# The Challenges of Remote K–12 Education During the COVID-19 Pandemic: Differences by Grade Level

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**Abstract**
The transition to remote teaching in K–12 schools during the spring of 2020 as a result of the coronavirus pandemic (COVID-19) presented new challenges to teachers across the United States. This survey-based mixed methods study investigates these challenges, as well as differences by grade level, to better understand teachers' experiences remote teaching. A total of 604 teachers who had completed the survey were included in this study. Findings indicate that some challenges were experienced by teachers across grade levels, with common challenges including student engagement, adjusting curriculum to the remote format, and the loss of the personal connection of teaching. Differences were also found by grade level, with elementary teachers struggling more with varying attitudes of parents regarding remote learning and adjusting their curriculum to an online format, and secondary teachers more often reporting student engagement and a general feeling of being lost or unsupported in their teaching as challenges. These challenges provide important context around the experience of remote teaching, as well as what supports teachers need to continue remote teaching.

*Keywords*: remote teaching, challenges of teaching, teaching during a pandemic, online teaching

The coronavirus disease (COVID-19) pandemic shifted teaching in the United States to an entirely new format in the spring of 2020. This unprecedented national change presented a major adjustment for teachers and students. Some school districts only gave teachers a weekend to prepare, expecting them to restructure their lessons to a fully remote—which most often meant fully online—format (Herold, 2020). This shift alone was a major challenge for teachers, as was the following month and a half when many teachers taught remotely for the first time regardless of grade level or content area, while also living in a pandemic.

Teachers already face many challenges in their work when teaching in-person. Some of these challenges include handling disruptive classroom behaviors, feeling socially isolated, and struggling to balance work and family responsibilities (Bullough, 1987; Coates & Thoresen, 1978: Rosenholtz, 1989). While a remote format may lessen some of these challenges, others may be exacerbated by it. For example, social isolation would likely intensify with the switch to teaching remotely, while handling disruptive classroom behaviors may lessen when away from the physical classroom. The switch to remote, as well as the context of teaching during a global pandemic, would likely present teachers with a range of unique new challenges and difficulties because this situation is unfamiliar to many teachers and the change happened quickly.

Teachers have informally discussed their experiences of teaching remotely, with some teachers reporting more challenges than others (Rae, 2020). The current study seeks to explore teacher experiences, specifically looking at differences by grade level to understand how teachers may be experiencing this situation differently. Grade level will be divided into elementary (early childhood through 5th grade) and secondary (6th through 12th grade). Comparing these groups will likely provide a better understanding of what challenges are most prevalent for elementary and secondary teachers, and consequently, what supports these teachers need most.

The current study sought to explore teacher experiences with remote teaching in spring 2020 to understand what unique challenges teachers of different education levels and content areas may have experienced by answering the following research questions:
1. What challenges do teachers report facing in implementing remote learning?
2. How do these challenges differ by grade level (elementary versus secondary)?

# Literature Review
## The Stresses and Challenges of Teaching
Teaching is a stressful job, often demanding long hours and intense emotional strain (Lavian, 2012). Teachers often end up doing more than outlined in their contracts. For example, they may work more hours or take on additional responsibilities outside of those for which they initially signed up (Organization for Economic Co-operation and Development, 2019). They also face challenges related to classroom behavior, conflicts with district and school administration, and a lack of supervisor support (Burke, 1996). In addition, many teachers feel isolated socially and struggle to manage both work and home responsibilities (Bullough, 1987; Coates & Thoresen, 1978). Teaching is also a consistently underpaid profession. With low starting salaries and frequent cuts to education funding across the United States, it is difficult to retain teachers in the profession (Gonzalez et al., 2008; Leachman et al., 2015).

As a result of all of these difficulties, teachers often experience higher levels of stress and burnout than other professions, as well as many mental health concerns (Ingersoll & Perda, 2014; Shin et al., 2013). Teachers often enter the profession believing in their ability to succeed at their

school and lose that feeling within the first year due to the high levels of stress (Lavian, 2012). Many teachers also report feeling exhausted and not engaged in their work, which contributes to the high burnout rate for teachers (American Federation of Teachers, 2017; Ingersoll & Perda, 2014; Gallup, 2013).

**Differences in Teaching Elementary and Secondary Courses**

Developmentally, elementary and secondary students have very different experiences, and teachers must adapt to the needs of the age level they teach (Epps & Smith, 1984; Hafen et al., 2012). Both students and teachers view these education levels differently, specifically perceiving the school culture of elementary school as less performance-focused and more task-focused than middle school (Midgley et al., 1995). Family perceptions are also different, with parents and teachers feeling more trust with each other at the elementary level than at the middle or high school level (Adams & Christenson, 2000).

The level of outside support that students at different grade levels receive may also be different. According to the Academic Communities of Engagement (ACE) framework, teachers must engage students by leveraging their personal and course community supports (Borup, Graham, West, Archambault, & Spring, 2020). The course community refers to those associated with the course, such as teachers, principals, and other school support staff. The personal community includes the people not involved in the course who may support the students, such as family members. A previous study found that, within an online learning environment, teachers struggled to support students due to the factors outside of their control (Borup et al., 2014). Grade level and age may also impact this dynamic and make it more or less difficult to keep students on track with their learning (Borup et al., 2020).

Studies that explore the differences in burnout and stress among elementary and secondary teachers have yielded conflicting results. One study found that elementary teachers reported feeling emotionally exhausted more often and experienced depersonalization, or disconnection from their life, more frequently in their work than secondary school teachers (Yavuz, 2009). A later study found that elementary and secondary teachers tend to feel similar levels of stress and burnout as a result of their job (Richards et al., 2016). Another study found that teachers who taught at multiple grade levels experienced more severe burnout than those that taught a single grade level (Bernhard, 2016).

