

Teacher Self-Efficacy during COVID-19: A Qualitative Study on Experienced High
School Teachers

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by

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Dedication

I dedicate this work to my loving husband, Charles Cummings. Without his support, I would have had a challenging time taking on this program, working full time, and moving forward toward my academic goals. I also dedicate my work to my cat, William Shakespeare, who napped by my side the entire time.

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Abstract

TEACHER SELF-EFFICACY DURING COVID-19: A QUALITATIVE STUDY ON EXPERIENCED HIGH SCHOOL TEACHERS

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In March of 2020, every teacher's career changed when the impact of COVID-19 prevented students from coming to school in-person. With the entire structure of education forced to change because of schools moving to online learning, Bandura's research on self-efficacy can provide insight to how individual teachers' self-efficacy beliefs adapted during COVID. This qualitative study focused on individual teacher's experiences involving the four sources that are known to impact self-efficacy, including mastery experiences, vicarious experiences, social persuasion, and physiological state. Given that research has found educators at the mid-point of their career are typically at their highest levels of teacher self-efficacy beliefs, seven teachers with at least ten or more years of experience in a public high school were interviewed for this research. This study observed that each teacher was impacted to varying degrees in each of the four sources of self-efficacy over the two years, between March 2020 and June 2022. The

most notable self-efficacy impacts among all participants were with mastery experiences, social persuasion, and personal physiological state, as many teachers struggled with the loss of student interaction while teaching online. This study's findings suggest that the amount of support from schools and leadership played a significant role in teachers recovering their self-efficacy beliefs during COVID. In addition, results found that teachers who had an adaptable growth mindset toward teaching were more likely to easily rebound from self-efficacy loss. Based on these findings, school districts should evaluate what kinds of support they provide to teachers, both pre- and post-COVID. Focusing on what teachers need most, considerations should potentially address emotional adaptability and wellness opportunities to help teachers not only recover from the lingering effects of COVID, but also the everyday changes they face in the classroom.

Introduction

In March of 2020, education around the world completely changed as schools, states, and countries needed to react to the global health crisis, COVID-19. With so little known about the virus, schools everywhere began to close their doors and turned to online learning, whether they were prepared or not. By April of 2020, over 58,510,836 students in the United States alone were impacted and adjusting to the changes (United Nations Educational, Scientific and Cultural Organization, 2021). While some schools and communities were able to pivot quickly to live virtual classes, other schools had a more challenging time reaching that point, due to internet connectivity issues and a lack of student devices (United Nations Educational, Scientific and Cultural Organization, 2020a). School closures spurred a sequence of immediate concerns including learning loss, low-income students not receiving meals, and students being home alone or caring for siblings (United Nations Educational, Scientific and Cultural Organization, 2020a). However, long-term concerns about teachers and how they were adapting to the changes are still being identified two years later. This study seeks to observe and explore the phenomenon of COVID-19's impact on teachers' self-efficacy beliefs as educators. A specific focus was on experienced high school teachers, who were in at least their 10th year of teaching when the pandemic began.

COVID-19 Impact on Virginia Schools

Providing further context on COVID-19's impact in the state of Virginia, all schools were ordered to close on March 23, 2020 for the rest of the 2019-2020 school year by Governor Northam in Executive Order # 61 (VDOE :: School Closure FAQ., n.d.). Although schools had been closed for a few weeks at that point, many school districts had not been offering any learning until further direction was given. However, once schools knew they would not be opening their doors again that year, all districts managed the end of that school year in different ways. The state of Virginia's only formal guidance on teaching at that time was to keep equity, accessibility, and intention in mind if schools chose to move to online learning (VDOE :: School Closure FAQ., n.d.). In the Summer of 2020, many school districts in Virginia began to purchase student computers to meet the needs of their population and prepared teachers to transition properly to online learning for the 2020-2021 school year. At the start of the 2020-2021 school year, many schools in the state of Virginia began with a 100% online model and eventually transitioned to additional formats as the year progressed. Later on, by June of 2021, out of a total of 2,045 schools, 868 schools were operating in a hybrid format and 1,097 were conducting in-person instruction (VDOE :: State Snapshot: Virginia School Operational Status., n.d.). At the start of the 2021-2022 school year, all divisions in the state of Virginia were required to offer in-person learning, with some schools choosing to continue to offer virtual components or programs at student/family request (VDOE :: State Snapshot: Virginia School Operational Status., n.d.).

