Adjusting sails for changing winds: exploring Reddit use for professional purposes in higher education

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Abstract
Emerging practices of social media for professional purposes in higher education merit further attention. Reddit, a social media platform, is under-studied despite its significant presence. This study explores participation patterns on Reddit for two summer periods during 2019–2020, before and during COVID-19. We collected a total of 82,494 contributions from two subreddits, r/highereducation and r/Professors. Results show changes in contributions and interactions, with more consistent growth in r/Professors. Major topics discussed in both subreddits during summer 2020 had shifted from 2019, largely related to COVID-19. Findings are discussed with a community of practice lens, noting changes in participation and adjustment to the crisis. Additionally, we present implications for supporting and sustaining higher education professionals through Reddit during and after massive disruptions like those experienced during the COVID-19 pandemic.

Keywords COVID-19 · Community of practice · Digital traces · Higher education · Social media · Reddit

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Introduction

As technology initiatives and online learning become fundamental in higher education, designing courses and selecting appropriate instructional strategies and technology are crucial (Ritzhaupt & Kumar, 2015). These topics have become even more imperative as traditional modes of instruction shifted to remote and online learning due to the COVID-19 pandemic, demanding that education professionals seek tips and best practices. Fortunately, opportunities for just-in-time knowledge-seeking are feasible through social media platforms that are not constrained by geographical and temporal boundaries, allowing educators to seek and share timely information (Greenhalgh & Koehler, 2017; Krutka et al., 2017; Trust et al., 2017). These tools have gained significant attention from education professionals as a means to exchange ideas, find resources, discuss educational trends, and combat isolation when colleagues are not available in-person (Carpenter & Krutka, 2014; Staudt Willet & Carpenter, 2020, 2021).

Studies investigating professional uses of social media in education are becoming well established. Numerous studies have explored how teachers use social media platforms, such as Facebook, Twitter, or Reddit, for professional purposes (Carpenter et al. 2018; Greenhalgh et al., 2020; Kelly & Antonio, 2016; Staudt Willet & Carpenter, 2020, 2021). Although this body of research continues to grow, research focusing on social media use for professional purposes in the higher education setting is still needed (Luo et al., 2020; Veletsianos & Kimmons, 2016). For example, a recent systematic review conducted by Luo et al. (2020) found a limited number of empirical studies investigating the use of social media for professional development in the higher education setting, highlighting the need for further exploration.

Furthermore, Reddit, a social media platform with a significant presence (Staudt Willet & Carpenter, 2020, 2021), has been under-researched compared to other platforms like Facebook and Twitter. Due to little previous research, there remain questions regarding to what extent Reddit is utilized for professional purposes, such as exchanging ideas, learning in interaction, and combating isolation (Staudt Willet & Carpenter, 2020), thereby necessitating further exploration. Still, two past studies showed that educators used Reddit as a place to follow and discuss changes and reforms in educational policy (Carpenter & Staudt Willet 2021; Staudt Willet & Carpenter, 2021).

Because Reddit allows usernames that are not linked to the users’ real identities (e.g., legal name and geographic location), user anonymity is one of the platform’s norms. This distinguishes Reddit from other social media platforms like Facebook and Twitter (Haythornthwaite et al., 2018). Past research has suggested that further work is needed to understand how professionals interact with others in an anonymous environment (Staudt Willet & Carpenter, 2021). Additionally, researchers have not yet studied Reddit during unplanned disruptions affecting the entire field of education, such as the global COVID-19 pandemic spanning at least the years 2020–2021. The disruptions of COVID-19 would seem to be a valuable setting to investigate such effects.
The purpose of this study is to explore participation patterns of Reddit users in two subreddits (i.e., distinct, themed discussion forums hosted on Reddit) relevant to the interests of higher education professionals: r/highereducation and r/Professors. In this paper, we define “higher education professionals” as the people who work in post-secondary institutions (e.g., colleges and universities), such as administrators, faculty members, and staff members. They may hold roles and responsibilities in teaching, student affairs, enrollment management, library, or instructional technology, among others. In addition, when we refer to “faculty” or “faculty members,” we specifically mean the academic professionals who teach in the higher education setting who are either tenured, on a tenure track, lecturers, adjunct faculty members, or graduate teaching assistants.

With a higher education context in mind, we examine the time period between semesters when presumably much planning occurs (i.e., the summer months May–August), both before and during the COVID-19 pandemic (i.e., summer 2019 and summer 2020). Results from this exploration address a gap in the literature at the intersection of higher education professionals’ ongoing knowledge-seeking and -sharing, responses to the COVID-19 pandemic, and the use of Reddit to accomplish these purposes. Furthermore, we discuss the implications of these findings for supporting the ongoing knowledge-seeking of higher education professionals, as well as sustaining higher education during and after massive disruptions and rapid changes like those experienced during the COVID-19 pandemic.

**Conceptual framework**

We frame our investigation with a community of practice lens. A community of practice (CoP) is a group where people with similar interests, identities, and values can share and discuss a topic, concerns, or problem (Wenger et al., 2002). In a CoP, learning is situated, meaning that participants in a CoP grow their knowledge and expertise through ongoing interaction with one another (Wenger et al., 2002). These interactions develop a sense of belonging to the community over time (Eaton & Pasquini, 2020). CoPs have three primary characteristics: (a) a common domain, displaying a shared commitment and competence among the members; (b) a community, where members can interact with one another and learn together; and (c) shared practice, indicating the creation and contribution of knowledge as a result of the interaction (Wenger, 1998; Wesely, 2013). The domain characteristic allows members to share interests, passions, and commitments about the field. Members value the collective expertise of the group and are therefore willing to learn from each other (Wenger & Wenger-Trayner, 2015). The community characteristic provides a space for members to dialogue and share activities. In turn, such interactions generate the knowledge base and resources that represent the group’s shared-practice characteristic (Wenger & Wenger-Trayner, 2015). A CoP is beyond a project team or work group because these three characteristics allow the members to “actively learn from their colleagues’ expertise and work collaboratively to transfer knowledge, build skills and solve problems” (Berry, 2019, p. 133).
Members of a CoP can participate and interact with other group members in various ways (Wenger et al., 2002). New members may start with peripheral participation, such as observing the actions of others and following group discussions, particularly as a means of learning the norms and expectations of the community (Lave & Wenger, 1991). They may initially prefer to read discussions without responding, attain information rather than sharing insights, and ask questions more than answering others’ questions (Kollock & Smith, 1996; Muljana et al., 2020). As new members become more familiar with the group, they may increase their participation and become more active participants by sharing insights and resources and responding to questions while still seeking knowledge. Other members may be in a more core position in the community by holding leadership roles, facilitating discussions, and/or promoting group interactions. This means that the behaviors of group members may appear differently, with a few members contributing a significant amount of content and the majority of the members merely observing. A CoP view of learning indicates that both individual learners and the collective group are important, and there is a mutuality between the two (Berry, 2018). Finally, participation in a CoP may be fluid and can change over time (Guldberg & MacKness, 2009; Muljana et al., 2020).

