



**Social Media Use for Learning and Development**

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**Poll 1: How many of you have posted to a social media account since you arrived in Amsterdam?**

**Poll #2: How many since this morning?**

**February 7, 2017**

YouTube takes on Facebook with mobile live  
Jefferson Graham, USA Today  
<http://www.usatoday.com/story/tech/2017/02/07/youtube-takes-facebook-mobile-live/97366592/>






**July 11, 2017**

**Poll #3: Anyone have "phigital" children or students?**

Going 'phigital'? 4 things schools need to know about Generation Z, Todd Kominak, Trusted  
<http://trustedk12.com/phigital-digital-learning/>

**May 15, 2017**

3 must know's about the rising "phigital" student-and why their impact is enormous, Mario Staudary, Campus News  
<https://www.campusnews.com/campus-administration/education-gaz-z-phigital-student/>

**January 20, 2017**

**Poll #4: How many of you have a blog?**

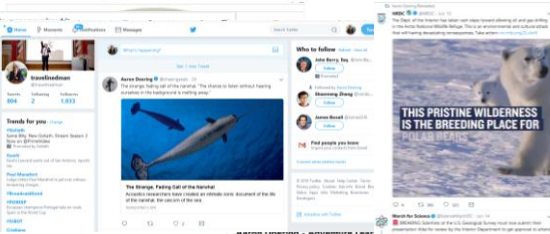
**The Changing Earth**  
<http://thechangingearth.com/>



**Jan 17, May 14, and June 15, 2018**

**Poll #5: How many of you have a Twitter Account?**


Aaron Doering, Chasing Seals, TEDx  
<http://chasingseals.com/>  
<https://twitter.com/chasingseals>  
<https://www.nytimes.com/interactive/2018/05/14/climate/arctic-sea-ice.html>



**June 15, 2018**

**Poll #6: How many of you subscribe to a Twitter account?**

**Poll #7: How about this Twitter account?**  
<https://twitter.com/realDonaldTrump>



**May 30, 2018**  
**Poll #8: Have you heard of Hoaxy?**  
<https://hoaxy.iu.edu/>  
<https://twitter.com/iubloomington/status/1001825139284172801?lang=en>  
<https://twitter.com/iubloomington/status/998651640948428801?lang=en>

Not fake news: Using tools developed here at IU, scientists are learning more about how information is spread and manipulated online. Full story: [go.iu.edu/21v](http://go.iu.edu/21v)

This image shows how an article claiming that 3 million illegal immigrants voted in the 2016 U.S. election spread between users on Twitter. Retweets, replies and mentions are shown in gray. Darker pink circles are more likely bots. The yellow lines, which do not overlap with many accounts sharing the claim, show the spread of articles fact-checking the story. Image courtesy: Hoaxy Research

# Social Media in General

## What is Impact of Social Media?

### Read Review Articles and Systematic Reviews

1. Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)—A literature review. *Computers in Human Behavior*, 29(5), A60-A68. (e.g., blogs, Twitter, Facebook, LinkedIn, etc.)
2. Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008-2011. *British Journal of Educational Technology*, 43(5), 783-801.

**Nada Dabbagh & Anastasia Kitsantas (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15(1), 3-8.**

**Connection between PLE, social media, and self-regulated learning, and provide a framework for using social media to create PLEs that support student self-regulated learning.**

- Level 1, instructors should encourage students to use social media such as blogs and wikis to create a PLE to engage in self-regulated learning processes (goal setting and planning).
- Level 2, instructors should encourage students to use social media to engage in basic sharing and collaborative activities
- Level 3, information aggregation and management, instructors encourage students to use social media to synthesize and aggregate information from Level 1 and 2.

**Nada Dabbagh & Anastasia Kitsantas (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15(1), 3-8.**

**Table 1**  
 A framework for using social media to support self-regulated learning in Personal Learning Environments (PLEs).

