Theses and Dissertations

2023

Exploratory case study of teachers finding support from the global educator Facebook group during the emergency school closures of the Covid-19 pandemic

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EXPLORATORY CASE STUDY OF TEACHERS FINDING SUPPORT FROM THE

GLOBAL EDUCATOR FACEBOOK GROUP DURING THE EMERGENCY SCHOOL

CLOSURES OF THE COVID-19 PANDEMIC

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Education in Learning Technologies

by

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July, 2023

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This dissertation, written by

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under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

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ACKNOWLEDGMENTS

Growing up I remember my dad saying that my education is my inheritance and to value it. From an early age, the importance and power of an education was instilled in me by my mom and dad. I am extremely grateful and thankful for their endless support and inspiration to strive to be my best. Thank you to my sisters, Kathleen, Roseanne, and Elaine, for the constant encouragement and listening to the many updates and challenges within my process of completing my dissertation. A special shoutout to my niece Claudia for the cheers and reminders that I can do it!

Thank you to my dissertation chair, Dr. Kay Davis, for the continued support and guidance throughout this process. My dissertation journey included a few bumps in the road, and I am so thankful for Dr. Davis' guidance and inspiration. Thank you.

VITA

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ABSTRACT

The emergency school closures caused by the COVID-19 pandemic impacted students and teachers across the globe. This study explored how the Global Educator Collaborative Facebook group, with over 125,000 members, supported teachers as they adapted to distance learning instruction amid emergency school closures. Through the Facebook group, teachers built a community to share questions, challenges, and seek support from their peers. This study explored how teachers participated in the Facebook group between February 2020 and December 2021 and whether their participation represented Wenger's criteria for a community of practice (Lave & Wenger, 1991; Wenger, 1998). An exploratory case study design (Yin, 2018) allowed for an in-depth study using artifacts of the Global Educator Collective Facebook group. Through a stratified two-step sampling process, artifacts for analysis were selected from a keyword search of technology challenges, technology support, technology win, or technology support within four identified phases (February-March 2020, April-July 2020, August 2020-March 2021, and April-December 2021). Eighty posts and associated comments were selected for thematic analysis, which found teachers posting for assistance on the teaching and learning environment, classroom management, instructional, and technology support. Through the associated comments, fellow members offered advice, suggested an application or tool, and/or offered to further the conversation off the Facebook page. A total of 1,320 passages were coded across all four phases with 68% or 904 posts and associated comments focused on instruction and classroom management. Additionally, 17% or 228 posts and associated comments were seeking or providing technology support. The findings showed how the needs changed across the four phases. While Phase 1 posts and comments focused on providing instructional and technology support as teachers shifted to distance learning; by Phase 3 the focus was more concerned with

classroom management and technology support as teachers confronted hybrid and a return to in-person learning environments. This study affirms that teachers embraced a virtual community and used it to integrate new tools into their instruction, however it was not a true community of practice as defined by Wenger because it lacked the development of deep connections, shared resources, and widespread commitment among members.

Chapter One: Introduction

Two thousand twenty began with hopes and dreams of a new year and a better life. Fresh promises and goals of the new year were quickly disrupted as a novel coronavirus disease, COVID-19, began to slowly spread across the globe (Belluz, 2020). With the initial outbreak beginning in Wuhan, China in December 2019, travelers unknowingly facilitated the spread of the virus and infections started popping up across the world. Nations attempted to slow the spread by restricting travel from China, as portions of Wuhan were being locked down (Aizenman, 2020). On February 4, 2020, eleven cases of COVID-19 were diagnosed within the United States and nine cases were a result of travel from Wuhan, China (Patel & Jernigan, 2020). By the middle of March 2020, the World Health Organization (WHO) declared COVID-19 viral disease a pandemic as the outbreak from China spread to Spain and Italy, President Donald Trump declared a national emergency within the United States and the Center for Disease Control (CDC) recommended limiting gatherings of fifty or more individuals ("A Timeline of the Coronavirus Pandemic," 2020).

The scientific and medical communities rushed to understand and treat COVID-19 and its impact on the human body. The severe acute respiratory syndrome COVID-19 or coronavirus 2 (SARS-CoV-2) caused pneumonia-like symptoms that could be further complicated by patients pre-existing conditions, including heart disease, diabetes, and asthma. Additionally, the concern of overwhelming hospitals paralleled an increased difficulty in accessing medical supplies, especially personal protective equipment (PPE) supplies and ventilators needed to treat patients. The United States of America was not prepared for the quick spread of the novel coronavirus and each individual state was forced to find their own medical supplies, rather than coordinating at a federal level.

With no cure or treatment for COVID-19, American cities scrambled to deal with outbreaks and hospitalizations from the virus, while also trying to understand how the coronavirus was transmitted. Fearing community spread and a massive outbreak which was occurring in Italy and Spain, the San Francisco Bay Area was the first region in the United States to institute a shelter in place for all nonessential needs beginning March 16, 2020 (Waldrop & Martin, 2020). By the end of March 2020, much of the United States were sheltering in place and a major outbreak of COVID-19 was beginning in New York. With nonessential businesses and services shut down through May, schools were shut down and scrambled to deal with the emergency shutdowns by attempting to pivot to distance learning.

The COVID-19 pandemic impacted education through sudden school closures and a forced shift to distance learning. The emergency closure of schools in the Spring of 2020 greatly disrupted instruction and learning, more than 1.2 billion students in 186 countries were affected by school closures (Li & Lalani, 2020). In dealing with emergency closures because of the pandemic, schools and school districts were in uncharted territory. In the final days before the shelter in place order was instituted, many classroom teachers instructed students to take home textbooks, workbooks, and needed supplies that could be used to continue learning. Schools distributed available Chromebooks and iPads for students to access the internet and be able to participate in remote learning. There were a lot of unknowns. Neither teachers nor students were prepared for the quick pivot from face-to-face learning to distance learning; school leaders and teachers quickly started planning how to continue learning from home. While some districts and schools were able to look for ideas from Asian and European schools that were already several weeks into distance learning, many school districts needed longer to pivot toward online

learning. Schools needed to support students by providing devices and internet connectivity to those that did not have access at home.

Just as schools and school districts scrambled to shift from in person teaching and learning to providing a distance learning program, classroom teachers needed to rethink their instructional methods and strategies for distance teaching. Distance teaching and learning can occur either synchronously or asynchronously. Asynchronous teaching and learning occur when the teacher records or creates a lesson and materials ahead of time, students are then able to observe the lesson and materials on demand at a time that works well for them. Asynchronous teaching provides students and families flexibility for learning and completing schoolwork (Ali et al., 2021; Libasin et al., 2021). Synchronous teaching and learning occur in real time. Students and the classroom teachers are connected in real time via conferencing software, such as Google Meet or Zoom, and the teacher can provide instruction and interaction directly with students. While synchronous teaching and learning provide real time education, it does require students to have access to Internet bandwidth and a device for the specific class time. Both access to a device and reliable Internet connection was an issue for many families throughout the pandemic. Both instructional methods of distance teaching forced classroom teachers to step outside their comfort zone and expand their repertoire of teaching strategies (Ali et al., 2021). The *Global Educator Collective Facebook* group offered teachers a community of fellow educators that were going through similar experiences an opportunity to share ideas and lend support. This research seeks to explore how teachers used the Global Educator Collective Facebook group to create a community of support as the COVID-19 emergency school closures forced teachers to provide distance learning opportunities to students.

Shifting the Role of Technology in the Classroom

Outside of school, students are accustomed to interacting with fast paced, media rich games, sites, and apps. Children are used to on demand information, whether googling or asking Alexa or Siri to play music, tell a joke, or state the facts about a holiday or monument (Rideout & Robb, 2020). Especially prior to the emergency closures caused by the spread of COVID-19, many classrooms offered students an opposite experience in which curriculum was presented in less dynamic ways and a slow step by step process.

The goal of a classroom teacher is to teach the grade level or course curriculum in a manner that best supports student achievement and comprehension. In looking at data from prior to the pandemic, a McKinsey and Company report on the impact of educational technology on learning found a greater increase in student performance when the teacher was using technology for instruction (Bryant et al., 2020). The report also noted that the technology tools and applications are beneficial when they fit the needs and context of the instructional content. To impact learning, Bryant et al. (2020) highlighted that the technology needs must extend beyond tablets and laptops. They must include the networking infrastructure, internet bandwidth and software that can support the learning needs. More and more classroom teachers are using instructional strategies that integrate media and devices to engage learners, but the COVID-19 pandemic forced all teachers to fully embrace the use of technology within their teaching and curriculum.

Even without sudden school closures and shifting to distance teaching, teaching is a difficult profession. Classroom teachers experience a high level of turnover and burnout within the education field. As reported in 2017, Every year 8% of teachers leave the classroom and another 8% transfer to a new school (Straus, 2017). A 2021 survey of 2,700 classroom teachers by National Education Association found that 32% of teachers planned to leave the teaching

profession earlier than they had planned (Rodriguez-Delgado et al., 2021). The consistent changes of personnel within schools leads to a change in the vision and direction of a school or district. The continuous change in personnel can be disruptive to existing initiatives and goals, but it can also lead to an infusion of ideas and positive changes. While holding onto the traditions and old ways within a school is safe, the rigidity is not always a strength. Instead, schools should "support bold moves rather than trepid reiterations of the past because boldness sparks innovation, propelling the useful and informed actions that are required to complete the transition to 'right now'" (Jacobs & Alcock, 2017, p. 7). These bold moves were exemplified through the sudden school closures caused by COVID-19. The challenges of the COVID-19 pandemic within education have led to a nationwide shortage of school staff, including teachers, administrators, student support, substitutes, and custodial staff (Rodriguez-Delgado et al., 2021). As the COVID-19 pandemic wanes and students return to in person learning, schools must look for creative ways to meet student needs, while dealing with staffing shortages and burned-out teachers.

While individuals and society have embraced and fully integrated technology into all aspects of our daily lives, educational structures have been a little slower to integrate technology into classrooms (Rideout & Robb, 2020). Darling-Hammond et al. (2020) stressed the need for federal and state funding to support the ongoing costs technology devices, training and the needed network and infrastructure upgrades to support the devices and instructional content. As schools and districts return to in person learning, it is hoped that the digital divide can be reduced and increased access to student technological devices will continue (Darling-Hammond et al., 2020). It will be important for schools and districts to ensure teachers have ongoing training and time teachers to enhance their use of student technology within the classroom. The rise in

distance learning caused an increase in online learning and the use of educational technology, tools, and apps. Many online tools and applications offered free access to students and schools during the initial emergency school closures from March through June of 2020, but on-going use required schools to purchase subscriptions for continued access. The COVID-19 pandemic created an inflection point that spurred the rapid innovation in online learning tools and applications. Li and Lalani (2020) highlighted the worldwide market growth of online educational technology tools and apps to increase from just under $19 billion in 2019 to a projection of over $350 billion in 2025. The surge in the use of educational technology tools is caused by COVID-19 and the emergency school closures (Li & Lalani, 2020).

As access to student devices increases within classrooms, professional development for teachers is imperative. Classroom teachers need to learn how to use the devices and educational applications to maximize the device's benefit as an instructional tool within their classroom. While one to one device programs offer increased educational opportunities for students, they require teachers to integrate different instructional and teaching strategies that better complement 21st century skills. Educational practices must shift from focusing on the learner as a receiver of knowledge (the passive learner), to a more contemporary pedagogy (active learning) which encourages more personalized and customized learning (Baker, 2014; Jacobs & Alcock, 2017).

Classroom teachers, site principals, and district staff feel the pressure to do well and strive to better prepare students for academic and future success (Jacobs & Alcock, 2017). While scores on assessments can show growth, they do not take into consideration the challenges that teachers face within the classroom. Jacobs and Alcock (2017) stressed that the increasing accountability for schools to show growth and improvement each year, has led to the increased

reliance on data within schools and a sense of threat among teachers as they struggle to find the time to teach the curriculum within the school day. "The teacher is the academic leader, behavior model and manager, guidance counselor, emotional nurturer, physical therapist, joy and fun promoter, safety patrol officer, assessor, and learner" (Jacobs & Alcock, 2017, p. 7). Teachers have a difficult role and wear many different hats and work hard each day to support the needs of their students. Through technology and curriculum that supports the learning objectives, educational structures hope to better support teachers and increase learning opportunities for students.

With the changing and increasing role of the classroom teacher, it is even more important for teachers to create a classroom atmosphere in which students feel valued, engaged, and eager to learn (Darling-Hammond et al., 2020). The use of effective instructional strategies can impact student engagement and learning within a classroom. Teachers use a variety of instructional or teaching strategies to build their desired classroom atmosphere, a few of the instructional strategies include differentiated instruction, personalization, lecture, and small group work. Depending on the lesson, content and the desired outcome, teachers may vary the instructional strategies that are used within their classroom. The use of the different instructional strategies allows teachers to create a learning environment for students that best fits their curriculum and goals.

Adapting to Emergency Closures and Distance Learning

The COVID-19 pandemic caused emergency school closures across the globe. The United Nations (2020) reported the COVID-19 pandemic had disrupted education across the globe and affected 94% of the world's population of students. While schools within the United States did not begin closing until the middle of March of 2020, schools within Asia and Europe

began closing in January and February 2020 as outbreaks of the coronavirus spread from Wuhan, China. On February 27, 2020, a small group of international teachers responded to the uncertainty of teaching through a pandemic by creating the *Educator Temporary School Closure for Online Learning Facebook* group. The Facebook group was established with the intention of creating an online forum for teachers to share expertise, ideas, experiences and offer support. As the emergency school closures spread across the globe, the Facebook page had quickly grown to over 127,000 educators from around the world. In April 2020, the Facebook page name was changed from *Temporary School Closure Support* to the *Global Educator Collective*. The url of the Facebook page remains the same from its initial development in 2020 (https://www.facebook.com/groups/Temporaryschoolclosuresupport/). The Global Educator Collective Facebook group created an online forum to support teaches as they changed their instructional practices to better match distance learning, they looked for resources on the Internet.

The COVID-19 pandemic greatly disrupted teaching and learning during the 2019-2020, 2020-2021 and 2021-2022 school years. The pandemic's impact on education was unprecedented, never had schools or teachers been required to immediately shift from in person to distance learning. The impact of the COVID-19 pandemic on both students and teachers needs to be researched. While there are many aspects of the impact of the COVID-19 pandemic on education, this study is looking at how teachers were supported by the Global Educator Collective Facebook group. The social networking group provided a forum for teachers to seek advice and support from other educators across the globe that were also experiencing emergency school closures.

Statement of the Problem

The COVID-19 pandemic which started during the Spring of 2020 altered all aspects of daily life as communities across the United States and globe sheltered in place. As the pandemic spread, physical school buildings were closed, and educators were forced to provide an online format for primary and secondary education. Schools and educators had never confronted extended closures and were not prepared to shift to online learning. Schools faced challenges as they prepared to pivot to online learning. In addition to help prepare teachers to shift from face-to-face teaching to online teaching, schools needed to gather and distribute textbooks, technology devices, purchase web-based software that promoted and supported online learning, and provide access to internet hotspots. In preparing to shift to online teaching, educators turned toward social media sites for support and ideas. The Global Educator Collective Facebook group (https://www.facebook.com/groups/Temporaryschoolclosuresupport/) was created on February 27, 2020, a private group to collaborate, share ideas, and support each other while adapting to online instructional strategies and tools to provide distance learning opportunities for students. Since its creation, the Facebook page as grown to over 125,000 educators.

With the sudden shift to online learning and increased reliance on educational technology tools and apps, more research is needed to better understand how this shift impacts the future of teaching and learning. This exploratory case study of the Global Educator Collective Facebook group will seek to how teachers reacted to the sudden shift toward online learning. As schools are opening back up starting in the summer months of 2021 with a return to in person learning, there was not just a simple return to pre-pandemic instruction and learning. The pandemic changed pedagogical practices and further research is needed to determine what was learned from the sudden school closures and rapid implementation of distance learning (Darling-Hammond et al., 2020). Schools and districts need to use the waning pandemic and return to in

person learning as an opportunity to evaluate what went well and what did not go well within distance learning to rebuild instructional strategies to ensure student learning and support the teachers and administrators.

Purpose of the Study

The purpose of this study was to better understand how classroom teachers adapted to the sudden and prolonged school closures caused by the COVID-19 pandemic. This exploratory case study examined how teachers used the Facebook Global Educator Collective group to create a community which provided support and ideas as they shifted from teaching students in person within a classroom to teaching remotely online. Artifacts from the Facebook Global Educator Collective private group were the source of data for this study. The goal of this research was to explore how the Global Educator Collective Facebook group created a community to support classroom teachers as they were on the front lines of this disruptive change from in person to distance teaching during a pandemic.

Research Questions

The central guiding research question for this exploratory case study is: How did the virtual space Global Educator Collaborative Facebook group support teachers as they adapted to distance learning instruction amid emergency school closures caused by the COVID-19 pandemic?

Sub-questions include:

- What technology challenges emerged with the shift to distance learning instruction?
- How does the Global Educator Collective Facebook group create a sense of community and how does it represent Wenger's (1998, 2000) characteristics for a community of practice?

This study relies on several assumptions. This study is based on the ideas and thoughts of members of the Global Educator Collective Facebook group that were expressed through posts and associated comments. It assumes that members of the page were educators and being impacted by the sudden school closures and switch to distance learning. Additionally, this study assumes that the members of the Global Educator Collective Facebook group were appropriately sharing their knowledge and expertise and it could be replicated by other educators.

Methodology and Role of the Researcher

The purpose of this exploratory case study was to explore how teachers found support and ideas within the Facebook Global Educators Collective group during the COVID-19 pandemic. The case study design allowed the case or Global Educators Collective page to be studied from a holistic view (Yin, 2018). Creswell (1998) viewed a case study as an exploration "over time through detailed, in-depth data collection involving multiple sources of information rich in context" (p. 61). This study looked at the single Global Educators Collective Facebook group and how it helped educators as they adapted to distance learning instruction during the emergency school closures caused by the COVID-19 pandemic.

According to Creswell (2014), qualitative research is helpful when the natural setting of the phenomenon is studied and used for the collection of multiple sources of data. The qualitative research methods allowed for the exploration of artifact data from the Facebook page. This study used the posts and associated comments as artifacts. This study focused on the posts and comments that were made on the Global Educators Collective Facebook page during four distinct phases of time (February through March 2020; April through July 2020; August 2020 through March 2021; and April through December 2021). Within each phase, the researcher identified potential posts that matched one of the following search terms: technology challenges,

technology support, technology success, and technology win. For each phase, the researcher selected 40-50% of the potential posts as artifacts to be analyzed within this study. By setting these de-limitations, this study will be able to highlight the thoughts and needs of teachers during different time periods of the COVID-19 pandemic.

It is important to consider the role of the researcher to ensure the integrity of the research process within this study. Yin (2018) highlighted the need of the researcher to minimize reflexivity in which the researcher's perspective influences the research. The researcher has worked for the past 25 years in education as a classroom teacher, middle school assistant principal and district level technology administrator. The researcher lived through the COVID-19 pandemic, experienced the emergency school closures, and understands the experiences of the educators that posted on the Global Educator Collective Facebook group. As a district level technology administrator, the researcher supported teachers within her school district to adapt instructional practices for distance learning instruction. The researcher wants to explore how teachers found a community of support and ideas for distance learning instruction through social media, specifically the Global Educators Collaborative Facebook group.

Theoretical Framework

In March of 2020, all aspects of life came to a grinding halt as COVID-19 spread across the world. Retreating to the safety of home reinforced the importance of social connections as schools and offices shut down. The Internet and social media sites allowed individuals to search for new social connections and learning opportunities. Learning occurs through social interactions and experiences with others. Distance learning is defined as a method of learning in which students learn from home while teachers provide lessons and assignments digitally via the Internet. For teachers, the Global Educator Collective Facebook group provided access to a

community of fellow teachers that were also experiencing school closures and a shift to distance learning. Bandura (1971) proposed that learning extended beyond direct experience and included a social element in which learning could occur through observation and modeling. Lave and Wenger (1991) introduced the concept of Communities of Practice as a "set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice" (p. 98, location 1087).

For a group to be a community of practice, there are three key components. A community of practice must have a domain, a community, and a practice. The domain is a shared interest or passion that members of the community identify and feel a commitment to the domain (Wenger, 2011). The sudden classroom closures due to the COVID-19 pandemic helped establish a domain for educators that joined the Global Educator Collective Facebook group. The members of the GEC Facebook page were seeking support and ideas for transitioning to distance teaching.

A second key component of a community of practice are the members or community that is built through interactions. Through shared activities or discussions, members of the community of practice can learn and interact with each other while pursuing the domain (Wenger, 2011). As members of the Facebook page posted questions and fellow members responded, the community grew and developed. Members that participated by creating individual posts or commenting on posts helped the community enhance the domain of supporting teachers as they transition to distance teaching. With over 125,000 members, many members of the Global Educator Collective group were on the periphery, the members that participated by sharing ideas, suggestions and tips for their fellow educators represented the community.

The practice is the third key component for a community of practice. Members of a community of practice need to create a shared compilation of resources or a practice that supports the domain of the group (Wenger, 2011). The practice is developed as members problem solve, seek ideas, and share experiences within the community. The posts, shared experiencing, uploaded documents and conversation threads on the Global Educator Collective Facebook group helped develop the practice. The combination of developing the domain, community and practice is foundational for a community of practice.

Definitions of Key Terms

Synchronous Teaching and Learning: a method of teaching and learning in which the classroom teacher and students are connected in real time. Teaching and learning can occur in person or via video conferencing software, such as Google Meet or Zoom.

Asynchronous Teaching and Learning: a method of teaching and learning in which the teacher creates and records a lesson and materials ahead of time, the lesson is posted, and students are then able to observe the lesson and materials on demand at a time that works well for them.

Distance or Online Teaching and Learning: a method of instruction and learning in which the teacher and students are in different physical spaces, such as from home. Teachers use digital resources, including video conferencing and classroom management software, to provide lessons and assignments.

In Person Teaching and Learning: a method of teaching and learning in which the teacher and students physically meet in real time within a classroom.

Significance of the Study

This exploratory study is both important and timely. As the distribution of vaccines continued to increase through 2021 and there is a better understanding of how the COVID-19 virus is transmitted, schools returned to in person learning and began to reflect on what can be learned from distance learning and the sudden school closures. The COVID-19 pandemic disrupted the educational model of classroom learning for millions of students and as schools return to in person learning, it is important to reflect on aspects from distance learning and teaching that could be beneficial and worth continuing.

Prior to the start of the COVID-19 pandemic in March 2020, access to distance learning courses was limited and focused on college level courses (Baum & McPherson, 2019; Peachey, 2017). The sudden shift to distance learning by millions of classrooms spanning from kindergarten to college level was a massive disruption to the educational experience and setting that has never occurred. The disruption and shift to distance learning provides an opportunity to learn from the experience and evaluate its impact on both teachers and students. The COVID-19 pandemic forced educators to increase their use of technology tools without the traditional professional development opportunities from their school or district. Instead, teachers searched for distance teaching ideas from fellow teachers, including the Global Educator Collective Facebook group. This study is significant in it studied how teachers used the community of the Global Educator Collective Facebook group for ideas and support. The Global Educator Collective provided a forum for teachers to share and provide educational, technology and emotional support to fellow teachers that were all experiencing the sudden school shutdowns. By exploring the posts, comments and reactions made by educators on the Global Education Collective Facebook group page, this study may offer insight into potential innovations and lessons that can be applied with the return to in person learning.

Even prior to the COVID-19 pandemic, teaching is a demanding profession and has struggled to retain educators (Straus, 2017). The pandemic and sudden shift to distance teaching increased the stress on teachers and the percentage of teachers that are questioning whether to remain in the profession is increasing (Rodriguez-Delgado et al., 2021). While this study is not looking at how to retain teachers, this study is going to explore some factors that may be leading to increased stress among educators. By exploring the artifacts of the Global Educator Collective group page, this study can highlight what teachers were feeling and needing at different points of the COVID-19 pandemic. This study may provide ideas and insight for schools and districts that are facing an increasing number of educators that are considering leaving the profession to use and better support the needs of teachers.

Chapter Summation

The COVID-19 pandemic disrupted the 2019-2020 school year as students and teachers moved from the traditional classroom learning environment of face-to-face teaching and learning to remote learning. The shift to distance learning and teaching continued into the 2020-2021 school year for many schools across the United States and required teachers to learn new tools and skills to adapt toward online learning and distance teaching. Even with the change to remote learning, the importance of good teaching is still fundamental to student learning. This study explored how teachers used the Global Educator Collective Facebook group as a source of ideas and support for distance teaching during the COVID-19 pandemic.

Chapter Two: Literature Review

This chapter reviews the literature on teaching and learning, particularly the readiness and shifts which teachers were required to make with the emergency school closures caused by the COVID-19 pandemic, and communities of practice. Within teaching and learning, the review begins by looking at online learning prior to the COVID-19 pandemic and the lessons that could be transferred to more widespread online learning that occurred during the pandemic. The evolving state of teaching before the pandemic is also reviewed as teachers integrated technology and collaborative learning into their classrooms. The value of training through professional development, the technological pedagogical content knowledge framework (TPACK), and the changes to teaching and learning during the COVID-19 pandemic is presented. Communities of practice are the second area of focus within this literature review. Within communities of practice, the review looks at what they are and how communities of practice can provide support and growth to its members.

Teaching and Learning

The COVID-19 pandemic disrupted all aspects of life during 2020-2022, schools and education were particularly impacted. Beginning in early 2020, many students and teachers throughout the world moved from the traditional classroom environment of in person teaching and learning to distance learning through video conferencing software from their homes. The shift to distance learning and teaching continued into the 2020-2021 school year for many schools across the United States and some schools continued to offer distance learning opportunities into the 2021-2022 school year. Tinubu Ali and Herrera (2020) highlighted that approximately 55 million K-12 students and teachers in the United States had shifted to remote learning from home in March 2020, which marked the beginning of the COVID-19 pandemic.

The emergency changes to distance learning required teachers to learn new tools and skills to adapt toward teaching remotely through video conferencing software, such as Zoom or Google Meet. Even with the change to remote learning, the importance of good teaching remains fundamental to student learning. Cruickshank et al. (2003) identified effective teachers as being "caring, supportive, concerned about the welfare of students, knowledgeable about their subject matter, able to get along with parents…and genuinely excited about the work they do" (p. 329). The COVID-19 pandemic forced teachers to adapt their teaching methods to support the academic and social emotional needs of their students.

Online Learning Prior to COVID-19 Pandemic

Online learning is a method in which the teacher provides lessons and assignments digitally via the to the student that is in a different physical space, such as from home (Aparicio et al., 2016; Greenhow et al., 2021; Protopsaltis & Baum, 2019). Prior to the COVID-19 pandemic, online learning was available primarily to college and post graduate students. Accordingly, research on online learning focused on the experiences of college and post graduate students. In looking at college and post graduate courses, online learning can offer similar benefits as traditional in person classroom instruction (Greenhow et al., 2021; Protopsaltis & Baum, 2019). Protopsaltis and Baum (2019) noted that approximately one-third of college students take at least one course online and it is the fastest-growing sector within higher education. The online courses offer increased flexibility, access and opportunities for college and post graduate students. Even though K-12 students did not participate in a great deal of online learning prior to the COVID-19 pandemic, many of the lessons learned from college aged students can be transferred to younger learners.