Self-Efficacy Defined

When a person is facing an obstacle or challenge that they have never experienced, their first thoughts are often whether they will be able to work through it. Depending on the situation, some people might feel confident and ready to take on the challenge, but others might feel the opposite. Bandura defined this construct of whether a person feels and believes that they can successfully complete a task as self-efficacy; a component of social cognitive theory (1997). Self-efficacy, specified further by Usher and Pajares (2006), is influenced by four major sources including mastery experiences, vicarious experiences, social persuasion, and physiological state. The first source of influence on a person's self-efficacy is mastery experiences, which is whether a person has had previous success at a task prior to facing a new challenge (Usher & Pajares, 2006). The second source is vicarious experiences, or how a person perceives they can complete a task based solely on how others like them can do it (Usher & Pajares, 2006). Next, social persuasion refers to the messages received from others about one's ability to be successful at a task (Usher & Pajares, 2006). The last influential source in Usher and Pajares' (2006) research on self-efficacy is a person's physiological state. This component focuses on the idea that a person who normally would feel confident in achieving a task might not feel the same if they are experiencing elevated levels of stress or anxiety. Self-efficacy suggests that a person's temperament, experiences they have

gone through, and experiences they are currently going through, will impact whether they have a high or low self-efficacy belief about if they can accomplish new and different tasks (Bandura, 1997).

Teacher Self-Efficacy

The concept of self-efficacy can also be related to how individuals perceive themselves in their careers. Applying this theory to education, teachers and their personal views of self-efficacy can have an impact on their students, instruction quality, and overall mindset on their careers. Researchers Dicke et al. (2014) identify teacher self-efficacy as the confidence and belief a teacher has about their ability to be a successful educator. Further, the number of years of experience and individual successes and failures in the classroom can impact their self-efficacy beliefs. Research done by Klassen and Chiu (2010) assessed three domains of teacher self-efficacy, including student engagement, instructional strategies, and classroom management. Moreover, they discovered that a teacher's self-efficacy increases as they have more years of experience, but that soon begins to decrease as they enter their veteran years of teaching (Klassen & Chiu, 2010). Teachers will experience highs and lows in their sense of teaching self-efficacy beliefs throughout their careers, depending on the support they receive as a teacher and the experiences they have in the classroom. With the variety of influences, this suggests that teacher self-efficacy is dynamic and will be impacted by factors at different points throughout a person's teaching career.

Measurements

There are many different versions of teacher self-efficacy scales, including Bandura's (1997) original Teacher Self Efficacy scale. More recent adaptations include the 2001 Teacher Sense of Efficacy Scale (TSES), created by Tschannen-Moran and Hoy, which focuses on the teachers' sense of self-efficacy for their instructional practices, classroom management, and student engagement (Nie et al., 2012). Dellinger et al. created the Teachers' Efficacy Beliefs System-Self (TEBS- Self) form in 2008 to better define, contextualize, and assess teachers' belief in their ability to plan, manage the learning environment, create a classroom climate, enhance learning, encourage thinking, assess learning, and other professional duties (Dellinger et al., 2008). Overall, all self-efficacy scales seek to measure the construct of teacher self-efficacy, but each prioritizes different tasks and/or situations teachers face both inside and outside of the classroom.

Impact on Students

Depending on the nature of a teacher's self-efficacy belief, either high or low, will impact how students respond to what the teacher is trying to teach. For example, researchers Fauth et al. (2018) discovered in their study of teacher self-efficacy that a teacher who demonstrates high self-efficacy was directly associated with a teacher's popularity among students. This suggests that students are drawn to enthusiastic and confident teachers, making those teachers the most "popular" at the school. However, Fauth et al. (2018) and Kim et al. (2018) both saw in their research that teacher popularity did not necessarily relate to students having higher achievement in the class. Students were more likely to be motivated to do well if they had a teacher with high self-efficacy,

but that did not always mean that they had higher achievement than students who had less popular teachers with low self-efficacy. Moreover, as Klassen and Chiu's (2010) research suggests, teachers with low self-efficacy are often the result of high workload stress and classroom teaching stress. Consequently, if teachers are negatively impacted by classroom management stressors, the low self-efficacy that results will result in continued classroom management issues, stress, and emotional uncertainty (Dicke et al., 2014). Teachers who are overworked, stressed, and lack enthusiasm about what they are doing do not have the same beliefs in their ability to overcome behavior issues as a confident, highly self-efficacious teacher could. As a result, students will not only struggle to engage with the teacher, but some could also struggle to engage in the material, causing them to do poorly in class. The relationship of how the students feel about the teacher and how well they choose to do in class is related to a teacher's individual self-efficacy.