A CoP framework is appropriate for our current study as we investigate changes in participation and interaction, including individual phenomena (i.e., higher education professionals’ knowledge-seeking and use of Reddit) and collective behavior (i.e., higher education’s response to COVID-19). A CoP approach allows us to view our investigation through a community-focused lens for explaining knowledge-seeking and -sharing activities occurring in a social media platform like Reddit, resonating with Luo et al. (2020). Additionally, with a CoP perspective, we can gain insight into a community where interaction, joint activities, and collective learning occur (Luo et al., 2020; Muljana et al., 2020).

**Literature review**

**The use of social media for professional purposes in higher education**

Educators often self-identify a need for continuous knowledge-seeking for improving teaching practice and impacting students’ learning outcomes (Darling-Hammond et al. 2009; Kennedy, 2016; Krutka et al., 2017; Timperley & Alton-Lee, 2008; Van den Bergh et al. 2014). In particular, faculty members in higher education are experts in their fields who often seek innovative instructional strategies beyond traditional lectures, including ideas on integrating technology and staying abreast of current educational trends (Luo et al., 2020; Mundy et al., 2012). However, geographic and temporal barriers may have frequently limited their opportunities to connect and collaborate with others with similar interests, roles, and expertise (Trust et al., 2017). Utilizing social media is beneficial in this regard.

Social media platforms transcend traditional boundaries and can be accessed asynchronously using small devices; this allows people to communicate with others without being constrained by funding, time, and location (Luo et al., 2020, Luo...
Social media affordances offer knowledge-seeking possibilities different from traditional settings, such as connecting with colleagues they have not met in-person. Furthermore, social media are open, meaning that higher education professionals can “discover exciting, relevant new information, connections, and opportunities that they were not originally seeking” (Trust et al., 2017, p. 2). For example, faculty members utilize social media to attain professional knowledge, share ideas and resources, seek advice, and extend networks (Meishar-Tal & Pieterse, 2017; Veletsianos, 2012). Administrators and staff members use social media to share information, support students, build community, and extend outreach (Davis et al., 2012; Junco, 2014; Veletsianos & Woodward, 2017). Similarly, staff members such as librarians are interested in using social media for just-in-time knowledge-seeking because it allows them to learn from others across various contexts (Luo & Hostetler, 2020).

Social media use during COVID-19

The COVID-19 pandemic has changed educators’ personal and professional lives. Due to the new governmental guidelines in many countries (e.g., physical distancing, quarantine, and lockdown), courses that were delivered traditionally in-person have shifted to a virtual format (Favale et al., 2020; Johnson et al., 2020; Verma et al., 2020; Sandars et al., 2020; Toquero, 2020). The result of this disruption and shift has been referred to as emergency remote teaching (Hodges et al., 2020). Educators quickly adjusted their instructional strategies, often within several days, to fit into the virtual mode (Archambault & Borup, 2020). These changes necessitated just-in-time learning that aided emergency remote teaching (Trust et al., 2020).

Educators faced numerous challenges while adjusting traditional courses for emergency remote teaching. At the beginning of the shift, educators were overwhelmed by the wide variety of online learning resources and tools from which to select, largely due to the lack of knowledge and experience with online and/or virtual teaching tools and strategies (Trust & Whalen, 2020; Verma et al., 2020). Additional challenges included inadequate quality of internet access (Trust & Whalen, 2020), limited access to technological tools (Aguilar, 2020; Galperin et al., 2020; Verma et al., 2020), student attrition (Verma et al., 2020), heavy internet traffic (Favale et al., 2020), lack of support from institutions, inability to access laboratories remotely (Verma et al., 2020), and overwhelming influx of communication (Bal et al., 2020).

Among the aforementioned studies related to emergency remote teaching, social media communities were mentioned as communication venues where educators could seek knowledge, resources, and support during the pandemic (Bozkurt et al., 2020; Trust et al., 2020). Trust and Whalen (2020) discovered that more than half of their study participants, who were primarily educators in Massachusetts school districts, turned to social media to read posts (168 out of 325 participants), and comments (177 out of 325 participants) from other educators, and nearly a quarter asked for help, ideas, or resources (79 out of 325 participants). Faculty members teaching in higher educational institutions in India also turned to social media to connect with
others (Verma et al., 2020). Faculty members working at higher educational institutions in the U.S. used social media as a means of communication during the pandemic (Johnson, Veletsianos, and Seaman, 2020). Trust et al. (2020) found that two Twitter hashtags (#RemoteTeaching and #RemoteLearning) were actively used by educators to interact with peers, combat physical isolation, and find and share information that assisted them in shifting to emergency remote teaching during the pandemic. When there was a lack of sufficient, timely resources, social media offered affordances to promote engagement with and learn from colleagues (Bozkurt et al., 2020). In sum, during the challenging time of the COVID-19 pandemic, educators used social media to provide mutual emotional support and motivation in addition to seeking knowledge and resources.

The use of Reddit for professional purposes

The social media platform Reddit is highly popular (Schrader et al., 2020), ranking as the sixth most visited website in the United States and 14th globally (Alexa Internet, 2022). Reddit hosts more than 50 million daily active users, with more than 13 billion posts and comments (Reddit Inc., 2022). Like other social media, Reddit users take on different roles, such as moderators who provide guidelines. Reddit allows asynchronous threaded conversations; therefore, contributors can generate posts and comments (i.e., responses to others’ posts) in a threaded format. For users who prefer not to post or comment, Reddit provides a voting feature where users can either upvote or downvote a post or comment (Carpenter et al., 2018; Schrader et al., 2020; Staudt Willet & Carpenter, 2020).

Reddit’s distinct features support communities where users can carry out authentic dialogues (Carpenter et al., 2018; Carpenter & Staudt Willet, 2021; Kennedy et al., 2016; Singer et al. 2014; Tăran, 2017). Reddit allows the formation of themed discussion forums, called subreddits. At the time of writing, there are more than 100,000 active subreddits (Reddit Inc., 2021). Each subreddit is a community dedicated to facilitating discussions about common topics of interest, open to anyone with common interests, passion, and goals—thereby encouraging participation from members (Moore & Chuang, 2017). Additionally, registered Reddit users can create usernames not associated with their real identities (e.g., legal name or location). As a result of this anonymity, Reddit users can discuss any topic and ask questions without feeling intimidated or judged by other users. With these distinct features, Reddit may offer a safe environment for higher education professionals to seek knowledge and share resources related to sensitive topics that they may otherwise be reluctant to discuss in-person or with local colleagues (Carpenter & Staudt Willet, 2021; Staudt Willet & Carpenter, 2020, 2021).