Online learning offers both advantages and challenges for learners. While online learning offers convenience and flexibility for students, it creates a sense of isolation and limits the opportunities for students to network and build face to face relationships with the instructor or classmates (Baum & McPherson, 2019; Peachey, 2017). Peachey (2017) noted the importance of socialization for language skill development, while highlighting online learning as an individual or solitary experience. Online courses, especially with asynchronous coursework, require students to be self-motivated, organized, and disciplined (Aparicio et al., 2017; Baum & McPherson, 2019; Peachy, 2017). Students need to advocate for themselves with instructors, as well as navigate connection and hardware issues. Students with weak technology skills and digital literacy will have a harder time with online learning (Peachey, 2017). During synchronous learning, one student with audio or video difficulties can create disruptions and delays the entire class (Peachey, 2017). Online learning can present challenges for students, especially disadvantaged or under prepared students (Garcia & Weiss, 2020; Protopsaltis & Baum, 2019). Protopsaltis and Baum (2019) highlighted students with weak academic backgrounds were less likely to self-advocate and persevere in online classes. Additionally, online degrees and courses are perceived as less favorable over traditional degrees and courses (Protopsaltis & Baum, 2019). While previous research on online classes focused on college aged students, it can be transferred to K-12 students.

While technology applications and tools support online teaching, Carrier and Nye (2017) noted the importance of digital and online learning being guided by pedagogy. The pedagogy for online teaching is different from in person teaching and requires a different set of skills for teachers to integrate.

To be successful, online teachers must address the many challenges that are presented with online learning. While an in person traditional classroom allows teachers to move around the space and interact with students in a variety of ways, online learning forces teachers to adjust their classroom management skills to teaching through a computer screen. Peachey (2017) noted teachers have less tools available with synchronous online teaching. When teaching in person, most teachers have access to a whiteboard, interactive display, manipulatives, posters, flash cards, and books to support instruction and teaching. While online video conferencing software continues to make advancements, there are less tools available within online teaching. In addition to teaching the curriculum, Peachey (2017) found online teachers needed to help students with technical issues and try to prevent the technical issues from disrupting the lesson.

The literature on online learning highlights the importance of interactions between the student and instructor (Protopsaltis & Baum, 2019). Online courses need to be designed to encourage and facilitate interactions between the instructor and students. Building a rapport with individual students and building a community within a class are important for teaching. It is harder for teachers to build relationships and trust with students when teaching online (Peachey, 2017). With traditional in person learning, teachers can manage their class with verbal and nonverbal gestures or facial expressions, which can be difficult to see or interpret through the online learning medium of a webcam. Protopsaltis and Baum (2019) noted the Achilles' heel of online education is the lack of meaningful personal interaction with students.

The use of technology tools and applications supports online teaching, but the role of the teacher changes with online teaching. Within online learning, the teacher shifts from primarily instructing to also guiding and facilitating (Carrier & Nye, 2017). Peachey (2017) highlighted teacher can be successful at online teaching by adapting their teaching strategies.

The webcam and video conferencing applications are vital tools for synchronous online learning. Peachey (2017) notes the webcam provides students and the teacher the ability to see each other, which helps create relationships and build rapport within the class. The webcam can reduce the sense of isolation by fostering communication and building connections with both the teacher and students in a synchronous online class (Peachey, 2017). Enhancements to video conferencing applications have helped online teaching. The use of breakout rooms to facilitate small group discussions, text chatting for sharing links or questions, and emoji reactions for students to raise their hand or for teachers to gauge understanding all teachers to better manage online learning (Peachey, 2017). Even though the webcam and video conferencing applications increase the demands for bandwidth and needed computing device for synchronous online learning, they are foundational teaching tools for online instruction. To match the changing role for online teachers, Peachey (2017) highlights the importance of ongoing professional development and training on the necessary teaching tools and strategies for online learning.

Teaching Prior to COVID-19 Pandemic

Teaching is a difficult profession and even prior to the COVID-19 pandemic, there was a high level of turnover and burnout within the education field. Prior to the pandemic, Straus (2017) highlighted that 8% of teachers leave the classroom and 8% of teachers transfer to a new school each year. The National Education Association surveyed educators in January 2021 and found that 90% of its members that completed the survey felt burn out was a serious problem among teachers (Kamenetz, 2022). Jacobs and Alcock (2017) highlighted that frequent changes of personnel within schools leads to a change in the vision and direction of a school or district. The continuous changes within a teaching staff can be disruptive to existing initiatives and goals, but it can also lead to good change. While holding onto the traditions and old ways

within a school is safe, the rigidity is not always a strength. Instead, schools should "support bold moves rather than trepid reiterations of the past because boldness sparks innovation, propelling the useful and informed actions that are required to complete the transition to 'right now'" (Jacobs & Alcock, 2017, p. 7). These bold moves were needed during the COVID-19 pandemic as schools strived to keep students and staff learning and safe throughout the emergency school closures. Schools modified their programs to ensure students were safe; while some schools offered in person learning options, others continued with extended periods of distance learning or hybrid models in which students rotated between small group in person learning and distance learning.

Within the learning environment, in person learning or face to face communication is different from communicating through online tools. Through in person classroom settings students are guided throughout the day and lessons by the teacher, the interaction with the classroom teacher is different within distance learning and e-learning. Hubalovsky et al. (2019) noted that during e-learning students do not have the support of classmates and instead, self-motivation of the learner takes on a greater importance. Students have an increased responsibility to self-study, monitor their time, and motivation while e-learning (Hubalovsky et al., 2019).

The development and increasing integration of technology devices and applications within education promoted innovation and has opened the possibilities of learning outside of the classroom. Learning is no longer dictated or confined to a classroom, which corresponds with Jacob and Alcock's (2017) contemporary pedagogy and the changes to the relationship between the student and teacher. Within Jacobs and Alcock's (2017) contemporary pedagogy, the learner controls his or her own learning and is focused on creating and learning through the process.

The learner can choose areas of study and learning that they are interested in. "With the anytime/anywhere search capabilities of Internet browsers and the availability of digital media and tools for sharing power, the notion of classroom walls has been disrupted" (Jacobs & Alcock, 2017, p.15). Learning does not have to occur within a classroom; instead, learning can be in person or virtual. Learning can take place whenever and wherever.

As the control of learning shifts to the student, Jacobs and Alcock (2017) indicated the role of the teacher changes to a coach that collaborates and help students navigate the endless amounts of information available to learners. With the teacher relinquishing control over what and where students learn, the role of the teacher changes to cheer students on. Teachers must also become learners, in which they study the tools and content that can be used to guide their students. Education futurist, Alan November (2012) outlined the changing role of the teacher from instructor to guide and coach as discover and searcher for content. For students, one of the pitfalls with self-directed learning is that it is easy to fall down a rabbit hole or veer off in unintended directions (November, 2012). Accordingly, the teacher must help students gain the tools necessary to successfully navigate the endless information that is available within the Internet. "The implications for a deliberate pedagogical shift in roles and responsibilities are glaring, yet the system holds fast to past models" (Jacobs & Alcock, 2017, p. 15). The COVID-19 pandemic offered schools and teachers the opportunity to evolve and better adapt to the changes and possibilities that the contemporary instructional strategies offer learners.

Through the contemporary pedagogy, the role of the teacher and student changes from controlling the flow of information to modeling how to learn for students (Jacobs & Alcock, 2017). The teacher is no longer instructing students, but rather modeling, coaching, and mentoring. Each student become a self-navigator, social contractor, media maker and critic,

innovative designer, and global citizen (Jacobs & Alcock, 2017). As a self-navigator, the student

dictates what is learned by his or her interests, while relying on his or her teacher to offer

coaching and mentoring. In that the student is following his or her own interests, the student is

controlling what is learned. Gureckis and Markant (2012) note that better learning occurs when

individuals are self-selecting the content. Through social contracts, the student and teacher

establish learning plans that guide the student's learning outcomes and provide opportunities to

innovate through a design thinking process that encourages problem solving and creative

thinking. Communication within the digital age has changed, students need to participate,

collaborate, and create networks with other learners that share similar interests throughout the

world (Jacobs & Alcock, 2017).

For teachers and students to be successful within the increasingly media rich culture, they

need to increase their media literacy and ability to integrate digital tools. The International

Society of Technology in Education (ISTE) believes that technology can transform learning and

teaching; the organization works with educators to improve learning opportunities for students

through the guidance of the ISTE standards. Media literacy is a core value within the

Knowledge Constructor student standard, in which students will be able to "evaluate the

accuracy, perspective, credibility and relevance of information, media, data and other resources"

(ISTE, 2021). Media literacy includes the ability to access content and information as well as the

skills necessary to critically discern the value and reliability of media and information. As

students increasingly self-navigate the Internet, it is extremely important that they are media

literate (Baker, 2014; Jacobs & Alcock, 2017). Media literacy includes knowing how to use the

tools and to be able to tell the difference between high quality and poor websites, articles,

commercials, and other forms of media. Baker (2014) states "while our students may be media

savvy, most are not media literate. They tend to believe everything they see, read, and hear. Healthy skepticism does not exist, while media illiteracy is rampant" (p. 5). As teachers mentor their students, it will be important to provide students with opportunities to create and show their learning through a variety of media forms. The COVID-19 pandemic offered teachers the opportunity to change structure of teaching and learning by giving students more opportunities to direct their learning.

Professional Development

Teaching is a profession in constant growth and teachers need to be lifelong learners. Ongoing and effective professional development is important for teachers to integrate new curriculum and skills into their teaching repertoire. In addition to gaining new content, professional development provides teachers with opportunities to have valuable conversations and collaborate with fellow educators (Darling-Hammond & Richardson, 2009).

Professional development is important, it provides hands-on opportunities for teachers to explore and practice skills and applications that can be applied to their curriculum and instruction (Zoch et al., 2016). While the explicit instruction is valuable for teachers to experiment and deepen knowledge, professional development is equally valuable for teachers to have time to model ideas and collaborate with their fellow teachers (Zoch et al., 2016). Professional development allows teachers opportunities to enhance their skills, while also helping shape their beliefs and attitudes toward integrating technology into their curriculum.

As an alternative to one-time professional development opportunities, many schools and districts also utilize mentors, advisors, and teachers on special assignment to provide individualized and on-demand training to better support teachers. The peer mentors or teachers on special assignment can support and individualize the content and technological needs of

classroom teachers (Plair, 2008). Each teacher has a different comfort level and fluency with integrating technology and customizing the support allows teachers to be better supported. Additionally, the mentors or teacher leaders can serve as "harbingers of innovation" (Plair, 2008), in which they test new tools or application and share their thoughts with their peers.

Darling-Hammond and Richardson (2009) highlighted several research supported conditions that supported professional development for teachers. Professional development provides opportunities for teachers to increase their knowledge of the content and improve teaching strategies, but it is more effective when professional development is integrated into a school reform effort. (Darling-Hammond & Richardson, 2009). Professional development in isolation does not promote change beyond an individual classroom. A schoolwide approach to professional development, in which an entire grade level or team of teachers, participate in a training will help facilitate a broader change (Darling-Hammond & Richardson, 2009). Darling-Hammond and Richardson (2009) note that collaboration allows teachers to support one another and share ideas as they are implementing new skills. With peers and teammates engaged in common training experiences, teachers can share thoughts and experiences about how the content or skills can be integrated into their individual classrooms.

A schoolwide or district team approach toward professional development helps build a professional learning community. Through a professional learning community, Darling-Hammond and Richardson (2009) emphasized teachers working together and examining their instructional practice to enhance student performance. Professional learning communities allow teachers create a forum for teachers to share ideas, implement instructional practices, and reflect on how it worked within their classroom with peers.

Supporting Teachers to Utilize Technology Tools

The COVID-19 pandemic increased the need for teachers to integrate technology into their instruction and curriculum. Ertmer (1999) identified two orders of barriers for integrating technology into classrooms. The first-order barriers included access to devices, technical support, and training to use the devices and applications. The second-order barriers are more intrinsic to the teacher and include the teacher's attitudes, beliefs, skills, and knowledge of technology tools, (Ertmer, 1999). Cowan (2008) noted that the greatest challenge for integrating technology is ensuring teachers understand the benefit and use the technology in ways that can impact learning.

Ertmer (1999) identified first-order barriers to integrating technology into classrooms as access to devices, technical support, and training. While the expectation is for schools to have the technology infrastructure and devices available for teaching and learning, it is a challenge for most schools and school districts to keep up with the constant advances with technology (ChanLin, 2007). While first-order barriers are extrinsic to the teacher and focus on a school's investment in integrating technology into the curriculum, the second-order barriers are intrinsic to teachers by focusing on the attitudes, beliefs, skills, and technical knowledge of the individual teacher (Ertmer, 1999).

The second-order barriers are personal and vary for each teacher. Cowan (2008) highlighted that engagement and the ability to serve many different learners is a great asset with integrating technology. A teacher's perception as to the benefit of technology integration stems from the teacher's experiences, beliefs, and the professional development that they have received (ChanLin, 2007). It is the beliefs and attitudes that teachers hold, which can impact the extent each teacher implements technology into their instruction (Ertmer, 1999; Zoch et al., 2016).

Teachers face high expectations to address standards and accountability with local and state assessments. These expectations have forced teachers to create curriculum that has become standardized and reduces opportunities for teachers to integrate technology (Cowan, 2008). Teachers that have adapted and developed the technological skills needed within today's advancing technology-based society are more willing to invest their time in learning the skills and tools to integrate technology into their curriculum and instruction (ChanLin, 2007). To establish a positive perception of integrating technology among teachers, schools can try to alter a teacher's experience through reliable access to devices and professional development on the curriculum and applications that support content.

Technological Pedagogical Content Knowledge Framework (TPACK)

With technology applications and tools, teachers can design lessons to help students become more actively engaged and participants within their learning. This has led to the development of a framework that addresses the integration and balance of the content, pedagogy, and technology within the learning environment. Mishra and Koehler (2006) introduced the technological pedagogical content knowledge framework (TPACK) to better understand the relationship between teaching and technology. The TPACK framework looks to emphasize the connections between a teacher's understanding of the content, pedagogical, and technology knowledge. Within the TPACK framework, the content knowledge refers to the curriculum subject area that the teacher or course is focused on. The pedagogical knowledge reflects the teaching strategies and processes that are aligned within the goals or outcomes of the course. The technology knowledge, in the TPACK framework, refers to the knowledge and ability to use the tools and technologies within the teaching and learning environment. The technology knowledge that is needed will vary according on the expectations and outcomes of

the course. TPACK is a "teachers' knowledge of how to integrate content knowledge with appropriate pedagogical approaches, including those that use emerging technologies, to enable learners to master the subject matter" (Brantley-Dias & Ertmer, 2013, p. 106). In the TPACK framework, the relationship between the content, pedagogical, and technology knowledge allows a teacher to determine the most effective method of teaching for a particular concept (Mishra & Koehler, 2006).

Since the TPACK framework focuses on the relationship between the content, pedagogical, and technological knowledge, each pair must be considered. The pedagogical content knowledge encourages teachers to determine the most appropriate and beneficial teaching strategies and approach for the particular content being taught (Mishra & Koehler, 2006). It is recognizing that the teaching strategies must be varied and match the needs and abilities of the learners within the particular classroom and school. Technological content knowledge necessitates that teachers understand how technology can influence the level at which the students learn the content (Mishra & Koehler, 2006). For example, virtual frog dissection software allows students to better understand and deepen their knowledge of the frog organ systems by using the technological tools available online through the software. Technology fluency is the ability a teacher to understand which technology tool or application best supports the educational objective (Plair, 2008). The technological pedagogical knowledge requires teachers to know how to use and select an appropriate and relevant technology, while understanding how the selected technological tool may impact the learning environment and outcomes for students (Mishra & Koehler, 2006). Figure 1 provides a model of the TPACK framework and its knowledge components.

Figure 1

TPACK framework and knowledge components.
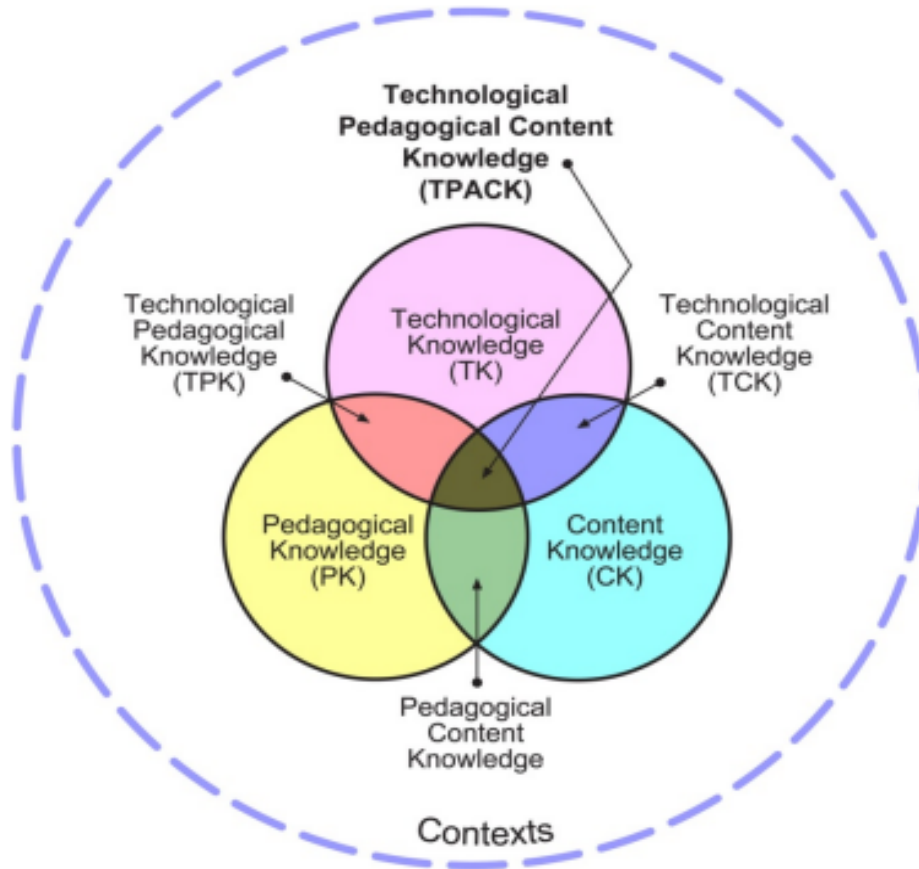
Mishra and Koehler (2006) described how TPACK creates a foundation for effective

teaching with the use of technology tools by considering:

The representation of concepts using technologies; pedagogical techniques that use

technologies in constructive ways to teach content; knowledge of what makes concepts

easy or difficult to learn and how technology can help redress some of the problems that

students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones. (p. 1029)

Technology use and integration into the curriculum became the foundational with the shift to distance learning during the COVID-19 pandemic. The shift to online learning required teachers to integrate technology tools into their teaching and the TPAK framework provides a model for good teaching by helping teachers better understand the intended goals of student learning by taking into account how technology impacts and interacts with the content and pedagogy. Chai and Koh (2017) highlighted that knowing how to use technology and increasing technology skills does not alone increase the ability for teachers to integrate technology into their curriculum. In addition to learning the needed technology and digital skills to provide distance learning, teachers must also understand the digital learning pedagogy and how technology can be used to support the curriculum and deepen learning potential for students.

Teaching During the COVID-19 Pandemic

At the start of the COVID-19 pandemic in March 2020, approximately 55 million K-12 students and teachers in the United States shifted to distance or remote learning (Tinubu Ali & Herrera, 2020). Neither students nor teachers were prepared for the sudden shift to distance learning. Many students and teachers lacked the technology or digital competency skills, devices, high speed internet access, and the skills to teach the curriculum through distance learning (Giacosa, 2021; Hollweck & Doucet, 2020). The United States Department of Education's National Education Technology Plan was last revised in 2017, and the Plan did not address distance learning nor how to prepare for a shift to emergency remote teaching (Greenhow et al., 2021). Within the United States, education policy and expectations are

primarily the responsibility of the state and local agencies, so distance learning and teaching expectations were established within the local community. School districts and individual schools quickly devised plans to provide remote learning opportunities for students with the resources that were available.

Within Finland, teachers reported high levels of digital competence prior to the COVID-19 pandemic and sudden shift to distance learning. A 2019 national survey of teachers in Finland found approximately 38% considered themselves as an advanced level of digital competencies, while only 10% of surveyed teachers felt they lacked digital skills (Lavonen & Salmela-Aro, 2022). Even with confidence in their digital skills, one third of Finish teachers felt they needed more support and felt an increase in the workload with distance learning during the COVID-19 pandemic. Lavonen and Salmela-Aro (2022) noted that the perceived increase in workload goes along with the findings in which over 45% of surveyed Finish teachers identified as at risk of burnout or severe burnout. The survey noted that Finish teachers felt increased stress and perceived level of burnout when the teachers knew their students were struggling with distance learning (Lavonen & Salmela-Aro, 2022). The challenges of distance learning during the COVID-19 pandemic were difficult for teachers, especially teachers that were identified as at risk of burnout or severe burnout and may consider leaving the teaching profession.

While the school closures during the COVID-19 pandemic impacted all students, those in underserved communities felt the impact of distance learning even more. A 2021 report conducted by the Boston Consulting Group in partnership with Common Sense Media and the Southern Education Group looked at the digital divide and its impact on education during the COVID-19 pandemic. The digital divide was originally referred to as the homework gap, in which students performed lower if they did not have access to high-speed internet at home and a

digital device that allowed them to participate in online learning (Ali et al., 2021). Even though the digital divide existed before the COVID-19 pandemic, the shift of distance learning during the pandemic exacerbated the digital inequities. Ali et al. (2021) found about 30% or over 15 million K-12 students within the United States did not adequate internet connectivity or access to an e-learning device. Students that did not have access to a digital device or high-speed internet were unable to fully participate in distance learning during the COVID-19 pandemic.

Just as many students did not have access to the needed digital tools and internet for distance learning, many teachers also did not have the tools needed to teach online. Ali et al. (2021) found 400,000 K-12 teachers within the United States did not have access to high-speed internet during the COVID-19 pandemic, which impacted their ability to teach and the learning of each student within their classes. Additionally, Ali et al. (2021) highlighted the need for professional development, particularly teacher mentoring and coaching, to support teachers with the skills to implement and transition to distance teaching. Distance teaching requires that teachers keep students actively learning while personalizing the instruction and needed support (Ali et al., 2021). The sudden shift to distance learning during the COVID-19 pandemic highlighted the importance of ensuring teachers had the support and professional development available to learn and implement best practices for distance learning.

Communities of Practice

As humans, individuals want to belong and connect with other people, especially those with shared interests (Webber, 2016). Humans are social beings that want to learn and work with others. Riel and Polin (2004) noted that a community is a group of individuals that participate in group activities with a shared purpose and sense of togetherness. Communities continue to develop over time, even as new members join and others leave, the shared

connections allow communities to evolve while creating a sense of history and expertise. Whether a community includes the teachers with a district, individual school site, grade level or department team, teachers are used to collaborating and working together. Within this study, the Global Educator Collaborative Facebook page created an online community for educators to support and learn from each other while sharing ideas on adapting and improving distance learning strategies and tools during the COVID-19 pandemic.

What is a Community of Practice?

A community of practice is a social learning theory with a foundation that learning occurs by participating in groups and working with others that share similar interests (Wenger, 1999). In 1991, Jean Lave and Etienne Wenger introduced the concept of a community of practice to exhibit how connections were formed by individuals through their practice within and between organizations (Webber, 2016). Lave and Wenger (1991) defined a community of practice as "a system of relationships between people, activities, and the world; developing with time, and in relation to other tangential and overlapping communities of practice" (p. 98). Lave and Wenger (1991) came up with the term communities of practice while researching apprenticeships and their role in learning. The definition of a community of practice was designed to be broad to ensure many different types of groups were included (Wenger-Trayner & Wenger-Trayner, 2015).

Wenger (1998) stressed the importance of communities of practice for enabling learning, identity, and negotiating of the practice through the creation of tools, concepts, and stories. For Wenger (1998), the practice brings the community together through mutual engagement, a sense of joint enterprise, and a shared repertoire of resources. Through a shared interest and desire to improve the practice, individuals form and build a community based on mutual engagement

(Wenger, 1998). Communities of practice provide opportunities for learning, as part of a social process that is based on the historical and cultural context of the practice (Farnsworth et al., 2016). The practice is shaped and directed by the community; members of the community create a shared enterprise by negotiating the conditions, resources, and boundaries of the practice (Wenger, 1998). In sharing information and ideas, the members of the community of practice find value in their interactions and may develop tools, designs, or documents to enhance learning. Through shared activity and knowledge, the group becomes a community of practice (Wenger et al., 2002).

A community of practice relates to the social process of a group growing over time within the domain or area of interest. A community of practice does not refer to the group of people or members of the group, but instead the social process of the group over time (Farnsworth et al., 2016). By learning together within a community of practice, members can think together and draw on each other's knowledge (Pyrko et al., 2019). Communities of practice allow individuals to work together to build and create new knowledge.

Many communities of practice are informal and integrated into our daily lives, individuals may belong to them through work, school, or different hobbies (Wenger, 1999). Within communities of practice, individuals can range between being an active core member or observing from the sidelines (Wenger, 1999). Individuals within a community of practice do not have to work together or within the same school or company, instead they need to have a shared connection or passion about a particular topic or subject (Wenger et al., 2002). Not all groups or teams are communities of practice. Within a team, all the members work together to accomplish a joint task. This is opposed to a community of practice in which the members share the same practice but are working on different tasks and with different teams (Farnsworth et al., 2016).

For a group to be a community of practice, consistent and ongoing interaction amongst the group is important for ideas to develop and advance. Communities of practice have three key elements or characteristics, which are the domain, community, and practice.

The Domain. The first element within a community of practice, the domain, is represented by a shared interest or enterprise identified by the group (Wenger, 2011; Wenger-Trayner & Wenger-Trayner, 2015). The domain is the area or content that the community has legitimacy to be competent and knowledgeable about (Farnsworth et al., 2016). The members within the community of practice must participate in collective learning and have a commitment towards enhancing or improving the domain (Wenger, 2011). Through the domain and a sense of joint enterprise, members shared a collective understanding of the community's focus. Communities of practice allow individuals to share ideas toward advancing the domain or shared topic that is bringing the group together. During the COVID-19 pandemic, the Global Educators Collective Facebook page provided a forum to share ideas about the domain of teaching remotely during a pandemic.

The Community. The community is the second foundational element within a community of practice. Wenger (1998) established the communities of practice learning theory on the premise that learning occurs socially through participation and active engagement. The membership or community drive the practice, members participate and work together to add to the collective knowledge of the community (Wenger, 1999). A mutual engagement allows members to build the community by setting norms and expectations. The engagement enables members of the community to build competence through participation while working toward the goals of the group (Wenger, 2000). Wenger-Trayner and Wenger-Trayner (2015) stressed that it is the engagement in shared activities and discussions that build a community of practice.

Wenger (2000) noted that communities of practice serve as building blocks for social learning systems, in that the community helps to establish the competencies for the practice.