**Teaching Remotely**

Although teaching remotely does not always mean teaching online, teachers most often used online platforms and systems to teach their students remotely (Lieberman, 2020). However, remote instruction is significantly different from online learning. In this study, "remote" is used to refer to the adapted lessons that teachers created as a result of the switch away from in-person learning. These lessons are not necessarily designed for online, but rather reformatted to work in the online format.

Research on teaching K–12 online has found that online instructors face unique challenges in their work. Larkin et al. (2016) found that online instructors struggled with inactive students, missing face-to-face student interactions, and workload. Another study found that online teachers struggled to draw lines between work and home, as working from home quickly erased these boundaries (Knott, 2014). Another study interviewed an online language teacher who also designed courses. The study reported that online teachers often experience the following challenges: few resources and trainings for teaching online, struggling to get students to collaborate with each other, and struggling to motivate students to engage with their lessons (De Paepe et al. 2018). In addition to lacking training and resources, many online teachers have

also reported not knowing how to use online platforms and not knowing where to go to learn more (Mupinga, 2005).

While many K–12 teachers may not feel adequately trained or supported to teach in online formats (Pulham & Graham, 2018), a vast body of research exists on successful online teaching practices (Marcus-Quinn & Hourigan, 2016). In fact, many trace online K–12 teaching practices back to 1991 (Barbour, 2013; Clark, 2013; Hu et al., 2019), with Arensen et al. (2019) reporting the first peer-reviewed journal article on the subject was published in 1996. Since then, many challenges related to online schooling have been identified (Barbour & Reeves, 2009), including equity and access issues with regard to the "digital divide" (Berge & Clark, 2005; Shank & Cotton, 2013) as well as issues related to student readiness, engagement, and retention (Barbour & Reeves, 2009; Cavanaugh et al., 2005; McLeod et al., 2005), with the initially pervasive belief that in order for K–12 students to be successful when physically separated from their teacher, students must be more autonomous and achievement-oriented than would be required to succeed in a face-to-face format (Wedemeyer, 1981). However, in the past 15 years, alternative design principles specific to virtual environments began to be identified (Barbour, 2007; Barbour & Reeves, 2009; Cooze & Barbour, 2005).

DiPietro et al. (2008) identified 37 best practices for online teaching, broken down into four categories, including general characteristics, classroom management, pedagogical strategies, and technology (Pulham & Graham, 2019). Also, Ferdig et al. (2009) published a review of best practices for online K–12 teaching. Since these initial efforts to identify best practices, online teaching and learning recommendations have only become more refined and distinct from face-to-face practices (Pulham & Graham, 2019). As the development of these competencies continues to expand, one thing is clear: successful online teaching is not a direct translation from face-to-face teaching. Rather, successful online teaching is a distinct form of teaching which requires instructional design distinct from face-to-face teaching (Pulham & Graham, 2019).

However, suddenly switching to an entirely remote format is different from choosing to teach online. At the onset of the COVID-19 pandemic, many teachers had never taught online before, and had to learn how to use the necessary technology to continue to teach in this modality (Heim, 2020). As mentioned previously, inequities in access to and understanding of how to use digital devices is referred to as the "digital divide" (Berge & Clark, 2005; Shank & Cotten, 2013). The digital divide is considered to have two levels of digital divide factors: access to technology (first level) and the ability to use technology (second level). This is applicable to both teachers and students in a remote setting, as many teachers had to learn how to navigate new technologies with few resources while also supporting students in learning about these technologies.

In addition to the teaching challenges introduced by remote or online instruction, teachers may also be struggling with the loss of the things they found enjoyable or meaningful that are unique to in-person instruction. Despite all the unique stressors and challenges of K–12 teaching, research has shown that the teachers who do stay in the profession tend to do so because of their desire and motivation to work directly with children (Watt & Richardson, 2007). Indeed, many teachers who persist in the profession assert that their primary motivator is interacting with and developing meaningful teacher-student relationships with their pupils (Lachlan et al., 2020). As a USA Today/Ipsos poll pointed out (Lardieri, 2020), many teachers feel that teaching remotely or through distance learning does not offer the same level of meaning or satisfaction as teaching in person, which could lead to increased burnout and attrition in the teacher workforce.

**Teaching During Crises**

One study looked into the experience of teachers who taught in-person during the 2009 H1N1 pandemic. Teachers reported feeling increased stress and anxiety about their new responsibilities and challenges (Howard & Howard, 2012). They feared for their own safety, as well as their students' safety, and struggled with being expected to be "infection control agents."

Research has also explored school communities after Hurricane Katrina. One study examined teacher experiences of teaching directly after the hurricane hit. Teachers indicated it was the most difficult semester they had ever experienced, as they had to manage their own stress and anxiety as well as the emotions that their students felt (Alvarez, 2010). They reported that the hurricane impacted students differently, with some students acting unpredictably under the increased stress. Other research demonstrated that after schools shut down due to Hurricane Katrina, only half of the teachers who had been dismissed had returned to the teaching profession two years later (Lincove et al., 2017), which could be interpreted as further evidence of the toll of teaching during and in the wake of a crisis.