Past research has documented investigations of education-related topics on Reddit. Chang-Kredl and Colannino (2017) analyzed 600 entries to discover what people remembered about their best, worst, favorite, and least favorite teacher. By analyzing the top 25 entries in the /Teachers subreddit, Carpenter et al. (2018) found that users engaged in advice-seeking and advice-giving related to technical and emotional aspects of teaching, which might be sensitive and uncomfortable to discuss.
in-person. Staudt Willet and Carpenter (2020) analyzed a full year of entries from four subreddits (i.e., r/education, r/Teachers, r/teaching, and r/teachingresources), revealing educators’ various contributions and interaction levels in Reddit. Finally, Staudt Willet and Carpenter (2021) studied how contributions, conversation topics, and discourse in r/education and r/Teachers changed across three-and-a-half years, and Carpenter and Staudt Willet (2021) used qualitative analysis to explore how educators apply the affordances of anonymity in these two subreddits. Despite these examples of past studies, research exploring the use of Reddit for professional purposes in higher education is still limited. There remain questions about how professionals in higher education interact with each other and seek and share advice in Reddit.

Communities of practice and Reddit

Modern technologies like the internet allow more CoP groups to emerge and organize differently. For instance, the connective affordances of the internet help collapse geographical and temporal limitations, which is especially useful when CoP members live in dispersed areas and time zones (Wenger et al., 2002; Woo, 2015). CoPs have often been studied in the context of social media research. Several studies found that teachers used Twitter to find, interact with, and learn from other teachers without meeting in-person (Carpenter & Krutka, 2015; Krutka et al., 2017). For instance, Twitter hashtags can serve as CoPs where meaningful dialogues, mentoring, and resource sharing can occur (Britt & Paulus, 2016). Gao and Li (2017) examined how educational professionals participated in a one-hour synchronous chat event on Twitter and explored the participants’ interaction levels. Eaton and Pasquini (2020) analyzed Twitter #AcAdv chats, interviewed participants, and discussed how a Twitter-facilitated CoP supports the ongoing learning and practice of the academic advising professionals in higher education. A sense of social presence may play a role in this type of dialogue and interaction (Lomicka & Lord, 2012). Gradually, this sense of social presence may further contribute to a sense of community (Lomicka & Lord, 2012; Rosell-Aguilar, 2018), where joint activities and discussions take place (Lord & Lomicka, 2014).

Reddit’s features and affordances can be understood through a CoP lens. For instance, a CoP lens highlights that subreddit user membership can take form in core (e.g., moderator), active (e.g., those who frequently post and comment), or peripheral (e.g., those who prefer to merely read the content) roles. This variety of roles resonates with findings from Muljana et al. (2020) and Wenger et al. (2002). For example, at least one moderator in each subreddit provides guidelines and monitors conversations. All other members are welcome to post or comment, but the moderator may delete any inappropriate posts or comments. Those who do not wish to post or comment can participate in a less demanding way by upvoting or downvoting subreddit content (Carpenter et al., 2018; Schrader et al., 2020; Staudt Willet & Carpenter, 2020). In addition, the anonymity feature of Reddit provides a safe environment where people can freely interact with the topic, content, and others without feeling afraid to be judged (Carpenter & Staudt Willet, 2021). “Joining” a subreddit
initially can be seen as low engagement as reading a single post in that subreddit; there are no expectations to contribute at a certain level. That is, a CoP welcomes participation regardless of users’ contribution and interaction levels. In fact, Lave and Wenger (1991) argued that newcomers entering a group should contribute less and observe more as a form of legitimate peripheral participation that is essential for situated learning. As peripheral members become more comfortable interacting in the community, they may be more motivated to participate further (Lai & Chen, 2014). In this way, participation is fluid and can change over time (Guldberg & MacKness, 2009).

Also, subreddits’ features and affordances resonate with the CoP’s three characteristics: common domain, community, and shared practice. For example, most subreddits include a welcome statement describing the purpose and the members who may want to join. This type of welcome statement may suggest that the moderator and existing members would like to share interests or passions about common topics, resonating with the *domain* characteristic. Reddit itself refers to a community dedicated to facilitating discussions about common topics of interests (Moore & Chuang, 2017), allowing the members to engage one another, which aligns with the *community* characteristic of CoP. Through the engagement afforded by the community characteristics, the subreddit members can actively seek advice and share knowledge. Over time, their interactions can generate a knowledge base and resources, representing the members’ *shared practice* characteristics. In other words, if subreddits include a clear purpose statement about their communities, the common topics or fields the members share, how the discussions are moderated, and a description of the target members, their existences are likely to resonate with the three CoP characteristics.

**Purpose**

This study addresses a gap in the literature at the intersection of higher education professionals’ just-in-time knowledge-seeking and -sharing, responses to the COVID-19 pandemic, and the use of Reddit to accomplish these purposes. In this study, we examined participation patterns of Reddit users in two subreddits relevant to the interests of higher education professionals, r/highereducation and r/Professors, during the time period between semesters when presumably much planning occurred, both before and during the COVID-19 pandemic. Three research questions guided this study:

- **RQ1:** To what extent, if any, did individual contributions in r/highereducation and r/Professors change during COVID-19?
- **RQ2:** To what extent, if any, did content interactions in r/highereducation and r/Professors change during COVID-19?
- **RQ3:** To what extent, if any, did popular topics in r/highereducation and r/Professors change during COVID-19?
Method

This study aimed to examine the participation patterns and higher education topics on Reddit via a descriptive study, allowing us to observe “a situation as it is […] without changing or modifying the situation under investigation” (Leedy & Ormrod, 2016, p. 136). This descriptive design guided us through analyzing people’s behaviors (Leedy & Ormrod, 2016). In the context of this study, we specifically took a quantitative approach by collecting and analyzing digital traces (Lee et al. 2017) of activity in two subreddits, r/highereducation and r/Professors. Digital traces can be found in the self-documenting and self-archiving information left behind by social media users as they participate online, such as posts and comments on Reddit (Staudt Willet & Carpenter, 2020). Studying digital traces is a means to unobtrusively examine behaviors in a natural setting (Lee et al., 2017). Because digital traces can provide researchers with “comprehensive pictures of both individual and group behavior” (Lazer et al., 2009, p. 721) and “a moment-by-moment picture of interactions over extended periods of time” (p. 722), this approach may offer effective insight into activity in Reddit communities of practice at a large scale.

Sampling

We selected two subreddits used by those interested in higher education, including higher education professionals: r/highereducation and r/Professors. The r/highereducation subreddit was created in 2009 and had 48,300 members as of April 2022 (r/highereducation, 2022). r/highereducation invites “news, articles, and discussion related to professional and policy issues in higher education” (r/highereducation, 2022, About Community section). The welcome message of r/highereducation describes the use of moderated flair; with the members’ permission, a moderator can tag the members with the employment category or department (e.g., administrator, faculty, staff of student affairs, or “any other subfield in higher education”) (r/highereducation, 2022, Welcome section). Although there is no way to prevent other stakeholders (e.g., parents and students) from joining r/highereducation, the welcome message suggests that the content of this subreddit targets higher education professionals.