A community of practice can become stagnant if members do take the initiative to continue learning and growing the practice (Wenger, 2000). Individuals within a community can increase their membership role by actively engaging and deeply interacting with other members (Pryko et al., 2019). Communities of practice can interact through face-to-face communication or web-based communication. Communities of practice need an internal structure and leadership to develop. Wenger (2000) noted the importance of having members lead, network, and document the practice within the community. Additionally, Wenger (2000) stressed the need for a member to take on the role of 'community coordinator' to manage the day-to-day communication and running of the group. During the COVID-19 pandemic, the teachers worked together to support each other during the emergency school closures.

The Practice. The practice represents the third foundational element for classifying a group as a community of practice. Wenger (1998) indicated that a key factor in defining the enterprise of a group is to work with others that share the same conditions. While the concept of practice represents doing and interacting, the practice also implies doing within the historical and social context of the community (Wenger, 1999.) Accordingly, the concept of practice includes the explicit and implicit elements of the community. Wenger (1999) noted that the explicit elements of the practice can include the tools, language, documents, outlined procedures or regulations of the community, while the implicit elements of the practice may include untold rules of thumb, subtle cues, or shared world views. Communities of practice need a shared repertoire, in which members share or create resources and ideas to enhance the goals of the community (Pyrko et al., 2019; Wenger, 2000). For teachers, the act of teaching represents the

concept of a practice in which teachers share common experiences and implicit understandings of how to educate students during the COVID-19 pandemic.

Wenger (1999) viewed the domain, community, and practice as the three components for competence within a community of practice. Communities of practice require all three components to remain active and continue growing. Organizations may refer to communities of practice as learning networks or thematic groups, but they still need to have an identifiable domain, community, and practice (Wenger-Trayner & Wenger-Trayner, 2015).

Levels of Participation in a Community of Practice

Through participation, members of a community of practice can learn and advance the practice. Wenger et al. (2002) noted three levels of participation within a community of practice, they include the core, active and peripheral levels of participation. With varying levels of participation, the community of practice recognizes that members have different levels of interest and reasons for belonging to the community. While some members are looking to build the community, others may be seeking to improve their own skills or grow personal connections (Wenger et al., 2002). With varying levels of commitment, members will also have varying levels of participation with the community of practice.

Leadership within an active community of practice is important. Each community needs a member to take on the role of community coordinator to organize and moderate the group. The community coordinator helps the community stay focused on the domain, develops relationships within the community, and advance the practice (Wenger et al., 2002). Community coordinators are active members that are well respected for their contributions to the practice and dedicated to the community. Communities can also have facilitators and subject matter experts. The

facilitators connect with members and encourage participation, while subject matter experts manage the practice or knowledge of the domain (Baker & Beames, 2016).

Beyond the leadership within a community of practice, Wenger et al. (2002) noted that the level of a member's participation allows them to be a part of the core, active, or peripheral group. The core group is highly involved in community discussions, they take on leadership of projects and guide the topics for the community to explore. The core group includes approximately the top 10% to 15% of the members in the community and they work with the community coordinators to lead and maintain the progress of the community (Wenger et al., 2002). The second level of participation within the community is represented by the active group. The active group embodies 15% to 20% of the community, these members regularly participate in community discussions, forums, and activities (Wenger et al., 2002). The final and largest membership group is the peripheral participation level. The peripheral group represents 65% to 70% of the community members, and they rarely participate in discussions or projects (Wenger et al., 2002). The peripheral members are not completely passive members, while on the sidelines many are observing the active members and may be integrating the activity of the community into their own knowledge (Bakar & Beames, 2016). Wenger et al. (2002) noted that peripheral members' observations may be carried further through their own discussions or activity outside of the community.

Within a community of practice, the boundaries are fluid and members can move between the core, active and peripheral levels. As conversations and activities of the practice shift, a member's participation may increase or wane. Wenger et al. (2002) emphasized that the fluidity between levels of participation fosters a sense of belonging and connection for members, while continuing to advance the practice.

Identifying a Community of Practice

Wenger (1998) noted that communities of practice are negotiated and defined through the participation of its members. Through participation and mutual engagement, communities of practice create opportunities for learning, meaning and identity (Roberts, 2006). Member interactions create connections that are united by a sense of joint enterprise or working together toward the same domain or area of interest. Over time, the connections among members of the community of practice foster a shared collection of resources (Roberts, 2006).

In understanding communities of practice, it is important to identify whether a group is a community of practice. Wenger (1998) identified several characteristics to determine if a group developed into a community of practice. While the members of the community may not label a group as a community of practice, the characteristics within Table 1 can be helpful in identifying a community of practice. Communities of practice will have several of the characteristics included within Table 1.

Table 1

Characteristics of a community of practice (Wenger, 1998, pp. 125-126).

Key characteristics of a community of practice:

- Sustained mutual relationships – harmonious or conflictual
- Shared ways of engaging in doing things together
- The rapid flow of information and propagation of innovation
- Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process
- Very quick setup of a problem to be discussed
- Substantial overlap in participants' description of who belongs
- Knowing what others know, what they can do, and how they can contribute to an enterprise
- Mutually defining identities
- The ability to access the appropriateness of actions and products
- Specific tools, representations, and other artifacts
- Local lore, shared stories, inside jokes, knowing laughter
- Jargon and shortcuts to communicate as well as the ease of producing new ones
- Certain styles recognized as displaying membership
- A shared discourse reflecting a certain perspective on the world.

Wenger (1998) noted that communities of practices are negotiated and defined through the participation of its members. The characteristics of a community of practice highlight a social structure with "a community of mutual engagement, a negotiated enterprise, and a repertoire of negotiated resources accumulated over time" (Wenger, 1998, p. 126).

Benefits of a Community of Practice

Wenger (1998) highlighted that a community of practice benefits members through mutual engagement, a shared repertoire, and a joint enterprise. Through the sharing and developing of information connected to the practice, the community is increasing the knowledge and educating the members. The ongoing and consistent interactions among the community provide support and engagement for participating members. Communities of practice assist groups in furthering their knowledge by working collaboratively to solve complex problems

(Wenger, 1998). By increasing the work toward the community's domain, members can increase their own knowledge and apply the knowledge they have learned through the community within their individual practice or work.

While the concept communities of practice were originally introduced within groups that interacted through face-to-face communications, online or virtual groups via social media, such as Facebook, can expand the development of a community of practice. Virtual communities of practice provide access to a larger community that can spread across time zones and geography (Yarris, 2019). Through an online community of practice, members are connected across the globe and have access to ideas and practices beyond their local community (Thoma et al., 2018). With a broader reach, online communities can increase their number and diversity in membership because they are easier to join than face to face communities (Zhang & Watts, 2008). Communities of practice allow individuals to tap into the knowledge and skills of the entire community.

Challenges for Communities of Practice

The strengths of a community of practice include multiple perspectives in the study of the domain, an established practice, and a shared sense of identity and participation within the community. These strengths allow the community to grow and evolve over time, but they can also present challenges for the community of practice (Roberts, 2006).

Power. Within a community of practice, membership is obtained through participation in the group. Wenger's (1998) focus on situated learning highlighted that increased participation and sharing of ideas allowed members to move from the periphery to a greater role and standing within the community. The increased role and participation of active members provided a greater sense of power within the community over inactive members on the periphery.

Roberts (2006) notes that an active member with increased power can impact the discussions and knowledge that is negotiated within the community. The structure of a community of practice, which is also negotiated, can determine the distribution of power. When the organization has loose and decentralized network, with the power structure distributed, then the community of practice many have more voices and greater diversity of members in shaping the meaning and knowledge of the practice. Alternatively, an organization with a more centralized and structured network of power may find the direction and development of knowledge to be shaped and negotiated by the few members that hold the power (Roberts, 2006). Additionally, a community of practice can be a group that does not have a power structure and instead, focuses on providing a space for members to be creative and experiment with ideas. The lack of a power structure within a group can lead to difficulties in negotiating the knowledge building of a community (Roberts, 2006). The amount of power held by members and how it is distributed within a community of practice can impact the transfer and negotiation of knowledge within the community.

Trust. Trust within an organization is foundational to a community of practice. With trust, members feel comfortable sharing knowledge and ideas. Roberts (2006) notes that trust within and between organizations can help the community develop and share knowledge and artifacts. Additionally, Roberts (2006) highlighted that the level of trust by members involved in the sharing of knowledge can be influenced by the community's power structures and social dynamics. The levels of competition and cooperation among the members of a community of practice can impact the sense of trust. Roberts (2006) noted that communities of practice are best suited within organizations that have a high degree of autonomy and promote trusting and

harmonious environments. The growth of a community of practice is dependent on the trust of its members.

  Predispositions. Wenger (1998) stressed that knowledge is negotiated by the members of a community of practice. Each member brings their individual beliefs and predispositions to the community and its collective knowledge. The collective knowledge and meaning of the community are shaped by the predispositions of the members (Roberts, 2006). Over time, the predispositions and preferences can influence the community's ability to create and build new knowledge. The community of practice may become resistant to change and static in developing knowledge if new beliefs and predispositions are not welcomed into the community. Communities of practice can become caught in routines and ingrained ways that discourage creativity and flexibility (Roberts, 2006). This can be more problematic if preferences or predispositions dictate the routines for generating knowledge as it will limit the community's ability to implement radical change or innovation (Roberts, 2006).

  While power, trust and predispositions are the primary challenges confronted by a community of practice, there are additional challenges that can impact the success and sustainability of a community. Communities of practice can be developed within groups of varying size and proximity of its members. A practice can operate through face-to-face conversations or globally through Internet message boards (Roberts, 2006). Communities of practice develop and evolve based on the participation of its members. Accordingly, the size and member proximity of a community of practice can impact the ability of members to participate and share ideas.

  Wenger (1998) highlights that communities with a large, distributed structure can be a network or web of connected practices that are a part of the larger practice. Through shared

connections and interests, members of the overarching practice can cross boundaries and develop separate communities of practice. A large community of practice can foster a network of connected practices. The boundaries of the connected practices are flexible and allow for an exchange of ideas across the network. Wenger (1998, 2000) indicated that knowledge can be transferred across the boundaries of a community through interactions, brokering, and cross-disciplinary projects.

Chapter Summation

The COVID-19 pandemic led to emergency school closures and a shift from in person to distance learning. The teaching skills and procedures needed for in person learning are different for distance teaching. Teachers were not prepared and did not have the instructional nor technology skills and tools needed for the sudden shift to distance teaching during the COVID-19 pandemic. While schools and district worked to offer professional development support, teachers looked for online communities, including the Global Educator Collective Facebook group that offered support and ideas on transitioning to distance teaching.

Wenger's community of practice is a social learning theory that brings together individuals through a common interest to work together as part of a community. Communities of practice have three key elements or characteristics, which are the domain, community, and practice. The community guides the practice in which members create a shared repertoire, in which members create resources and ideas to enhance the goals of the community. A community of practice creates opportunities for a group to learn, create meaning, and build an identity through participation and mutual engagement.

Chapter Three: Research Methods and Design

This chapter outlines the methodology of this exploratory case study of the Global Educator Collective Facebook group. This exploratory case study investigated how classroom teachers supported each other while adapting their instructional practices during the sudden switch to distance learning instruction due to the COVID-19 pandemic starting in March 2020. The sudden shift to teaching online required teachers to learn new tools and methods for distance teaching. Many teachers turned to the Internet and social media sites, such as Facebook, for ideas from other educators. The Global Educator Collective Facebook group (https://www.facebook.com/groups/Temporaryschoolclosuresupport/) provided an opportunity for teachers to join a community of fellow teachers from across the world looking to support each other through the sudden school closures and tremendous change to their practices. The goal of this exploratory case study was to investigate how the Global Educator Collective Facebook group enabled the sharing of skills and resources to support teachers during the transition from in person classroom teaching to distance learning instruction. After restating the research questions, this chapter describes the design of the case study, the role of the researcher, and the methods for collecting and analyzing the data.

Research Questions

Within qualitative research, Creswell (2014) highlights that the research questions need to be guided by a broad question to allow the exploration of the phenomenon. Within this study, the phenomenon that was explored was a teachers' sudden transition from in person instruction to distance learning instructional practices. The Global Educator Collaborative Facebook page provided a virtual space for teachers to communicate with other teachers experiencing the phenomena.

The central guiding research question for this study is: How did the virtual space Global Educator Collaborative Facebook group support teachers as they adapted to distance learning instruction amid emergency school closures caused by the COVID-19 pandemic?

Sub-questions include:

- What technology challenges emerged with the shift to distance learning instruction?

- How does the Global Educator Collective Facebook group create a sense of community and how does it represent Wenger's (1998, 2000) characteristics for a community of practice?

Research Design

The purpose of this case study was to explore how teachers found advice and support from fellow teachers within the Facebook Global Educators Collective group during the emergency school closures caused by the COVID-19 pandemic. The case study design allowed this study to explore how the Global Educators Collective Facebook group provided support for teachers during the emergency COVID-19 school closures.

This study employed an exploratory case study design. The case study design allowed the case or Global Educators Collective group to be studied from a holistic view (Yin, 2018). The case study design supported the goal of understanding the Global Educators Collective group by researching "what is it, how it works, and how it interacts with its real-world contextual environment" (Yin, 2018, p. xxiii). The Global Educator Collective Facebook group served as the case and followed the description of a case study as a "specific, complex functioning thing" (Stake, 1995, p. 2). Creswell (1998) viewed a case study as an exploration "over time through detailed, in-depth data collection involving multiple sources of information rich in context" (p. 61). This study looked at the single Global Educators Collective Facebook page and how the

page assisted educators as they adapted to distance learning instruction during the emergency school closures caused by the COVID-19 pandemic.

A case study design is beneficial when the research question seeks a "how" or "why", when contemporary events are being researched, and when the researcher does not have control over the events (Yin, 2018, p. 13). As a research method, a case study allows the researcher to investigate a real-world problem, in which the lines between the phenomenon and the context maybe blurred (Yin, 2018). These conditions match this study of the Global Educator Collective Facebook group. The case study allowed the exploration of many different educators that shared their ideas and perspectives via posts, comments, and reactions within the Facebook group. The researcher carried out this plan through an exploratory case study that focused on a single case, the Global Educator Collective Facebook group.

This study used qualitative data to allow for the holistic view of the Global Educators Collective page to be explored. Based on Creswell (2014), qualitative research is beneficial when the natural setting of the phenomenon is studied and used for the collection of multiple sources of data. The qualitative research methods allowed for the exploration of artifact data from the Facebook page. The data included the information shared through posts and associated comments on the Global Educators Collective Facebook page. The Global Educators Collective Facebook group represents the phenomenon and served as the "case" for this study's case study design and the source for the qualitative data.

Role as Researcher

It is important to consider the role of the researcher to ensure the integrity of the research process within this study. Yin (2018) highlighted the need of the researcher to minimize reflexivity in which the researcher's perspective influences the research. Within this case study,

the researcher conducted qualitative research and reduced any personal influence on the research by maintaining subjectivity.

The researcher has worked within education for the past 25 years as a classroom teacher, middle school assistant principal and district level technology administrator. The researcher holds a Bachelor of Arts in Psychology and two Masters of Arts in Education and Educational Administration. The researcher's background includes leading professional development trainings for elementary and middle school educators in exploring digital tools and online applications to better integrate technology within teaching and the curriculum.

While working for a school district, the researcher lived through the COVID-19 pandemic and can relate to the experiences of the educators that posted on the Global Educator Collective Facebook group faced throughout the emergency school closures. The researcher currently works as a district level educational technology administrator within a school district in California and experienced the sudden shift to remote instruction within her district. Throughout the COVID-19 pandemic, the researcher worked with and supported teachers within her school district to adapt instructional practices for distance learning instruction. The researcher has seen how the COVID-19 pandemic required teachers within her district to adjust their instructional practices for distance teaching and learn new technology applications. The researcher wanted to better understand how the emergency school closures and sudden shift to distance instruction effected other educators. Additionally, the researcher wanted to explore how teachers found a community of support and ideas for distance learning instruction through social media, specifically the Global Educators Collaborative Facebook group.

In March 2020, the researcher joined the Global Educators Collaborative Facebook group while researching information to share with her fellow educators. Prior to deciding to use the

Global Educators Collective Facebook group as the case within this study, the researcher commented and "liked" several posts with the Global Educators Collective page during the Spring of 2020. Since choosing to research the Facebook page, the researcher has remained an observer within the Facebook page. The researcher's initial participation with the Global Educator Collective group did not cause personal bias within this exploratory case study.

The researcher's life experiences as an educator and living through the COVID-19 school closures required practices that protect against researcher bias. The researcher was an observer on the Global Educators Collective Facebook page. Throughout the study, the researcher did not interact on the Facebook page by making any posts, comments, or reactions. Through reflexive practices, the researcher used a journal to document field notes, ideas, thoughts, and observations to ensure any personal bias or preconceptions were minimized. The researcher focused the study on posts and associated comments that were made on the Global Educators Collective Facebook page in the past and potential bias was reduced with the use of stratified sampling to select the posts to be explored.

The Case: Global Educator Collective Facebook Group

As a member of a school district's leadership team, the researcher remembers having discussions in early March 2020 about whether the district should close schools and most importantly, how can instruction continue? Schools and school districts across the globe were having similar conversations as the COVID-19 pandemic spread in early 2020. As decisions were made to close schools due to the COVID-19 pandemic, teachers looked to social media sites, like Facebook, for ideas and support.
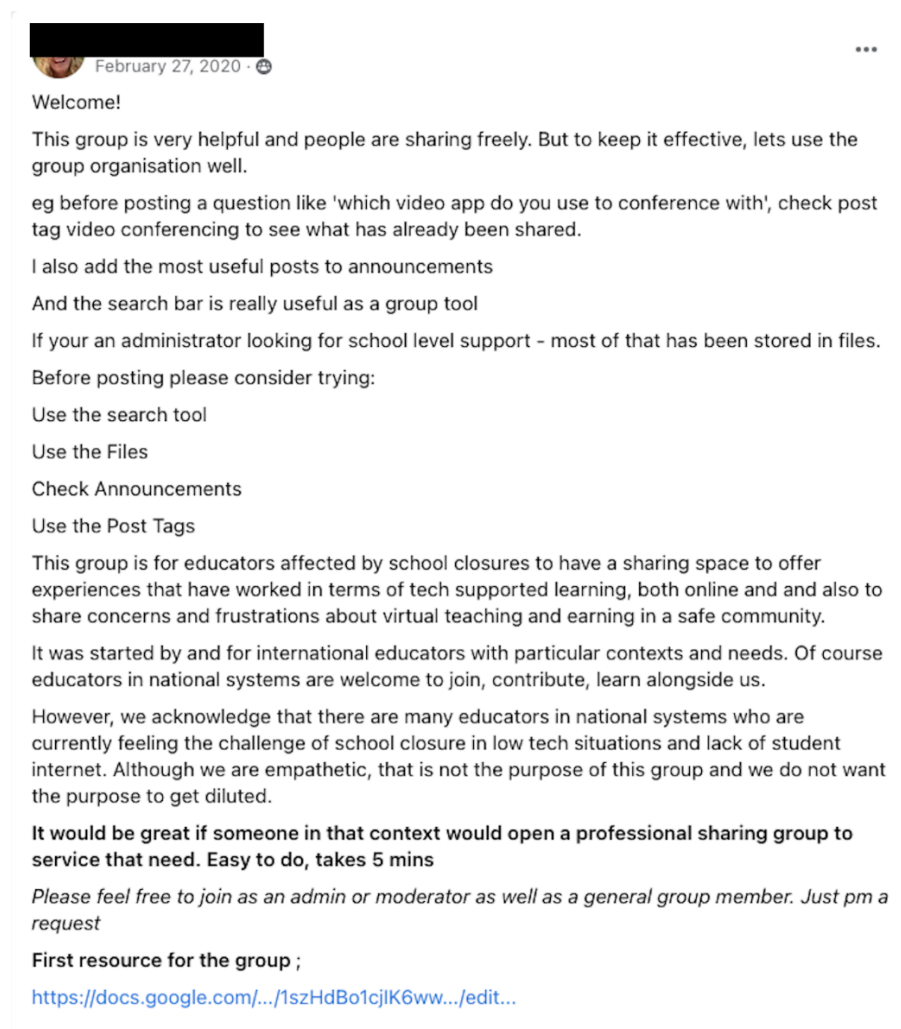
The Facebook social media site allows individuals to share information through profiles, pages, and groups. An individual creates a Facebook profile to share information, including

interests and photos, about themself. Facebook pages are public and provide a forum for public figures, businesses, and organizations to connect and update their customers or interested individuals. Facebook groups allow for communication with certain individuals about a shared topic or interest. Access to join or view a Facebook group can be customized through the group's privacy settings (Facebook, 2023). After joining a Facebook group, posts to the group's page will be included within each member's individual feed.

The Global Educator Collective Facebook group (https://www.facebook.com/groups/Temporaryschoolclosuresupport/) was created in response to the sudden school closures from the COVID-19 pandemic and serves as the case within this study. The Facebook group was created on February 27, 2020, with the name of *International Educator Temporary School Closure for Online Learning*; on March 3, 2020, the page was renamed to *Educator Temporary School Closure for Online Learning*; and on April 7, 2020, the Facebook page was renamed to its current name of *Global Educator Collective.* The early name changes to the group's Facebook page mirror the uncertainness that schools faced as the COVID-19 pandemic spread at the beginning of 2020. Figure 2 exhibits the Welcome post by the moderator of the Global Educator Collective group page. Within the Welcome post, members were informed that the goal of the space is to "offer experiences that have worked in terms of tech supported learning, both online and also to share concerns and frustrations about virtual teaching and learning in a safe community" (Figure 2).

Figure 2

Welcome Post for the Global Educator Collective Facebook Group

February 27, 2020 · 🌐

Welcome!

This group is very helpful and people are sharing freely. But to keep it effective, lets use the group organisation well.

eg before posting a question like 'which video app do you use to conference with', check post tag video conferencing to see what has already been shared.

I also add the most useful posts to announcements

And the search bar is really useful as a group tool

If your an administrator looking for school level support - most of that has been stored in files.

Before posting please consider trying:

Use the search tool

Use the Files

Check Announcements

Use the Post Tags

This group is for educators affected by school closures to have a sharing space to offer experiences that have worked in terms of tech supported learning, both online and and also to share concerns and frustrations about virtual teaching and earning in a safe community.

It was started by and for international educators with particular contexts and needs. Of course educators in national systems are welcome to join, contribute, learn alongside us.

However, we acknowledge that there are many educators in national systems who are currently feeling the challenge of school closure in low tech situations and lack of student internet. Although we are empathetic, that is not the purpose of this group and we do not want the purpose to get diluted.

It would be great if someone in that context would open a professional sharing group to service that need. Easy to do, takes 5 mins

Please feel free to join as an admin or moderator as well as a general group member. Just pm a request

First resource for the group ;

https://docs.google.com/.../1szHdBo1cjlK6ww.../edit...

Note. Welcome! [Status update], by Durward, K. (2020). Global Educator Collective, Facebook. https://www.facebook.com/groups/Temporaryschoolclosuresupport. In the public domain.

Figure 3

Celebration of 100,000 Members within Global Educator Collective
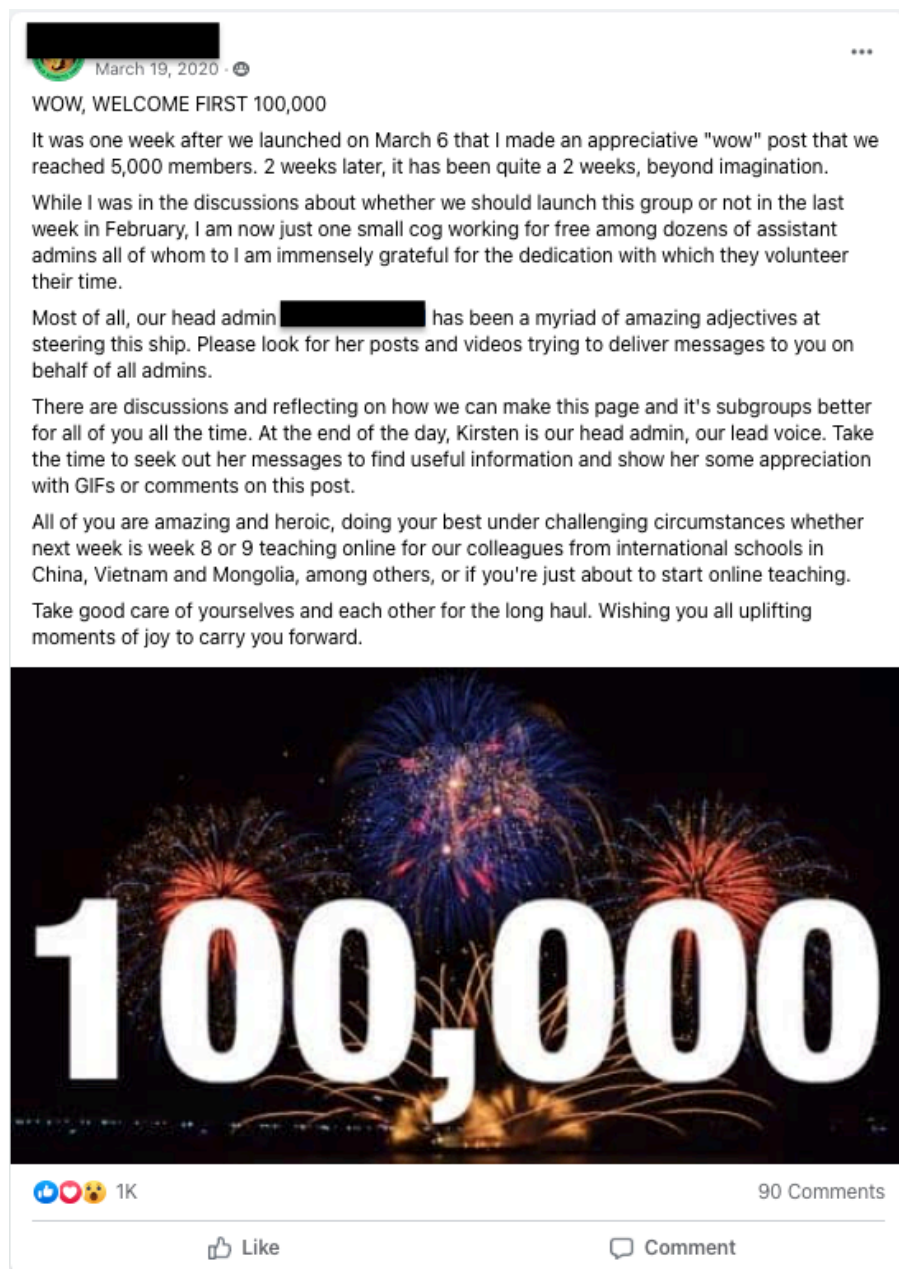
Note. WOW, Welcome first 100,000 [Status update], by Springer, J. (2020). Global Educator Collective, Facebook. https://www.facebook.com/groups/Temporaryschoolclosuresupport. In the public domain.