Teaching under these conditions places increased pressure on teachers, who are responsible not only for their own wellbeing, but often take on the burden of worrying for all of their students. Some research has shown that people who work with children who have experienced trauma more often develop compassion fatigue (Conrad & Kellar-Geunther, 2006; Meyers & Cornille, 2002). We would especially anticipate this to be the case when teachers are also feeling taxed about their own safety and wellbeing, as well as the safety and wellbeing of their families and students.

**Emerging Research about the COVID-19 Pandemic**

Some research has started to come out of China on the impacts of the pandemic on K–12 education. Most of this research has focused on the most effective format for teaching rather than the experience of teachers during this time (Chen et al., 2020). For example, one study looked at the most effective format for teaching an online chemistry class, while another study explored whether live online teaching was more effective than pre-recorded materials at a middle school (Chen et al., 2020; Yao et al., 2020).

Research on remote learning has also started to emerge out of the United States. One study explored high school chemistry courses, finding that it was difficult for both students and teachers to engage with the online version of the course (Kelley, 2020). This was partially due to the loss of in-person labs, as all experiments and demonstrations had to be done over Zoom or through videos. Relatedly, another study found that university-level biology (specifically, ecology and evolution) courses had a sharp decrease in fieldwork, which was associated with decreased student learning outcomes and lower engagement in the remote version of the course from both students and faculty (Barton, 2020). Other hands-on topics similar to chemistry and biology may also be more difficult to teach remotely. Another study conducted interviews with elementary teachers about their remote learning experiences. Teachers indicated that they lacked resources for converting their lessons to an online format and that it was difficult to teach younger students online (Anderson & Hira, 2020).

Another study found that teachers across content areas were struggling to translate their lessons to a remote format and to figure out to evaluate student learning (Trust & Whalen, 2020). This was echoed in another study that found that both remote and hybrid learning were more difficult than in-person learning for teachers as well as students (Raes et al., 2020). Similarly, another study documented the process by which university instructors rapidly adapted their

course material from an in-person to a remote format, and how that process differed from the process of developing distance learning courses which were intended to be remote from the outset (Bryson & Andres, 2020).

Research into how teachers are experiencing remote teaching during the COVID-19 pandemic is currently emerging. One recent study examined the use and association of various coping strategies with psychological outcomes such as wellbeing and happiness for language teachers (MacIntyre et al., 2020). Using a close-ended survey with a list of hypothesized possible stressors, MacIntyre et al., 2020) were able to identify an assortment of stressors these language teachers were experiencing, including increased workload, worry about the health of family members, and loss of control at work, among others. While these findings provide an initial glimpse into the types of stressors and challenges language teachers faced when switching to remote teaching due to COVID-19, the potential list of stressors was created by the researchers, not by the participants. A more inductive approach using qualitative data from open-ended questions could provide a more in-depth understanding of the teacher experience. Furthermore, a direct comparison between elementary and secondary teachers' experiences during the COVID-19 pandemic has yet to be made.

# Method

This study sought to investigate the challenges that K–12 teachers experienced remote teaching during the COVID-19 pandemic in the spring of 2020. This mixed methods study used a concurrent, partially mixed, qualitative dominant approach (Leech & Onwuegbuzie, 2009), wherein the data were collected at the same time (concurrently); were mixed only at the interpretation stage (partially mixed); and the qualitative data were given more emphasis (qualitative dominant). Study approval was obtained from the institutional review board of the authors' institution.

**Participants**

After obtaining IRB approval, invitations to participate were emailed to 19,574 potential participants with an active teaching license in a single western state. Some of these email addresses were not functional, leading to 18,891 potential participants. Of this number, 831 participants completed the survey, resulting in a 0.04% response rate. While this is a low response rate, it was determined to be an adequate sample size due to the circumstances of collecting data during a pandemic. State licensure requirements did not explicitly require training in online teaching; although the licensure requirements did include training in using instructional technology, this was in reference to using the technology available when teaching face-to-face.

The sample was further narrowed to only include teachers who reported that they taught exclusively at the elementary or secondary level, as some teachers indicated that they taught at both. This narrowed the sample to 604 participants. Out of 603 participants who indicated their gender identity, 75.5% identified as female, 24.0% as male, and less than 1% identified as "other." Most of the sample identified as White (94.5%), while 1.5% identified as American Indian or Alaskan Native, 1.3% identified as Black or African American, and 1.0% identified as Asian. 8.9% of participants reported that they were of Hispanic, Latinx, or Spanish origin. The gender, ethnicity, and racial composition of the respondents is representative of the population to whom the survey was sent.

Participants also indicated what age range they fell into: 24% were between 18- to 34-year-olds, 27.5% were between 35- to 44-year-olds, 29.0% were between 45- to 54-year-olds, 17.4% were between 55- to 64-year-olds, and 2.0% were 65 or older. Years in the profession

ranged from 1 to 41 years with a mean of 15 years of experience. The majority of participants (58.3%) taught at the secondary level (sixth through twelfth grade), and the remaining 41.7% taught at the elementary level (early childhood through fifth grade). 81% taught core subjects (e.g., math, literacy, science) and the remaining 19.2% taught special subjects (e.g., art, music, drama).

**Procedure**

Email addresses were obtained for K–12 teachers in a western state through a public website. The survey was distributed via email and was administered through Research Electronic Data Capture (REDCap; Harris et al., 2009). REDCap is an online data capture tool for hosting surveys securely. Completing the survey took approximately 5 to10 minutes.

**Instruments**

Respondents were presented with six optional open-ended questions about their experiences with remote learning. Example questions include, "If you had to pick one advantage for the current remote teaching that you wanted to maintain in the future, what would that be?" and, "What else would you like us to know about your experiences with remote teaching?" For the purpose of this study, responses from the question, "What has been the biggest challenge with remote teaching?" were selected for further analysis in order to better understand what challenges teachers reported facing and how this may have differed by education level taught.