The r/Professors subreddit, created in 2011, is a community for tenured and tenure-track faculty members, lecturers, adjunct faculty members, or graduate teaching assistants to engage one another (r/Professors, 2022). There were approximately 101,000 members in r/Professors as of April 2022 (r/Professors, 2022). Although r/highereducation may welcome all higher education professionals (e.g., administrators, faculty, and staff members), r/Professors appeals specifically to educators teaching in higher education institutions as the target members. For example, students may join r/Professors, but their posts (e.g., questions about professors) may be subject to removal at the moderator’s discretion (r/Professors, 2022).

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presumably much planning occurs, both before and during the COVID-19 pandemic. Therefore, we collected posts and comments in r/highereducation and r/Professors generated from May 1, 2020, to August 31, 2020. To understand how members’ subreddit participation and activity may have changed during COVID-19 relative to the year before the pandemic, we also collected posts and comments generated from May 1 to August 31, 2019.

**Data collection**

To obtain digital traces from these subreddits, we downloaded posts and comments from both subreddits in 2019 using Google Cloud’s (2020) BigQuery web service. However, because of a delay in when BigQuery’s Reddit archive is updated, we were unable to obtain Reddit posts and comments from 2020 through BigQuery. To collect the more current 2020 data, we wrote an original web scraping script in the R programming language (R Core Team, 2020) that queried the Reddit API and returned the most recent posts and comments.

From 2019, we collected a total of 765 posts and 1487 comments within 253 threads (i.e., posts that receive responses) in r/highereducation dated May 1 to August 31, 2019. We additionally collected 1458 posts and 25,722 comments within 1361 threads in r/Professors. From 2020, we collected 666 posts and 4969 comments within 512 threads from r/highereducation dated May 1 to August 31, 2020. We further collected 2,065 posts and 45,326 comments within 2,013 threads from r/Professors.

**Data analysis**

We used R to conduct all analyses. To address RQ1 and RQ2, we analyzed the numbers of contributors, posts, threads, and responses. To address RQ3, we identified the five most popular conversation topics in 2019 and 2020 through a procedure that expanded upon the topic modeling example from Silge and Robinson (2017). First, we made all text from the subreddits posts and comments lower case. Then, we removed punctuation marks, symbols, numbers, and URLs (i.e., links to websites). We also removed the default English stopwords identified by the quanteda R package (Benoit et al., 2020). In addition to these default stopwords, we also removed “NA,” “removed,” and “deleted” which indicated posts and comments that were no longer available, as well the words “just,” “can,” “like,” “also,” and “even” which seemed to be used frequently as colloquial “filler” words as part of the informal authorship in these subreddits. We then organized the cleaned text into a document-feature matrix.

With the text in this required format, we were able to create topic models through latent Dirichlet allocation (LDA), a statistical method of grouping words together using frequency and likeness, by using the topicmodels R package (Grünn & Hornik, 2020). This process calculated per-topic-per-word probabilities, called “betas” (Silge & Robinson, 2017). Finally, we used the seriation R package (Hahsler et al.,...
to reorder the terms within each topic. We used the default parameters for the “seriate” function, which set the reordering method as principal components analysis (PCA). The seriation process did not change the beta values but simply clustered them within topics according to frequency. In other words, after reordering, adjacent rows were more similar than non-adjacent rows. This allowed us to plot the per-topic-per-word probabilities in a data visualization affording a direct comparison between topics (see Fig. 2).

Results

RQ1: changes in individual contributions

We analyzed changes in individual contributions in the two subreddits by calculating the number of posts, posters, comments, and commenters (Table 1). In r/highereducation, the number of posts and posters decreased from 2019 to 2020, while the number of comments and commenters increased more than 100%. This would seem to suggest a significant change in conversation patterns in r/highereducation. That is, there were fewer new conversations during COVID-19 relative to the prior year, but those conversations that were started received much more attention. In contrast, all four measures of individual contributions increased in r/Professors.

We additionally analyzed the number of daily posts and comments in both subreddits (Fig. 1). We observe fewer daily posts in r/highereducation during June-July 2020 than during the same months in 2019. However, the number of 2020 daily posts trended upward at the end of the summer (i.e., August 2020). As a result, during the COVID-19 pandemic, there were more daily posts in r/highereducation just before a new semester started than at the same time the previous year. Additionally, there were more daily comments in r/highereducation throughout summer 2020.

In r/Professors, there was a noticeable decrease in the number of daily posts and comments from May to June, followed by steady increases in July and August 2020. This would seem to suggest that r/Professors participants were less active during the summer months but then became more engaged as a new semester approached. Although this pattern was evident in both 2019 and 2020, there were more r/Professors posts and comments during the COVID-19 summer of 2020 than the year before.

Table 1 Individual contributions by subreddit from May to August (2019 vs. 2020)

| Measure | r/highereducation | r/Professors |
|---------|------------------|--------------|
|         | 2019 (n) | n_difference (%) | 2020 (n) | 2019 (n) | n_difference (%) | 2020 (n) |
| Posts   | 765     | −99 (13% decrease) | 666     | 1458 | 607 (41.6% increase) | 2065 |
| Posters | 269     | −5 (2% decrease)  | 264     | 751  | 413 (55% increase)  | 1164 |
| Comments| 1487    | 3482 (243% increase) | 4,969 | 25,722 | 19,604 (76% increase) | 45,326 |
| Commenters | 545 | 600 (110% increase) | 1145 | 3,248 | 2,011 (62% increase) | 5,259 |
Fig. 1  Daily posts and comments by subreddit from May to August (2019 vs. 2020)

Table 2  Content interactions by subreddit from May to August (2019 vs. 2020)

| Subreddit       | 2019 Posts | 2020 Posts | 2019 Threads | 2020 Threads | 2019 Comments | 2020 Comments | Response rate (2019) | Response rate (2020) |
|-----------------|------------|------------|--------------|--------------|---------------|---------------|---------------------|----------------------|
| r/highereducation | 765       | 666        | 253          | 512          | 1474          | 4,987         | 33.07%              | 76.88%               |
| r/Professors    | 1,458      | 2065       | 1,361        | 2013         | 25,645        | 45,572        | 93.35%              | 97.48%               |

| Thread length | Mean Posts | SD Posts | Median Posts | Maximum Posts | r/highereducation | r/Professors |
|---------------|------------|----------|--------------|----------------|------------------|--------------|
| 2019          | 5.83       | 7.11     | 3            | 50             | 1,458            | 2065         |
| 2020          | 9.74       | 12.36    | 5            | 225            | 1,361            | 2013         |

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RQ2: changes in content interactions

We analyzed response rate (i.e., the percentage of subreddit posts that received comments) and thread length (i.e., the average number of comments to posts that received at least one response) as measures of change in content interactions (Table 2). The response rate in r/highereducation more than doubled, increasing from 33.07% in 2019 to 76.88% in 2020. The response rate in r/Professors was already high in 2019 at 93.35%. Nevertheless, this rate still increased in 2020, to 97.48%. In addition, the average thread length in both subreddits increased from 2019 to 2020. In 2019, r/highereducation threads contained a mean of 5.83 comments; this increased to 9.74 comments in 2020. The average thread length in r/Professors also changed, but it was not as steep as in r/highereducation. In r/Professors, the mean 2020 thread length was 22.64 comments, an increase from 18.84 comments per thread the prior year.