Factors that Impact Teacher Self-Efficacy Beliefs

Connections with Students

COVID-19 caused teachers to go from seeing and talking to students in person every day, both casually and through instruction, to only seeing students as pictures or initials on a screen in a virtual meeting. Knowing this, it is important to explore how teachers' social interactions and relationships with students impact their self-efficacy beliefs. Hajovsky et al. (2019) suggests that there are two main factors involving how students can affect teacher self-efficacy, including closeness and conflict. Closeness focuses on the working relationship that the student and teacher have in the classroom, whereas conflict addresses the behavioral management issues that teachers must address

and manage while teaching. Exploring student closeness, Hajovsky et al. (2019) found that teachers with better relationships with their students tended to have a higher self-efficacy. Strong teacher-student relationships, as researched by Zee et al. (2020), are a key to both student and teacher success. Zee et al. (2020) found that when a student feels that their teacher is willing to listen and support them in their academic needs, students are more motivated and engaged in the classroom. The level of how close a student feels to their teacher could impact how confident the teacher feels in their self-efficacy beliefs, considering that student is more likely to participate in class, actively engage in learning, and speak with the teacher in a positive way.

In contrast, when there is a lot of conflict between student(s) and the teacher, the teacher's self-efficacy suffers. As Dicke et al. (2014) suggests that classroom disturbances and frequent issues in classroom management directly influence the emotional exhaustion and stress that often leads to hurting a teacher's self-efficacy and eventual burnout. Unlike in positive relationships, if students feel that their teacher does not care about them or is not confident in their classroom, students are more likely to misbehave. Dicke et al. (2014) suggest that classroom management issues are a direct result of low teacher self-efficacy. They found that teachers who demonstrate confidence in their content and their teaching are also better able to confidently manage issues that arise in their classroom (Dicke et al., 2014). As a result, the amount of closeness and/or conflict that teachers experienced with their students in online learning is an important observation to look for when examining teacher's self-efficacy beliefs during COVID-19.

Technology Integration

A few years before the pandemic, researchers Corry and Stella (2018) conducted a literature review to evaluate all that has been discovered about teacher self-efficacy and using technology to teach online, because of virtual programs becoming more prominent. They wanted to evaluate how teachers implemented online educational courses, how well teachers were able to adapt to teaching online, and how professional development opportunities to gain experience with online tools impacted teacher's self-efficacy (Corry & Stella, 2018). One study they listed focused on how prepared teachers were to integrate technology into their teaching and what the overall impact was on teachers individually. Not only did conclusions identify experienced teachers needing more technology training than less experienced teachers, they found that the ease and efficiency of technology being implemented also impacted teacher's self-efficacy (Corry & Stella, 2018). If the technology tool was not highly effective, teachers felt lower self-esteem and self-efficacy when using it. Continuing their review of the literature, Corry and Stella found that there was an additional layer to the teacher's reports of self-efficacy in that teachers have a sense of self-efficacy for their teaching and another sense of self-efficacy with their ability to use technology (Corry & Stella, 2018). The low self-efficacy of teachers who have not used technology in their classrooms could be due to their lack of knowledge of how to use it and/or their lack of knowledge of how to integrate it into their teaching. Corry and Stella's (2018) literature review of research about teaching online suggests that a lack of mastery experiences with new and different uses of technology can cause decreased teacher self-efficacy, especially if the technology is not easy to use or learn.

Current Studies of Teacher Self-Efficacy During COVID-19

Technology Roadblocks: Experience and Training

Reviewing current research on how COVID-19 impacted teacher's self-efficacy, the most common focus is on technology. With the transition to online teaching happening so quickly, proper training and preparation for teachers varied dramatically between schools (Tas et al., 2021). The lack of time to prepare meant that teachers who had little to no knowledge of classroom technology suffered the most (Tas et al., 2021). Several current studies have observed that teachers who had proper training or prior experience using online teaching tools, such as Learning Management Systems (LMS), or experience teaching online classes displayed both higher self-efficacy and higher student success overall (Baroudi & Shaya, 2022; Buric et al., 2021; Dolighan & Owen, 2021; Ladendorf et al., 2021). In fact, researchers Tas et al. (2021) observed that teachers with more experience in online teaching identified higher self-efficacy than even the most experienced teachers in schools. Connecting this observation to the constructs Usher and Pajares (2006) identified as influencing a person's self-efficacy, teacher's previous mastery experiences resulted in whether they were successful in the changes caused by COVID-19. This supports the current research where teachers with several years of mastery classroom experience struggled if they did not also have experiences using technology in successful ways (Tas et al., 2021).