Two existing surveys were used to better understand teachers' quality of life and the challenges experienced during remote teaching. The Professional Quality of Life Scale (ProQOL5; Stamm, 2010) was administered to measure teachers' professional quality of life, which the ProQOL5 manual defines as "the quality one feels in relation to their work as a helper," which includes both the positive and negative aspects of their work. Results of these scales are reported elsewhere (Leech, Benzel, Gullett, & Haug, 2020). The ProQOL5 manual includes Cronbach alpha coefficients for reporting internal consistency using 1,289 respondents across multiple studies (Stamm, 2010). Although these scales were excluded from the current analysis, the alpha coefficients for the compassion satisfaction, burnout, and secondary trauma scale were 0.88, 0.75, and 0.81 respectively.

The EDUCAUSE DIY Survey Kit: Remote Work and Learning Experiences (EDUCAUSE, 2020) was administered to measure what resources and barriers teachers had or experienced. Results of the EDUCAUSE survey are also reported elsewhere (Leech, Gullett, Howland Cummings, & Haug, 2020). Participants were also asked several demographic questions about their content area, gender, race/ethnicity, age, and teaching experience. Because the EDUCAUSE DIY Survey Kit was designed at the onset of COVID-19 as a customizable survey template to gather feedback from communities, no formal reliability analyses have been conducted for this instrument (EDUCAUSE, 2020).

**Constant Comparison Analysis**

A constant comparison analysis was conducted using responses to the open-ended survey question, "What has been the biggest challenge with remote teaching?" This was done to see what themes emerged about the challenges of remote learning to better understand teachers' experiences of remote teaching. Constant comparison analysis was selected to analyze responses, as this method allows for the creation of overarching themes that emerge from the data (Corbin & Strauss, 2014).

Two of the authors coded these responses. This was done by first developing codes independently using 30 responses and then coming together to create codes from the independent coding and resolve any coding disputes. After this first meeting, both coders then independently coded 40 additional responses and compared their results. At this point, intercoder reliability was assessed; percent agreement (Miles & Huberman, 1994) was 64% and the average of Cohen's (1988) kappa for each code used was 0.80. The coders then met again to resolve discrepancies between codes and reach agreement about the use of codes. Then both coders independently coded 60 additional responses and compared their results. After this batch, percent agreement was 79% and the average of Cohen's kappa for each code used was 0.81. Although Miles and Huberman (1994) recommend reaching 80% agreement, the researchers felt that sufficient intercoder reliability had been achieved since kappa levels of 0.81 and above are considered "near perfect" agreement (Landis & Koch, 1977). Because Cohen's (1988) kappa considers the probability of reaching agreement by chance, this intercoder reliability statistic is thought to be more useful than simple percent agreement (Cohen, 1960; Hallgren, 2012; Lombard et al., 2002). After this, the remaining responses were divided between the two coders and coded independently.

After codes were developed and all responses coded, data were analyzed for the whole group of respondents and separately for elementary and secondary teachers to provide answers to the research questions.

# Results

Several overarching themes related to the challenges of remote teaching emerged from the constant comparison analysis. These themes are discussed more in-depth, along with specific quotes to exemplify each theme and the underlying codes. Differences are also discussed by education level (elementary versus secondary). The overall frequency of codes can be found in Table 1.

Table 1
*Frequency of All Codes, Overall and by Education Level*

| | Total | Elementary | Secondary | Difference | Effect size (φ) |
|---|---|---|---|---|---|
| Issues with engagement, participation, or attendance | 30.1% | 24.6% | 34.1% | 9.5%* | 0.10 |
| Lack of student motivation or accountability | 7.9% | 5.6% | 9.7% | 4.1% | |
| Loss of relationship/connection with students/people in general | 20.7% | 21.4% | 20.2% | -1.3% | |
| Difficultly adjusting curriculum or teaching practice to a remote setting OR remote learning isn't working as well | 12.9% | 16.7% | 10.2% | -6.4%* | 0.10 |
| Difficulties with communication or providing feedback (with students, parents, other staff) | 9.9% | 11.9% | 8.5% | -3.4% | |
| Difficulty accessing technology/internet teachers | 0.7% | 0.8% | 0.6% | -0.2% | |
| Difficulty using the available technology—teachers | 3.6% | 4.8% | 2.8% | -1.9% | |
| Difficulty accessing technology/internet—students and families | 3.3% | 4.4% | 2.6% | -1.8% | |
| Difficulty using the available technology—students and families | 3.0% | 4.0% | 2.3% | -1.7% | |
| The varying attitudes, abilities, and resources of some parents regarding remote learning | 5.6% | 10.7% | 2.0% | -8.7%*** | 0.19 |
| Concern about students with specific needs (e.g., students on IEPs, students with attention issues, etc.) | 4.3% | 5.2% | 3.7% | -1.5% | |
| Juggling home and work responsibilities, work/home boundary issues | 6.0% | 7.9% | 4.5% | -3.4% | |
| Additional teaching responsibilities/increased workload | 4.6% | 5.2% | 4.3% | -0.9% | |
| Feeling helpless, unsupported, and/or lost in my teaching, feeling ineffective | 3.0% | 1.2% | 4.3% | 3.1%* | 0.09 |

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

## Challenges with Student Engagement and Motivation

Many teachers struggled with issues related to students engaging. Teachers struggled with several different types of engagement, such as attendance, participation, and putting in effort. The frequency of codes pertaining to engagement can be found in Table 2.

