

## **#RemoteTeaching & #RemoteLearning: Educator Tweeting During the COVID-19 Pandemic**

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The coronavirus pandemic has upended educators' lives and work in various ways. Many educators turned to social media spaces, such as Twitter, to navigate the transition to remote life and teaching. For this study, we examined two popular hashtags - #RemoteLearning and #RemoteTeaching - that served as just-in-time affinity spaces for educators navigating the COVID-19 pandemic-induced work upheaval. Initial analysis of a random sample of tweets indicated that these hashtags served as spaces for meeting educators' cognitive, social, and affective needs. In this paper, we detail findings from our early-stage study and offer recommendations for teacher professional development.

## RATIONALE

The widespread and rapid shift to online and remote teaching during the COVID-19 pandemic created unprecedented demand for just-in-time professional development. To navigate these challenging circumstances, many educators turned to Twitter hashtags as affinity spaces to build collective knowledge, find emotional support, and develop their distance pedagogies. Research has shown that social media can enable timely, situated professional learning for educators and support their social, cognitive, affective, and identity growth (Carpenter & Krutka, 2015; Greenhalgh & Koehler, 2017; Lantz-Andersson et al., 2018; Trust et al., 2016). In this early-stage study, we reviewed tweets from two hashtags — #RemoteTeaching and #RemoteLearning — which educators turned to during the pandemic. These two hashtags emerged as common hashtags during the months of March and April in the U.S. (in contrast to preexisting related hashtags like #onlinelearning and #onlineteaching) and attracted more use than other hashtags dealing with teaching during the pandemic (e.g., #triageteaching, #pandemicteaching).

## PROCESS

We collected tweets from mid-March to mid-April using the Twitter Search API. Excluding retweets, our search returned 36,788 tweets for analysis. This is noteworthy, as the sheer volume of tweets dwarfed many other established hashtags on Twitter that regularly deal with technology and teaching, such as #edtechchat (Carpenter et al., 2020). We further limited the dataset to only include tweets posted by users with the word “teacher” in their user descriptions. This yielded a final dataset of 10,444 tweets from 3,939 accounts. To determine early results, we selected a random sample of tweets by utilizing the random ordering function in a MySQL query and returning the first 500 results. Two authors did a brief read of the tweets and inductively identified codes based on the literature (e.g., knowledge sharing, asking questions, expressing gratitude, connecting with others; Trust, 2015). After discussing, revising, and establishing an initial set of codes, two authors each did open coding (Saldaña, 2016) of overlapping subsets of tweets. At this early stage of our research, codes were primarily oriented towards trying to categorize the content of the tweets (see Table 1).

**Table 1**  
Codebook with Examples

Code	Description	Example	% of 500
Sharing (Self-Promotion)	Tweet featured resources, links, and/or materials created by the person writing the tweet.	"Are you frantically trying to figure out #remoteteaching and #onlinelearning? Here's a quick video I put together."	18%
Sharing (Promoting Others' Content)	Tweet featured resources, links, and/or materials created by others.	"Here's a great tutorial from @EC about using the #GoogleMeet #GridView #ChromeExtension"	21%
Sharing (Ideas or Thoughts)	Tweet featured advice, thoughts, or links to articles with ideas.	"I've done online teaching in a few capacities before, so here are some tips for those switching to #remotelearning"	20%
Sharing (Technical Advice)	Tweet featured information, advice, or resources for using various tools and apps for remote teaching.	"#remotelearning with #MicrosoftTeams: Everything you need to start is here."	15%
Asking Questions / Making Requests	Tweet featured a question or request for help.	"Has anyone made a #Discord for their students? How is that going for you? #remotelearning"	5%
Discussion	Tweet was part of a discussion thread or a synchronous Twitter Chat.	"Q3: In the current environment (#RemoteLearning & #DistanceLearning), how do we help families do #STEM together with their kids? #ALedchat"	5%
Parenting	Tweet featured resources for parents or examples of parenting.	[Image of a daily schedule] "This. #remotelearning schedule for three children, two parents working at home remotely, and a #pandemic surrounding all of us. I love that we are all finding our way through this moment together."	5%
Presenting Student Work	Tweet showcased student work.	[Image of a kid with the caption: "Made a single string violin for his music lesson"] "Nice work! #RemoteLearning #TeachUp"	6%
Positive Culture	Tweet featured success stories, words of encouragement, gratitude, or motivational messages.	"Good luck to all the teachers in Victoria and more broadly who are diving into the deep end of #remotelearning for T2."	23%
Remote Teaching Life	Tweet featured personal experiences related to the shift to remote teaching.	"Day 1 of #remotelearning and I'm a nervous wreck. I got this. I can do this! I'm excited to see my students, to check in with them, and to play some games."	27%
Humor	Tweet featured a gif, meme, or other intentionally funny material.	[Picture of dog] "When you need your mom's undivided attention but she's holding a zoom session with her students. #remotelearning #needybabygreedybaby"	4%
Challenges with Remote Teaching	Tweet presented concerns, difficulties, or critiques of the remote teaching situation during COVID-19.	"Another bummer from #remotelearning is missing student birthdays."	3%