	(Level 1) Personal information management →	(Level 2) Social interaction and collaboration →	(Level 3) Information aggregation and management →
Blogs	Instructor encourages students to use a blog as a private journal to set learning goals and plan for course assignments and tasks.	Instructor encourages students to enable the blog comment feature to allow for instructor and peer feedback enabling basic interaction and sharing.	Instructor demonstrates how to configure a blog to pull in additional content and how to add the blog to RSS aggregation services.
Wikis	Instructor encourages students to use a wiki as a personal space for content organization and management.	Instructor encourages students to enable the wiki's collaborative editing and commenting features for feedback.	Instructor demonstrates how to view a wiki's history to promote student self-evaluation of their learning across time.
Google Calendar	Instructor encourages students to use Google Calendar for personal planning.	Instructor encourages students to enable the calendar sharing features to allow feedback and collaboration to complete course tasks.	Instructor demonstrates how to archive personal and group calendars to promote student self-evaluation regarding time planning and management.
YouTube or Flickr	Instructor encourages students to use Flickr or YouTube to set up a personal media archive related to course content.	Instructor encourages students to connect to online communities related to their professional goals.	Instructor demonstrates how to aggregate media from several media archives to reflect their personal archive.
Social networking sites	Instructor encourages students to create an academic and career profile on LinkedIn.	Instructor encourages students to collaborate with other classmates and create a shared list of bookshelves related to a specific learning topic or project.	Instructor asks students to engage in self-reflection with the goal to restructure their profile and social presence.
Social bookmarking	Instructor encourages students to use a social bookmarking tool (e.g., Delicious) to organize course content.		Instructor asks students to self-reflect on their personal and group bookshelves to enhance the desired learning outcome.

**Baiyun Chen and Thomas Bryer (2012). Investigating instructional strategies for using social media in formal and informal learning. *IRRODL*, 13(1), 87-104.**

- **Eight USA public admin instructors participated in telephone interviews about their experiences and perceptions of using social media for teaching and learning.**
- **Informal learning using social media could be facilitated by instructors into formal learning environments for enriched discussions, increased engagement, and broad connections.**

Baiyun Chen and Thomas Bryer  
 University of Central Florida, USA

**Baiyun Chen and Thomas Bryer (2012).  
Investigating instructional strategies for using  
social media in formal and informal learning.  
IRRODL, 13(1), 87-104.**

**Conclusions and Advice:**

1. Use social media as tools to facilitate informal discussions and collaborations with clear instructional goals.
2. Understand that the focus of social media activity for some faculty is learners' personal interests and preferences, rather than institutional or instructors' requirements.
3. Evaluate students' reflections on their learning via social media in the form of formative assessment.
4. Use social media as an optional tool inside and outside classes. Provide students with alternative assignments if they choose not to participate.
5. Educate students about the security and privacy issues of posting personal information online.
6. Implement institutional policies on the use of social media in the educational environment in light of security/privacy issues, as well as faculty and student support.



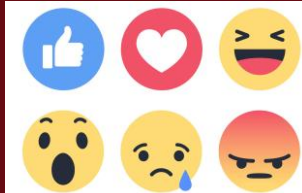
**Jin Mao (2014). Social media for learning: A mixed  
methods study on high school students' technology  
affordances and perspectives.  
Computers in Human Behavior, 33, 213-223.**

Investigated high school students' affordances for social media, their attitudes and beliefs about these new technologies, and related obstacles and issues.

- The affordance findings indicate that students depend on social media in their daily lives for leisure and social connections.
- Educational uses by teachers for teaching and learning are sporadic.
- Uses by students on their own for learning purposes seem to be abundant but also incidental and informal.
- Quantitative results suggest that in general, students show positive attitudes and beliefs about social media use in education.



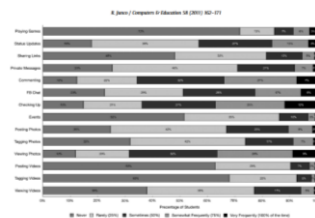
## Facebook Research



January 14, 2018, Callum Borchers,  
The Washington Post

<https://www.washingtonpost.com/news/technology/wp/2018/01/14/facebook-says-it-is-a-bubble-where-youre-always-right/>

**Reynol Junco (2011), The relationship  
between frequency of Facebook use,  
participation in Facebook, *Computers and  
Education*, 58, 162-171.**



**Reynol Junco (2011), The relationship between  
frequency of Facebook use, participation in  
Facebook, *Computers and Education*, 58, 162-171.**

**Sample = 2,368 college students**

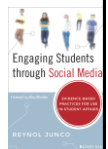
**Results indicate that Facebook use was significantly *negatively predictive* of engagement scale score and positively predictive of time spent in co-curricular activities.**