Table 2
*Frequency of Codes Related to Student Engagement, Overall and by Education Level*

| | Issues with engagement, participation, or attendance | | Lack of student motivation or accountability | |
| --- | --- | --- | --- | --- |
| | **Frequency** | **% of $n$** | **Frequency** | **% of $n$** |
| Total ($n = 604$) | 182 | 30.1% | 48 | 7.9% |
| Secondary ($n = 352$) | 120 | 34.1% | 34 | 9.7% |
| Elementary ($n = 252$) | 62 | 24.6% | 14 | 5.6% |
| Difference between Secondary and Elementary | | 9.5%* | | 4.1% |

*$p < 0.05$, $\varphi = 0.10$

The most common challenge that teachers discussed was the struggle to get students to attend class and engage during class. This was seen in 182 (30.1%) of the responses. Teachers struggled to reach all of their students and to get all of their students to participate during class. For example, one teacher stated, "Connecting with students online. I hardly ever see my students even though I am available online every single day. I don't have the same relationship with them through a screen that I had in the classroom." Teachers often discussed providing students with opportunities to engage or get additional support but felt like students did not take advantage of these opportunities.

Some teachers also noted that students weren't able to engage, sometimes due to technological issues, other times because they didn't have an adult to help them get online. For instance, one teacher stated that their biggest challenge was, "getting little kids involved—they need support from parents and really can only review learning, we are having a hard time teaching them something novel." A higher percentage of secondary teachers (34.1%) reported that student engagement was a challenge than elementary teachers (24.6%). A chi-square test of association revealed that this difference was statistically significant ($\chi^2(1, 604) = 6.23$, $p < 0.05$) with an effect size of $\varphi = 0.10$, which is considered small (Cohen, 1988).

Forty-eight teachers (7.9%) brought up the challenge that students seemed to lack motivation, often attributing this to a lack of proper accountability structures to enforce engagement and participation. For example, one teacher described their biggest challenge:

Lack of student participation which I believe is in part driven by the fact that their grades cannot go down. If they are happy with their grade, then why do anything. Education is not happening for a large number of our students, and we are abdicating our responsibility to educate our students.

Due to the context of the pandemic, many requirements were loosened or removed, leading to some students not feeling the motivation to attend class or complete assignments. This challenge was also more prevalent at the secondary level, as 9.7% of secondary teachers mentioned it, compared to 5.6% of elementary teachers. A chi-square test of association approached statistical significance ($\chi^2(1, 604) = 3.38$, $p = 0.066$), so it is not clear if this difference between secondary and elementary teachers is due to chance or not.

**Challenges with Teaching in a Remote Format**

Another common type of challenge that teachers discussed was the challenge of teaching in a remote format. These challenges included struggling to adjust curriculum to a remote setting, feeling disconnected from students and colleagues, and struggling to communicate remotely with students, families, and other staff. The frequency of codes related to remote teaching can be found in Table 3.

Table 3
*Frequency of Codes Related to Remote Teaching, Overall and by Education Level*

| | Loss of relationship or connection with students/people in general | | Difficulty adjusting curriculum or teaching practice to a remote setting OR remote learning isn't working as well | | Difficulties with communication or providing feedback (with students, parents, other staff) | |
|---|---|---|---|---|---|---|
| | Frequency | % of *n* | Frequency | % of *n* | Frequency | % of *n* |
| Total (*n* = 604) | 125 | 20.7% | 78 | 12.9% | 60 | 9.9% |
| Secondary (*n* = 352) | 71 | 20.2% | 36 | 10.2% | 30 | 8.5% |
| Elementary (*n* = 252) | 54 | 21.4% | 42 | 16.7% | 30 | 11.9% |
| Differences between Secondary and Elementary | | -1.2% | | -6.5%* | | -3.4% |

*$p < 0.05$, φ = 0.10

A little over 20% of teachers struggled with feeling disconnected from other people. This most often was in reference to feeling disconnected from students, but sometimes referred to other school staff. For example, one teacher stated that their biggest challenge was, "missing the personal connection/worrying about students' mental health." Another teacher more broadly described struggling with feeling disconnected:

> The disconnection. As we all kind of knew inherently before about how talking on social media is not truly the same as talking in person (I don't actually have social media accounts). Now many of us are truly realizing that whether you tend to be more introverted or extroverted . . . we are social beings. I hate being stuck in one place and not getting to make my lessons involve some movement and excitement . . . I miss the effervescence of a classroom of kids working together. This is incredibly disconnected and the learning doesn't feel as authentic to them most of the time.

Teachers felt like the relationship part of teaching was missing from their work and that they were no longer connected to their students and colleagues in the same way. This challenge was brought up fairly consistently by elementary (21.4%) and secondary (20.2%) teachers. A chi-square test of association suggests that no true difference between elementary and secondary teachers exists in regard to experiencing this challenge ($\chi^2$ (1, 604) = 0.142, $p = 0.707$).

Seventy-eight teachers (12.9%) discussed the challenge of adjusting their lessons to remote teaching. Many teachers felt like it wasn't working as well as in-person teaching and that they could not do the same activities and assignments. For example, when describing their biggest challenge, one teacher stated, "Missing the daily hands-on work with my kindergarteners. I am unable to provide instant feedback to guide their learning and development. Loss of direct instruction with writing, small motor skills, social emotional skills, peer relations for students." Another teacher stated, "Figuring out how to adapt my lessons for online learning and figuring out what platform would work best to post my lessons. We were given lots of options from the district but had to explore each on our own and create it from scratch." Struggling to use the online technology to simulate in-person assignments was a challenge for teachers, particularly when they did not feel well supported to use these the provided platforms.

