contributors"

## [1] "dated between 2016-01-01 and 2019-06-30 (41.98 months),"

## [1] "a total of 54933 posts and 641727 responses to those posts."
```

Type of Contribution: ▲ post + respo

```
## [1] "For the r/Teachers subreddit, the slope of the `post` linear regression is 0.03 (p=0),"

## [1] "and the slope of the `response` linear regression is 0.49 (p=0)."
```

Table 1. Contributions to r/Teachers

Period	Subscribers	Contributors	Posters	Responders	Proportion Contributing	Multiple Posts	Multipl
2016-Jan-Jun	31448	8150	3512	6997	25.92	79.64	
2016-Jul-Dec	36703	9988	3866	8794	27.21	83.45	
2017-Jan-Jun	42508	10676	4272	9373	25.12	82.70	
2017-Jul-Dec	49500	11606	4575	10313	23.45	85.55	
2018-Jan-Jun	61145	13650	5292	12184	22.32	83.50	
2018-Jul-Dec	79400	18212	6322	16415	22.94	81.35	
2019-Jan-Jun	98858	18368	7062	16241	18.58	78.58	

Table 2. Content Interaction in r/Teachers

Period	Posts	Threads	Responses	Response Rate	Responses per Thread	Words per Post	Words per R
2016-Jan-Jun	5370	4493	53945	83.67	12.01	157.05	64.75
2016-Jul-Dec	6043	5268	65146	87.18	12.37	161.43	62.17
2017-Jan-Jun	6465	5710	70457	88.32	12.34	180.24	61.81
2017-Jul-Dec	7099	6356	88134	89.53	13.87	156.12	62.88
2018-Jan-Jun	8373	7400	105322	88.38	14.23	153.33	57.04
2018-Jul-Dec	10100	8655	129957	85.69	15.02	158.85	56.17
2019-Jan-Jun	11483	9649	128766	84.03	13.35	161.45	54.61

Table 3. Social Interaction in r/Teachers

Period	Nodes	Edges	Transitivity	Reciprocity	Node Degree				
					Mean	SD	Median	Min	Max
2016-Jan-Jun	7682	53345	0.0262	0.0027	6.94	19.97	2	0	667
2016-Jul-Dec	9589	64420	0.0232	0.0044	6.91	21.59	2	0	701
2017-Jan-Jun	10268	69542	0.0234	0.0046	6.53	22.15	2	0	1164
2017-Jul-Dec	11247	87319	0.0260	0.0052	7.37	23.45	2	0	843
2018-Jan-Jun	13137	103631	0.0252	0.0059	7.49	25.90	2	0	1102
2018-Jul-Dec	17498	127843	0.0214	0.0065	6.98	27.12	1	0	1145
2019-Jan-Jun	17496	126277	0.0184	0.0038	6.99	26.10	2	0	1352

Version/dependencies

```
sessionInfo()
```

```
## R version 3.5.2 (2018-12-20)
## Platform: x86_64-apple-darwin15.6.0 (64-bit)
## Running under: macOS Mojave 10.14.6
##
## Matrix products: default
## BLAS: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRblas.0.dylib
## LAPACK: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRlapack.dylib
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
##  [1] ggraph_1.0.2     igraph_1.2.4.1   lubridate_1.7.4  anytime_0.3.3
##  [5] forcats_0.4.0    stringr_1.4.0    dplyr_0.8.3      purrr_0.3.3
##  [9] readr_1.3.1      tidyr_1.0.0      tibble_2.1.3     ggplot2_3.1.1
## [13] tidyverse_1.2.1  kableExtra_1.1.0 knitr_1.22
##
## loaded via a namespace (and not attached):
##  [1] ggrepel_0.8.0    Rcpp_1.0.3       lattice_0.20-38
##  [4] clisymbols_1.2.0 utf8_1.1.4       rprojroot_1.3-2
```

```
##  [7] assertthat_0.2.1   zeallot_0.1.0      digest_0.6.23
## [10] ggforce_0.2.2      R6_2.4.1           cellranger_1.1.0
## [13] plyr_1.8.5         backports_1.1.5    RApiDatetime_0.0.4
## [16] evaluate_0.13      httr_1.4.1         pillar_1.4.3
## [19] rlang_0.4.2        lazyeval_0.2.2     readxl_1.3.1
## [22] rstudioapi_0.10    rmarkdown_1.12     webshot_0.5.2
## [25] polyclip_1.10-0    munsell_0.5.0      broom_0.5.2
## [28] compiler_3.5.2     modelr_0.1.4       xfun_0.6
## [31] pkgconfig_2.0.3    htmltools_0.4.0    tidyselect_0.2.5
## [34] gridExtra_2.3      fansi_0.4.0        viridisLite_0.3.0
## [37] crayon_1.3.4       withr_2.1.2        MASS_7.3-51.4
## [40] grid_3.5.2         nlme_3.1-139       jsonlite_1.6
## [43] gtable_0.3.0       lifecycle_0.1.0    magrittr_1.5
## [46] scales_1.0.0       cli_2.0.0          stringi_1.4.3
## [49] farver_1.1.0       fs_1.2.7           viridis_0.5.1
## [52] xml2_1.2.2         generics_0.0.2     vctrs_0.2.1
## [55] tools_3.5.2        glue_1.3.1         tweenr_1.0.1
## [58] hms_0.5.2          yaml_2.2.0         colorspace_1.4-1
## [61] rvest_0.3.3        haven_2.1.0        usethis_1.5.0
```