In addition to this qualitative content analysis, we conducted sentiment analysis on the text from the entire dataset of 10,444 tweets using SentiStrength (Thelwall et al., 2010). SentiStrength utilizes a preexisting lexicon of positive (e.g., *good*, *happy*, *yay*) and negative (e.g., *bad*, *sad*, *boo*) words to generate scores for an artifact along two spectra: positivity and negativity. These two scores for each tweet were then compared to determine if the tweet was either neutral, net positive (i.e., the positive polarity was greater than the negative polarity), or net negative. This approach to analysis does not account for uniqueness of contextual data or nuanced meaning (like sarcasm), but its results have been found in previous studies to be similar to human coders (Kimmons et al., 2017).

## EARLY RESULTS

In the full data set of tweets, 58% were neutral, 36% were net positive, and only 5% were net negative in sentiment. Neutral tweets generally focused on sharing information. In 55% of the tweets we coded, educators posted resources, ideas, learning opportunities, or insights related to remote teaching, teaching with technology, or remote learning (see “sharing” tweets in Table 1). Seventy-four tweets (15%) focused on sharing advice or resources for using specific technology tools, such as Zoom, Microsoft Teams, Google Meet, Class Dojo, and Flipgrid. For example, one educator posted, “Try the Google Meet Grid View Extension ... makes it look more like Zoom.”

Among the coded tweets, many educators (43%) tweeted words of encouragement or gratitude or shared their experiences as they navigated the crisis. For instance, educators (23%) wrote positive or inspiring posts, expressed thanks for the people and digital tools supporting their remote teaching, or shared their triumphs (“Had another successful ESL meeting”). Some educators (27%) tweeted about their new workplace settings (“Teaching in the sunshine today!”) or daily lives during the pandemic. A few educators (4%) shared humorous photos, GIFs, and memes to lighten the mood of an intense time. Hashtags encouraging unity and togetherness — like #RemoteRelationships (3%), #WeGotThis (<1%), and #WeAreInThisTogether (<1%) — were relatively common in the full dataset (see Table 2). Some teachers even seemed to use Twitter to journal about their COVID-19 teaching experiences (“#RemoteTeaching Day 3: Short video focusing on getting kids moving, active & away from screens”). Tweeting on these hashtags was quite social and dialogic, as response tweets using the

hashtag (26%) were more common than in other studies (Carpenter et al., 2020; Kimmons et al., 2017).

**Table 2**  
Common Hashtags Used in the #RemoteTeaching or #RemoteLearning Dataset (n=10,444)

Hashtag	Total (n)	Percent
#distancelearning	495	4.74%
#edtech	364	3.49%
#remoterelationships	318	3.04%
#CoVid19	233	2.23%
#EdChat	201	1.92%
#elearning	178	1.70%
#onlinelearning	176	1.69%
#education	138	1.32%
#Teachers	132	1.26%
#CoronaVirus	105	1.01%
#MicrosoftEdu	87	0.83%
#BetterTogether	82	0.79%

Educators also reminisced during a time of loss. Using Twitter to combat isolation is not new (Carpenter & Krutka, 2015), but the global pandemic created a particular type of isolation — one where educators were physically isolated from their colleagues and students. Educators (2%) tweeted about missing their classrooms, students, and school community (“Google Meet with my kiddies! Ugh miss them”) and they turned to Twitter to share daily updates and successes, something that might normally happen in the teachers’ lounge or hallway.