The Facebook group grew quickly and after three weeks the group surpassed 100,000 members. Figure 3 highlights the ascent of the Global Educator Collective group to 100,000 members, while also recognizing how the sudden emergency shutdowns led many teachers to look for support from fellow educators. The Global Educator Collective offered an online forum for teachers as they experienced emergency school closures because of the COVID-19 pandemic. Through the Global Educator Collective group, teachers were able to share expertise, ask questions or join the online discussion of posts and responses which offered ideas and support as teachers began to transition to virtual teaching. Figures 4 exhibits an example of a member inviting members to a workshop on learning how to use the Zoom video conferencing software with virtual teaching.

Figure 4

Member Invitation for a Training Using Zoom Video Conferencing App

Note. Come to an interactive workshop to get a handle on how to effectively use Zoom for virtual teaching plus a [Status update], by Penney, M., 2020, Global Educator Collective, Facebook. https://www.facebook.com/groups/Temporaryschoolclosuresupport. In the public domain.

Data Collection Strategies and Procedures

        The source of data within this case study are the artifacts created within the Facebook Global Educator Collective group. The posts on the Global Educator Collective Facebook page are the primary sources of data. Individuals within the Global Educator Collective group created posts on the Facebook page to ask questions, brainstorm ideas, share tips, or garner support from

other teachers that were also fellow members and transitioned to distance learning instruction. In addition to the posts, the associated thread of comments from fellow members of the group were gathered and analyzed.

Because of the extensive participation, within the Facebook page, this study focused on posts that were made during four distinct time periods of the COVID-19 pandemic (Table 2). The four time periods were modeled from the "Understanding Pandemic Pedagogy" special report of the *State of the Nation: K-12 E-learning in Canada* project by Barbour et al. (2020) and several blog entries shared on the "PhilOnEdTech" blog (Hill, 2020a, 2020b, 2021, 2022b). Within Barbour et al. (2020) and Hill (2020a; 2020b; 2021; 2022b), Phase 1 was represented by the emergency school closures that led to an immediate shift to the remote delivery of instruction between February and March of 2020. Phase 1 was marked by a reliance on synchronous video interaction between educators and students through *Zoom*, *Google Meet*, and other video conferencing software applications. While Phase 1 was characterized by the rushed transition to online instruction and learning, Phase 2 marked the realization that schools would remain closed for longer than a few weeks and the equity of access and the integrity of academic standards needed to be addressed (Barbour et al., 2020; Hill, 2020a, 2020b). Phase 2 extended from April through July 2020. Regarding equitable access, schools needed to address students' access to computer devices, sufficient Internet connection, and support for students with disabilities as school closures were extended to the end of the 2019-2020 school year in Phase 2. Phase 3 was from August 2020 through March 2021 and represented COVID-19's continued uncertainty with the start of the 2020-2021 school year (Barbour et al., 2020; Hill, 2020a, 2020b, 2022a). While schools strived for a return to in person learning, they also needed to be prepared for online instruction to address potential surges in COVID-19 exposures and the desire of some parents for

their children to continue distance learning. Phase 4 extended from April through December 2021and was marked by the re-integration of the new normal in which most students have returned to in person learning, but online learning levels are higher than prior to the pandemic (Barbour et al., 2020; Hill, 2021, 2022b).

Table 2

Data Capture Phases

Date Ranges of Phases	Rationale for Selected Phases
February - March 2020	represents the immediate shift to remote instruction at beginning of emergency school closures
April – July 2020	represents the realization that schools would be closed through the end of the 2019-2020 school year and a shift to focus on equitable access and academic quality
August 2020 - March 2021	represents the uncertain turmoil as school returned to in person learning, but also were ready to meet online learning needs
April - December 2021	represents the new normal as most students have returned to in person learning

This study used a stratified, two stage sampling process to first select posts with a theme of technology support being sought or the sharing of a success story about technology use. The second stage was following the thread of comments and reactions and selecting the posts based on specific criteria about the posts. A step-by-step data sampling process is defined below within Table 3. The data sampling process was used to narrow down and select the posts and associated comments within the Global Educators Collective Facebook page that were researched.

Table 3

Data Sampling Process

From each of the four distinct phases, the researcher selected the artifacts (posts and associated comments) through the following two-step process:	
Step 1: Identified posts from the Global Educator Collective Facebook page based on the following key word search within each phase:	a. Technology challenges
	b. Technology support
	c. Technology success
	d. Technology win
Step 2: Select a 40-50% sample of the posts that met the following criteria and were rated as "strong":	a. Quality of the post to express a question about learning or instruction with technology during the COVID-19 pandemic.
	b. Posts indicated a minimum of 10 comments
	c. Comments addressed the question from the post
	d. Balance of posts identified by search terms
	e. Balance of the posts' dates within the phase

In identifying the potential posts from the Global Educators Collective Facebook page for analysis, Step 1 of the data sampling process included of the following actions. From the Global Educators Collective Facebook page, the researcher used the Facebook group search feature to search the first key term of "technology challenges". The researcher used Facebook's search results filters to display only posts that were dated in 2020 to identify potential posts on "technology challenges" during the Phase 1 time frame of March through April of 2020. The researcher reviewed the search results and posts were identified as possible selections if the post was created during Phase 1, had more than ten comments, and the contents of the post and associated comments supported the search term of "technology challenges". The process of

identifying potential posts from the "technology challenges" key word was repeated for Phases 2, 3 and 4. Then, the process of Step 1 to identify potential posts was repeated for the remaining three key word searches of "technology support," "technology success," and "technology win".

Once the potential posts representing the key word searches were identified for each phase, the second step of selecting the posts to analyze began. For each phase, the potential posts from all four key word searches were evaluated based on the quality of the post to express a question about learning or instruction with technology during the COVID-19 pandemic; the number of associated comments and whether the comments were addressing the question within the post; a balance of posts identified by the four search terms; and a balance of the dates that the potential post was created within the phase. Based on the evaluation criteria, each potential post was rated as weak, moderate, moderate strong, and strong. The process of rating the potential posts was repeated for all four phases. Within each of the four phases, the posts rated as strong represented 40-50% of the potential posts and were selected for analysis within this study.

Human Subjects Considerations

This exploratory case study involves artifacts posted on the Global Educator Collaborative Facebook group and does not involve any direct contact with human subjects. The Global Educator Collective group includes educators from around the world that have selected to join the Facebook group. The research focused on the artifacts that have been curated within the Global Educator Collective Facebook group page. All data was aggregated and de-identified further, if necessary, by applying pseudonyms for individual posts and comments that were shared on the page. This study was be submitted and approved with the Pepperdine University Institutional Review Board for non-human subjects research. Refer to Appendix A for a copy of the IRB approval for non-human subjects research from Pepperdine University. The researcher

was not able to gain access to the Global Educator Collaborative Facebook group's analytics and Facebook Insight reports.

Analysis

This exploratory case study of the Global Educator Collective Facebook group focuses on artifacts of posts and associated comments that were added to the group's Facebook page during four selected phases of the COVID-19 pandemic. The qualitative data within the posts and associated comments underwent a thematic analysis (Creswell & Creswell, 2017). Stake (1995) noted that qualitative research "capitalizes on ordinary ways of making sense" (p. 72). For each of the posts selected from the stratified two-stage sampling process, the researcher read and gathered a general sense of the data's meaning. With the assistance of HyperRESEARCH qualitative data analysis software, the data was coded. A codebook was generated to assist in defining and identifying the codes that were connected to passages within the posts. To ensure reliability of the coding process, a peer-reviewer was engaged to review the codebook and coded passages.

Means to Ensure Study Validity

Several strategies were employed in order to ensure internal study validity. The first focuses on the qualitative, interpretive nature of this research by using reflexivity to minimize the effects of researcher bias. Reflexive practices include a journal to document field notes, ideas, thoughts and observations. Qualitative validity is also supported through the two-stage sampling process and by using rich, thick descriptions of findings. To ensure a reliable interpretation process, rigorous thematic analysis including HyperRESEARCH software for transparency and a peer-reviewer was employed.

Chapter Summation

Through this exploratory case study, the researcher evaluated how the Global Educator Collaborative Facebook group supported teachers as they adapted to distance learning instruction amid the COVID-19 pandemic. By focusing the scope of the research on the identified phases and the data sampling process, this study was able to explore the posts and associated comments in which teachers sought support about technology. Chapter Four includes the findings and organized by data sources and thematic categories.

Chapter Four: Results

The purpose of this case study is to explore how the COVID-19 pandemic led teachers to seek a community and support within the Global Educator Collective Facebook group. This chapter is divided into four sections to correspond with the four phases of the COVID-19 pandemic. Phase 1 reports the results within the period of February through March of 2020. Phase 2 presents the results within the period of April through July of 2020. Phase 3 exhibits the results within the period of August 2020 through March 2021. Phase 4 reports the results within the period of April through December 2021. The culmination of the four phases will span the period of February 2020 through December 2021.

The Global Educator Collective Facebook group was created by two educators on February 27, 2020. The Facebook group page grew from a chat between the two founding members, one shared "I feel the need for a specific group where people can share and tag their own specifically made resources…. Am I mad?" (Artifact G). In replying, the other founder shared "There might be a helpful element of aggregating a separate list of what people find has not worked well that would be helpful for those getting into the online game later" (Artifact G). From this conversation, the Global Educator Collective Facebook group was created and over the course of a month, the Facebook group grew to over 113,000 members (Artifact F). With the rapid growth of the group, the moderators were filtering through over 3,500 daily posts requests (Artifact I). Volunteers stepped forward to help support the moderation of the Global Educator Collective group and break out groups based on location, curricular subject and grade level were created to support members in targeting the needed support (Artifact B). The Global Educators Collective Facebook page quickly became a resource of information, advice, and support for

teachers throughout the world that were experiencing the emergency closures because of the

COVID-19 pandemic.

Artifacts of the Exploratory Case Study

A total of 80 Facebook posts and associated comments from the Global Educator

Collective page were selected as artifacts within this exploratory case study. The search feature

on the Global Educator Collective Facebook page was used to review posts identified based on

the following search terms within each of the four phases: technology success, technology

challenge, technology win, and technology support. Through the search terms, relevant posts

were identified as potential artifacts. From the potential posts, posts were selected as artifacts

based on their relevance, strong comments that supported the question or request from the poster

and contained a minimum of 10 comments. Table 4 provides a summary of the potential posts

that were identified on the Global Educator Collective Facebook page through the search tags

and the selected posts for each phase.

Table 4

Summary of Potential and Selected Posts by Phase

Phase	Time Period	Number of potential posts identified through search tags	Number of selected posts based on strong review of comments, variety of date within phase and search tag
Phase 1	February - March 2020	38	17
Phase 2	April - July 2020	42	20
Phase 3	August 2020 - March 2021	54	23
Phase 4	April – December 2021	40	20

Within each of the four phases, the presentation of coded posts and associated comments

from the Global Educator Collective Facebook page are organized into four broad categories for

ease of discussion. The categories are teaching and learning environment, classroom

management support, instructional support, and technology support. The teaching and learning

environment category are divided into an overview of the posts that were seeking support with

the learning environment and a summary of the feelings and emotions expressed by teachers

within the posts and comments. The classroom management support, instructional support, and

technology support categories use the same subcategories. The subcategories include an

overview of the posts seeking support, as well as the associated comments in which educators

were suggesting advice, an application or website, or offering to extend the conversation outside

of the Facebook page.

Phase 1: February - March 2020

Phase 1 presents data from the selected 17 posts between February - March 2020 that

represented the rapid transition from in person learning to distance learning and teaching because

of the emergency school closures due to the COVID-19 pandemic. The 17 posts with associated

comments resulted in 401 coded passages grouped into four categories representing the teaching

and learning environment; classroom management support; instructional support; and technology

support. Figure 5 displays the frequency distribution of the total 401 coded posts and comments

within Phase 1.

Figure 5

Frequency Distribution of Codes for Phase 1

Phase 1: Frequency Distribution of Codes (N=401)

Category	Value
CLASSROOM MANAGEMENT (CM)	
Post seeking CM support	1
Comment offering CM app, tool or website	4
Comment offering CM adivce	10
INSTRUCTIONAL SUPPORT (IS)	
Post offering Instructional Support	3
Post seeking Instructional Support	7
Comment offering IS further conversation	23
Comment offering IS app, tool, or website	71
Comment offering IS advice	139
TECHNOLOGY SUPPORT (TS)	
Post seeking Technology Support	6
Comment offering TS further conversation	3
Comment offering TS app, tool or website	22
Comment offering TS advice	45
EXPRESSED FEELINGS WITHIN POSTS & COMMENTS	
Expressing joy or success	2
Expressing stress or exhaustion	7
Offering support and encouragement	44
LEARNING ENVIRONMENT SHARED IN POST	
Virtual	14

Teaching and Learning Environment

The teaching and learning environment encompassed posts and comments about how teachers were feeling and whether they were teaching in person, hybrid, or virtually.

Posts by Teachers Seeking Support with the Learning Environment. Of the 17 selected posts, 14 teachers reported they were teaching virtually. The remaining three posts did not mention the teaching and learning environment. Teachers were looking for ideas and

assistance in managing virtual learning. A teacher was looking for advice from other teachers that had already started teaching virtually, "For those of that you use google meet with your students— What are some rules or guidelines you wished you had established before having to use with the students? (Trying to limit the fooling around as much as possible)" (Phase 1, Case 2).

Teachers were interested in support troubleshooting and setting up different applications or online tools. A teacher looked for support in troubleshooting Zoom, "Has anyone else experienced audio problems with video conferencing that relates to the number of students in the Zoom meeting?" (Phase 1, Case 3). A physical education teacher about to begin virtual teachings, asked "My school in Abu Dhabi is doing remote e-learning soon. We will be using Seesaw. Besides throwing on the 80s Lycra to teach aerobics, becoming the next Olivia Newton John, anyone have suggestions? Ideas? Good websites?" (Phase 1, Case 6). Another teacher from Prague was looking for advice on setting up Google Classroom as their platform for virtual teaching. The teacher was interested in "how easy is it to use and set up? Are there any useful sites I should visit to get help?" (Phase 1, Case 15).

Several posters noted the difficulties of virtual teaching. A poster shared the challenges of virtual teaching, "It's frankly overwhelming. The time demands of remote teaching are already extreme. Plus, I've got a list of about 20 websites and apps I want to check out." (Phase 1, Case 4). Another teacher posted a question about how to assess students virtually, "We haven't even closed yet but so far my biggest worry is what happens if we get to the point where we have to assess (middle school math) from a distance? How can we guarantee kids make honest and ethical choices?" (Phase 1, Case 12).

In addition to challenges with teaching virtually, teachers also posted looking for ideas to change how their class was organized or managed. One teacher posted, "I am ending week 6 online learning with my school in Beijing. Feeling a bit stuck in my same new routine with my EAL students. Grade 9 and 10. I was thinking about a change and students not using the computer all day long or at least for my online session…. Any ideas are welcomed." (Phase 1, Case 7). A second-grade teacher noticed that giving parents the option to email the teacher assignments over posting the student work directly into Google Classroom created an organizational mess. The teacher noted "I'm trying to figure out how to organize it best. I've uploaded the pictures into Google Drive and can share that folder with the parents as I check them. I'm just trying to figure out how to organize it best. Has anyone else had a similar experience and found something that works" (Phase 1, Case 14). Teachers looked for ideas to support the sudden shift to distance teaching at the start of the COVID-19 pandemic.

Posts and Comments on How Teachers Felt. Within Phase 1, there were 53 coded responses about how the poster or commenter was feeling about teaching during the COVID-19 pandemic. Table 5 shows the number of responses that were coded for either a poster or commenter expressing concern, joy, or offering support during Phase 1 of the COVID-19 pandemic.

Table 5

Feelings Expressed During Phase 1 within Posts and Comments

Feelings expressed during Phase 1 within posts and comments	Number of instances
Expressing concern, stress, or exhaustion	7
Expressing joy, enthusiasm, or success	2
Offering emotional support, encouragement, or positive thoughts	44

Many teachers offered each other support and encouragement. Within the Phase 1 artifacts, there were 44 coded instances of teachers offering support. With positive reminders like "you are a rock star!" (Phase 1, Case 1) and "give yourselves, your students and their parents the gift of flexibility and grace" (Phase 1, Case 14), teachers posted comments to uplift and encourage each other. The emergency school closures and sudden shift to remote learning and teaching created challenges. Many teachers posted comments encouraging their fellow teachers to know their best was good enough. One teacher noted "Your heart is in the right place so, your students will grow and that's all you need to really keep in mind" (Phase 1, Case 12). Another teacher noted "I've decided I'm gonna worry about the things I can control. That's something I can't control. This is an unprecedented situation and none of us know what to do - just the best we can" (Phase 1, Case 12). "Your job is to provide a stopgap until this whole situation is over. Start out small and simple and see where the learning takes you...." (Phase 1, Case 4). The positive reminders uplifted the teachers within the Global Educator Collective group.

Seven comments and posts that expressed concern, stress, or exhaustion from teaching during Phase 1 of the pandemic were coded. A teacher noted "feeling a bit stuck in my same new routine" (Phase 1, Case 7). Within Case 9, the poster shared that as a Digital Learning Instructional Coach they have been planning and leading professional development to prepare teachers for the transition to distance teaching. The poster noted, "I am honestly completely drained" (Phase 1, Case 9). Within the comments to the post, other teachers expressed similar feelings of stress, exhaustion, and a sense of being overwhelmed.

Within Phase 1, only two responses were coded as expressing success, joy, or enthusiasm. In appreciation for her work in transitioning students to distance learning, one

teacher noted that "'thank you' and positive messages from the families keeps me going and wanting to make more! Don't get me wrong; I'd rather be at school with my students!" (Phase 1, Case 1).

Classroom Management Support

During Phase 1 of the COVID-19 pandemic, teachers were experiencing emergency school closures and used the Global Educator Collective Facebook page to seek and offer support on managing the classroom. During Phase 1, there was only one post seeking classroom management support and 14 comments offering suggestions in managing the classroom. The 14 comments were divided between 10 comments offering advice and four comments suggesting a website, application, or tool to support managing the classroom. Additionally, there were zero comments offering further conversation outside of the Facebook post on managing the classroom.

Post Asking for Classroom Management Support. There was only one selected post seeking support in managing the classroom during Phase 1. Within the post, the teacher was concerned about how to assess students that were not physically in front of them. "We haven't even closed yet but so far my biggest worry is what happens if we get to the point where we have to assess (middle school math) from a distance? How can we guarantee kids make honest and ethical choices?" (Phase 1, Case 12). Teachers faced a lot of unknowns and were forced to adapt during the sudden school closures.

Comments Offering Advice on Classroom Management. In Phase 1, 10 comments were coded as providing advice. In response to the teacher posting about how to assess while students were learning from home, several teachers offered suggestions. One teacher shared "our administration told us not to worry about grades for now. Focus on getting the students

working online and coping as you will find it is challenging psychologically for you and them"

(Phase 1, Case 12). Other teachers offered practical advice, such as creating different versions of

an assessment, asking students to email pictures of their work, monitoring students taking the

assessment over a Zoom session, or reviewing the version history within Google Documents

(Phase 1, Case 12). Outside of the post on assessment, teachers shared the importance of

creating routines and helping students navigate their day by "creating a daily schedule and

inserting the links right into the doc" (Phase 1, Case 14).

Comments Suggesting an App, Tool, or Website for Classroom Management. As

teachers began distance teaching, they suggested apps, tools, and websites that worked well with

their classes. The four coded comments provided suggestions included the use of Google

Classroom, Zoom, Microsoft Teams, Google Forms, Screencastify, Kahoot, Go Guardian,

Desmos, Education Perfect, and Khan Academy to support managing the classroom.

Instructional Support

The Global Educator Collective Facebook page served as a resource for teachers to share

ideas and support on their instruction, curriculum, and content. During Phase 1, there were

seven posts looking for instructional support and two posts offering instructional advice. In

addition to the nine posts on instruction, there were 233 comments that offered suggestions or

advice on instruction, curriculum, or content. Table 6 exhibits the breakdown of the 233

comments offering instructional support.

Table 6

Comments Providing Instructional Support during Phase 1

Instructional Comments that offer:	Number of comments
Advice	139
Website, app, or tool	71
Further conversation outside the Facebook page	23

Posts on Instructional Support. Out of the 17 posts within Phase 1, ten were either seeking support or offering advice on instruction and content. Three posts were providing instructional advice and support and seven posts were seeking instructional or curriculum support.

Within each of the three posts where the teacher was sharing their advice or tips on instruction, the teacher had experience teaching virtually. One teacher shared their success setting up a Google Meet to play Quizlet with students, the teacher shared "I let them know on Google Classroom what time and had them put their name on a Google Doc if they wanted to play. At 1:00 I updated the 'assignment' with the code" (Phase 1, Case 10). Another preschool teacher shared tools that helped virtual teaching with three- to four-year-old students, the teachers shared "Self-made videos, audio, YouTube links, and Google Slides have proven to be the best tools for my lessons! It's a lot of work for me, but it is worth it!" (Phase 1, Case 1). Additionally, a teacher with ten years of previous online teaching experiences shared several tips to help fellow teachers be successful in the transition to virtual teaching. The tips included not pre-recording video lessons, utilizing videos posted on YouTube, break up class sessions into smaller chunks, and do not be disheartened by non-responses. The teacher stressed that "Online

teaching is very different to face to face so manage your expectations appropriately" (Phase 1, Case 17).

Phase 1 included seven posts of teachers seeking instructional support. An instructional coach that was providing professional development on online learning was looking for ideas from other schools and districts, the teacher asked "How are other districts handling this PD load to get teachers up and running during this time? #EducationIsATeamSport" (Phase 1, Case 9). One teacher was seeking ideas to change up their instruction and have students read a variety of books independently after six weeks of online learning, the teacher asked "my issue would be that maybe everyone would have a different book. Hard for me to track if they are really reading their books. hmmmm As you can see I am in need of some inspiration" (Phase 1, Case 7). Another teacher was looking to gather "a list of examples of how young people -- K-12 -- can participate in social action/service learning in these "stay at home" days" (Phase 1, Case 8). As teachers looked to shift activities that had been previously completed in person, a poster looked for advice: "What I need some help with is how to put it all together. Is there a format where we could upload the videos and share it with the entire school community that would also enable the community to post questions for the students to answer?" (Phase 1, Case 11).

Comments Offering Advice on Instructional Support. Within the comments, teachers readily passed on lessons they had learned. In Phase 1, there were 139 coded comments offering advice. In responding to a teacher looking for ideas on distance learning with preschoolers, several teachers offered suggestions. A teacher shared "I am giving only 2 activities per day: 1 UOI and 1 numeracy or literacy. We also give some optional activities for those who want to do more. I have been recording myself for most instructions because the kids like to see me talking to them🤗❤️" (Phase 1, Case 1). Another shared "many of my students are taking photos of their

work making short videos! Our student and teachers are all in different time zones so an agreed

posting time was given" (Phase 1, Case 1). A teacher looking for suggestions on setting up

Google Classroom was offered several suggestions. One commenter affirmed the ease of use

with "I am zero techie and I can use it" (Phase 1, Case 15).

In another post about managing the digital collection of assignments versus students

uploading assignments directly into Google Classroom, several teachers offered advice. A

teacher noted "I would have them take a picture and attach it to the assignment within Google

Classroom for your sanity." (Phase 1, Case 14). Another teacher suggested, "Ignore the

bombarding emails and set up a day a week in which you go over assignments and make a list of

students who have missed and send a reminder to those parents" (Phase 1, Case 14).

Comments Suggesting an App, Tool, or Website for Instructional Support. Seventy-

one coded comments recommending an application, tool, or website were identified within Phase

1. Table 7 exhibits the apps and tools that were suggested multiple times in the comments to

support instruction. Some of the applications that were suggested once include: Kahoot!,

Gimkit, Nearpod, GoNoodle, Classkick, and Edpuzzle.

Table 7

Apps and Tools Suggested More than Once for Instructional Support during Phase 1.

Instructional Comments that offer:	Number of times coded
Google Classroom	9
SeeSaw	8
Flipgrid	4
Zoom	3
Class Dojo	2
Microsoft Teams	2

In looking for assistance with setting up Google Classroom, commenters suggested a variety of YouTube videos, Google's tutorial website, and the website of a teacher that shared "best practices" for using Google classroom (Phase 1, Case 14). In addition to apps and tools, commenters also provided information on instructional strategies, such as flipped learning. In Phase 1, Case 17, a teacher provided a few key points on flipped learning and provided a link to the Flipped Learning Network website. Other teachers provided links to websites with teaching resources for remote teaching, including Common Sense Media and the International Society of Technology in Education.

Comments Offering Further Conversation for Instructional Support. Within Phase 1, there were 23 instances of teachers offering to help outside of the Global Educator Collective Facebook page. Teachers offered to share their expertise. One teacher shared the link to a Google folder with three weeks of learning activities (Phase 1, Case 1). A teacher shared "I've been teaching in a hybrid structure for the last 6 years, there are many, many ways we can do this... Let me know what you're working with, I am happy to help!" (Phase 1, Case 12).

Another teacher offered "let me know if you need any more help. I'm in school to get my instructional tech facilitator license, so this is my jam!" (Phase 1, Case 14). Other commenters encouraged their fellow teachers to send private messages or emails to ask more specific questions and further the conversation.

Technology Support

During Phase 1 of the COVID-19 pandemic, teachers were experiencing the sudden transition from in person to virtual teaching. In making the transition, technology was fundamental, and many teachers looked to the Global Educator Collective for technology support and advice. During Phase 1, there were six posts seeking technology support and 70 coded comments offering suggestions or advice. Table 8 displays the breakdown of the 70 coded passages offering technology support.

Table 8

Comments Providing Technology Support during Phase 1

Technology Support Comments that offer:	Number of comments
Advice	45
Website, app, or tool	22
Further conversation outside the Facebook page	3

Posts Seeking Technology Support. In Phase 1, six of the 17 posts were from teachers looking for technology support. The six posts can be categorized into posts looking for support on a specific application or seeking support selecting applications to use with students.

Four of the posts were from teachers seeking advice on using specific applications with distance teaching. A teacher hoping to add an Edpuzzle into a Nearpod presentation looked to

the Global Educator Collective community and was "throwing it out there in hopes that someone else knows how to do it (assuming it's even possible) or something like it" (Phase 1, Case 13). Two teachers created posts about issues with video conferencing applications, Google Meet and Zoom. One teacher was looking for help troubleshooting audio issues within Zoom and differentiating the features within the free and premium versions of the software (Phase 1, Case 3). The second teacher was getting ready for her school to start distance learning and was looking for "some rules or guidelines you wished you had established before having to use (Meet) with your students?" (Phase 1, Case 2).

The remaining two posts were looking for support in selecting apps for their classroom. A teacher recognized the plethora of educational apps and tools that were available to support distance learning but was asking the community if there was a "searchable database that catalogs all these resources with Information on what the resource can do, technical specifications, cost, age recommendations, alignment to standards" (Phase 1, Case 4). Another teacher from a boarding school had students that returned home to China when their school closed and the teacher asked, "for those of you working within Chinese Schools, besides the big sites (Google Apps, YouTube) that are blocked from China, can you list any other ones?" (Phase 1, Case 16). The sudden switch to distance learning created new challenges for teachers and they reached out to the Global Educator Collective community for assistance.