Continuing to observe current impacts of technology-related self-efficacy, Fernández-Batanero et al. (2021) conducted a literature review on the impact of educational technology on teacher's stress levels and overall mental health. They identified that, while there were increased levels of teacher stress and anxiety with educational technology, almost all these situations of burnout and low self-efficacy were caused by a lack of preparation for the teachers (Fernández-Batanero et al., 2021). Among the various research Fernández-Batanero et al. (2021) cited, there were common patterns of teachers who have never used technology in the classroom having heightened stress. Several current COVID-19 studies had findings related to a lack of preparedness causing stress and lack of confidence when trying to adapt their teaching to online platforms. A study with Italian teachers identified a positive correlation between the transition to online teaching and stress levels with the teachers surveyed (Toto & Limone, 2021). Similarly, study about levels of technostress (stress brought on using technology) and job satisfaction conducted by Aktan and Toraman (2022), found that there were significant results showing teachers having increased psychological fatigue and stress when they were faced with using increased amounts of technology during COVID-19. In another example, Pressley et al., (2021) conducted their research with elementary teachers from several different regions in the United States and found that teachers in schools who went to 100% virtual teaching at the beginning of the 2020-2021 school year were much more likely to experience higher anxiety levels. Also, a study done in the United States with 141 teachers found that one of the biggest challenges teachers identified in the open-ended responses was the lack of proficient knowledge with

technology and teaching tools, causing them to feel less successful to teach in an online space (Cardullo et al., 2021). It identified that the training conditions, support from the school/district, and ease of use with the LMS (Learning Management System) could be used to predict how confidentially those teachers adapted to online teaching (Cardullo et al., 2021). However, a study conducted in China by Ma et al. (2021) suggests that, while most Chinese teachers experienced a struggle initially with transitioning to an online format, some were able to improve if they had personal adaptive qualities and prior knowledge of how to teach online. These current COVID-19 studies relating to technology use and stress suggest that the amount of new technology tools, training, and support were all factors that made an impact on teachers' mental health and stress during COVID- 19. These current studies suggest that teachers who had higher anxiety levels because of teaching online were more likely to face decreased self-efficacy beliefs.

Students: Absent and Disconnected

One of the other common trends in the current research on teacher's self-efficacy during COVID-19 is the observation that students became more absent when teaching moved to an online format. Students were not only more likely to be physically absent from class, but, even if they were digitally present, they were often disengaged from the teacher. This presented a negative impact on teachers since a factor that influences teacher self-efficacy, social persuasion, includes the closeness they have with their students (Hajovsky et al., 2019). In the study done by Tas et al. (2021) with over 700 teachers in Turkey, only 5.67% of the teachers identified that they regularly had 75% or more of their students attending class when they moved online. This suggests that most

teachers had less than 75% of their students attending on a regular basis (Tas et al., 2021). While some teachers claimed having fewer students attending class regularly during COVID was less stressful (Herman et al., 2021) research, many teachers struggled with the lack of student participation.

Research done by Yang et al. (2021) with over 300 educators in Northern California identified that teachers struggled with finding ways to connect to their students. Unlike a normal classroom where teachers see students regularly and can connect with them, these teachers were trying to reach out and relate to students through a computer. Educators began to feel compassion fatigue, an emotional and psychological strain brought on by trying and failing so often when trying to connect with students in the digital environment (Yang et al., 2021). In the effort, many teachers struggled with reaching the closeness that they are used to having in the physical classroom and even had issues creating boundaries between their home life and work (Yang et al., 2021). Additionally, in the research done by Tas et al. (2021), they found that over 90% of teachers who responded to the survey identified that online teaching is less enjoyable than teaching face-to-face and 80% identified that they were less motivated with their teaching because of the lack of student engagement. In further research done by Pressley and Ha (2021), they had teachers identify on a teacher self-efficacy scale their confidence in their ability to engage students. The three groups of teachers who participated included a group of teachers who were still teaching in-person, a group who was teaching in a hybrid format, and a group who was teaching 100% virtually. Among the three groups, the group who scored the lowest on the engagement efficacy measure was the group who

was teaching 100% virtually (Pressley & Ha, 2021). The next highest was the hybrid group and the highest overall score was from the all in-person group of teachers.