**Reynol Junco (2011), Too much face and not  
enough books: The relationship between multiple  
indices of Facebook use and academic performance.  
*Computers in Human Behavior*.**

**Sample = 1,839 college students...**

**Participation in Facebook activities, and time spent preparing for class and actual overall GPA...time spent on Facebook was *strongly and significantly negatively related* to overall GPA, while only weakly related to time spent preparing for class. Furthermore, using Facebook for collecting and sharing information was *positively predictive* of the outcome variables while using Facebook for socializing was *negatively predictive*.**



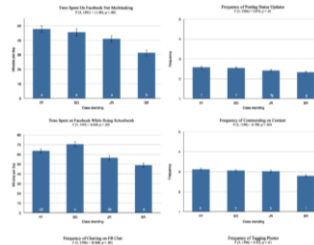
Reynol Junco (2015). Student class standing, Facebook use, and academic performance. *Journal of Applied Developmental Psychology*, 36, 18-29.

Sample = 1,649 college students...

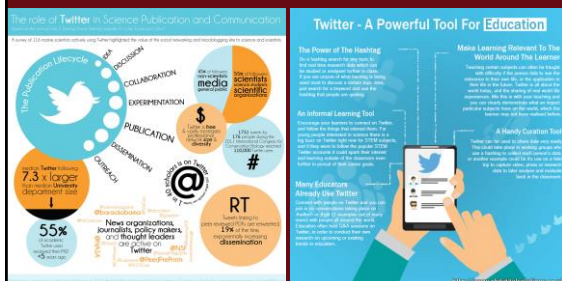
The results showed that **seniors spent significantly less time on Facebook and spent significantly less time multitasking with Facebook** than students at other class ranks. **Time spent on Facebook was significantly negatively predictive of GPA for freshmen** but not for other students. Multitasking with Facebook was significantly negatively predictive of GPA for freshmen, sophomores, and juniors but not for seniors.



Reynol Junco (2015). Student class standing, Facebook use, and academic performance. *Journal of Applied Developmental Psychology*, 36, 18-29.



## Twitter Research



Reynol Junco, Greg Heiberger, E. Loken (2011)  
The effect of Twitter on college student engagement and grades.  
*Journal of Computer Assisted Learning*, 27(2), 119-132.

Explored 125 students taking a first year seminar course for pre-health professional majors.

- Twitter was used for various types of academic and co-curricular discussions.
- Engagement Measured by NSSE.
- The experimental group had a significantly greater increase in engagement than the control group, as well as higher semester grade point averages.
- This study provides experimental evidence that Twitter can be used as an educational tool to help engage students and to mobilize faculty into a more active and participatory role.

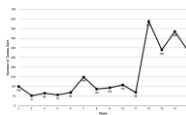


Reynol Junco, Greg Heiberger, E. Loken (2011)  
The effect of Twitter on college student engagement and grades.  
*Journal of Computer Assisted Learning*, 27(2), 119-132.

Group	Section	Engagement score difference		Semester GPA		N
		Mean	SD	Mean	SD	
Experimental	1	4.94	4.92	2.48	0.91	16
	2	6.93	7.77	3.05	0.82	15
	3	5.20	5.99	2.66	0.83	15
	4	3.79	7.70	2.94	0.81	19
	Overall	5.12 <sup>†</sup>	6.69	2.79 <sup>†</sup>	0.85	65
Control	1	1.79	7.37	2.36	1.18	14
	2	3.11	8.48	2.09	1.08	20
	3	1.84	7.38	2.41	1.03	19
	Overall	2.28 <sup>†</sup>	7.67	2.28 <sup>†</sup>	1.08	53

<sup>†</sup>Experimental group had significantly higher difference scores on engagement ( $P < 0.05$ ).

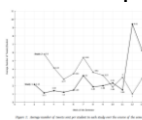
<sup>†</sup>Experimental group had significantly higher semester GPAs ( $P < 0.05$ ).



Reynol Junco, Greg Heiberger, E. Loken (2013)  
Putting twitter to the test: Assessing outcomes for student collaboration, engagement and success. *BJET*, 44(2), 273-287.