This challenge was discussed slightly more for elementary (16.7%) than secondary (10.2%). A chi-square test of association revealed that this difference was statistically significant ($\chi^2$ (1, 604) = 5.415, $p < 0.05$), which indicates that teaching elementary remotely may be more difficult to do remotely.

Another challenge related to remote teaching was the struggle of communicating with others, most notably families and students. This challenge was brought up by 60 (9.9%) teachers. Many teachers struggled to reach all families and students despite using a range of techniques. For example, one teacher stated, "[I] have to do more written interaction—emails, post responses, phone calls. [It takes] more time than . . . in person to do." They also felt like this was more time consuming, as they had to spend more time trying to contact families than during in-person learning.

Communicating feedback to students was also more difficult. One teacher described this challenge by stating, "Communication with my students is MUCH harder. In the classroom, if a student isn't understanding, I can just walk over and help them. Now, many things get in the way of communication and helping foster understanding." Rather than being able to give quick, in-the-moment feedback, teachers were resorting to emails and assignment comments that students may or may not see. Challenges with communication were brought up slightly more by elementary (11.9%) than secondary (8.5%); however, a chi-square test of association was not statistically significant ($\chi^2$ (1, 604) = 1.878, $p = 0.171$), so this observed difference between elementary teachers and secondary teachers may be due to chance.

Some teachers discussed struggles with technology, such as accessing the internet or using available technology. Although it might be anticipated that technology difficulties would be one of the more common challenges, it was brought up less frequently than many of the other challenges. The frequency of codes related to technology can be found in Table 4.

Table 4
*Frequency of Codes Related to Technology, Overall and by Education Level*

| | Difficulty accessing technology/ internet—teachers | | Difficulty using the available technology— teachers | | Difficulty accessing technology/ internet—students and families | | Difficulty using the available technology— students and families | |
|---|---|---|---|---|---|---|---|---|
| | Frequency | % of $n$ | Frequency | % of $n$ | Frequency | % of $n$ | Frequency | % of $n$ |
| Total ($n$ = 604) | 4 | 0.7% | 22 | 3.6% | 20 | 3.3% | 18 | 3.0% |
| Secondary ($n$ = 352) | 2 | 0.6% | 10 | 2.8% | 9 | 2.6% | 8 | 2.3% |
| Elementary ($n$ = 252) | 2 | 0.8% | 12 | 4.8% | 11 | 4.4% | 10 | 4.0% |
| | | -0.2% | | -2% | | -1.8% | | -1.7% |

Some teachers struggled to use the available technology to do remote teaching. Twenty-two teachers (3.6%) described challenges related to using online platforms to effectively design and implement remote lessons. For example, one teacher stated, "Adequate knowledge of, training with, and time for the programs and software that could make this easier or more beneficial. Especially related to student engagement." Teachers felt like they needed additional trainings and professional development with the programs available to them. A higher percentage of elementary teachers (4.8%) discussed this challenge than secondary (2.8%), but once again, a chi-square test of association was not statistically significant ($\chi^2$ (1, 604) = 1.544, $p$ = 0.214), suggesting that this difference may be due to chance. A less common challenge for teachers was accessing the internet, with only four teachers (0.7%) reporting that this was a challenge for them.

Conversely, twenty teachers (3.3%) reported that students or families struggled to access the internet, often having unreliable internet or no internet at all. Eighteen teachers (3%) reported that students or families struggled to use the available technology. They may have had reliable internet but did not know how to use the devices and software necessary for remote learning.

**Challenges with Student Resources and Supports**

Teachers also struggled with the challenge of supporting students given their available resources. Teaching remotely allowed teachers to see inequities in the available supports that students have at home. The frequency of codes related to student supports and resources can be found in Table 5.

Table 5

*Frequency of Codes Related to Student Resources, Overall and by Education Level*

| | The varying attitudes, abilities, and resources of some parents regarding remote learning | | Concern about students with specific needs (e.g., students on IEPs, students with attention issues, etc.) | |
|---|---|---|---|---|
| | **Frequency** | **% of *n*** | **Frequency** | **% of *n*** |
| Total (*n* = 604) | 34 | 5.6% | 26 | 4.3% |
| Secondary (*n* = 352) | 7 | 2.0% | 13 | 3.7% |
| Elementary (*n* = 252) | 27 | 10.7% | 13 | 5.2% |
| Difference between Secondary and Elementary | | -8.7%*** | | -1.5% |

***$p < 0.001$, φ = 0.19

Thirty-four teachers (5.6%) discussed the challenge of parents' attitudes about remote learning and their ability to support their children in remote learning. For example, one teacher stated, "Not all parents have the time to monitor/support kids. Parents are not teachers and can get frustrated when they don't know how to best help." This quote demonstrates one way in which parents differ in their ability to help students, as some parents are able to spend most of the day helping their child stay on task with remote learning, while other parents have to work and are unable to monitor their child. Teachers also felt frustrated by seeing these inequities in parental support. For instance, one teacher stated, "The attitude of parents regarding remote learning. Some of them take it very seriously and helped their child at the beginning with the technology so now the student is adept at running it while other parents can't even get their 1st or 2nd grade student out of bed to 'come to school.'" This challenge was brought up much more by elementary teachers (10.7%) when compared to secondary (2.0%). Further, a chi-square test of association revealed that this difference was statistically significant ($\chi^2$ (1, 604) = 21.049, $p <$ 0.001) with an effect size of φ = 0.19, which is considered small to moderate (Cohen, 1988).