Similarly, research done by Narayanan and Ordynans (2022) identified that teachers felt a type of “disorientation” with what they were doing when they began to teach online.

Instead of feeling fulfilled and engaged with students, teachers were unsure if anyone was participating and felt a lack of purpose as a result (Narayanan & Ordynans, 2022). This concept of losing purpose in teaching was also shared by Italian teachers in the mixed-method study done by Soncini et al. (2021) in the initial months after COVID-19 began to impact schools. Overall, the social persuasion interactions teachers had during this time was influenced by the amount of student closeness and engagement the teacher received when teaching. If students were physically not there or just not engaged, many teachers were less confident in what they were doing, even with years of experience behind them.

Instructional Content: Delivery and Effectiveness

Based on current research, teachers identified that their self-efficacy belief in their ability to provide quality instruction suffered after moving online. Specifically, teachers felt that they were unable to provide meaningful and effective instruction, even if they were confident in using online teaching resources (Ladendorf et al., 2021). However, teacher’s confidence in their instructional quality did vary depending on the content they taught (e.g., math compared to band) with some content being able to better transition to an online format than others (Ladendorf et al., 2021; Tas et al., 2021). For example, in Menabo et al.’s (2022) research, they found that teachers had very different perspectives

on the usefulness of technology in instruction, depending on the content and grade level they taught. Although, there were still teachers who felt that online resources were less efficient and did not provide accurate measurements of student success and achievement (Tas et al., 2021). In the Turkish study done by Tas et al. (2021), 90% of teachers surveyed felt that online teaching was not as efficient as face-to-face instruction.

Additionally, the self-efficacy survey done by Pressley and Ha (2021) across the United States identified lower instructional self-efficacy scores for teachers who taught 100% online, compared to the higher scores from the teachers who were teaching in-person. Depending on the content they taught, many teachers did not consistently feel that they were able to provide the same level of instructional content online, which can play a role in teacher's self-efficacy beliefs in providing meaningful instruction.

Years of Teaching: Veteran-Level Compared to New Teachers

Among the current research being done, there are mixed results identifying how the self-efficacy of teachers with years of teaching experience compared to teachers with fewer years of teaching experience during COVID. As described in an earlier section, there is significant research that shows teachers with more experience teaching online had higher self-efficacy and more success transitioning to online than teachers who had little to no experience using technology in their classrooms (Tas et al., 2021). Moreover, some research identifies that the number of years of face-to-face classroom teaching experience had no significant impact on how well a teacher adjusted to online teaching (Pressley, 2021; Pressley & Ha, 2021; Tas et al., 2021).

However, research done by Yang et al. (2021) identified teachers who had more years of teaching experience suffered less from emotional fatigue brought on by student connections, which would suggest that the more years of experience was an asset.

Another example, with research done by Pellerone (2021) in Italy, found that the strength of teacher self-efficacy before COVID helped teachers overcome more of the emotional challenges brought on by COVID. This study suggests that teachers with more years of teaching experience and high self-efficacy were better able to adapt to challenging situations than teachers with only a few years of experience (Pellerone, 2021). In these studies, teaching experience and high teaching self-efficacy did have a significant impact in the response to COVID.

Further exploring the mixed results, research by Cataudella et al., (2021) identified that there were negative correlations between years of experience and the amount of change with a teacher's self-efficacy during the pandemic. They suggest that teachers who had more experience at the start of the pandemic had a more notable change in self-efficacy during this time than people with fewer years of experience (Cataudella et al., 2021). Experienced teachers, who normally have higher self-efficacy, were more likely to experience a decrease in their self-efficacy. In line with these findings, Rabaglietti et al. (2021) concluded that an increase in teacher's perceived stress levels when they transitioned to a new form of teaching through distance learning caused a decrease in a teacher's self-efficacy beliefs for even the most experienced teachers. Moreover, there are clear gaps and inconsistencies as to how veteran teachers managed changes from COVID-19 compared to newer teachers.