RQ3: changes in popular topics

Through topic modeling, we juxtapositionally analyzed popular topics in r/highereducation and r/Professors posts and comments, comparing 2019 to 2020 (Fig. 2). We also analyzed the most frequent words used within each topic (Table 3). We report findings by how the top-five topics in posts and comments changed from 2019 and 2020, organized by subreddit.

r/highereducation

In 2019, posts in r/highereducation covered a broad range of issues related to colleges and universities. Three of the five topics were student-focused, including a topic on student admissions featuring terms such as “top,” “SAT,” “score,” “get,” and school ( Topic 5). A second student topic seemed more focused on students’ experiences of Master’s degrees and getting a job (Topic 4). A third student topic seemed to be conversations about career concerns (Topic 3), with terms such as “unemployed,” “underemployment,” “rate,” “median,” and “wage.” Global education was a fourth area ( Topic 1), with terms like “six sigma” (a process-improvement certification), “NCERT” (the National Council of Educational Research and Training, an educational reform movement in India), and “MBBS” (the Bachelor of Medicine and Bachelor of Surgery degree in the U.K.). A final topic in r/highereducation posts seemed to be related to news in higher education (Topic 2), with additional terms “online,” “survey,” “interviews,” and “people.”

r/highereducation comments in 2019 seemed to be connected to jobs and careers, with Topic 4 including the terms “job,” “degree,” “work,” “get” and Topic 2 including “want,” “make,” and “much.” Another topic in the comments was focused on students’ discussions in online courses ( Topic 1). Faculty were the focus of another comments topic ( Topic 5) and a final topic in the comments seemed concerned with time issues ( Topic 3).
Fig. 2 Popular topics by subreddit from May to August (2019 vs. 2020). Note Columns depict five topics from 2019 and five from 2020. Brighter colors show a higher density of terms in a topic, with the dark purple color meaning that a term was absent from a topic. Rows have been computationally reordered using principal components analysis (PCA) so that adjacent rows are more similar than non-adjacent rows.
### Table 3: Per-topic-per-word probabilities (betas) by subreddit, type, and year