Comments Offering Advice on Technology Support. Forty-five comments offering advice on technology were identified in Phase 1. Teachers showed a willingness to offer practical suggestions and troubleshooting advice in the comments. A teacher offering advice on integrating an Edpuzzle lesson into a Nearpod presentation was troubleshooting to help the poster, "I'm playing around with an assignment that I have already assigned for real, so maybe

that's why. I just can't get it to hyperlink anywhere" (Phase 1, Case 13). As another example of commenters help troubleshoot, a commenter shared "someone just showed me how... do you have an iPhone? I will tag you in the post that helped me!" (Phase 1, Case 3). A teacher helped a poster with audio issues with "make sure that they're only logged in on one device or if they're near another device to have it on mute. Same for yourself if you're on two devices" (Phase 1, Case 3).

Responding to a post seeking guidelines for third and fourth graders on Google Meet's videoconferencing application, several commenters offered advice. The advice included encouraging student to find a quiet place to join the call, using the chat feature for questions, and turning mics off (Phase 1, Case 2). A teacher suggested setting an expectation of "no messing with other people's access or microphones. No inappropriate comments verbally or in the chat" (Phase 1, Case 2). A teacher shared a successful strategy of using four flash cards that could be held up to the camera and communicate information to the class. The flash cards included "a person shushing (everyone shh), hands raised (raise your hand if you want to speak), thumbs up (show me you understand/agree etc.) and a group of children (everyone may answer at once)" (Phase 1, Case 2). Another teacher commented that "I've taught lots of teachers how to use Meet and no matter your age, everyone is a goofball the first few times!" (Phase 1, Case 2).

Comments Suggesting an Apps, Tools, and Websites for Technology Support. There were 22 comments that included an application, tool or website for the teacher posting to check out. In supporting a poster that was looking for sites that were approved within China, several comments suggest apps, including Screencastify, Flipgrid, WeChat and Seesaw (Phase 1, Case 16). Another teacher provided a link to the Comparitech.com, a site that tests if a site is blocked in China (Phase 1, Case 16). In helping troubleshoot a Screencastify issue, a commenter

suggested using Loom, while another commenter shared a coupon code for access to the premium version of Screencastify (Phase 1, Case 3). With so many teachers experiencing the emergency school closures, there was a willingness among teachers on the Global Educator Collective Facebook page to help each other succeed.

      Comments Offering a Further Conversation for Technology Support. Only two comments offered to continue the conversation off the Facebook page. In Phase 1, Case 3, a commenter offered to send screenshots in trying to embed an Edpuzzle lesson into a Nearpod presentation. The second offer to extend the conversation was a teacher offering to email a netiquette presentation (Phase 1, Case 2). Several other teachers within the Global Educator Collective added comments requesting for a copy of the presentation too.

Key Findings from Phase 1

Phase 1 presented data from February – March 2020 that represented the beginning of the COVID-19 pandemic and the start of the emergency school closures. Within Phase 1, there were a few key findings from the 401 coded posts and comments. The virtual learning environment was highlighted in 14 out of the 17 coded posts. Even through online learning existed prior to the COVID-19 pandemic, it was not experienced by all teachers and there were many questions about instituting it at all grade levels. The Phase 1 data highlighted that while teachers had access to many online applications and tools, selecting the right or best application with students was difficult. Finally, the emergency school closures brought teachers together within the Global Educator Collective and teachers felt like they were working collectively. In Phase 1, Case 9, a teacher included "#EducationIsATeamSport" within their comment and it exemplifies how teachers supported each other during Phase 1.

Phase 2: April - July 2020

Phase 2 reports data from the selected 20 posts between April - July of 2020. Phase 2 represented the last few months of the 2019-2020 school year when schools realized the emergency school closures would extend longer than a few weeks. The 20 posts with associated comments resulted in 344 coded passages. The coded passages were grouped into four categories representing the teaching and learning environment; classroom management support; instructional support; and technology support. Figure 6 displays the frequency distribution of the total of 344 coded posts and comments within Phase 2.

Figure 6

Frequency Distribution of Codes for Phase 2
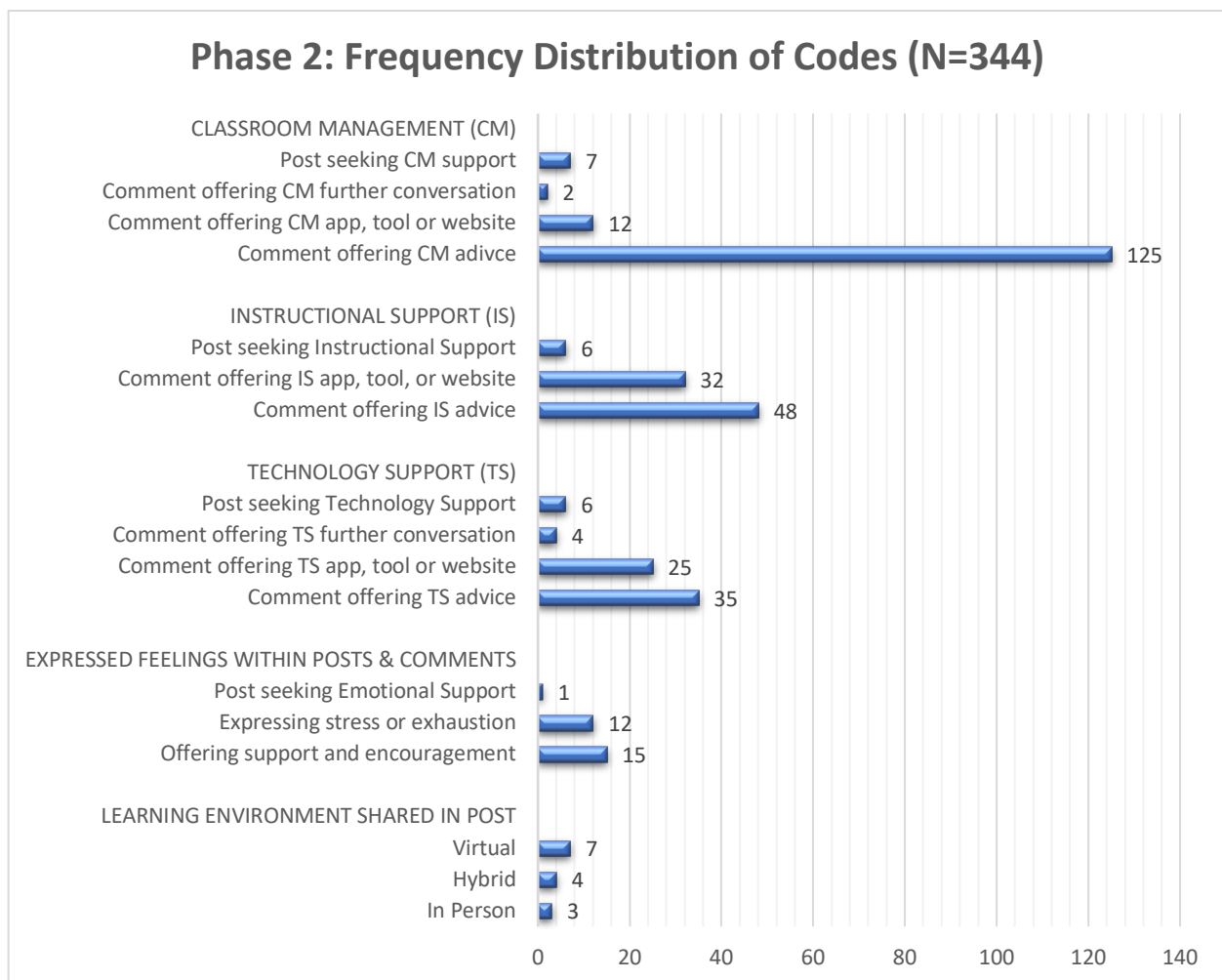
Teaching and Learning Environment

The teaching and learning environment encompassed posts and comments about how teachers were feeling and whether they were teaching in person, hybrid, or virtually.

Posts by Teachers Seeking Support with the Learning Environment. Within the 20 selected Phase 2 posts, 14 teachers posted a question about the learning environment. Of the 14 posts that specified the teaching environment, three teachers reporting in person teaching, seven teachers reporting virtual teaching, and four teachers reporting hybrid teaching. The posts from teachers with in-person learning environments were looking for activities for students to do while social distancing or ideas or opportunities for welcoming in coming kindergarten students to their new school. The teachers seeking support within their hybrid learning environment were looking for ideas to manage having students divided between the in-person classroom and participating virtually. In Phase 2, Case 10, a teacher shared "Advice please-I will be teaching a group of 3rd grade students in my classroom face to face while also live streaming to students at home all at the same time. In researching how best to do this I think I'll need Bluetooth headphones with a built-in mic and wireless because of our room set up." The seven teachers in a virtual learning environment were looking for support to reach families that been unresponsive to distance learning, ideas to increase motivation as the school year finished, and considering starting a new school year with distance learning. A teacher that was teaching virtually felt exhausted and shared "Anyone else just getting thru the class sessions remaining. I see lots of posts here of people working really hard to motivate and entice students. Kudos, but that is not me" (Phase 2, Case 19). Another teacher was trying to reach unresponsive students and asked, "Anyone have an idea or any ways that you have found successful in reaching families that are unresponsive to remote learning?" (Phase 2, Case 5).

Posts and Comments on How Teachers Felt. During Phase 2, there were 26 coded passages of teachers expressing an emotional response. Twelve coded passages were expressing concern, stress, or exhaustion and 15 of the coded passages were offering emotional support, encouragement, or positive thoughts. There were zero comments expressing joy, enthusiasm, or success.

Within Phase 2, there were 12 responses expressing concern, stress, or exhaustion by teachers. The sudden school closures and switch to distance learning was difficult and can be seen through the sentiments of responses, including "I have 3 more weeks to prep for and 4 weeks to get through. I hate every moment of this" and "feeling like a failure but i have no more to give. I will give my best but can do no more!!!!" (Phase 2, Case 19). Another commenter noted "it is very discouraging personally to be exerting so much effort with absolutely no results" (Phase 2, Case 5). A teacher's post exhibited exhaustion with "anyone else just getting thru the class sessions remaining. I see lots of posts here of people working really hard to motivate and entice students. Kudos, but that is not me. Teaching Shakespeare thru Zoom. We listen, read, watch, discuss. No bells or whistles. I. Just. Can't. 10 more sessions and it is a wrap" (Phase 2, Case 19). Within the comments, teachers could relate to the poster and were supportive. One teacher shared feeling similar with "I'm with you! Counting the days! I'm burned out" (Phase 2, Case 19).   Other teachers offered supportive and positive thoughts with "I TOTALLY understand! Hang in there 💜" and "I think we all did very well, given the circumstances" (Phase 2, Case 19).

Teachers were supportive and wanted to encourage their peers, which was represented through 15 responses that offered emotional support or positive throughs. One commenter encouraged a fellow teacher with "thank you for all you will do to help all students learn" (Phase

2, Case 10). Another teacher reminded their peer that "you're amazing and they are lucky to

have you!" (Phase 2, Case 12). "Teachers are heroes right now! Stay strong" (Phase 2, Case 13)

is another example of encouragement. Another commenter was sympathetic with "moving room

to room does seem hard!! Good luck! ❤️" (Phase 2, Case 10).

Classroom Management Support

During Phase 2 of the COVID-19 pandemic, schools and teachers faced the realization

that the emergency school closures would extend beyond a few weeks. Teachers were seeking

assistance in managing their classrooms and there were seven posts seeing classroom

management support. In addition to the seven posts, there were 139 coded comments on

managing the classroom and offered advice, suggestions of an application or tool, or offer for

further conversation. Table 9 exhibits distribution of the 139 comments supporting classroom

management.

Table 9

Comments Providing Classroom Management Support during Phase 2

Classroom Management Comments that offer:	Number of comments
Advice	125
Website, app, or tool	12
Further conversation outside the Facebook page	2

Posts Asking for Classroom Management Support. Within Phase 2, there were seven

posts seeking support with managing the classroom. In a post, a teacher wanted "an idea or any

ways that you have found successful in reaching families that are unresponsive to remote

learning" (Phase 2, Case 5). Another teacher asked for "good digital jobs or responsibilities for

students" (Phase 2, Case 4) to support the virtual learning classroom. Of the seven posts, three

had a common request of looking for in person activities that followed social distancing

guidelines. One teacher asked, "My school is returning and wants events, but students cannot

gather in one location and must have limited contact due to covid, as well as other safety

guidelines" (Phase 2, Case 12). Another teacher was looking for "creative ideas (virtual or one-

on-one/small groups) for how to help incoming kindergartners transition and become

comfortable before the year starts" (Phase 2, Case 2).

Comments Offering Advice on Classroom Management. During Phase 2, there were

125 coded comments from educators sharing advice on managing the classroom. Several

comments were offering advice to a teacher that taught two different virtual classes at the same

time and wanted ideas for providing synchronous instruction. A commenter suggested "have one

live meeting and go over both of the learning goals," while another commenter shared "our 'live'

sessions are just 'office hours' so students can join to ask questions" (Phase 2, Case 17).

Another teacher seeking advice on the potential of virtual learning with incoming

kindergartners. One commenter worried about the lack of relationships with the teacher and

school for incoming kindergartners, another commenter added "It is going to be so different

remotely teaching kids we have never met. 😢" (Phase 2, Case 18). Other commenters suggested

setting up video or outdoor meetings with each incoming student and their parents to meet the

teacher. A commenter suggested "doing some front loading with new students to teach them

how to interact with the technology, how to navigate Seesaw, how to engage during Zoom calls

(Phase 2, Case 18). Another first-grade teacher shared that they "sent a 'tour' of my classroom

via Zoom to the kindergarten teachers to share with each of their classes. I ended it with a read

aloud so the kids could get a feel for what class might be like with me" (Phase 2, Case 2).

For the teacher looking for ideas to reach families that have not been responsive to distance learning, there were several comments offering advice. Commenters suggested reaching out to the families through social media, texting the families, mailing a handwritten note expressing concern, and home visits with care packages of baked cookies or groceries (Phase 2, Case 5).

Comments Suggesting an App, Tool, or Website for Classroom Management. The 12 comments that provided an application, tool or website to support managing the classroom provided ideas for the posts seeking social distance activities and reaching unresponsive families. Goose Chase, Kahoot Challenge, Minute to Win It, and Google Tour Builder were suggested applications to create social distancing activities. The applications suggested to connect with unresponsive families were Family Ambassadors, Remind, and Talking Points.

Comments Offering Further Conversation for Classroom Management. There were only two comments offering to continue the discussion off the Facebook page. In both cases, the teachers shared their experience and encouraged the poster to send a private message for more information.

Instructional Support

Teachers used the Global Educator Collective Facebook page to share ideas and support on their instruction, curriculum, and content. In Phase 2, there were six posts seeing instructional support; 48 comments offering instructional advice; and 32 suggested websites, applications, or tools to support instruction. There were no comments offering to continue the conversation outside of the Facebook page.

Posts on Instructional Support. Of the six posts requesting instructional support in Phase 2, five posts were looking for support in specific content and one was seeking ideas to

better support teachers. A teacher seeking information on how iXL math application was being used in middle school asked, "I believe I have set my expectations too high on what I want the students to do and I would love some feedback" (Phase 2, Case1). A special education teacher posted and was "looking for recommendations on good web-based reading ELA programs" (Phase 2, Case 11) to support a hybrid learning environment. A middle school engineering teacher considered sending home robotics kits and wondered "has anyone provided materials to kids or considered this for next year? Is anyone doing maker work or long-term projects with their kids?" (Phase 2, Case 6).

In addition to questions about instructional content, one poster was seeking resources to better support teachers. The poster was an instructional coach and shared "I am already thinking about how to support teachers. Differentiation strategies, resources for direct instruction, formative assessments... the list goes on. Any advice of where to begin?" (Phase 2, Case 13).

Comments Offering Advice on Instructional Support. There were 48 comments identified as sharing instructional advice in Phase 2. In commenting on the post asking for suggestions with iXL math application, a commenter advised "if I see my kids spending hours on a skill, that tells me they do not understand" (Phase 2, Case 1). Another teacher shared "I don't have a minimum score- if they score poorly, we have a 1-1 google meet for about 20 minutes and complete together so I can help (and it helps me so I don't have to do whole class instruction as often). Just for practice" (Phase 2, Case 1).

There were several comments supporting the post that was looking for resources to better support teachers. One commenter advised, "we are going to need to better understand the achievement gap from this shift and find ways to address the fall as well as plan for the rise!!" (Phase 2, Case 13). Another commenter suggested "just plain teaching teachers how to teach

online. How to take a regular in person lesson and transfer to online while reaching all learners"
(Phase 2, Case 13).

Comments Suggesting an App, Tool, or Website for Instructional Support. In Phase 2, there were 32 comments that suggested applications or websites to support instruction. With the post seeking an online English Language Arts program, commenters suggested a variety of applications including Freckle, Newsela, Lexia and Readworks.org (Phase 2, Case 11). For the post of the teacher that considered sending home robotics kits, commenters suggested online engineering sites and applications that would offer support. The commenters highlighted NAEIR.org, Tinkercad, and Scratch.mit.edu (Phase 2, Case 6).

Technology Support

In Phase 2, there were six identified posts requesting technical support. In response to the six posts, there were 64 comments offering technology support. Table 10 displays the distribution of comments offering technology support.

Table 10

Comments Providing Technology Support during Phase 2

Technology Support Comments that offer:	Number of comments
Advice	35
Website, app, or tool	25
Further conversation outside the Facebook page	4

Posts Seeking Technology Support. The six posts seeking technical support within Phase 2 were centered on needing assistance with teaching in a hybrid learning environment and troubleshooting features within an online application. Three posts were seeking technical

support for their hybrid learning environment. A teacher at an international school was looking

for technical support to help several students connecting from China to access her Google

application content. The teacher did not "want students to have to rely on an unreliable VPN to

access student material. Does anyone have a suggestion on what I can do without reworking

everything I do?" (Phase 2, Case 15). A director of a missionary school in Africa was seeking a

learning platform to allow remote teaching until travel restrictions are lifted and the teachers

were able to enter the country. For the online learning program, his "main concerns are EASE of

use (many of our teachers AND kids just aren't 'naturals' in the land of computers) and LOW

data/bandwidth (the internet here just isn't reliable or fast and there is no such thing as 'unlimited'

data like in North America)" (Phase 2, Case 7).

In addition to seeking support with hybrid learning, three teachers posted looking for

assistance in troubleshooting online applications. One teacher needed help troubleshooting

features within Zoom and administrator settings (Phase 2, Case 3). Another teacher was looking

for help in setting up their Canvas workflow, the teacher shared "while I am knowledgeable, I

want to make sure I've got the major milestones done" (Phase 2, Case 16). Additionally, a

teacher was looking "to put a student into Google Classroom and keep them locked in so they

can't remove themselves?" (Phase 2, Case 9). With each post, commenters were offered ideas

and suggestions.

Comments Offering Advice on Technology Support. Within the comments teachers

willingly shared their own experience and advice to help troubleshoot the technical posts.

Thirty-five comments were coded for offering advice with troubleshooting technology issues. In

offering advice on setting up Canvas, a commenter shared "I find modules with everything in

sequential order works best for me. Just remember a 'quiz' isn't just for quiz and test" (Phase 2,

Case 16). Several commenters offered advice to the post seeking technology support on the administrative settings within Zoom. A commenter helped differentiate a feature between the free and paid account features, "the ability to set a co-host ahead of the meeting is through the paid account. Same for polling. As some have mentioned, you can give others the co-host role once you're both in the meeting, just not ahead of time" (Phase 2, Case 3). For the post seeking to prevent a student from removing themselves from Google Classroom, one commenter suggested adding the parent to the classroom and another commenter shared that "there is no way to lock a student into a Google Classroom" (Phase 2, Case 9). Teachers were supportive in offering ideas and solutions for the technical questions that were asked.

Comments Suggesting an Apps, Tools, and Websites for Technology Support. There were 25 identified comments that offered applications or websites to troubleshoot technical questions. For the teacher troubleshooting how students connecting from China would be able to access their content, commenters suggested Microsoft Teams, Seesaw, Canvas and Nearpod applications (Phase 2, Case 15). The commenters suggested a sub-group on Facebook and site with tutorial videos for the post seeking help with setting up Canvas workflows (Phase 2, Case 16). For the post in which the teachers would need to distance teach until they were able to travel to the African missionary school, three were many suggestions. The commenters ideas included Edmodo, Canvas, PowerSchool, Yacapaca, Nearpod, and Pathwright learning platforms (Phase 2, Case 7).

Comments Offering a Further Conversation for Technology Support. There were four comments offering to continue the discussion outside of the Facebook page. Within a post of a teacher seeking support with organizing the workflow within Canvas, three commenters
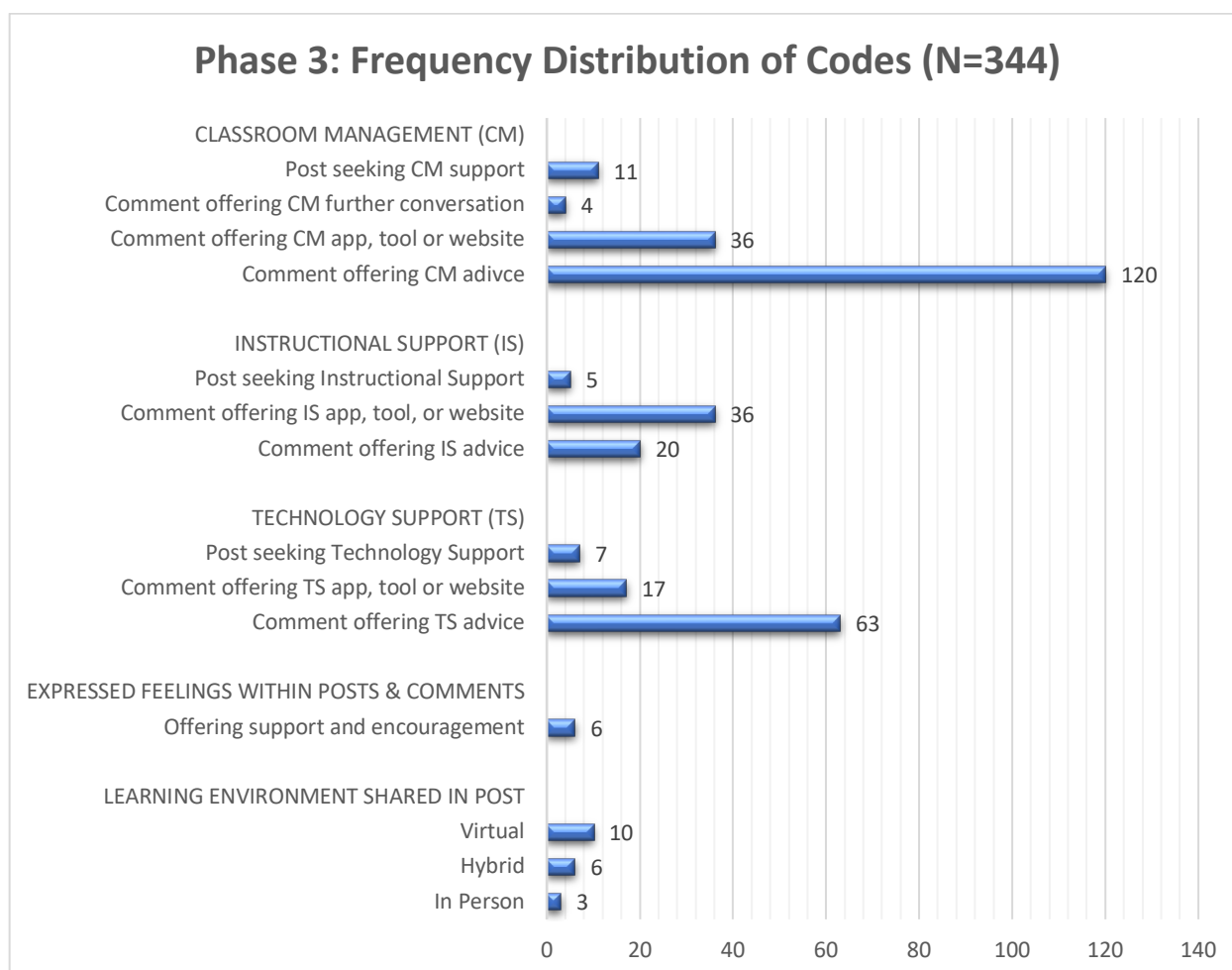
offered additional support through continuing the conversation outside of the Global Educator

Collective Facebook page.

Key Findings from Phase 2

Phase 2 presented the data from April – July 2020. Phase 2 represented the remaining

months of the 2019-2020 school year as teachers realized the emergency school closures would

extend beyond a few weeks and continue until the end of the school year. Within Phase 2, there

were a few key findings from the 344 coded posts and comments. The shift to distance teaching

led to a continued increase in feelings of stress and exhaustion among teachers. There was an

increase in the needs of managing the classroom. Teachers tried to keep students engaged and

balance safety guidelines. Hybrid teaching and learning was introduced in Phase 2, teachers

noted the added difficulties hybrid teaching presented.

Phase 3: August 2020 – March 2021

Phase 3 reports data from the selected 23 posts between August 2020 - March 2021, it

represented a period of continued turmoil as the COVID-19 pandemic continued into the start of

the 2020-2021 school year. Phase 3 began with many schools continuing distance learning but

prepared to institute in person and hybrid learning options. The 23 posts with associated

comments resulted in 344 coded passages grouped into four categories representing the teaching

and learning environment; classroom management support; instructional support; and technology

support. Figure 7 displays the frequency distribution of the total 344 coded posts and comments

within Phase 3.

Figure 7

Frequency Distribution of Codes for Phase 3

Phase 3: Frequency Distribution of Codes (N=344)

CLASSROOM MANAGEMENT (CM)
Post seeking CM support — 11
Comment offering CM further conversation — 4
Comment offering CM app, tool or website — 36
Comment offering CM adivce — 120

INSTRUCTIONAL SUPPORT (IS)
Post seeking Instructional Support — 5
Comment offering IS app, tool, or website — 36
Comment offering IS advice — 20

TECHNOLOGY SUPPORT (TS)
Post seeking Technology Support — 7
Comment offering TS app, tool or website — 17
Comment offering TS advice — 63

EXPRESSED FEELINGS WITHIN POSTS & COMMENTS
Offering support and encouragement — 6

LEARNING ENVIRONMENT SHARED IN POST
Virtual — 10
Hybrid — 6
In Person — 3

Teaching and Learning Environment

The teaching and learning environment included posts and comments about how teachers were feeling and whether they were teaching in person, hybrid, or virtually during Phase 3.

Posts by Teachers Seeking Support with the Learning Environment. Phase 3 extended from August 2020 – March 2021, which covered most of the 2020-2021 school year. Nineteen of the 23 posts mentioned the teaching environment, with three posts seeking support about in person learning, six posts on hybrid learning and

In the three posts on in-person learning environments, teachers were looking for ways to help their students get to know each other and be engaged in learning. A fourth-grade teacher was looking for ideas to help students interact shared "typically, I have lots of games and ways to have students interact. This year they are working at desks 6 ft. apart and are not allowed any shared materials. They cannot even pass around a ball or a paper" (Phase 3, Case 6). Another teacher was looking for ideas to help students transition from virtual to in person learning. The teacher planned "on reteaching routines as though it were day/week one, but I'm hoping to find some activities or games that really brought them back in joyfully, since I want them to re-enter as happy as possible - sort of coming from a trauma-informed or SEL approach maybe including some mindfulness" (Phase 3, Case 23).