Table 1*Overview of Current COVID-19 Studies on Teacher Self-Efficacy*

<i>Study</i>	<i>Country</i>	<i>Research Type</i>	<i>Timeframe Research was Conducted</i>	<i>Measurement Creation</i>	<i>Study Sample</i>
Aktan & Toraman (2022)	Turkey	Quantitative with some open-ended questions	March 2021 (Approx)	Pre-COVID	525 Teachers: Mix of public and private schools, years teaching, small population of high school teachers (63)
Baroudi & Shaya (2022)	6 Arab countries	Mixed Methods	Fall 2020	Pre-COVID	113 Teachers: Mix of grades, 45 public school, 68 private school, average of 15 years of experience
Buric et al. (2021)	Croatia	Quantitative	Spring 2020	Pre-COVID measurement, one slightly adapted for Post-COVID	1655 Teachers: Mix of ages, years teaching, and grades
Cardullo et al. (2021)	USA	Mixed Methods	October 2020- January 2021	Modified Measurements for Post-COVID	141 Teachers: Majority Elementary teachers, mix of ages and years taught
Cataudella et al. (2021)	Italy	Quantitative	During 2020-2021 school year	Pre-COVID	226 Teachers: Mix of ages, years teaching, and grades
Dolighan & Owen (2021)	Canada	Quantitative	March - May 2020	Pre-COVID	132 Teachers: Catholic secondary school, with 70% teaching for 16 or more years

Herman et al. (2021)	USA	Quantitative	Beginning and end of 2019-2020 school year	Research designed Pre-COVID and modified second survey to address COVID	639 Teachers: 45% elementary, 32% middle, 13% high, 10% mixed levels, mix of years teaching
Ladendorf et al. (2021)	Web-Based (Variety)	Quantitative	5-month window within 2020-2021 school year	Pre-COVID	100 Teachers: 35 elementary, 38 middle school, 15 high school, 12 at multiple levels, majority of veteran teachers
Ma et al. (2021)	China	Mixed Methods	August 2020	Pre-COVID	351 Teachers: Mix of years teaching, and grades taught
Menabo et al. (2022)	Italy	Mixed Methods	May -July 2020	Modified Measurements for Post-COVID	357 Teachers: Mix of years teaching, and grades taught
Narayanan & Ordynans (2022)	USA	Mixed Methods- Qualitative Focus	Round 1: October- November 2019 Round 2: April- May 2020	Research designed Pre-COVID and modified second round to address COVID	12 Teachers: 8 from Charter School, 4 from Public School, majority newer teachers, and a mix of grades taught
Pellerone (2021)	Italy	Quantitative	April and December 2020	Pre-COVID	374 Teachers: Mix of years teaching, and grades taught
Pressley (2021)	USA	Quantitative	October 2020	Pre-COVID	329 Elementary Teachers: Mix of years teaching with average of 13.69 years
Pressley & Ha (2021)	USA	Quantitative	October 2020	Pre-COVID	361 Teachers: 317 elementary, 44 secondary, mix of years taught

Pressley, et al. (2021)	USA	Quantitative	October 2020	Pre-COVID Measurements with a COVID Anxiety Measurement	329 Elementary Teachers: Mix of years teaching, majority from suburban schools (61%)
Rabaglietti et al. (2021)	Italy	Quantitative	Spring 2020	Pre-COVID Measurements, one new Post-COVID measurement	366 Teachers: Majority Female, mix of years teaching
Soncini et al. (2021)	Italy	Mixed Methods	May- June 2020	Created Post-COVID	1,036 Teachers: Mix of grades taught, average 18.8 years of experience
Tas et al. (2021)	Turkey	Quantitative with optional open-ended question	May and June 2020	Pre-COVID	758 Teachers: Mix of years teaching, and grades taught
Toto & Limone (2021)	Italy	Quantitative	March 2021	Pre-COVID Measurements, with Post-COVID measurement	688 Teachers: Mix of grade levels and years taught
Yang et al. (2021)	USA	Quantitative	May- June 2020	Modified Measurements for Post-COVID	321 Teachers: 187 elementary, 49 middle, 61 high, mix of years taught

Note. This information is current as of September 2022.