Study #1 = 125 students (Twitter required half)  
Study #2 = 135 students (Twitter voluntary)

Qualitative analyses of tweets and quantitative outcomes show that **faculty participation** on the platform, integration of Twitter into the course based on a **theoretically driven pedagogical model** and **requiring students to use Twitter** are essential components of improved outcomes.



**Evans, Chris (2014). Twitter for teaching: Can social media be used to enhance the process of learning?. BJET, 45(5)**

Retrieved June 15, 2018 from <https://www.learntechlib.org/p/148581/>.

Undergraduate students in Business and Management (n = 252) were encouraged to use Twitter for communicating with their tutor and each other during a 12-week course.

- Survey amount of Twitter usage and students' attitudes and experiences.
- **Positive correlation between amount of Twitter usage and student engagement in university-associated activities including organizing their social lives and sharing information.**
- Course-related tweeting was not related to interpersonal relationships between students and their tutor.
- **Twitter usage did not impact class attendance.**



**Hsu, Y. C., & Ching, Y. H. (2012). Mobile microblogging: Using Twitter and mobile devices in an online course to promote learning in authentic contexts. IRRODL, 13(4), 211-227.**

How best to promote learning in authentic contexts in an online graduate course in instructional message design. The 16 students used Twitter apps on their mobile devices to collect, share, and comment on authentic design examples found in their daily lives.

- Positive perceptions toward mobile microblogging.
- **Students were mainly engaged in assignment-relevant activities.**
- Appropriately applied design principles and terms.
- **Spontaneously generated social tweets as related to their own life experiences.**
- Peer design examples through mobile microblogging were inspiring.



**Hsu, Y. C., & Ching, Y. H. (2012). Mobile microblogging: Using Twitter and mobile devices in an online course to promote learning in authentic contexts. IRRODL, 13(4), 211-227.**

Table 1

Tweet Coding Category and Description

Category number	Coding category	Description
1	Assignment-relevant original tweets	Including tweets directly relevant to the assigned task of posting and commenting on real-world design examples collected from the Internet (coursework).
2	Assignment-relevant replies	Including tweets relevant to the assigned task of replying to posted design examples.
3	Other course-relevant tweets	Including tweets on: resource sharing; asking help on Twitter usage (e.g., how to tag tweets or use hashtags for filtering); replying to other coursework questions; and reflections on learning.
4	Social benefits derived from assignment	Including replies on assignment regarding daily life experiences other than graphic design topics.
5	Social benefits not derived from assignment	Including tweets that did not originate from the assigned microblogging task but were either personal, personalizing, relating their own lives.
6	Resource sharing tweets after the course ends	Sharing resource-relevant resources.



**Hsu, Y. C., & Ching, Y. H. (2012). Mobile microblogging: Using Twitter and mobile devices in an online course to promote learning in authentic contexts. IRRODL, 13(4), 211-227.**

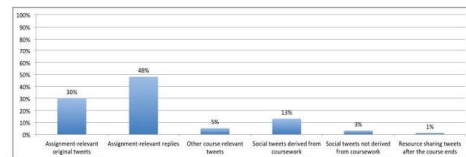


Figure 1. Tweet distribution by category.



**Shannon B. Rinaldo, Suzanne Tapp, Debra A. Laverie (2011). Learning by tweeting: Using Twitter as a pedagogical tool. Journal of Marketing Education, 33(2), 193-203.**

Twitter has many benefits for marketing educators who are interested in engaging students in experiential learning.

- In a real-time environment for student learning, professors may use Twitter for **direct communication** with students to generate discussion and interest in the course topics and examples.
- Educators can use Twitter to **generate interest** in a course through social media.
- Twitter is a **fast, easy method** for making announcements, solving student issues, and performing course-related administrative duties.
- **In three studies, both quantitative and qualitative data suggest that when students engage in Twitter use with the professor, students feel better prepared for future careers. Students indicate that Twitter facilitates achieving traditional educational goals.**



**Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008–2011. BJET, 43(5), 783-801.**

- This study critically analyzed the current body of published research on microblogging in education (MIE) to build a deep and comprehensive understanding of this increasingly popular phenomenon. Twenty-one studies on MIE in 2008–2011 were selected based on the selection criteria.
- **The analysis suggests that microblogging has a potential to encourage participation, engagement, reflective thinking as well as collaborative learning under different learning settings.** The quality of research, however, varies greatly, suggesting a need for rigorous research on MIE.





Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008–2011. *British Journal of Educational Technology*, 43(5), 783-801.

Table 2: Learning topics in the studies of microblogging in higher education (n = 21)

Learning topics	n	Studies
Language	4	Antenos-Conforti (2009); Borau <i>et al</i> (2009); Perifanou (2009); Agherdien (2011)
Instructional tech/design	6	Ebner and Schiefner (2008); Dunlap and Lowenthal (2009); Costa <i>et al</i> (2008); de Waard <i>et al</i> (2011); Kop (2011); Kop <i>et al</i> (2011)
New media	3	Holotescu and Grossec (2009); Ebner <i>et al</i> (2010); Elavsky <i>et al</i> (2011)
Business	2	Lowe and Laffey (2011); Rinaldo <i>et al</i> (2011)
Others	3	Ebner (2009a); Wright (2010); Junco <i>et al</i> (2011)
Not available	3	Ebner (2009b); Ross <i>et al</i> (2011); Waller (2010)



Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008–2011. *British Journal of Educational Technology*, 43(5), 783-801.

Table 5: Data types in the reviewed studies (n = 21)

Data types	n	Studies
Number of posts	14	Ebner and Schiefner (2008); Antenos-Conforti (2009); Ebner (2009a); Ebner (2009b); Holotescu and Grossec (2009); Ebner <i>et al</i> (2010); Wright (2010); de Waard <i>et al</i> (2011); Elavsky <i>et al</i> (2011); Kop (2011); Kop <i>et al</i> (2011); Junco <i>et al</i> (2011); Rinaldo <i>et al</i> (2011); Ross <i>et al</i> (2011)
Examples of posts	5	Antenos-Conforti (2009); Borau <i>et al</i> (2009); Dunlap and Lowenthal (2009); Waller (2010); Junco <i>et al</i> (2011)
Categories of posts	6	Antenos-Conforti (2009); Ebner (2009b); Ebner <i>et al</i> (2010); Wright (2010); Elavsky <i>et al</i> (2011); Ross <i>et al</i> (2011)
Survey/interview	15	Ebner and Schiefner (2008); Antenos-Conforti (2009); Borau <i>et al</i> (2009); Ebner (2009a); Perifanou (2009); Costa <i>et al</i> (2008); Ebner <i>et al</i> (2010); Wright (2010); Agherdien (2011); Elavsky <i>et al</i> (2011); Kop <i>et al</i> (2011); Junco <i>et al</i> (2011); Lowe and Laffey (2011); Rinaldo <i>et al</i> (2011); Ross <i>et al</i> (2011)
Academic grades	1	Junco <i>et al</i> (2011)
Others	3	Dunlap and Lowenthal (2009); Costa <i>et al</i> (2008); Waller (2010)



Gao, F. & Li, L. (2017). Examining a one-hour synchronous chat in a microblogging-based professional development community. *British Journal of Educational Technology*. 48(2), 332-347. doi:10.1111/bjet.12384

The purpose of the study is to understand how people interacted in a popular microblogging-based learning community by examining a one-hour synchronous chat event and exploring its network structure, levels of participation, major topics generated, and types of interaction.

- The study found that the online synchronous chat that occurred among the members of the #edchat Twitter community for educators was dominated by a group of active members.
- These active members not only generated a large volume of tweets but also interacted actively with other participants.
- However, about half of all members tweeted only once, and the majority of the members had limited connections with others.



Gao, F. & Li, L. (2017). Examining a one-hour synchronous chat in a microblogging-based professional development community. *British Journal of Educational Technology*. 48(2), 332-347. doi:10.1111/bjet.12384



Figure 1: Overall networking structure with degree mapped to size

Gao, F. & Li, L. (2017). Examining a one-hour synchronous chat in a microblogging-based professional development community. *British Journal of Educational Technology*. 48(2), 332-347. doi:10.1111/bjet.12384

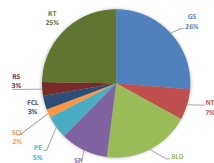


Figure 3: Percentages of tweets by types of interaction  
GS: General Statement; NT: New Topic; BLD: Building; SP: Supporting; PE: Personal Experience Sharing; SCL: Socializing; FCL: Facilitating; RS: Sharing Resources; RT: Retweeting