Six out of the 23 selected posts were seeking support with virtual teaching and learning. The teachers seeking support within their hybrid learning environment were looking for ideas to manage classes that were physically divided. One teacher noted "my style of teaching has been completely tossed out the window because of "hybrid" learning. I'm a relatively big fan of group discussion & group work to open up whole class discussion but because of COVID guidelines I can't put them into groups or pairs" (Phase 3, Case 2). Another teacher was seeking ideas for hybrid learning where the students were in the classroom with a paraeducator, while the teacher was home.

Ten posts within Phase 3 included questions about virtual teaching. The teachers in a virtual learning environment were looking for ideas to increase engagement. A fourth-grade virtual teacher noted "next week begins our 2nd Trimester. I'm trying to think of things I can do to change it up for the kids. I can tell we all need a hard reset!" (Phase 3, Case 13). Another teacher wanted ideas "for getting students who are extremely resistant to turning cameras to

actually turn them on" (Phase 3, Case 14). Teachers were seeking support and ideas from the Global Educator Collective Facebook page for managing all three learning environments.

Posts and Comments on How Teachers Felt. Within Phase 3, there were only six comments offering emotional support. All six of the comments were offering support or encouragement. In a post from a daycare supervisor seeking suggestions of how to support students while they were participating in distance learning while at daycare, commenters were supportive. One commenter shared "Thank you for trying to be a partner with the teachers. We really need to work together to make things as smooth as possible for the kids. Your partnership is invaluable" (Phase 3, Case 11). Another commenter noted "thank you for taking this on! Communicate and strengthen a partnership with the teachers! Good luck and bless you for taking this on!" (Phase 3, Case 11). In response to a post from a teacher that was remote while the students were in the classroom, a commenter offered support with "Good luck! I have done this with much success-we have a sub in the room with the kids to help keep order. It's possible-you can do it" (Phase 3, Case 22). While there only six comments offering emotional support within Phase 3, teachers still found support on the Global Educator Collective Facebook page.

Classroom Management Support

During Phase 3 of the COVID-19 pandemic, there were 11 posts seeking support on managing the classroom and 160 coded comments offering suggestions. The 160 comments were divided into 120 comments offering advice, 36 comments suggesting an application or website, and four comments offering to extend the conversation off the Global Educator Collective Facebook page.

Posts Asking for Classroom Management Support. In Phase 3, there were 11 posts from teachers that requested support in managing the classroom. From the 11 posts seeking

support with classroom management, they were looking for assistance to either help the students or the teachers be more successful.

Six of the 11 identified posts were looking for suggestions from the Global Educator Collective Facebook members to help students. A fourth-grade teacher had been remote since the beginning of the school year and with a new trimester about to start, the teacher posted "I'm trying to think of things I can do to change it up for the kids. I can tell we all need a hard reset!" (Phase 3, Case 13). A teacher posted looking for ideas to encourage more participation from distance learners, the teacher asked "does anyone have any tips for getting students who are extremely resistant to turning camera to actually turn them on? ...Today only 2 kids had their camera on the whole time" (Phase 3, Case 14). Within a hybrid learning environment, another teacher wanted ideas for helping her students get to know each other better. The teacher shared "one student in particular is sad and says she has no friends. Typically, I have lots of games and ways to have students interact. This year they are working at desks 6ft apart and not allowed to any shared materials" (Phase 3, Case 6). After 14 weeks online, a second-grade teacher was seeking ideas to help students return to in person learning. The teacher posted "Can anyone who's been through this mid-year transition give me some tips on things that made the transition smoother on day one and for the rest of the week?" (Phase 3, Case 23). Teachers care about their students and wanted to ensure their success.

Five of the identified posts within Phase 3 were seeking ideas to help support the teacher in managing the learning environment, while teaching the curriculum. A teacher posted "What creative ways have you used to minimize cheating in a remote learning or hybrid classroom?" (Phase 3, Case 1). A middle school Language Arts teacher with over 250 remote students wanted tips on teaching a large group of students. "I am having a hard time wrapping my mind

around the attention to detail in their work, the grading, the feedback, the relationship building, just the general meeting of needs for this many students" (Phase 3, Case 12). The Global Educator Collective Facebook page enabled teachers to gain ideas from their peers.

Comments Offering Advice on Classroom Management. In Phase 3, there were 120 identified comments sharing advice or experience on managing the classroom learning environment. The fourth-grade teacher looking to change things up as students began the second trimester in distance learning was given advice from the teachers on the Facebook page. A member of the community suggested "Fun Fridays for those who get their work done and host a meet/zoom… Then we show a movie or play Kahoot! and let them talk" (Phase 3, Case 13). Other suggestions included show and tell and special guest speakers, such as a resource officer or veterinarian (Phase 3, Case 13).

Several commenters shared ideas for the teacher wanting to encourage students to turn on their camera during remote learning. A commenter shared that their students are given the "option of pointing the camera up so it is only showing their forehead and ceiling" (Phase 3, Case 14). A teacher indicated that their students were required to turn on cameras during testing, while another commenter shared "I will give them extra credit for having their camera on. If it is super important you could bribe them with a free assignment pass" (Phase 3, Case 14). Another commenter offered that they do not force students to turn on cameras and "work on building community not compliance" (Phase 3, Case 14). It was also pointed out by a commenter to consider students' "bandwidth and ability to use the camera, especially in rural areas" (Phase 3, Case 14).

During Phase 3, some classrooms experienced a hybrid learning environment. One teacher shared they were in a country different from the students and was going to teach

remotely. The teacher was looking for ideas and finding other teachers in a common situation. A commenter in a similar situation recommended establishing a strong relationship with the teaching assistant that would be in the classroom with the students. The commenter shared "the only times a teacher had issues was when the TA (teacher's assistant) was unsure of how to motivate or discipline kids. The ones who did well were the ones who played around with the opportunities of having two adults in the classroom" (Phase 3, Case 22). Another teacher added "my biggest advice is that you focus only what you can control. My TA is amazing and we were friends before she took this position, and that has been most helpful because I've had to give her so much of what feels like 'my job'" (Phase 3, Case 22). It was suggested to vary the instruction between being projected on the big screen and having students individually join the zoom session. Another teacher also suggested assigning a student as the "ambassador to you each day or class time so that it's only one person asking you that may be helpful" (Phase 3, Case 22). The commenters within the Global Educator Collective were supportive in offering advice to those that posted questions.

Comments Suggesting an App, Tool, or Website for Classroom Management. Within Phase 3, there were 36 identified comments that suggested an application, tool, or website to benefit classroom management. In offering support to a poster looking for ideas to help students get to know each other, teachers used the comments to suggest gamified applications, such as Kahoot!, Quizlet, and Scribblio (Phase 3, Case 6). Commenters shared several ideas with a teacher looking for advice with online grading, the suggestions included Adobe PDF Expert, Kami, Notability, Seesaw, Go Formative, and Showbie (Phase 3, Case 8). A poster seeking to change things up for students was given a variety of ideas, including playing GimKit, Brain Break – Would you Rather, and Exploring by the Seat of Your Pants (Phase 3, Case 13).

Comments Offering a Further Conversation for Classroom Management. There were four comments offering to continue the discussion on managing the classroom outside of the Facebook page. The commenters offered to extend the conversation with the poster by suggesting they send a private message or "let me know if you need anything else" (Phase 3, Case 5).

Instructional Support

The Global Educator Collective Facebook page allowed teachers to seek ideas and support on their instruction, curriculum, and content. During Phase 3, there were five posts seeking instructional support and 56 comments providing instructional support. The 56 comments were divided into 20 comments offering advice and 36 comments suggesting an application or website to support instruction. Within Phase 3, there were zero comments offering further conversation outside of the Facebook post.

Posts on Instructional Support. Throughout Phase 3, there were five identified posts seeking instructional support. Teachers posted a variety of questions about instruction, curriculum, and content. A high school English Language teacher was seeking online resources for students with very limited English skills. The teacher noted "all of the resources at this level seem to be created for elementary aged students and are too 'childish' to capture the attention of/engage high school learners" (Phase 3, Case 15). A math instructional coach posted "what would you suggest I do to begin preparing teachers in case we shut down?" (Phase 3, Case 4). Another teacher was looking for advice on a project, "we are learning about the UN's global goals, specifically goal #6 safe water and sanitation. I have to develop a project based on this goal. Any thoughts?" (Phase 3, Case 20). The Phase 3 posts wanting instructional support were varied, but commenters were willing to offer support.

Comments Offering Advice on Instructional Support. There were 20 coded comments offering suggestions about the content, curriculum, or instruction. Commenters offered advice to the teacher looking for project ideas on water safety and sanitation, the advice included studying about the water issues in Flint, Michigan, reading *A Long Walk to Water*, and building simple water filters (Phase 3, Case 20). A teacher looking to minimize cheating during remote learning was given several tips. The commenters suggested the teacher create open book assessments with higher level questions, encourage students to work together in pairs to solve problems, and asking students for their personal thoughts (Phase 3, Case 1). A teacher looking for ways to engage students during hybrid learning was advised to "open the chat during the discussion so kids can respond both ways" (Phase 3, Case 2).

Comments Suggesting an App, Tool, or Website for Instructional Support. Thirty-six comments were identified for suggesting an application, tool, or website to support instruction. A teacher posted a request for strategies "to keep kids engaged throughout a lesson" (Phase 3, Case 2) and was offered several tools and applications to check out. Commenters suggested integrating Padlet, Jamboard, breakout rooms, Flipgrid, Whiteboard.fi, and the Verso app. In addition to the applications, commenters also pointed the poster to a Facebook page specifically for high school teachers and an article "Back to School 2020: Building Community for Connection and Learning" from the Facing History website (Phase 3, Case 2).

The English Language teacher looking for online resources to assist high school students with very limited English was offered many ideas. Within the comments, ideas included Rosetta Stone, BrainPop ELL, CommonLit, and Duolingo applications (Phase 3, Case 15). Commenters suggested several websites for the poster to reference. The sites included links to "twinkl" and "Teachers Pay Teachers" for teaching resources. Additionally, commenters suggested websites

such as "8 Online EAL Resources Every Teacher Needs to Bookmark" and Read Theory (Phase 3, Case 15). Through the comments, teachers were able to share their experience and ideas to support each other.

Technology Support

During Phase 3, there were seven identified posts that were requesting technical support and 80 comments providing technology support. The 80 comments were divided into 63 comments offering advice and 17 comments suggesting an application, tool, or website to support the technology question. There were zero comments offering further conversation and assistance on technology support outside of the Facebook post.

Technology Support - Needs. In Phase 3, Zoom and Google Meet video conferencing applications were the primary technology issues posted on the Global Educator Collective. Seven posts were identified for seeking technology support and five of the posts wanted support with either Zoom or Meet. Two of the five posts were having specific connection issues with Meet and Zoom. One teacher within a hybrid learning environment posted "the f2f (face to face) students are struggling to all connect on zoom simultaneously in the same room. The connection lags badly, especially during a lesson that involves screen sharing" (Phase 3, Case 10). Another teacher noted students were being kicked out of Meet as more individuals joined the call and was looking for suggestions, the teacher posting noted "I start remote teaching soon so this is freaking me out" (Phase 3, Case 17).

Another poster shared they were home quarantining due to a COVID exposure and noted "the plan is that I Zoom from home to my student who will log into Zoom and will be monitored by a sub. Any tips or recommendations?" (Phase 3, Case 19). A teacher looked to the Global Educator Collective Facebook page for help troubleshooting why their first graders were having

issues using the Google Meet link. The teacher shared "everyone can get into the first meeting, but as we go through the day, when some students click the link, it tells them they can't join" (Phase 3, Case 3). One of the two posts that were not connected to video conferencing was a request for support with enabling guardians in Google Classroom. The teachers shared I "have tried just all of the directions I can find and enable all settings but I'm clearly missing something" (Phase 3, Case 16).

Comments Offering Advice on Technology Support. There were 63 identified comments offering advice with technology support. A teacher posted they were having problems activating guardians within Google Classroom and several commenters offered suggestions. One commenter shared "tell your admins that they need to add faculty to the teachers' group in google. This is a common oversight but important before teachers can add guardians. Many Gadmins forget this part" (Phase 3, Case 16). After advising the poster to check settings within the Google Suite for Education admin panel, the poster was advised to start a chat session with Google support (Phase 3, Case 16). The teacher that posted issues with their Internet connection at home was provided many suggestions from the commenters. The comments included adding a mesh Wi-Fi extender to improve the Internet connection; upgrading their modem; checking the CPU usage on the Chromebook; and clearing the device's cache (Phase 3, Case 17). Additionally, the teacher that was seeking suggestions for Zooming into the classroom was offered a variety of ideas. Multiple commenters suggested that the substitute teacher project the teacher onto the classroom's display screen, so all the in-person students were not individually connecting to Zoom. A commenter shared "we taped a webcam to the wall so I can see everyone at their desks" (Phase 3, Case 19). Other commenters suggested that all the students should

connect to Zoom, mute themselves and use headphones to eliminate feedback (Phase 3, Case 19).

Comments Suggesting an Apps, Tools, and Websites for Technology Support. There were 17 comments identified for suggesting an application, tool, or website to help troubleshoot a technology question. For the teacher that was dealing with in person students having issues while connecting to Zoom in the classroom, the commenters suggested that the substitute project the teacher's Zoom connection through the classroom projector and to use a snowball microphone to hear the students in the classroom (Phase 3, Case 10). A math teacher wanted to share the screen so students could see her working through a problem, the commenters suggested Google's Jamboard tool and Whiteboard.fi, a free online whiteboard website. A commenter shared "I make a math Jamboard with problems, explanations, etc. I leave text boxes or space for them to put their work. They turn in their copy of the Jamboard for grading" (Phase 3, Case 9). All seven of the teachers that posted a question seeking technology support received tips and suggestions from the commenters.

Key Findings from Phase 3

Phase 3 presented the data from August 2020 through March 2021. Phase 3 represented much of the 2020-2021 school year as schools and teachers looked for a return to in-person learning, while meeting the needs of some learners to continue distance learning. Within Phase 3, there were a few key findings from the 344 coded posts and comments. Managing the classroom became a higher need for teachers during Phase 3. Also, the difficulty in managing classes when physically divided or hybrid learning environments increased. Within hybrid classrooms, technical challenges with video conferencing were more challenging when the teacher was remote. Teachers, especially those in virtual learning environments, struggled to

keep students engaged and looked for ideas to change things up. Finally, there were very few comments on how teachers were feeling.

Phase 4: April – December 2021

Phase 4 reports data from the selected 20 posts between April 2021 – December 2021 and represented a period of transition back to in person learning as restrictions from the COVID-19 pandemic eased. The 20 posts with associated comments resulted in 231 coded passages grouped into four categories representing the teaching and learning environment; classroom management support; instructional support; and technology support. Figure 8 displays the frequency distribution of the total 231 coded posts and comments within Phase 4.

Figure 8

Frequency Distribution of Codes for Phase 4
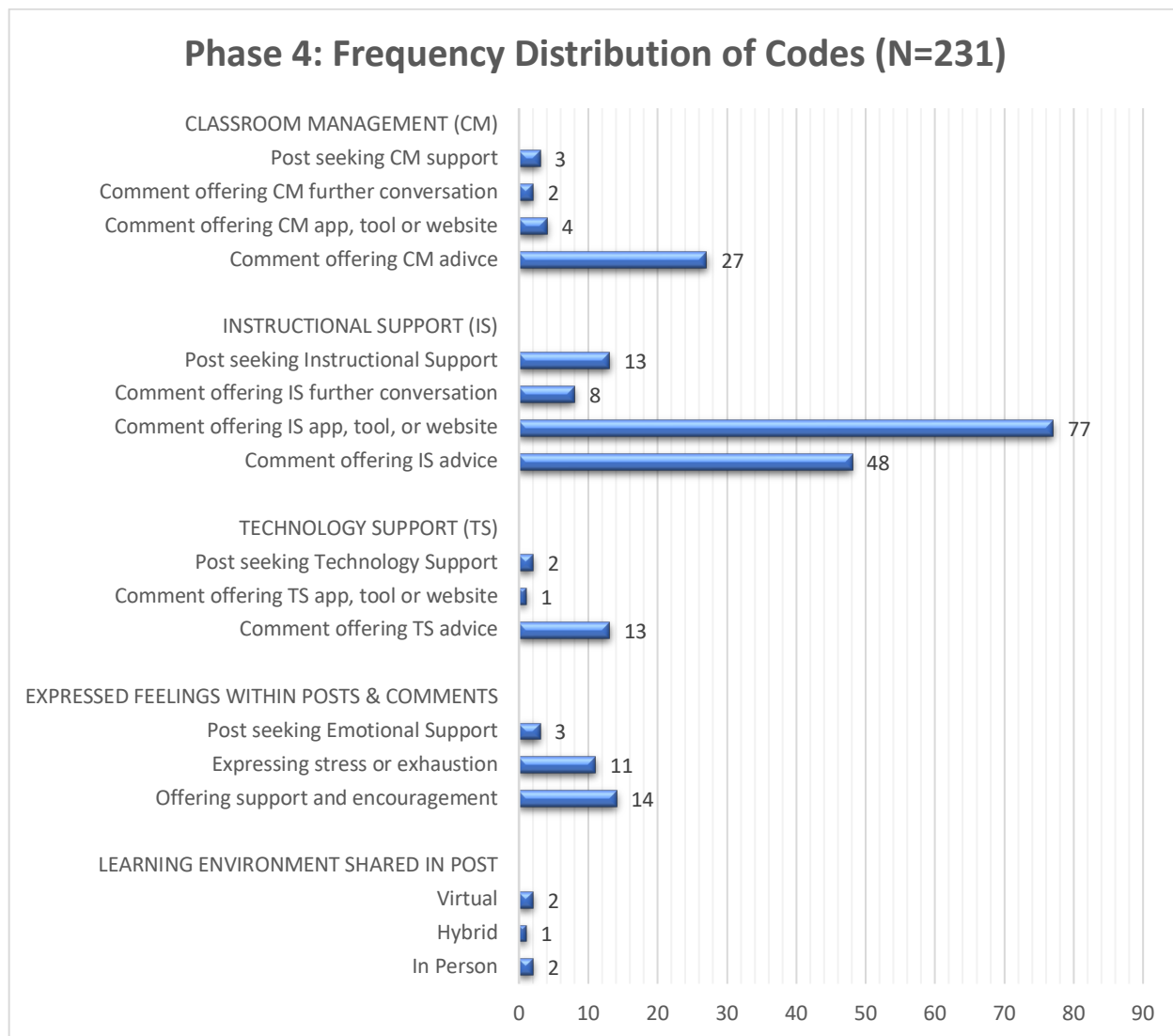
Phase 4: Frequency Distribution of Codes (N=231)

Teaching and Learning Environment

The teaching and learning environment encompassed posts and comments about how teachers were feeling and whether they were teaching in person, hybrid, or virtually.

Posts by Teachers Seeking Support with the Learning Environment. Within Phase 4, only five of the selected 20 posts commented on the learning environment. Of the five posts that

mentioned the learning environment, two teachers reported teaching in-person, two indicated teaching virtually and one reported hybrid teaching.

The two posts from teachers with in-person learning environments were looking for support to help students transition back to in-person learning. In Phase 4, Case 4, a primary grade teacher was seeking a lesson to help student understand how we learn. The poster noted "my new class have been online for 18 months and have forgotten how to be active learners. They are so passive and not retaining information" (Phase 4, Case 4). The second post about the in-person learning environment was from a teacher hoping to find other schools that have incorporated "What I need" or WIN time to provide interventions for students (Phase 4, Case 7).

There was only one post seeking support with the hybrid learning environment. A high school foreign language teacher was about to returned to in-person learning five days a week but needed to "include zoom-and-room synchronous activities/methods for those few students who remain fully remote" (Phase 4, Case 1).

During Phase 4, two teachers were seeking support with the virtual learning environment. In Phase 4, Case 17, a teacher was looking for ideas from other schools that were offering an online program in which classes met four days a week and one day for enrichment and extension activities. The second post about the virtual learning environment was from a teacher that was assigned a new grade level at a digital academy. As teachers were preparing to enter their second full school year of the COVID-19 pandemic, there were less posts about the learning environment in Phase 4.

Posts and Comments on How Teachers Felt. During Phase 4, there were three posts and 25 comments made teachers expressing an emotional response. Table 11 shows the number

of posts and comments expressing feeling down, joy or success, or offering support. There were no posts or comments expressing a sense of joy or success within Phase 4.

Table 11

Comments and Posts of How Teachers were Feeling during Phase 4

Feelings expressed during Phase 4 within posts and comments	Number of instances
Post seeking emotional support or advice	3
Expressing concern, stress, or exhaustion	11
Offering emotional support, encouragement, or positive thoughts	14

The difficulty of teaching during the COVID-19 pandemic was shown through the posts and comments seeking emotional support. In Phase 4, Case 14, a teacher expressed that it was the toughest year of their teaching career and was asking "what supports have been put in place to help teachers and students transition back to 'normal'?" While commenters offered support, including "sending love to your life raft" (Phase 4, Case 14), other commenters shared similar sentiments. A commenter shared "it's horrible! I love teaching; I hate how I feel 😔" and another noted "I'm having the worst year ever … starting this week I am taking sick days as needed for mental health" (Phase 4, Case 14). In Phase 4, Case 5, a teacher posted that they were feeling burnt out and was seeking suggestions. Commenters offered advice, including "be kind to yourself. We tend to live our lives around our teaching" and "look into the book *Onward*. It is meant to address teacher burnout" (Phase 4, Case 5). Another commenter shared "I think the pandemic has made many people consciously or subconsciously reevaluate. Teaching is a demanding job with poor to mediocre pay. The political climate is not friendly to teachers. What worked in the classroom pre-pandemic doesn't work now" (Phase 4, Case 5).

In Phase 4, Case 6, a kindergarten teacher posted that students were struggling with skills and working in small groups, the teacher was feeling overwhelmed. Commenters were extremely supportive in trying to boost up the teacher. One commenter noted "Give yourself a break – meet the children where they are and teach for growth, not a window that fits all students" (Phase 4, Case 6). Other commenters shared "be kind to yourself! I'm sure it is smoother than it feels" and "hang in there and meet them where they are" (Phase 4, Case 6). Another commenter reminded the kindergarten teacher to "take a deep breath... Relax. I'm sure you're doing really, really great...It's been a really tough couple of years. The kids will get better with time" (Phase 4, Case 6). During Phase 4 of the COVID-19 pandemic, teachers were tired.

Classroom Management Support

During Phase 4 of the COVID-19 pandemic, most schools had returned to in-person learning there were only three identified posts and 33 associated comments seeking classroom management support. The 33 comments on managing the classroom were broken down into 27 comments offering advice, four comments suggesting a website or application, and two comments offering further conversation outside of the Global Educator Collective Facebook page.

Post Asking for Classroom Management Support. Of three posts from teachers seeking support in managing the classroom, two were looking for suggestions on integrating new schedules. In Phase 4, Case 17, a teacher was looking for other schools that were using an online schedule with four days of online instruction and one day for intervention, enrichment, and planning time. Another teacher, in Phase 4, Case 7, was looking to add "What I need" time within their schedule to offer extension and intervention opportunities for students. The third post on managing the classroom was from a kindergarten teacher that wanted students to begin

writings their own sentences, but asked "how you find time to do all of this? I just feel so overwhelmed and that we are behind this year" (Phase 4, Case 5). Teachers continued to seek support from their greater community within the Global Educator Collective Facebook page.

Comments Offering Advice on Classroom Management. There were 27 comments offering suggestions or advice on managing the classroom during Phase 4. In response to the teacher that posted seeking advice on setting up "what I need" (WIN) time, the commenters offered several suggestions. A teacher shared that at their school students "we stayed with the same groupings and intervention groups for like 4-6weeks, then we had a data day to bucket kids again" (Phase 4, Case 7). One commenter noted that "your team will need to prioritize by setting goals based on essential learning targets. The groupings during WIN should be determined based on their need in relation to a specific learning target" (Phase 4, Case 7). Another teacher shared their personal experience with "the ESL, SPED, and other departments supported grade level WIN time in addition to their other supports. So, if students were pulled out or received push in support, this was in addition to WIN" (Phase 4 Case 7).

Commenters offered advice to the teacher that was seeking a schedule change for their online school to four days of instruction and one day for planning and extension activities (Phase 4, Case 17). Teachers that had experienced a similar schedule offered their own perspective, including "unfortunately, most students did nothing on Mondays. The teachers, however planned and met all day and reclaimed our weekends and evenings" (Phase 4, Case 17). Another commenter noted that the results were mixed for their integration of a four-day instruction week and shared "we don't have data, but some teachers and students used Fridays as it had been envisioned. Others not so much. Some parents complained" (Phase 4, Case 17).

Comments Suggesting an App, Tool, or Website for Classroom Management. Only four comments suggesting applications or websites to support managing the classroom were identified in Phase 4. The suggestions included Whiteboard.chat, Pear Deck, Microsoft Teams, Canvas, and OneNote.

Comments Offering a Further Conversation for Classroom Management. There were two comments offering to continue the discussion on managing the classroom outside of the Facebook page and they were both associated with the same post. A teacher was looking for schools that offered four days of online instruction and one day for intervention, enrichment and planning time (Phase 4, Case 17). Both commenters noted that their schools used a similar schedule the previous year and suggested they send a private message for more details.

Instructional Support

Teachers used the Global Educator Collective Facebook page to share ideas and support on their instruction, curriculum, and content. During Phase 4, there were 13 posts from teachers seeking instructional support and 130 comments that offered suggestions. The 130 comments were divided into 48 comments offering advice, 77 comments suggesting a website or application, and 8 comments offering further conversation outside of the Facebook page.

Posts on Instructional Support. There were 13 posts seeking instructional support from teachers seeking support with curriculum and managing instruction. Two teachers posted seeking materials for language arts resources to target advanced students. In Phase 4, Case 11, a teacher was looking for ideas and resources to teach an advanced language arts class to middle school students, while in Phase 4, Case 12, a fifth-grade teacher wanted sources to challenge high readers. Another teacher was seeking suggestions for a structured reading program (Phase 4, Case 15). A primary grade teacher asked "does anyone have a lesson for primary aged

students about how we learn? My new class have been online for 18 months and have forgotten how to be active learners" (Phase 4, Case 4). In Phase 4, Case 8, a teacher was placed at a new grade level and posted "is there anyone out there that teaches 4th grade exclusively online? Our district is rolling out a digital academy next year and has given us no direction on expectations" (Phase 4, Case 8). Additionally, a poster was seeking recommendations of educational applications for toddler aged children (Phase 4, Case 9).

There were also posts seeking support with managing instruction. In Phase 4, Case 1, a high school foreign language teacher wanted strategies for teaching in person with a few students connecting through Zoom. A poster looked for a form "to use at the beginning of the year as a 'get to know you' but includes chosen pronouns, identity, etc." (Phase 4, Case 18). Another teacher that created his own gradebook in Google Sheets wanted suggestions on how the data could be shared and viewed by students (Phase 4, Case 19).