| Subreddit       | Type  | Year  | Topic 1          | Topic 2          | Topic 3   | Topic 4   | Topic 5   |
|-----------------|-------|-------|------------------|------------------|-----------|-----------|-----------|
| r/highereducation | posts | 2019  | Class 0.0379      | Education 0.0165 | Rate 0.0263 | Job 0.0126 | College 0.0272 |
|                 |       |       | Study 0.0278      | Higher 0.0128    | Majors 0.0257 | Degree 0.0126 | Students 0.0216 |
|                 |       |       | Solutions 0.0213  | Us 0.0119        | Median 0.0257 | Higher 0.0109 | Colleges 0.0152 |
|                 |       |       | Ncert 0.0179     | News 0.0091      | Wage 0.0227 | Masters 0.0097 | University 0.0135 |
|                 |       |       | Csse 0.0169      | College 0.0085   | Degree 0.0198 | Experience 0.0093 | School 0.0108 |
|                 |       |       | Global 0.0152    | People 0.0065    | Graduate 0.0183 | University 0.0085 | Score 0.0105 |
|                 |       |       | Six 0.0145       | University 0.0064 | Career 0.0156 | Education 0.0074 | Get 0.0087 |
|                 |       |       | Sigma 0.0139     | Online 0.0060    | Unemployment 0.0144 | Student 0.0073 | Student 0.0076 |
|                 |       |       | English 0.0133   | Survey 0.0059    | Social 0.0142 | Get 0.0072 | Sat 0.0072 |
|                 |       |       | mbbs 0.0125      | Interview 0.0057 | Underemployment 0.0139 | Really 0.0070 | Top 0.0067 |
|                 |       | 2020  | Students 0.0194  | Students 0.0213  | Students 0.0222 | Higher 0.0163 | Higher 0.0154 |
|                 |       |       | University 0.0179 | Universities 0.0083 | Campus 0.0183 | Education 0.0138 | Students 0.0142 |
|                 |       |       | Fall 0.0112      | University 0.0082 | Going 0.0090 | Job 0.0130 | College 0.0136 |
|                 |       |       | Covid19 0.0108   | Campus 0.0069    | Covid19 0.0084 | Working 0.0100 | Education 0.0118 |
|                 |       |       | Colleges 0.0104  | Open 0.0063      | Fall 0.0082 | ed 0.0100 | Ed 0.0103 |
|                 |       |       | State 0.0070     | College 0.0055   | Student 0.0075 | gt 0.0098 | University 0.0087 |
|                 |       |       | College 0.0070   | Work 0.0051      | College 0.0073 | Students 0.0097 | International 0.0067 |
|                 |       |       | Cases 0.0059     | Get 0.0046       | Disability 0.0072 | University 0.0095 | Colleges 0.0067 |
|                 |       |       | Coronavirus 0.0058 | Many 0.0046     | Back 0.0067 | Work 0.0083 | Us 0.0062 |
|                 |       |       | Universities 0.0056 | Purdue 0.0046   | Work 0.0060 | Online 0.0083 | Student 0.0061 |
| Comments        | 2019  |       | Students 0.0184  | Get 0.0089       | Students 0.0087 | Education 0.0093 | Students 0.0095 |
|                 |       |       | Student 0.0079   | One 0.0071       | People 0.0069 | Job 0.0092 | College 0.0079 |
|                 |       |       | Think 0.0076     | Students 0.0070  | University 0.0065 | Get 0.0090 | Faculty 0.0067 |
|                 |       |       | Faculty 0.0073   | Think 0.0066     | Really 0.0055 | College 0.0083 | Education 0.0063 |
|                 |       |       | Discussion 0.0067 | Make 0.0059      | Dont 0.0049 | Work 0.0079 | People 0.0062 |
|                 |       |       | One 0.0060       | People 0.0056    | Say 0.0046 | Degree 0.0078 | University 0.0055 |
| Subreddit Type | Year | Topic 1 | Topic 2 | Topic 3 | Topic 4 | Topic 5 |
|---------------|------|---------|---------|---------|---------|---------|
| Make          | 2020 | Higher  | 0.0052  | 0.0055  | 0.0043  | School  | 0.0073  | Colleges | 0.0048  |
| Course        | 2020 | Education | 0.0049  | 0.0054  | 0.0042  | People  | 0.0066  | See      | 0.0048  |
| People        | 2020 | Much    | 0.0048  | 0.0052  | 0.0041  | Students| 0.0064  | Think    | 0.0047  |
| Online        | 2020 | Want    | 0.0048  | 0.0051  | 0.0040  | Higher  | 0.0064  | Know     | 0.0046  |
|               |      |         |         |         |         |         |         |          |          |
| Job           | 2019 | Online  | 0.0088  | 0.0116  | 0.0094  | Campus  | 0.0128  | People   | 0.0063  |
| People        | 2019 | Tuition | 0.0083  | 0.0082  | 0.0092  | University | 0.0079 | Faculty  | 0.0059  |
| Get           | 2019 | College | 0.0082  | 0.0081  | 0.0067  | Fall    | 0.0076  | University | 0.0058  |
| Work          | 2019 | Schools | 0.0074  | 0.0079  | 0.0060  | People  | 0.0068  | One      | 0.0057  |
| Experience    | 2019 | Education | 0.0067 | 0.0078 | 0.0049 | Staff | 0.0066 | Dont | 0.0055 |
| Time          | 2019 | Many    | 0.0066  | 0.0076  | 0.0048  | Back    | 0.0065  | Money    | 0.0054  |
| Think         | 2019 | Universities | 0.0061 | 0.0076 | 0.0046 | One | 0.0065 | Universities | 0.0051 |
| Dont          | 2019 | Year    | 0.0059  | 0.0058  | 0.0044  | Work    | 0.0065  | Higher   | 0.0049  |
| Education     | 2019 | School  | 0.0057  | 0.0056  | 0.0042  | Home    | 0.0063  | Get      | 0.0046  |
| r/Professors  | Posts |         |         |         |         |         |         |          |          |
| Subreddit | Type | Year | Topic 1 | Topic 2 | Topic 3 | Topic 4 | Topic 5 |
|-----------|------|------|---------|---------|---------|---------|---------|
| Students  | 0.0287 | Video | 0.0090  | Student | 0.0187  | Students | 0.0184  | Job     | 0.0067  |
| Online    | 0.0231 | Use   | 0.0088  | Students| 0.0158  | Fall    | 0.0083  | Know    | 0.0065  |
| Class     | 0.0142 | Zoom  | 0.0077  | Class   | 0.0084  | Faculty | 0.0079  | Faculty | 0.0062  |
| Course    | 0.0108 | Student| 0.0065 | One     | 0.0081  | University| 0.0076  | Teaching| 0.0060  |
| Classes   | 0.0099 | Using | 0.0065  | Grade   | 0.0069  | Online  | 0.0072  | Dont    | 0.0058  |
| Time      | 0.0097 | Students| 0.0054 | Work    | 0.0069  | Campus  | 0.0070  | University| 0.0058 |
| Teaching  | 0.0096 | Ive   | 0.0053  | Know    | 0.0067  | Going   | 0.0061  | Get     | 0.0058  |
| Semester  | 0.0071 | One   | 0.0051  | Get     | 0.0066  | Class   | 0.0061  | New     | 0.0056  |
| Fall      | 0.0066 | Name  | 0.0050  | Course  | 0.0065  | Classes | 0.0059  | Research| 0.0056  |
| One       | 0.0058 | Want  | 0.0048  | Time    | 0.0064  | One     | 0.0051  | Work    | 0.0055  |
| Comments  | 2019  | One   | 0.0140  | Students| 0.0262  | Work    | 0.0140  | Students| 0.0178  | Student | 0.0108  |
| Students  | 0.0084 | Get   | 0.0128  | Student | 0.0113  | Class   | 0.0126  | Students| 0.0107  |
| Dont      | 0.0073 | Think | 0.0102  | Time    | 0.0097  | Time    | 0.0112  | One     | 0.0093  |
| Time      | 0.0062 | Dont  | 0.0097  | Class   | 0.0094  | Teaching| 0.0090  | Think   | 0.0084  |
| People    | 0.0054 | Student| 0.0088 | Students| 0.0088  | Get     | 0.0081  | School  | 0.0076  |
| Good      | 0.0054 | People | 0.0067 | Know    | 0.0084  | Grade   | 0.0069  | Get     | 0.0069  |
| Class     | 0.0052 | Going | 0.0065  | Dont    | 0.0065  | Make    | 0.0067  | Class   | 0.0069  |
| See       | 0.0052 | First | 0.0061  | Us      | 0.0057  | Dont    | 0.0064  | Well    | 0.0065  |
| Really    | 0.0051 | Semester| 0.0059 | Years   | 0.0053  | Really  | 0.006   | People  | 0.0054  |
| Think     | 0.0050 | Much  | 0.0059  | Course  | 0.0052  | Know    | 0.0058  | Course  | 0.0054  |
| 2020      | Student| 0.0122 | Dont    | 0.0130  | Think   | 0.0126  | Students| 0.0320  | Students| 0.0152  |
| People    | 0.0095 | Time  | 0.0114  | Class   | 0.0112  | One     | 0.0158  | Get     | 0.0103  |
| Class     | 0.0088 | Want  | 0.0081  | Students| 0.0111  | Student | 0.0093  | Time    | 0.0097  |
| Work      | 0.0074 | Class | 0.0073  | Good    | 0.0097  | Get     | 0.0083  | Work    | 0.0087  |
| Subreddit   | Type  | Year | Topic 1   | Topic 2  | Topic 3 | Topic 4 | Topic 5 |
|-------------|-------|------|-----------|----------|---------|---------|---------|
| Students    | 0.0071| Course| 0.0069    | Get      | 0.0091  | Right   | 0.0057  | 0.0075  |
| Take        | 0.0067| Much  | 0.0068    | Classes  | 0.0069  | Now     | 0.0051  | 0.0072  |
| Online      | 0.0051| Well  | 0.0066    | Know     | 0.0062  | Semester| 0.0050  | 0.0069  |
| Go          | 0.0050| Really| 0.0062    | One      | 0.0052  | Really  | 0.0047  | 0.0056  |
| Now         | 0.0048| Online| 0.0060    | Go       | 0.0048  | Way     | 0.0044  | 0.0056  |
| Much        | 0.0046| Think | 0.0059    | People   | 0.0047  | Going   | 0.0044  | 0.0056  |
In 2020, the broad range of topics covered in r/highereducation posts shifted and focused on issues related to the COVID-19 pandemic. All five r/highereducation topics in summer 2020 were pandemic-related and student-focused. Topic 1 was explicitly about COVID-19, with additional terms like “coronavirus,” “cases,” and “state.” Topic 4 was about issues related to education moving online, and Topic 5 was about implications for international students studying in the U.S. Two topics were related to concerns about returning to campus in the fall, with Topic 3 slightly broader and touching upon disability concerns, and Topic 2 more narrowly attuned to the pandemic response at Purdue University, whose president made controversial comments in Summer 2020 that were being discussed in the news and on social media.

r/highereducation comments in 2020 seemed similarly impacted by COVID-19. One topic was related to classes going online (Topic 3) and another to working from home versus going back to campus (Topic 4). The remaining three topics were related to finances, with Topic 5 specifically related to money, Topic 2 about tuition and the potential impact of many classes moving online, and Topic 1 about getting a job, including terms like “work,” “experience,” and “time.”

r/Professors

In 2019, posts in r/Professors were related to a variety of issues pertaining to an academic profession, starting with finding a professorial job (Topic 1), with included terms like “faculty,” “position,” “get,” “school,” and “year.” The remaining four topics were more teaching focused, including general teaching concerns such as those related to time (Topic 3), giving and grading exams (Topic 2) which also included the terms “final” and “use,” and getting to know students in the first class meeting (Topic 4). Finally, Topic 5 was related to online courses, with terms such as “work,” “email,” and “time.”

r/Professors comments in 2019 seemed to be connected to the post topics, especially around teaching. There was a topic on the general work of teaching (Topic 3) with terms such as “course,” “class,” “time,” and “years;” another topic on getting students going at the start of the semester (Topic 2), and a topic on grading (Topic 4) that included terms like “students,” “grade,” and “make.” Topic 5 was centered on schools, courses, and classes. The theme of Topic 1 was difficult to infer because it included fairly generic terms such as “one,” “good,” “see,” “time,” and “really.”