Gao, F. & Li, L. (2017). Examining a one-hour synchronous chat in a microblogging-based professional development community. *British Journal of Educational Technology*. 48(2), 332-347. doi:10.1111/bjet.12384

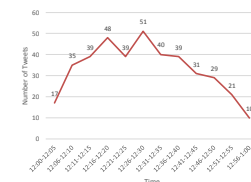


Figure 4: Number of content-focused tweets generated in every five minutes



Gao, F. & Li, L. (2017). Examining a one-hour synchronous chat in a microblogging-based professional development community. *British Journal of Educational Technology*, 48(2), 332-347. doi:10.1111/bjet.12384

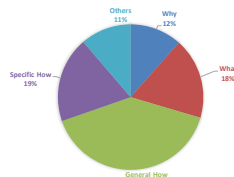


Figure 5: Percentages of tweets by major topics



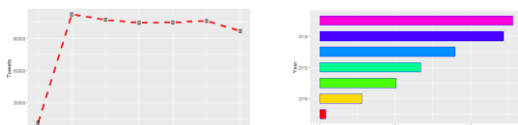
Xin, W. & Gao, F. (submitted) Exploring the relationship between online discourse and commitment in Twitter professional learning communities.

Investigated how some key features of online discourse influenced the continued participation of the members of a Twitter-based professional development community.

- More than 600,000 tweets generated over six years under the hashtag #edchat were gathered.
- Online discourse were deconstructed to the cognitive dimension, the interactive dimension, and the social dimension. Text-mining methods and survival analysis...
- The results revealed that the more tweets in the cognitive and interactive dimensions that the members were exposed to, the lower was their risk of dropping out.
- Tweets in the interactive dimension had slightly stronger influences than did tweets in the cognitive dimension.



Xin, W. & Gao, F. (submitted) Exploring the relationship between online discourse and commitment in Twitter professional learning communities.



The number of tweets over time.

The number of tweets over time.

Figure 1. Descriptive statistics of the #edchat community



Veletsianos, G. (2012). Higher education scholars' participation and practices on Twitter. *Journal of Computer Assisted Learning*, 28(4), 336-349.

The study was to understand 45 scholars' naturalistic practices on Twitter in particular...scholars participating on Twitter:

1. Shared information, resources, and media relating to their professional practice.
2. Shared information about their classroom and their students.
3. Requested assistance from and offered suggestions to others.
4. Sought to network and make connections with others.



George Veletsianos & Royce Kimmons (2016). Scholars in an increasingly open and digital world: How do education professors and students use Twitter?. *The Internet and Higher Education*, 30, 1-10.

This study examined education scholars' (professors' and doctoral students') social media participation by using data mining methods to capture a large data set of scholars' participation on Twitter (232 students, 237 professors, 74,814 unique hashtags, and 645,579 tweets).

1. Significant variation in how ed scholars participate on Twitter.
2. Question purported egalitarian structures of social media use for scholarship.
3. Suggest that by focusing on the use of social media for scholarship researchers have only examined a fragment of scholars' online activities, possibly ignoring other areas of online presence.

Implications: Must consider the meaningfulness of alternative metrics for determining scholarly impact.



Veletsianos, G., & Kimmons, R. (2016). Scholars in an increasingly open and digital world: How do education professors and students use Twitter?. *The Internet and Higher Education*, 30, 1-10.

Table 4  
Top hashtags by user role.

Professor			Student		
Hashtag	% of users	Tweets per user	Hashtag	% of users	Tweets per user
education	66.7	9.2	education	64.2	7.3
highered	62.5	30.2	edchat	59.9	20.9
edchat	62.0	32.3	highered	54.7	32.6
edtech	48.1	40.2	Ferguson	46.6	20.8
Ferguson	41.8	18.3	edtech	45.7	19.4
FF	38.8	4.5	research	33.2	3.8
research	38.0	3.3	phdchat	32.8	11.4
AIRAT13	35.4	17.9	teachers	32.0	3.6
STEM	34.6	7.9	edreform	32.0	5.5
teachers	34.2	4.6	FF	32.0	4.5