Comments Offering Advice on Instructional Support. Forty-eight comments providing instructional advice and suggestions were made in Phase 4. To the teacher seeking resources for an advanced language arts course, the commenters suggested a themed book study and the College Board's Pre-AP program (Phase 4, Case 11). Multiple commenters shared their own surveys to the teacher that was looking for a beginning of the year survey that allowed students in indicate their pronouns and identity (Phase 4, Case 18). In response to the poster that create a gradebook in Google Sheets and was looking for how to allow students to see only their own grades, a commenter suggested to "create a sheet for each student and use import range from the master sheet. The student then has view access only to their grade and no one else's" (Phase 4, Case 19). Another commenter suggested adding "a numeric identifier field I.e., student

id number that only they know you can hide the name field and share the sheet (I also usually do reverse ABC order to mix it up)" (Phase 4, Case 19).

Comments Suggesting an App, Tool, or Website for Instructional Support. Within Phase 4, commenters suggested 77 applications, tools or websites that would support the instructional program. For the foreign language teacher most students in person and a few connecting through Zoom, the commenters suggested the teacher make sure all the content is web based and use Google Tools, Pear Deck and Nearpod (Phase 4, Case 1). CommonLit, Readworks, NewsELA, and Epic were suggested by commenters to the teacher that was seeking resources to challenge high readers (Phase 4, Case 12). In response to a poster that was seeking advice on Lexia, commenters suggested a variety of tools, including Jolly Phonics, Sonday System, Rave-O, Leveled Literacy Intervention, and Phonics for Reading (Phase 4, Case 15). To support a teacher that wanted to set up digital portfolios, the commenters suggested using Google Sites, Seesaw, Pixton, Adobe Spark, and Book Creator (Phase 4, Case 20). Many commenters offered suggestions to the poster seeking toddler aged educational applications. The applications included: ABC Mouse, Teach Your Mouse to Read, Toca Boca, Duck Duck Moose, Scratch Jr. and Starfall (Phase 4, Case 9).

Comments Offering Further Conversation for Instructional Support. There were eight comments offering to continue the discussion on managing the classroom outside of the Global Educators Collective page. Within Phase 4, Case 18, a teacher was looking for a survey "as a 'get to know you' but includes chosen pronouns, identity, etc." Three teachers shared comments and offered to share surveys they use in their classrooms. One commenter noted, "It'll take some time to dig it up! I'll try to get it to you tomorrow, but please nudge me if I don't!" (Phase 4, Case 18).

Another teacher posted their district was starting a digital academy and they were assigned to teacher fourth grade; the teacher was seeking direction to start planning the year. A few commenters offered to extend the conversation off the Facebook page and one commenter shared "I've taught 4th for the last four years and have done mostly online since the pandemic started— I'm also in CA and would be happy to share resources/chat" (Phase 4, Case 8).

Technology Support

During Phase 4, there were two codded posts that were requesting technical support and 14 associated comments. Of the 14 comments providing technology support, 13 comments were offering advice, one comment suggested a webpage, and zero comments offering further conversation outside of the Facebook post.

Posts Seeking Technology Support. In Phase 4, there were two identified posts seeking technology support from the Global Educator Collective community. In Phase 4, Case 10, a teacher had an interactive whiteboard installed and wanted advice integrating the new tool. The second post seeking technology support was from a teacher whose school shifted from Google Classroom to Schoology. The teacher was seeking support on the Schoology application, the teacher wanted to "give comments and feedback on assignments AS kids were working on them – not after they were finished" (Phase 4, Case 16).

Comments Offering Advice on Technology Support. There were 13 comments offering advice on the two posts seeking technology support. For the teacher looking for ideas to integrate their new interactive whiteboard, a few suggestions were offered by commenters. One commenter shared that they put their lessons into "flip charts and embed everything I need for the lesson" (Phase 4, Case 10). Another commenter shared how they use it to model writing out math equations, then save the pages as a pdf to post on Google Classroom (Phase 4, Case 10).

Several commenters offered advice to the teacher that posted seeking technology support on the shift from Google Classroom to Schoology. While commenters noted feedback could only be given after the assignment was turned in and "unfortunately Schoology and Google Classroom do not play well together" (Phase 4, Case 16), others offered a work around. Commenters shared that assigning work through Schoology's Google Assignment App allowed teachers to "see if they (students) have opened it and you can see the work they have done and are doing. You can comment in Google to any portion of the document" (Phase 4, Case 16). Another commenter noted "yup, this is the way – but in my experience it's been a clunky integration" (Phase 4, Case 16).

Comments Suggesting an Apps, Tools, and Websites for Technology Support. There was only one identified comment suggesting a website to address a technology support question. For the teacher looking to give feedback as students were working on assignments within Schoology, a commenter shared a link to a webpage "Using the Google Drive Assignments App" from Schoology support. The website offered a work around to allow the teacher to provide feedback while students are working on assignments.

Key Findings from Phase 4

Phase 4 presented the data from April - December 2021that represented a return to in person learning as restrictions from the COVID-19 pandemic eased. Within Phase 4, there were a few key findings from the 231coded posts and comments. The pandemic took a toll on teachers and there was an increase in feeling exhausted. One teacher noted "this was the toughest year of my teaching career" (Phase 4, Case 14). Additionally, there was a decrease in the number of comments within Phase 4, the reduction of engagement occurred as the COVID-19

pandemic wore into its second full school year. Teachers were trying to transition away from the pandemic and find consistency back in their classrooms.

Chapter Summation

A detailed report of findings of the selected posts and comments from the Global Educator Collective Facebook page were presented. The findings included reports from each of the four phases within the COVID-19 pandemic and included findings on the teaching and learning environment, classroom management support, instructional support, and technology support. Chapter Five will provide discussion of the implications of the research including study conclusions and recommendations.

Chapter Five: Study Conclusion and Implications

This chapter presents a discussion of the key findings within this exploratory case study that investigated how the COVID-19 pandemic led teachers to seek a community and support within the Global Educator Collective Facebook group. The chapter opens with a summary overview of the study's issues and framework, as well as the theoretical foundation. An overview of the methods, a discussion of the thematic key findings, and study conclusions are presented. The chapter concludes with recommendations for practice, suggestions for future research, and the study's limitations and internal validity.

Study Issues and Significance

In the Spring of 2020, over 1.2 billion students were affected by the emergency school closures caused by the COVID-19 pandemic (Li & Lalani, 2020). The purpose of this exploratory case study was to investigate how teachers used the Global Educator Collective Facebook group as a community of support and resources amid the emergency school closures and transition back to in person learning during the COVID-19 pandemic. The primary issue was how teachers supported each other to teach through the emergency school closures and learning environment shifts during the 2019-2020, 2020-2021, and 2021-2022 school years. This study serves to better understand how a Facebook community of teachers was able to offer teaching assistance and support to each other through the COVID-19 pandemic. It is important to reflect on the experiences that teachers encountered with the disruption to the learning environment and determine what can be learned from their experiences to benefit education structures for the future, which makes this study timely and important.

Before the COVID-19 pandemic, online learning opportunities were limited and primarily available at the college level (Peachey, 2017; Baum & McPherson, 2019). The

emergency school closures forced classrooms at all grade levels to shift to distance instruction and learning. The sudden shift to online learning created an immediate disruption within education as schools confronted setting up virtual learning opportunities for kindergarten to college level students. After the initial struggle of ensuring students had access to devices and a reliable Internet connection, schools hastily began providing virtual instruction and teachers were forced to transition to teaching online with little preparation or training. The rapid expansion and innovation in technology learning applications and tools required teachers to learn how to use the new resources (Li & Lalani, 2020; Darling-Hammond et al., 2020). It is important to explore how teachers sought support to learn and integrate the new applications required by online learning and teaching. The Global Educator Collective Facebook group grew from teachers trying to support each other through the transition to online learning. This study is significant because it provides an understanding of the struggles and issues that teachers faced during the COVID-19 pandemic as teachers faced emergency school closures with a sudden shift to virtual learning and then a transition to hybrid or in person teaching and learning. Additionally, the wide reach of social media and drawing on the knowledge of fellow teachers around the world may offer benefits beyond the emergency school closures and COVOD-19 pandemic.

Teaching is not an easy profession and retaining educators has been challenging for schools (Straus, 2017). The shift in instructional methods to online teaching increased demands on teachers to change their instructional practices. Online teaching increased the stress among teachers, as many questioned remaining in the teaching profession (Rodriguez-Delgado et al., 2021). Through the exploration of the posts and associated comments made by teachers on the Global Educator Collective Facebook page, this study is highlighting how teachers were feeling

during the COVID-19 pandemic and may offer ideas for schools and districts to help better support and retain teachers.

Theoretical Foundation

The literature review explored the advancement of learning through communities of practice. A community of practice is a social learning theory in which connections and learning occur through participation in groups with others that have similar interests (Lave & Wenger, 1991; and Webber, 2016; Wenger, 1998). Communities of practice have three key elements or characteristics that establish a social structure with "a community of mutual engagement, a negotiated enterprise, and a repertoire of negotiated resources accumulated over time" (Wenger, 1998, p. 126). The community guides the practice in which members create a shared repertoire, in which members create resources and ideas to enhance the goals of the community (Wenger, 1998). Through this study, the shared repertoire or domain was transitioning to online learning during the COVID-19 pandemic; the community of mutual engagement was the Global Educator Collective Facebook group; and the practice was represented through the comments of advice, support and encouragement that were offered to teachers that posted on the group's Facebook page.

Methods

The exploratory case study design was selected and the data for the study came from existing artifacts on the Global Educator Collective Facebook group page. The central guiding research question for this exploratory case study was: How did the virtual space Global Educator Collaborative Facebook group support teachers as they adapted to distance learning instruction amid emergency school closures caused by the COVID-19 pandemic?

The two sub-questions included:

1. What technology challenges emerged with the shift to distance learning instruction?

2. How does the Global Educator Collective Facebook page create a sense of community and how does it represent Wenger's (1998, 2000) characteristics for a community of practice?

The artifacts were the posts and associated comments made by teachers on the Facebook page. Qualitative data was used to allow a holistic exploration of the Global Educator Collective group. Through a stratified, two-step sampling process, a total of 80 existing artifacts were selected as a representative sample of the existing artifacts on the Global Educator Collective Facebook page. The artifacts were written and posted on the Facebook page between February 2020 through December 2021, which spanned across four phases and reflected different time periods of the COVID-19 pandemic's impact on schools. A thematic analysis of the selected posts and associated comments was conducted to code and analyze the data.

Key Findings

The emergency school closures pandemic and shift to virtual teaching caused by the COVID-19 was difficult on teachers. The community of educators within the Global Educator Collective Facebook group leaned on each other and the group's Facebook page became a forum to post questions and gain advice. Four phases of the COVID-19 pandemic and their impact on teachers were defined: Phase 1 spanned from February to March 2020; Phase 2 extended from April to July of 2020; Phase 3 covered from August 2020 to March 2021; and Phase 4 extended from April to December 2021. Within each phase, the exploration of the artifacts focused on four broad categories of the teaching and learning environment, classroom management support, instructional support, and technology support.

The emergency school closures were unprecedented and the transition to distance learning was challenging for teachers. While virtual learning existed prior to the COVID-19 pandemic, it was not widespread and primarily available only at the college level (Peachey, 2017; Baum & McPherson, 2019). For many teachers, their first experience with online learning and teaching was during the COVID-19 pandemic. Teachers needed support and while schools and districts worked to provide professional development and training on instructional methods and tools, many teachers looked for assistance through online teaching forums like Facebook's Global Educator Collective group. The findings of this study focus on supporting teachers through the emergency school closures with teaching, technology, and emotional support. As educators' needs changed over throughout the COVID-19 pandemic, trends were evident across the four phases focused on within this study.

Teaching Support. The transition to virtual learning required teachers to adapt their instructional methods and learn a variety of new technology-based applications and skills. The research findings of this study presented clear evidence that teachers needed support transitioning their instructional and management methods throughout the COVID-19 pandemic. Many teachers were forced to transition from in person to virtual learning and then back to in person instruction with COVID restrictions and/or hybrid teaching. Through the Global Educator Collective, teachers were able to find support with their instruction and managing the classroom. Of the 80 posts that were selected as artifacts within this study, 56 posts or 70% of posts included questions about instruction or managing the classroom. Considering all of the 1320 coded posts and comments, 904 or 68% of all coded posts and comments were about instruction and classroom management. Figure 9 and Figure 10 display the frequency

distribution of codes for instructional and classroom management support across all four phases of this study.

Figure 9

Frequency Distribution of Codes for Instructional Support Across All Four Phases
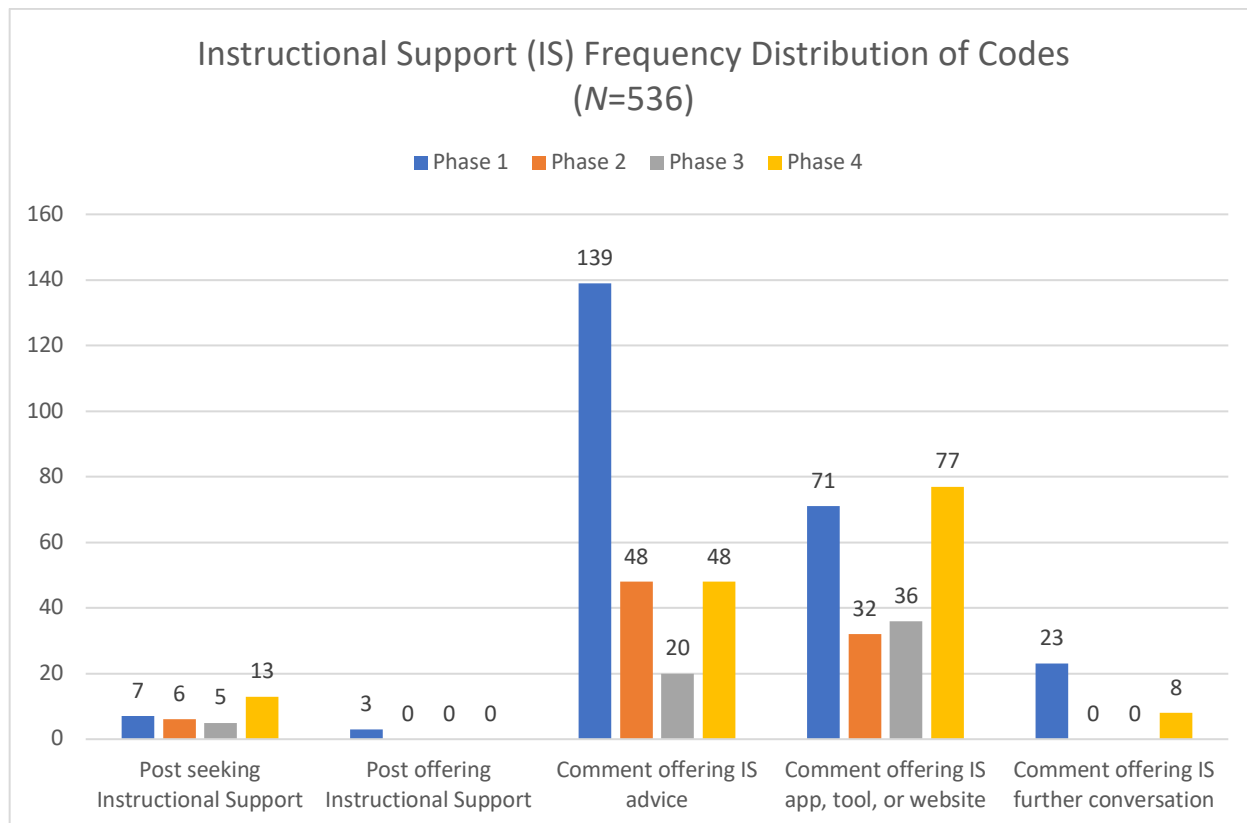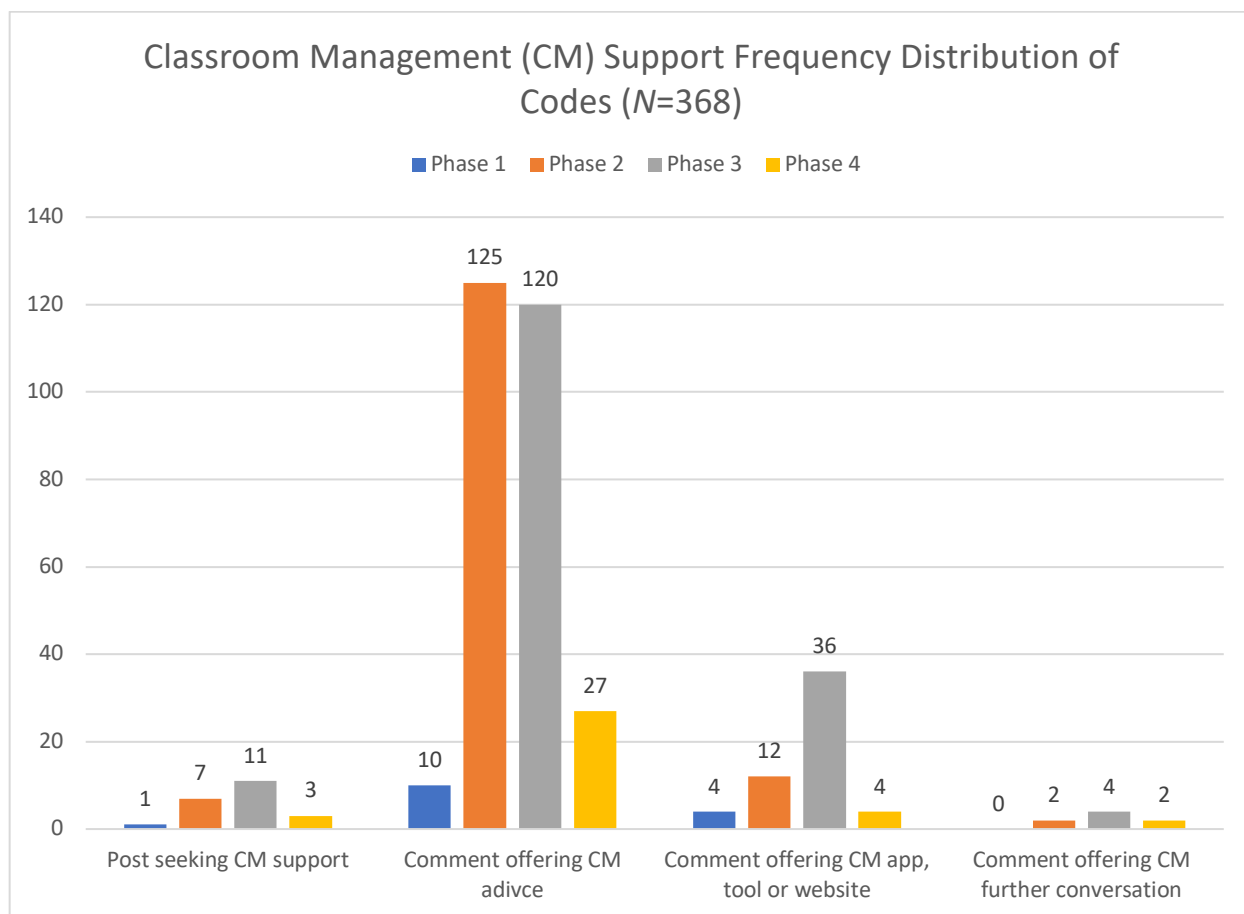

Instructional Support (IS) Frequency Distribution of Codes (*N*=536)

Figure 10

Frequency Distribution of Codes for Classroom Management Support Across All Four Phases

Classroom Management (CM) Support Frequency Distribution of Codes (*N*=368)

Both figures of the instructional and classroom management support codes highlight an increased number of posts in phases 3 and 4. The request for greater support in the phases 3 and 4 may reflect the adapting of learning environments as schools tried to return to in person learning while adhering to social distancing as well as meeting needs of families that wanted to continue distance learning through hybrid and virtual class options. Figure 11 displays the frequency distribution of coded posts that indicated in person, virtual, and hybrid learning environments across all four phases. The addition and increase starting in phase 2 of hybrid

learning brought additional challenges to the learning environment and in turn impacted the classroom teachers' instructional and management needs.

Figure 11

Frequency Distribution of Codes for Learning Environment Across All Four Phases

Learning Environment Shared in Post (*N*=52)
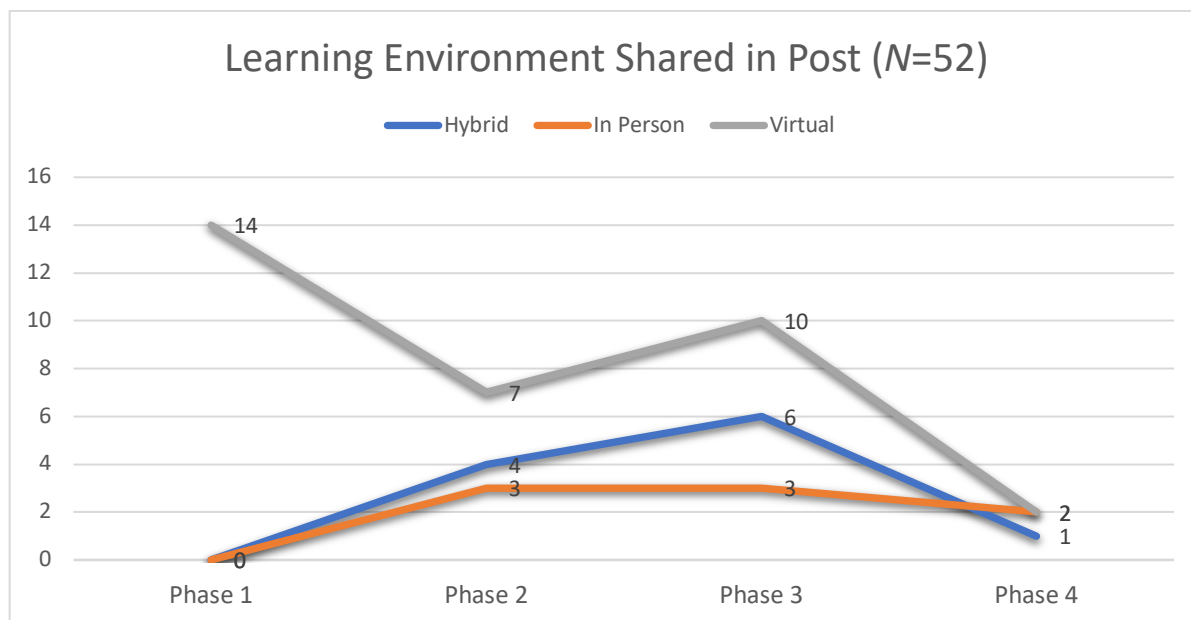
In Phase 1, Case 9, a teacher concluded their post with #EducationIsATeamSport, the hashtag is a good representation of how teachers banded together to help each other during the COVID-19 pandemic. Figures 9 and 10 exhibit the high frequency of comments offering advice or applications to benefit other teachers, which reinforces that teachers in the Global Educator Collective group want to help each other to be successful. Cruickshank et al. (2003) indicated a similar sentiment in which effective teachers are knowledgeable about their subject matter, while also supportive and caring.

Technology Support. In addition to teaching support, teachers also used the Global Educator Collective group for technology support. Figure 12 displays the frequency distribution of codes for technology support across all for phases of this study. Both the need and offer of

technology support was consistent through the first three phases of this study, before dipping in phase 4. The 228 coded posts and comments on technology represented 17% of the 1320 coded passages within this study. While the integration of technology tools and application was paramount in the shifting of learning environments over the COVID-19 pandemic, the fact that teaching support was a greater need than technology support may reflect that many teachers received professional development and training in technology tools and applications from their schools and districts.

Figure 12

Frequency Distribution of Codes for Technology Support Across All Four Phases

**Technology Support (TS) Frequency Distribution of Codes (*N*=228)**
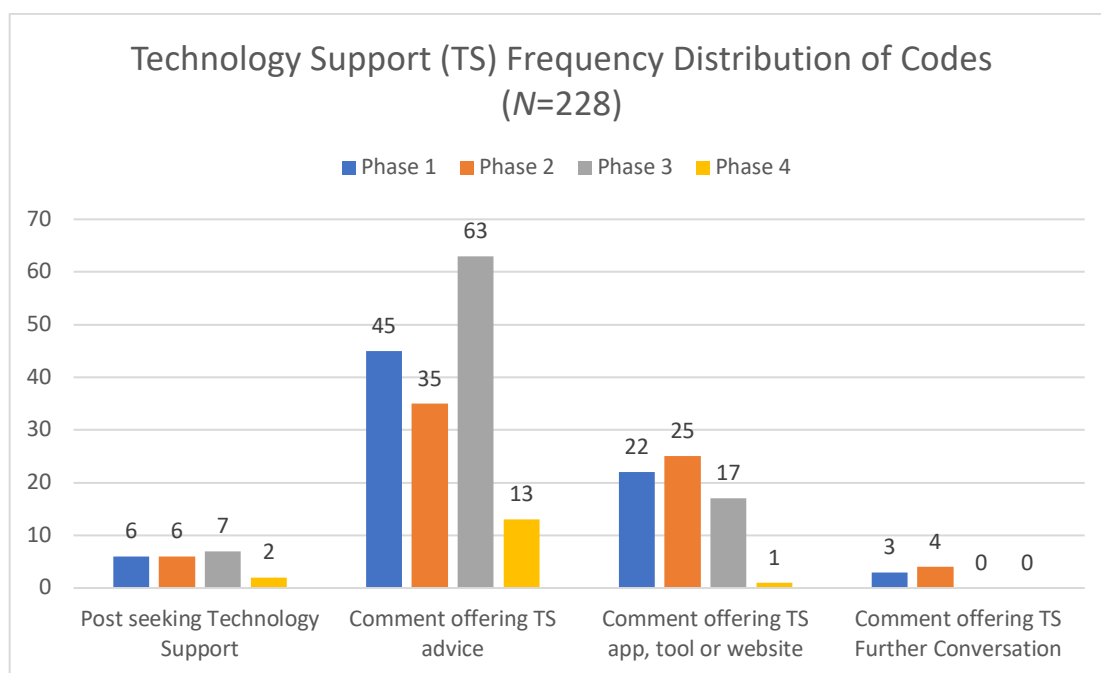
Emotional Support: The COVID-19 pandemic impacted teachers, students, and families. The emergency school closures forced a change in how learning and teaching occurred, it required a greater sense of adaptability. While online learning provided convenience and flexibility for students and teachers, it also was isolating and made it more difficult to build

classroom relationships (Baum & McPherson, 2019; Peachey, 2017; Protopsaltis & Baum, 2019). Figure 13 presents the frequency distribution of the expressed feeling within the coded posts and comments across all four phases of this study.