In 2020, topics in r/Professors posts shifted from the general work of an academic to focus on issues related to the COVID-19 pandemic. Two topics related to courses going online in the fall semester, with one seemingly more focused on teaching implications (Topic 1) and another on broad university concerns (Topic 4). Two other topics focused on specific teaching tasks, such as grading (Topic 3) and using Zoom for video meetings (Topic 2). The fifth and final topic was on faculty jobs, including terms like “new,” “research,” “teaching,” “work,” and “university.”

Topics of r/Professors comments in 2020 were all teaching-related. One topic focused on getting started with students (Topic 4), including terms like “right,” “way,” and “now.” Another topic was about students’ online work (Topic 5), with terms such as “use,” “make,” “know,” and “time.” A third topic seemed like a general concern for good classes (Topic 3), and the final two topics were both related to the online nature
of classes, with one more focused on the shift to online (Topic 1) and the other on time issues (Topic 2).

Discussion

Results from this study address a gap in the literature at the intersection of higher education professionals’ ongoing knowledge-seeking and -sharing, responses to the COVID-19 pandemic, and the use of Reddit to accomplish these purposes. Our results indicate changes in individual contributions and content interactions between those occurring before and during the COVID-19 pandemic in both r/highereducation and r/Professors. Growth in these measures is more consistent in r/Professors than in r/highereducation. Our findings also display more changes in r/highereducation popular topics than in r/Professors. Here, we further discuss the major findings through the CoP lens.

Changes in community participation

Our findings indicate increases in individual contributions in both r/highereducation (i.e., the number of comments and commenters) and r/Professors (i.e., the number of posts, posters, comments, and commenters). Additionally, content interactions (i.e., the response rate and average thread length) increased in both r/highereducation and r/Professors. Observing a steep increase in the response rate of r/highereducation (from 33.07% to 76.88%), it seems there was a sudden surge in interest in summer 2020.

A CoP welcomes any participation, regardless of the contribution and interaction levels. This includes embracing members who prefer to observe initially. As Lave and Wenger (1991) suggest, newcomers entering a CoP group may contribute less and observe more, supporting the peripheral participation for initiating a learning process. Particularly, Reddit’s anonymity may have helped provide a safe environment for higher education professionals to ask questions regarding relevant topics; the voting feature additionally allows the peripheral members to upvote or downvote posts and comments as they acquire information (Staudt Willet & Carpenter, 2020, 2021). In line with Eaton and Pasquini’s (2020) study, our findings suggest that these subreddits can serve as a CoP in gathering like-minded higher education professionals who intend to seek knowledge from each other and improve their professional practice. Over time, members of r/highereducation and r/Professors may recognize the social presence of others (Lomicka & Lord, 2012; Rosell-Aguilar, 2018), potentially resulting in a shift of engagement (Eaton & Pasquini, 2020; Enger et al., 2002). As expected, we found increased participation levels in both subreddits.

Although there was increased participation detected in the individual contributions and content interactions in r/highereducation, the growth in these measures was more consistent in r/Professors. This can be expounded through two potential explanations. First, recalling Staudt Willet and Carpenter’s (2020) study that compared individual contributions in four teaching-related subreddits, they discovered
that the percent contributing level increased more steadily in r/Teachers than in r/teaching and r/education, respectively. Like r/Teachers, r/Professors can serve as a teaching-related learning community with a clear target audience (i.e., professors). There was already much participation in r/Professors before the pandemic; when the pandemic occurred, it seemed like the members did not hesitate to revisit this subreddit to seek, share, and discuss instructional-strategy ideas. As found in this study, all numbers of posts, posters, comments, and commenters in r/Professors steadily increased during the pandemic. Faculty members participating in r/Professors may have possibly recognized the benefits of social media for attaining professional knowledge, sharing teaching ideas and resources, seeking advice, and networking with their peers, resonating with existing studies (Meishar-Tal & Pieterse, 2017; Veletsianos, 2012).

Second, it appears that subreddit members deemed shared commitment and competence among members (i.e., the common domain characteristic of CoP) crucial, aligned with prior literature (Wenger, 1998; Wesely, 2013). The main page of r/Professors displays the group’s purpose, guidelines for who can join, and the discussion content expected from the members. This subreddit appears exclusive; only those who teach in a higher education setting are encouraged to engage in r/Professors. On the contrary, the members of r/highereducation are possibly various stakeholders of higher education beyond faculty members; they are more diverse in their professions and interests, such as administrators, staff members, and possibly students. In other words, CoP members seemed to participate and interact more consistently when they knew that other members shared more common interests, expertise, and professions, which might explain the steady increase of contributions and interactions in r/Professors.

**Communities adjusting to crisis**

In addition to the changes in individual contributions and content interactions, we found changes in the most popular topics in both subreddits. Our findings indicate that these topical changes may be associated with the COVID-19 pandemic crisis in 2020. The new topics, matched with increases in individual contributions and content interactions, suggest that these CoPs were adjusting to disruption and crisis. Our findings parallel other research showing that the Twitter #Edchat CoP responded to the pandemic as a flexible, just-in-time emergency response network (Greenhow et al., 2021; Staudt Willet et al., 2021).

Moreover, social media have been used to seek support during the pandemic (Bozkurt et al., 2020; Trust et al., 2020). This may have also been the case with both r/highereducation and r/Professors. For example, as employees in the higher education setting were mandated to work from home, there may have been a need to overcome unfamiliar challenges related to physical isolation and working from home. Faculty members in higher education may have encountered new challenges related to transforming courses to emergency remote teaching during the pandemic. There may have been unusual questions and discussions that had not been asked before, and hence, the people working in the higher education sector possibly turned
to social media to connect with others to help them overcome challenges because they felt they were in this together (Verma et al., 2020). It follows that individual contributions and content interactions increased in both r/highereducation and r/Professors, even if rates were somewhat different in the two subreddits.