Teachers were also concerned about supporting students with specific learning needs, such as students on individualized learning plans (IEPs) or students with attention issues. This challenge was discussed by 26 (4.3%) teachers. For example, one teacher stated, "I teach SPED and English Language Development. My students require responsive instruction, both academic and social/emotional. I have found this to be very challenging to do effectively in a remote setting." Teachers struggled to provide the necessary supports and accommodations in the remote format. This challenge was discussed by a slightly higher percentage of elementary teachers (5.2%) than secondary (3.7%), but a chi-square test of association was not statistically significant ($\chi^2$ (1, 604) = 0.766, $p$ = 0.382).

**Challenges with Increased Stress and Work**

Some teachers reported challenges related to increased workloads and feeling more stressed and less supported in doing their work. This was exacerbated by having children to take care of as well. The frequency of codes related to these challenges can be found in Table 6.

Table 6
*Frequency of Codes Related to Teacher Stress and Work, Overall and by Education Level*

| | Juggling home and work responsibilities, work/home boundary issues | | Additional teaching responsibilities/incr eased workload | | Feeling helpless, unsupported, and/or lost in teaching, feeling ineffective | |
|---|---|---|---|---|---|---|
| | Frequency | % of *n* | Frequency | % of *n* | Frequency | % of *n* |
| Total (*n* = 604) | 36 | 6.0% | 28 | 4.6% | 18 | 3.0% |
| Secondary (*n* = 352) | 16 | 4.5% | 15 | 4.3% | 15 | 4.3% |
| Elementary (*n* = 252) | 20 | 7.9% | 13 | 5.2% | 3 | 1.2% |
| Difference between Secondary and Elementary | | -3.4% | | -0.9% | | 3.1%* |

*\*p* < 0.05, φ = 0.09

Thirty-six teachers (6%) discussed the challenge of trying to balance both work and family responsibilities. With boundaries between work and home life blurred by the switch to working from home, some teachers struggled to create new boundaries. For example, one teacher stated, "Balance of personal and professional life. Stepping away from the 'office.'" Teachers also struggled with trying to manage their own childcare while remote teaching. One teacher stated, "Juggling my life as a mom and a graduate student with my teaching responsibilities. The lines are completely blurred, and I have zero 'home life' without work. It's impossible to sustain this model." This challenge was brought up slightly more by elementary (7.9%) than secondary (4.5%). A chi-square test of association approached statistical significance ($\chi^2$ (1, 604) = 3.013, *p* = 0.083), so it is unclear if a true difference exists between elementary and secondary teachers in regard to experiencing this challenge, or whether that observed difference is due to chance.

Another challenge that was discussed was the increased workload of teaching remotely. This was brought up by 28 teachers (4.6%). These teachers felt like they were working longer hours and had more to do because of remote teaching. For example, one teacher stated, "The up-keep is never ending. There are always lessons to make/post and papers to score/give feedback on. I collect WAY more work since that's the only way to keep track of attendance." Another teacher described that their biggest challenge was, "Supporting my students and their families' health, safety, and wellbeing while still being asked to teach full time. They're two full time jobs." For some teachers, shifting to remote teaching from home created double the work for them because of additional childcare responsibilities. A similar proportion of elementary (5.2%) and secondary (4.3%) teachers discussed this challenge, and a chi-square test of association confirmed that no statistically significant difference exists between groups ($\chi^2$ (1, 604) = 0.268, *p* = 0.605).

Eighteen teachers (3%) brought up that they were feeling lost or unsupported in their teaching. For example, one teacher stated, "I've never taken a remote course and I've never seen one, even though I have taken all year long full Saturday courses on integrating technology into the learning process. I have no idea if what I'm doing is OK. I'm on my own out here." Some

teachers felt like their teaching was ineffective and that they didn't have the proper supports and resources to create more impactful lessons. Most of the teachers that reported this challenge were at the secondary level, with 4.3% of secondary teachers discussing this challenge compared to 1.2% of elementary teachers. A chi-square test of association revealed that this difference was statistically significant ($\chi^2$ (1, 604) = 4.790, $p < 0.05$) with an effect size of $\varphi = 0.09$, which is considered small (Cohen, 1988).

# Discussion

The purpose of this study was to investigate challenges teachers faced while remote teaching during the spring of 2020 and whether those challenges were experienced differently by elementary and secondary teachers. This information is important for identifying necessary supports for all teachers, as well as grade-level specific supports. As the pandemic continues, and schools continue to switch between in-person, hybrid, and remote learning, information about how best to support teachers during remote teaching continues to be important.

Overall, teachers reported several challenges across grade levels, including lack of student engagement, attendance, and participation; an overall feeling of disconnect from their students and colleagues; lack of knowledge and/or skill as to how to transfer the curriculum online; a lack of support and resources for students at home; issues with using and accessing technology; and blurred lines between home and work, many of which support findings from earlier research. These issues are highlighted in the following paragraphs.

Student engagement has been found to be lower in remote settings, with teachers struggling more to motivate and engage students online than during in-person learning (De Paepe, Zhu, & DePryck, 2018). This is a challenge that has been reported by online instructors as well (Larkin et al., 2016). Additional supports may be needed at the district and school-level to better support teachers in reaching out to students and increasing engagement. This might look like creating stronger systems for contacting students and families to identify barriers to engagement and better understand students' circumstances. These systems also need to utilize staff members across the school or at the district central office level in order to prevent teachers from feeling overwhelmed by reaching out to students. These supports are needed more at the secondary level, where this challenge was more prevalent for teachers.