Figure 13

Frequency Distribution of Expressed Feelings within Posts and Comments Across All Four Phases
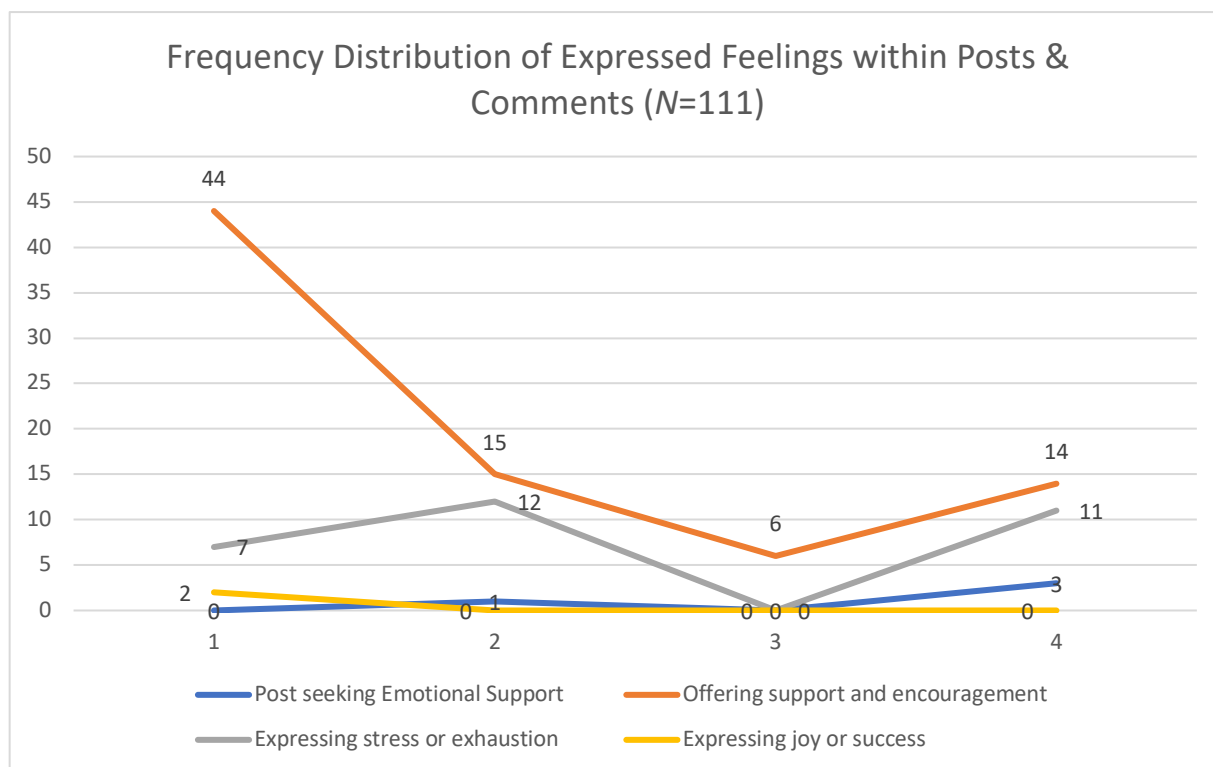
While there only four posts of teachers asking for emotional support, all four posts were sharing a sense of exhaustion and feeling worn out as a result of teaching through the COVID-19 pandemic. Within the comments, some teachers reiterated the sense of exhaustion with "it's horrible! I love teaching; I hate how I feel 😣" and another noted "I'm having the worst year ever … starting this week I am taking sick days as needed for mental health" (Phase 4, Case 14). Others used the comments for supporting and cheering on fellow teachers with kind words,

including "sending love to your life raft" (Phase 4, Case 14). Teaching during the COVID-19 pandemic was challenging and educators were able to share their thoughts and emotions with the Global Educator Collective community.

Study Conclusions

Three conclusions were drawn from the research findings of the selected Facebook posts and comments from the Global Educator Collective group. The implications for both scholarship and practice are presented.

Conclusion 1. Teachers embraced a virtual community of educators sharing the experiences of COVID-19 emergency school closures. The research findings affirm the conclusion that teachers embraced the virtual community of educators on the Global Educator Collective Facebook group by sharing and supporting each other through the emergency school closures.

Through the Global Educator Collective, teachers found others that were going through similar experiences and were able to learn from each other. The Facebook community of the Global Educator Collective reinforced Bandura's (1971) belief that learning extended beyond direct experience and included a social element in which learning could occur through observation, modeling, and social interactions. Communities of practice provide opportunities for learning, as part of a social process that is based on the historical and cultural context of the practice (Farnsworth et al., 2016). The practice is shaped and directed by the community; members of the community create a shared enterprise by negotiating the conditions, resources, and boundaries of the practice (Wenger, 1998). The Global Educator Collective grew from a shared need of transitioning to online teaching amid emergency school closures. Through the virtual community, teachers shared information and ideas which enabled teachers of the

community to find value in their interactions and develop tools or lessons to enhance instruction and learning in their own classrooms.

Within a community of 125,000 teachers, each member was able to set their own level of involvement. Through the Facebook page, teachers were able to participate by posting a question, responding with a comment, inserting an emoji reaction, or observing and reading through the posts and comments to gain pieces of the conversation that were relevant to their learning and needs. By engaging within the Global Educator Collective page, teachers were united through the shifts in learning and instruction caused by the emergency school closures and felt like they were working collaboratively. While every member of the group did not post a question or comment on the Facebook page, the reach of the page extended well beyond the active members to all that may have read and applied a suggestion into their own teaching practice. Figure 14 displays a note from the admin of the Global Educator Collective Facebook group that acknowledged and welcome the "silent" members of the community.

Through the virtual Facebook group, teachers found a collective community of support. The findings within this study suggest that online communities are beneficial for educators to share ideas and content. Online communities offer educators a broad reach to others with a similar interest. The Global Educator Collective Facebook group is still active and over 100,000 teachers are still members. While the number of daily posts and comments have decreased, it still has a reach to a wide audience of educators that are invested in enhancing their instructional practices.

Figure 14

Post from the Admin of the Global Educator Collective Facebook page (Artifact E)
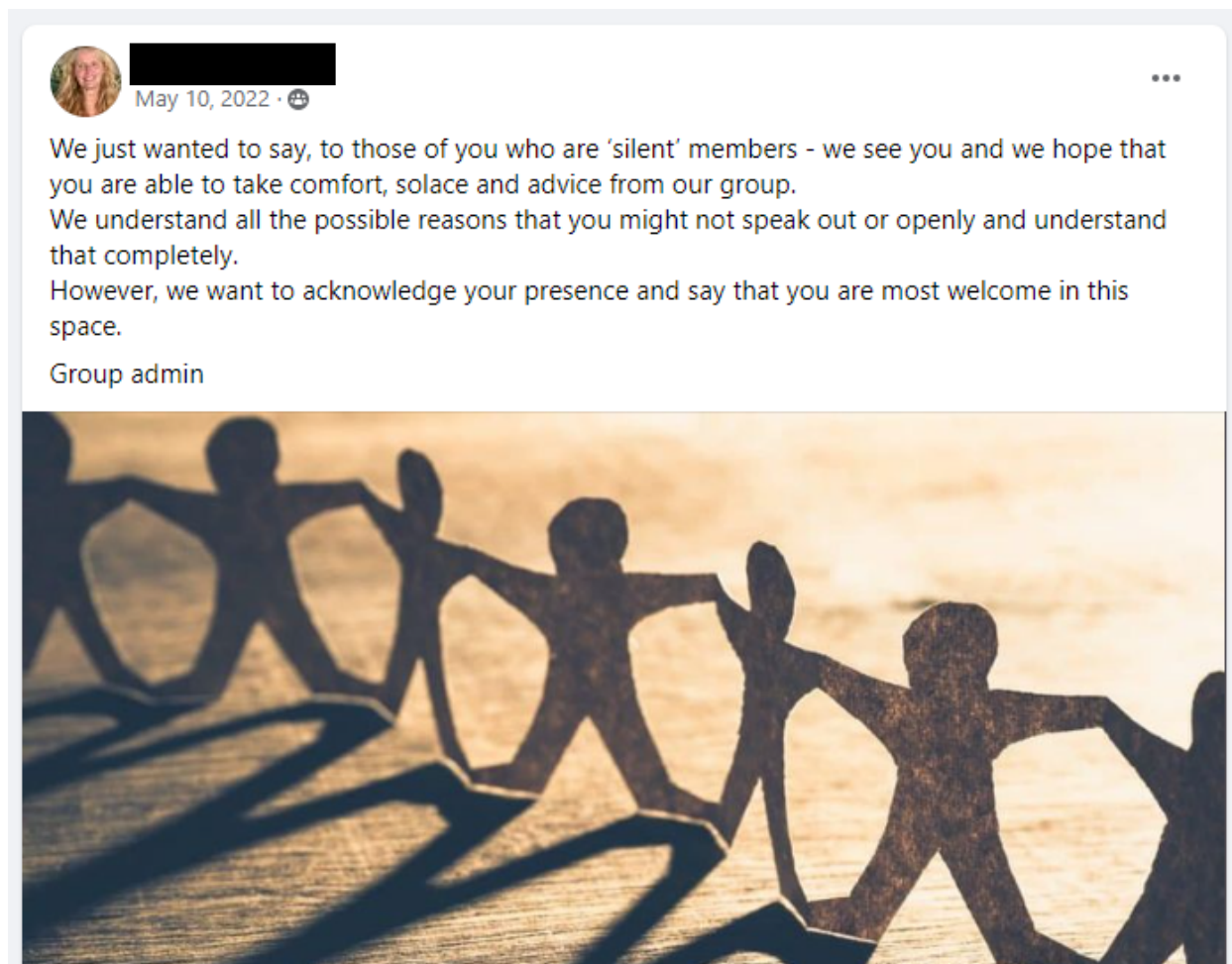
Note. We just wanted to say, to those of you who are 'silent' members [Status update], by Durward, K. (2022). Global Educator Collective, Facebook. https://www.facebook.com/groups/Temporaryschoolclosuresupport. In the public domain.

Conclusion 2. The sharing of ideas within the virtual community provided an expansive array of alternatives for technologically driven instructional practices. The research findings affirm the conclusion that the sharing of ideas within the Global Educator Collective Facebook group allowed teachers to learn new tools and applications that could be integrated into their instruction.

As educators, it is important to be lifelong learners and enhance instructional practices. Ongoing professional development and training is necessary to learn new tools and strategies for effective teaching (Darling-Hammond & Richardson, 2009; Peachey, 2017; Plair, 2008; Zoch et al., 2016). Zoch et al. (2016) stressed that professional development is valuable because it allows teachers to have time to model ideas and collaborate with their fellow educators. Ali et al. (2021) highlighted the need for professional development, particularly teacher mentoring and coaching, to support teachers with the skills to implement and transition to distance teaching. While teachers received formalized professional development and support from their local school or districts, the Facebook community offered an additional opportunity for teachers to learn about technology tools that could benefit their instruction and curricular content. Through the threads of posts and associated comments on the Global Educator Collective Facebook page, teachers were able to learn from each other's experiences and engage with questions while exploring different instructional tools or ideas that could be integrated into their individual classroom. As an example, in Phase 1, Case 2 a teacher was about to begin virtual teaching and asked the community for guidelines or rules to help their students use Google Meet. The teacher posting the question was able to learn from the experiences of other teachers that had already introduced video conferencing to their students.

Online teaching required teachers to increase their media literacy and ability to integrate digital tools. The International Society of Technology in Education (ISTE) believes that technology can transform learning and teaching; the organization works with educators and school organizations to improve learning opportunities for students through the guidance of the ISTE standards. In addition to teaching the curriculum, Peachey (2017) found online teachers needed to help students with technical issues, while attempting to prevent a student's technical

issues from disrupting the lesson. Peachey (2017) highlighted teachers can be successful at online teaching by adapting their teaching strategies. Carrier and Nye (2017) noted that the role of the teacher shifts from primarily instructing to also guiding and facilitating with online teaching. An example from this study is a teacher that was concerned with assessing students virtually (Phase 1, Case 12). With the shift to virtual learning, teachers needed to rethink instruction and even how they were assessing students. Members of the community offered a variety of suggestions and ideas.

The integration of technology tools and applications provides richer learning opportunities that increase student engagement and are better able to meet the individual needs of students.   The implications of this study support the need to provide teachers with the training to integrating new technology applications and tools. Additionally, this study supports educators using online social networking environments to share ideas and learn from fellow educators. Through the Global Educator Collective, teachers were able to learn about new technology tools or ideas for integrating applications into their instruction.

Conclusion 3. The Global Educator Collective virtual community demonstrated sharing of ideas among educators, however many of the characteristics of Wenger's (1998, 2000) community of practice model were not sustained or even evident. The Global Educator Collective Facebook group demonstrated several characteristics of Wenger's (1998, 2000) community of practice model, but it was missing key factors to make it a formal community of practice.

The Facebook community displayed some of Wenger's (1998) characteristics of a community of practice. The Global Educator Collective did not fully characterize a community of practice with "a community of mutual engagement, a negotiated enterprise, and a repertoire of

negotiated resources accumulated over time" (Wenger, 1998, p. 126). Nemec and LaMaster (2014) described five factors for a successful community of practice; the factors included focus, leadership, input, commitment, and open forums. The Global Educator Collective group displayed two of the factors for a successful community of practice. Within the Global Educator Collective, the focus was responding to the instructional shifts caused by the emergency school closures. The Facebook group's leadership was represented by the group founders and volunteer moderators. With over 125,000 members, the Global Educator Collective leadership team did not have the capacity to foster personal relationships that increased member commitment and collaboration toward increasing the goal of the group.

The sharing and developing of knowledge for an area of practice was a factor of a successful community of practice (Nemac & LaMaster, 2014). While there was significant sharing of ideas and suggestions throughout the Global Educator Collective Facebook page, it did not lead to the negotiation and development of documents or products for the collective membership. Instead, teachers adapted ideas and suggestions they learned through into their own practice and curriculum. Within the Global Educator Collective, there was not a sense of "knowing what others know, what they can do, and how they can contribute to an enterprise" (Wenger, 1998, p. 125-126). The inability to meet and have a fluid conversation to get to know fellow members did not allow the community to develop shared stories or local lore.

An active core group is foundational to building commitment within a community of practice. Wenger et al. (2002) believed members of a community of practice learn and advance the practice through participation. Within a community, there are different levels of participation including the core, active and peripheral groups. The core group represent the top 10% of the group and they lead and maintain the progress of the community; the active group represent 15%

to 20% of the community and are regular participants within the community; and the peripheral group represents 65%-70% of the community and are infrequent contributors (Wenger et al., 2002). Within the Global Educator Collective, the group administrators and moderators took on the role of the core group, but the researcher was not able to distinguish members of the active or peripheral groups. Additionally, the group moderators were reviewing and not accepting all posts, so participation may have been higher. Also, the Global Educator Collective had a membership of over 125,000 and levels of participation did not meet the ratios that were outlined by Wenger. Since this study analyzed a sample of the posts and de-identified the individuals that posted or made comments, the researcher was unable to determine the activity of individual members. While the Global Educator Collective was an active community that supported teachers through the challenges of the COVID-19 pandemic, a widespread commitment toward the group was not evident.

The final factor for successful communities of practice are open forums. A community of practice needs different forums to increase the exchange of ideas and build collaboration (Nemec & LaMaster, 2014). The building of relationships and shared ideas among members was not evident. The Facebook community did not allow for fluid dialogue. A shared way of engaging in doing things together was not evident; posting, commenting, or using an emoji reaction on the Facebook page was the shared form of engagement within the group. Through the Facebook page, there was a quick flow of information and innovation. Members could post problems and members would quickly begin to quickly comment with suggestions and advice. The Global Educator Collective provided an open forum for sharing ideas, but greater connections and collaboration is needed for a developed community of practice.

To help determine if the Global Educator Collective Facebook group was a community of practice, several codes were created that support the characteristics of a community of practice. The codes that identified comments which offered an application, tool, or website on classroom management, instructional and technology support included passages in which a commenter offered instructional or content materials. Through the sharing of materials, the researcher hoped it could highlight an exchange of ideas and development of materials within the community of practice. There were very few coded passages of a commenter offering materials. In Phase 1, Case 1, a preschool teacher shared a Google folder with three weeks of learning activities for other members to copy and use within their classrooms. Additionally, in Phase 2, Case 6, a robotics teacher offered to share several lessons, but the sharing did not promote additional conversation or collaboration among the educators on the post.

As a means of evaluating the development of a community, the researcher established codes on furthering the conversation outside of the Facebook page. While there were 46 coded passages across the four phases, the researcher was not able to identify if members took the commenter up on the offer to private message or contact them off the Facebook page. Figure 15 displays the frequency of comments that offered to extend the conversation off the Global Educator Collective Facebook page across all four phases. The development of a community was not evident from the coded passages offering further conversation.

Figure 15

Frequency Distribution of Comments that Offered to Extend a Conversation Off the Facebook

Page

Comments that Offered to Continue the Conversation off the Facebook Page (*N*=46)
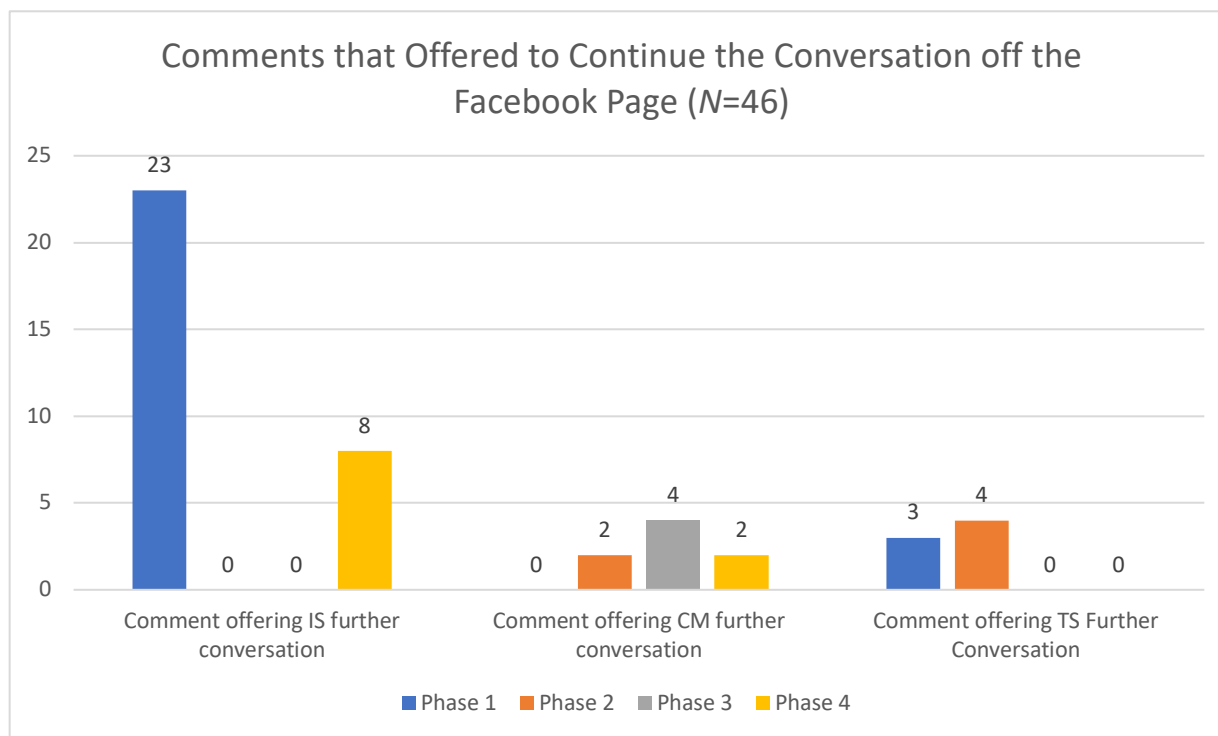
This case study of the Global Educator Collective Facebook group showed the value of a global online community for teachers to share ideas and learn from each other during the emergency school closures. Even though the group is not a formal community of practice, it provided a virtual community for teachers that needed assistance in managing their classroom, instruction, and new technology tools throughout the COVID-19 pandemic. The Global Educator Collective built a community of educators that worked together to support each other during the difficult transition to online teaching during the COVID-19 pandemic.

Recommendations for Practice

The findings of this study reinforced the value of social media, particularly Facebook, to bring individuals together and provide a forum for sharing ideas. As the emergency school closures began in February of 2020, teachers began looking outside of their local school communities for assistance. The Global Educator Collective group sprung to life from two international teachers that believed the global community on Facebook of teachers could band together to help each other. Within weeks of the group's creation and as emergency school closures spread across the globe, the membership of the Global Educator Collective exploded to over 125,000 educators. Social media has the power to bring large groups together to quickly engage in dialogue on a topic of interest. Educational groups and communities are already using Facebook and other social media sites to share ideas and bring individuals together, but this study shows that a groups' activity is related to supporting the needs of the individual members. Social networking groups are beneficial to bring educators together for collaborating and advancing a shared goal.

The COVID-19 pandemic and emergency school closures forced teachers to increase the use of technology. Through the posts and associated comments within this study, it was evident that many teachers needed more instructional and technology training and access to support than their local schools were providing teachers. Fortunately, the Global Educator Collective group created a forum for teachers to ask questions and share ideas. This study highlights the need for teachers to have access to ongoing professional development and training that addressed advancements in instructional practices and technology tools to improve learning.

As schools have returned to in person learning, it is important to consider what practices and strategies that were employed during distance learning should continue. For example, the increased integration of applications and online tools allowed teachers to better engage students

and increase learning opportunities. Google Classroom is another example of a tool that was beneficial in distance learning, but are teachers continuing to use Google Classroom within their in-person classrooms? This researcher believes that teachers and schools should evaluate the tools that enhanced learning during the pandemic and determine if the benefits would continue with in person learning too. While the emergency school closures were difficult, there were some practices that can continue to benefit learning and instruction.

Recommendations for Future Research

Since the emergency school closures and shift to virtual learning greatly impacted the 2019-2020 and 2020-2021 school years for teachers and students, it is an important topic for additional research. The COVID-19 pandemic strained teachers and further research to better understand the lasting impact on teacher training, changes in classroom management and instructional skills needed for teaching, and the emotional state of teachers. Even prior to the pandemic, the teaching profession faced a hiring shortage, and it would be interesting to see how the COVID-19 pandemic has impacted enrollment within teacher education programs. The COVID-19 pandemic impacted instruction and learning across two academic years, it will be import to conduct further research understand if there are any lasting effects on student achievement.

Additionally, the researcher recommends a deeper dive into the administrator and moderators of Global Educator Collective Facebook group. The researcher believes it is worthwhile to determine if the administrators and moderators are a better reflection of Wenger's community of practice. This study did not delve into the reactions that were made on posts or comments, but it may be interesting for future research to understand the true engagement of the page more accurately.

Limitations and Study Internal Validity

Case study designs involve setting boundaries. While 80 artifacts with posts and associated comments over the four phases provided a large data set, it is not known how well the selected artifacts fully represent the Global Educator Collective Facebook group. The artifacts selected did meet specific criteria. The researcher used key word searches within the Global Educator Collective Facebook group page to narrow down and select possible posts. The posts within the search results were determined because of Facebook's algorithms. The selected artifacts of posts and associated comments were rich with experiences from teachers.

Another limitation was that the researcher was not a group administrator of the Global Educator Collective Facebook group and did not have access to the page's analytics and insights as generated by Facebook. These analytics may have provided other additional insights about the educators' experiences.

The internal validity of the study was ensured through several measures. Reflexive practices were used to minimize the effects of researcher bias, and included a journal to document field notes, ideas, and observations. A two-stage sampling process to ensure the inclusion of artifacts across the full 22-month time period of the Covid-19 emergency school closures supports that the selected artifacts were representative of the Facebook group. A rigorous thematic analysis conducted with HyperRESEARCH qualitative software and a peer reviewer, ensured a transparent and reliable interpretation process. Finally, the thematic analysis and interpretation of artifacts from each of the four phases were triangulated to develop the conclusions of the study.

Closing Thoughts

The Global Educator Collective Facebook group served an important need for teachers throughout the emergency school closures and COVID-19 pandemic. The group was started to share ideas among educators teaching at international schools in Asia and as the COVID-19 pandemic spread, so did the Facebook community. The rapid rise of the Global Educator Collective Facebook community shows the true character of educators. First, teachers are hard-working and willing to seek out information that will benefit their teaching. Second, teachers want the best for their students. Through the Global Educator Collective, teachers were looking for ideas and instructional strategies to engage their students. Finally, teachers were supportive and took the time to answer questions, share ideas, and offer advice to their follow teachers. Members of the Global Educator Collective were able to connect with each other through similar experiences in transitioning to distance learning.

This study grew from a desire to better understand the experiences of other educators during the COVID-19 pandemic. As the technology director of a school district, I vividly remember the beginning of the emergency school closures within my district. I remember the frantic feelings and many meetings with our small technology team trying to figure out how we were going to train teachers over two days before distance learning began. Over the course of the two professional development days, we trained teachers to use *Zoom* and *Meet* video conferencing software, establish a Google classroom, and how to use *Loom* and *Screencastify* to record their screen. I was also fielding a multitude of questions on troubleshooting technology devices and tools from teachers, students, and parents. While the first few weeks of distance learning were the hardest, I was constantly impressed at the ongoing flexibility and adaptability of our teachers. In working with a teacher to troubleshoot an issue with *Meet*, the teacher shared

a tip they found on the Global Educator Collective Facebook page. In joining the group and looking for ideas of how other schools and districts were doing around the world were adjusting to distance learning, I was able to gain insight and wisdom from educators that were going through the same struggles as I saw our teachers going through. The Global Educator Collective group provided a forum to learn about available applications, gain troubleshooting tips, and connect with other teachers that were facing similar struggles. Through the Global Educator Collective group, I was able to see the value of a community of educators working together and recommended the Facebook group as a resource to our teachers.

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APPENDIX

IRB Non-Human Subjects Approval

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

July 20, 2022

Protocol #: **72022**

Project Title: EXPLORATORY CASE STUDY of an ONLINE SOCIAL NETWORKING
COMMUNITY TO SUPPORT SHIFTING INSTRUCTIONAL PRACTICES DURING THE COVID-
19 PANDEMIC

Dear Maureen:

Thank you for submitting a "GPS IRB Non-Human Subjects Notification Form" for
*EXPLORATORY CASE STUDY of an ONLINE SOCIAL NETWORKING COMMUNITY
TO SUPPORT SHIFTING INSTRUCTIONAL PRACTICES DURING THE COVID-19 PANDEMIC*
project to Pepperdine University's Institutional Review Board (IRB) for review. The IRB has
reviewed your submitted form and all ancillary materials. Upon review, the IRB has determined
that the above titled project meets the requirements for *non-human subject research* under the
federal regulations 45 CFR 46.101 that govern the protection of human subjects.

Your research must be conducted according to the form that was submitted to the IRB. If
changes to the approved project occur, you will be required to submit *either* a new "GPS IRB
Non-Human Subjects Notification Form" or an IRB application via the eProtocol system
(httpw://irb.pepperdine.edu) to the Institutional Review Board.

A goal of the IRB is to prevent negative occurrences during any research study. However,
despite our best intent, unforeseen circumstances or events may arise during the research. If an
unexpected situation or adverse event happens during your investigation, please notify the IRB
as soon as possible. We will ask for a complete explanation of the event and your response.
Other actions also may be required depending on the nature of the event. Details regarding the
timeframe in which adverse events must be reported to the IRB and documenting the adverse
event can be found in the *Pepperdine University Protection of Human Participants in Research:
Policies and Procedures Manual* at https://community.pepperdine.edu/irb/policies/.

Please refer to the protocol number denoted above in all further communication or
correspondence related to this approval.

On behalf of the IRB, we wish you success in this scholarly pursuit.

Sincerely,

Institutional Review Board (IRB)
Pepperdine University