We discovered broader topics in r/highereducation than in r/Professors. Before COVID-19, the members in r/highereducation frequently discussed issues related to education and college broadly and factors impacting such issues, such as admission and career opportunity for future graduates. Another frequent topic pertained to career-related issues. During the pandemic, discussion topics shifted to issues related to the pandemic, such as campus closure, cancellation of in-person classes, and how these might impact the quality of education. Additionally, there were conversations about what could and should have happened when students returned to campus (e.g., COVID-19 testing procedures, physical distancing). As all members were impacted by the pandemic and could relate to the issues, these relevant topics attracted a high volume of responses, thereby yielding a 76.88% response rate—much higher than the previous year. In contrast, the topics in r/Professors were more consistent across both periods. Additionally, the response rate in 2019 was already very high (93.35%) and increased marginally (97.48% in 2020). In 2019, r/Professors members discussed academic work, such as the professorial job and teaching-related matters. When we analyzed word-density in discussions during the pandemic, topics on teaching-related matters still existed. However, the focus shifted to online course delivery strategies, indicating that community members pursued topics relevant to the pandemic.

Such findings, as mentioned above, suggest that subreddit dialogue may take forms spanning from more conversational to deeper, which resonates with Staudt Willet and Carpenter’s (2021) findings. In our study, the topics found in r/highereducation are generally broad. Depending on a topic’s relevance, discussions may or may not attract responses. r/highereducation seemed to be interest-focused (e.g., trends and issues in higher education), whereas r/Professors appeared content-focused (e.g., teaching strategies). The scope of content in r/Professors discussions is more centered on teaching-related matters. These results highlight the imperative role of CoP characteristics, especially the domain characteristic (Wenger, 1998; Wesely, 2013). Members of r/Professors likely knew that fellow subreddit participants largely consisted of colleagues sharing similar teaching responsibilities and who tend to engage in teaching-related topics. This resonates with existing studies. For example, educators are likely to reach out to colleagues to find just-in-needs support (McGee et al. 2017) and mitigate feelings of isolation (Wright, 2020). Working professionals tend to seek ideas and strategies from peers who have been in similar experiences because such ideas and strategies can be more effective (Littlejohn, 2017). These past studies align with our findings, which may explain why the teaching-related discussions in r/Professors are focused, in-depth, lengthy, and therefore engaging overall.
Implications

Our findings suggest implications for higher education stakeholders applicable both during and after the COVID-19 pandemic. Because Reddit allows users to create usernames that are not linked to a real identity—creating a platform norm of anonymity that distinguishes Reddit from other social media such as Facebook and Twitter (Haythornthwaite et al., 2018)—members are able to participate comfortably in subreddits relevant to their interests. Depending on the content they would like to explore, learn, and discuss, they can select an appropriate subreddit to participate in and discuss topics that may be difficult to bring up in-person.

A subreddit hosting broad discussions (e.g., r/highereducation) may be appealing to discuss trends and issues impacting the higher education setting in general. For example, participants may bring up sensitive topics such as procedures, policy, and politics surrounding universities and colleges (Carpenter et al., 2018; Staudt Willet & Carpenter, 2020, 2021). Administrators may also seek ideas to overcome institutional challenges without revealing their institution’s name and may be able to find previous, similar discussions without posting a question.

Teaching-related subreddits (e.g., r/Professors) may be appealing to faculty members and graduate teaching assistants to ask questions without hesitance in this anonymous context (Carpenter & Staudt Willet, 2021). The subreddit is set up for and moderated to ensure participants share their professions in common. This allows the discussions to be more specific on instructional strategies because there may exist a shared commitment, competence, and practice among them—reflecting qualities of a CoP (Wenger, 1998; Wesely, 2013). Faculty members have already perceived the importance of pursuing professional development to keep abreast with instructional strategies and technologies (Luo et al., 2020). Subreddits like r/Professors can potentially serve as a professional development environment where participants can learn from and with others about timely topics and participate in joint activities (e.g., seeking information, experience, and resources from others, and engaging in problem-solving opportunities), particularly when they are restricted by geographical and time boundaries (Wenger et al., 2002).

Following the results of this study, which reinforce findings from the literature while adding the contexts of COVID-19 and Reddit, higher education professionals may consider pursuing the benefits of just-in-time learning opportunities afforded by social media (Greenhalgh & Koehler, 2017) and are especially important during emergencies, crises, and times of disruption. These benefits will likely be found regardless of a participant’s job position or title. Therefore, administrators and supervisors in higher education may consider providing support for allowing and encouraging the use of social media, like Reddit, as a learning tool (Anasi, 2018).

For those who lead or facilitate a CoP, we also offer a practical suggestion for increasing members’ participation. Providing leadership opportunities to CoP members can be a strategy to sustain the group (Eaton & Pasquini, 2020). For example, those serving as core members of a CoP may offer non-hierarchical leadership roles that other members can volunteer flexibly by assisting the moderation of discussion. Involving members in CoP coordination may promote ownership of the community, thereby strengthening and sustaining social presence (Easton and Pasquini, 2020).
Limitations and future research

Using social media for professional purposes among higher education professionals is still an emerging practice (Luo & Hostetler, 2020). Our study addresses a gap in the literature at the intersection of higher education professionals’ ongoing knowledge-seeking and -sharing, crisis response, and Reddit usage. We collected the Reddit data from two summer periods: before and during the COVID-19 pandemic. Our findings might have changed if we had collected data from a different period. The adjustments to contributions, interactions, and topics may continue beyond the pandemic and are worth exploring to understand further how collective learning and knowledge building shift from time to time. Future studies may also employ advanced statistical analysis. For example, because Reddit discussion forums are nested, scholars may consider performing hierarchical linear modeling to reveal differences from various periods.

Our methodological approach allowed us to describe trends in subreddit participation across time and at a large scale. However, this benefit came at the expense of depth, nuance, and insider perspectives—meaning that further investigation is warranted. Forthcoming research may consider acquiring Reddit users’ insights. For instance, scholars may utilize self-report measurements to comprehend factors influencing higher education professionals’ participation and interaction levels. A questionnaire may help obtain insights regarding what motivates some higher education professionals to actively contribute to discussions or merely read discussions. Notably, this additional investigation may reveal various reasons why people remain in a peripheral position (Romero-Hall et al., 2020) and which barriers (e.g., privacy issues, disreputable behaviors, and the spread of misinformation) hinder successful knowledge-seeking through social media platforms (Dabbagh et al., 2015; Krutka et al., 2019; Romero-Hall, 2021). Interviews can also reveal how (i.e., in what ways) and why (i.e., for what reasons) higher education professionals turn to Reddit for professional purposes. Self-reported findings from surveys or interviews may reveal how interactions and discussions may support faculty members’ scholarship of teaching and learning (Greenhow et al., 2019; Luo et al., 2020) and provide emotional support that further strengthens higher education professionals’ connection with colleagues (Trust et al., 2017).

Finally, the use of Reddit for professional purposes by other higher education professionals, such as instructional designers and instructional technologists, deserves further exploration, notably because such work is still rare (Luo & Hostetler, 2020). As modern technologies support the emergence of CoP groups, these future avenues of research are essential to offer valuable insights, expanding the relevant social-media literature on both scholarly and practical aspects.

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