Teachers also struggled with feeling disconnected from other people, and their students in particular. Research on teaching motivation has found that teachers often choose this profession because of their desire to work with children and develop meaningful relationships with their students (Lachlan et al., 2020; Watt & Richardson, 2007). A USA Today/Ipsos poll also found that teachers reported not feeling the same connection to their students when teaching remotely (Lardieri, 2020). Larkin et al. (2016) also found that online teachers experience this challenge as well. These findings indicate that teaching remotely may not provide the same opportunities for connection and relationship building as in-person teaching. More strategies may be needed to help teachers build new connections and maintain existing relationships, both with students as well as their families. Virtual home visits or family phone calls may be one way for teachers to continue to work with families and build relationships. However, not all families may have the technology necessary to be able to do virtual visits, which supports the previously mentioned implication that more training sessions are needed for families.

Teachers also struggled to adjust their curriculum to the remote setting, finding it difficult to create the same experiences online that they could in the classroom. Successful online courses are designed as online courses rather than simply face-to-face courses that are delivered online

(Bryson & Andres, 2020), which was not a luxury available to teachers in spring 2020. Courses with hands-on components, such as lab experiments or field experiences, present additional challenges for teachers and students (Barton, 2020; Kelley, 2020). Although longer attention spans and more experience with technology tools may seem to work to the benefit of older students in remote learning settings, this study found that teachers complained of older students' engagement and participation more than younger students. This may be impacted by the adolescents' significantly reduced social interactions with friends, as well as having more autonomy and control over their learning, as student engagement tends to decrease in secondary grades even during non-pandemic times (Hafen et al., 2012). For older students, engagement is likely less dependent on parent involvement, and they also may have additional responsibilities and commitments that could interfere with school (Hafen et al., 2012).

For elementary teachers, adapting the curriculum to the remote/online format and garnering parental support for their students were among the most commonly cited challenges they faced. Other research has found that adapting lessons is harder for younger students as well (Anderson & Hira, 2020). These findings indicate that teachers need additional support in adjusting their curriculum to the online format, or in designing for a remote/blended environment rather than attempting to adjust in-person lessons. Since most teachers were operating from a mindset of adapting and adjusting curriculum rather than creating new lessons, their lessons were likely not as effective as they would have been if intentionally designed for the online format (Pulham & Graham, 2019). This was more prevalent for elementary grades, where teachers struggled more to adapt curriculum to work with younger students remotely. This may suggest that elementary teachers need more professional development and training resources to be able to provide the same quality of educational experiences to their students during remote learning that they did during in-person learning. These findings also have policy implications; additional funding could ensure that schools and districts are able to provide teachers with adequate professional development to better be able to plan lessons for the remote/blended learning formats.

Another challenge that was more common among elementary teachers was the varying attitudes and supports of parents in regard to remote learning. Fewer secondary teachers reported issues getting parents invested in remote learning or in motivating parents to get their children to participate. This is likely connected to secondary students being more autonomous (Hafen et al., 2012), as parent involvement would be less of an issue when students take on more responsibility for their learning. Disparities in parent attitudes and resources were also a challenge for many teachers, but more so elementary teachers. This indicates that teachers may need training related to handling differences in attitudes and knowledge about remote learning among parents. This also connects to the ACE framework and differences in students' available personal supports (Borup et al., 2020). Attitudes about remote learning may have impacted how parents and family members supported their students, leading to additional challenges for teachers. Districts need to provide more consistent expectations related to remote learning for families so that teachers are not tasked with creating and upholding these expectations. Family training sessions are also needed in multiple languages so that families are able to access the correct technology to be able to support their students while remote learning. At the policy level, additional funding is needed to ensure that families are provided with the proper devices and infrastructure (such as adequate training and WiFi hotspots) to be able to support their students' learning.

Teachers also reported struggling to juggle home and work responsibilities while remote teaching. This aligns with past research on online teaching, which found that online teachers

struggled to separate work and home when the physical boundaries were erased (Knott, 2014). More recent research has also found that teachers reported increased workload and feeling a loss of control at work, which could impact home life as well (MacIntyre et al., 2020). This indicates that teachers may need stronger boundaries and expectations between work and home, which may need to be set at the school or district administration to create clear guidelines for teachers, students, and families around teachers' schedules and communication expectations.

Technology issues were reported by some teachers but were not as common as might be expected given that many teachers and students may not have used the technology and devices before (Blagg & Luetmer, 2020). This may have been because the survey specifically asked about technology issues earlier in the survey and teachers therefore did not feel the need to bring them up again in their open-ended responses (see Leech, Gullett, Howland Cummings, & Haug, 2020).

# Limitations

The current study had several limitations, including primarily the ability to generalize results based on the sample. The response rate was low as a result of the survey being distributed during a pandemic. While it was an adequate size given the circumstances, it may not have contained the full range of teacher experiences. It is possible that only those who felt strongly about remote teaching took the survey, or that those who were most overwhelmed by remote teaching did not have the time or energy to take the survey. This study also did not control for challenges that teachers may have faced prior to remote teaching.

# Future Research

Additional research is needed on the support that teachers need while remote teaching. While the current study looked at differences by grade level, differences by content area should also be explored to better understand whether specific subjects are more difficult for teachers to teach remotely. With hybrid learning and in-person learning with COVID restrictions continuing to be necessary in schools as the pandemic continues, research is also needed regarding teachers' experiences switching nimbly among teaching formats.

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