## OUTCOMES

Since social media platforms are sites of primarily self-directed professional activity, teacher educators and scholars might turn to spaces like Twitter to better understand the concerns, perceptions, and approaches of educators. Through our initial analysis of the #remoteteaching and #remotelearning hashtags, we found that many educators used these hashtags

to share information that would aid the shift to remote teaching. With more than 36,000 tweets in a month, these hashtags served as a potential treasure trove of resources, ideas, and insights to support educators' cognitive growth as they adjusted their pedagogy to remote teaching due to the COVID-19 pandemic. These findings align with previous studies - namely, that educators turn to Twitter to exchange and build collective knowledge and access just-in-time professional development (e.g., Greenhalgh & Koehler, 2017; Staudt Willet, 2019).

In addition to supporting educators' cognitive growth with resources and ideas, these hashtags also seemed to serve as spaces for meeting educators' affective and social needs. Educators in our sample sought to share daily experiences, motivate each other during challenging times, and reminisce about what was lost. Given their physical isolation, educators turned to social media to interact with peers in ways that might otherwise have occurred at work. Teaching is inherently emotional work (Schutz, 2014), and this has been accentuated by the strain COVID-19 has placed on educators and students. While formal PD often focuses exclusively on teaching tools, knowledge, and strategies, educators likely also have social, affective, and identity needs to meet (Trust et al., 2016). Considering prior research from other crisis contexts has suggested the importance of teacher training in emotional management (O'Toole & Friesen, 2016) and the need for teachers to have dedicated time to process their own emotions and grief (Long & Wong, 2012), school leaders and teacher educators must attend to the well-being of teachers if they expect those teachers to in turn help their students with their well-being.

## RECOMMENDATIONS

Based on our findings, we offer three recommendations for in-service and pre-service teacher educators. First, teacher educators should aim to create learning spaces and experiences that will holistically support teachers' cognitive growth, affective well-being, and social needs (Trust et al., 2016). Educators might accomplish this by designing professional development (PD) experiences that combine formal training with informal or guided social learning activities (Luebeck et al., 2017; Trust & Horrocks, 2017). For example, a PD day might consist of expert-led workshops about specific remote teaching strategies and tools followed by an informal learning experience, like an unconference where educators can decide the topics of interest to explore, such as how to teach and parent during quarantine (Carpenter & Linton, 2018).

Second, teacher educators might offer opportunities for teachers to expand their professional learning networks to include informal digital learning spaces—Twitter or otherwise—that can help them meet their cognitive, social, and affective needs (see Table 2 for a list of additional hashtags for teachers to explore). However, we caution schools in requiring specific PD via social media as needs and situations vary, challenges can accompany social media use (Carpenter & Harvey, 2019), educators might suffer from on-line fatigue at various times (e.g., Dhir et al, 2018; Tseng, 2014), and forced PD can erode benefits and motivations for some educators (Hunzicker, 2011; Kennedy, 2016).

Third, teacher educators, administrators, and scholars should look for patterns in the content and categories of educational tweets as a way to better understand the needs of the field, colleagues, and teacher candidates, particularly as a means to offer just-in-time professional development during a crisis like the coronavirus pandemic (Greenhalgh & Koehler, 2017). Our initial exploration of two popular educational hashtags during the COVID-19 pandemic revealed that educators sought out knowledge and resources to help them address pedagogical challenges, but also opportunities to express emotions and receive support online may help. Sometimes what educators need most are spaces to support each other.

## FUTURE RESEARCH

Through this early-stage study, we offered initial insights about educators' tweeting with two hashtags during the COVID-19 pandemic, but more research is needed. While we identified sentiments, categories, and content, we believe researchers could further explore large social media datasets to better understand patterns of engagement, interactions, and use. For example, how do behaviors differ between platforms with distinct affordances and norms (e.g., Twitter vs. Facebook) and how do individual factors, such as location, gender, race, age, ethnicity, and so forth, influence patterns of use, professional benefits, and challenges faced (Kerr & Schmeichel, 2018; Nagle, 2018; Veletsianos et al., 2018)? Scholars might also conduct studies to better understand educator's affective and social needs during a crisis or to critically examine whether the technologies promoted online are effective, safe, and justified in practice. Twitter can be a point of departure for exploring teachers' beliefs, experiences, and concerns in the larger contexts of the field (Kimmons et al., 2018). Such research can offer insights during times of uncertainty, change, or quarantine in a manner that is relatively fast and minimally invasive (Kimmons & Veletsianos, 2018).

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