Critique of Current Studies

After extensively reviewing current research outlined in Table 1 on the topic of teacher self-efficacy during COVID-19, there are gaps in the research that should be addressed. One of the most significant limitations of current research is that they were all conducted either in the immediate aftermath of the pandemic or conducted within the first 12 months. For example, research done by Pressley and Ha (2021) was conducted in the first month of the 2020-2021 school year, right when teachers were starting their first full school year in the pandemic. Research done by Dolighan and Owen (2021) in Ontario, Canada was within the first three months of the pandemic and Yang et al. (2021) in Northern California, was conducted in June of 2020. Additionally, although the studies conducted by Herman et al. (2021) and Narayanan and Ordynans (2022) surveyed teacher self-efficacy at the beginning and end of the 2019-2020 school year, they were not initially designed with COVID in mind and were both modified midway through the research to address COVID. Therefore, those two studies do not truly encompass what teachers were experiencing with COVID, since the studies were not originally designed for that topic. Although all current studies address experiences during the initial year of COVID-19, they do not cover a long enough span of time to get a picture of what COVID's impact could be long-term with teacher self-efficacy beliefs.

Another limitation from current studies is the types of participants used in the research had a limited focus on any specific group of teachers. Specifically, most of the studies were done to capture as many teachers as possible during that time through convenience sampling. As a result, there was often not an equal balance of elementary,

middle, and high school teachers represented in each study. For example, in Pressley and Ha's (2021) study, there were 317 elementary teachers but only 44 secondary teachers. This suggests that, although the secondary teachers were represented in that study, any unique experiences secondary teachers had were not equally represented in the data. Additionally, Dolighan and Owen's (2021) quantitative sample only had 132 teachers respond in total, which suggests that their findings should only be used as a starting point for self-efficacy research and not for widespread generalizations about teachers in Ontario. Also, participants in most current studies range widely between new teachers and veteran teachers, grade levels, and types of schools. Exceptions include the studies done by Pressley (2021) and Pressley et al. (2021), which took a specific focus on elementary teachers and the study done by Dolighan and Owen (2021), which took a focus on secondary Catholic School teachers. Further, even though veteran teachers likely had differing experiences than newer teachers, none of the studies observed veteran teachers or newer teachers exclusively.

Moreover, even though a few of these studies were conducted in the United States, many of them were conducted in other countries. For example, Tas et al.'s (2021) research was conducted in Turkey. Research done by Rabaglietti et al. (2021), Cataudella et al., (2021), and Pellerone (2021) were all conducted using teachers from varying regions in Italy. As a result, even though the basic nature of being a teacher is similar no matter what country a person is in, different countries have varying types of educational policies, expectations, and influences. Although research done in countries outside of the

United States provides meaningful insight, it cannot be used to describe the same experiences of teachers in the United States.

An additional critique of the current research on teacher self-efficacy is that most current studies were quantitative in nature with only a few using mixed methods or components of qualitative research. All studies included surveys that were conducted through an online platform using different measurement scales. Knowing that most of the studies were based on results from various measurement scales, it is important to note that most of the measurements used in the surveys were created pre-COVID. Since the measurements used were not designed originally to address online teaching and COVID specifically, it brings into question whether the construct of changing self-efficacy beliefs from COVID-19 was appropriately measured. However, a few studies did use modified or new measurements designed with COVID-19 in mind. Two specific examples include Yang et al.'s (2021) modified teacher self-efficacy scale and Pressley et al.'s (2021) COVID-19 anxiety measurement. But it is important to note that even newly created measurements require additional time and research to explore validity and reliability. With so few studies having qualitative components, there are limited observations about specific experiences, interpretations, and meaning behind teachers' responses. Even though quantitative measurements provide valuable data with how teachers are feeling based on measurement scales, qualitative research provides necessary enrichment of the experiences that will help understand of the phenomenon of COVID-19.

Problem Statement

After reviewing the dynamic nature of teacher self-efficacy beliefs, continued and specified research on COVID-19's impact on educators could provide valuable insight on teacher self-efficacy beliefs. In addition, with previous research identifying experienced teachers as being at a high level of self-efficacy, it is important to observe if teachers at the suggested high point of teacher self-efficacy were negatively impacted from COVID-19. With low teacher self-efficacy often resulting in teacher burnout and decreased student motivation, it is important to observe if teachers were able to recover from any decreased self-efficacy. Therefore, the guiding research questions of this study are: What were teachers' experiences adjusting to changes in education during the COVID-19 pandemic? How did the experiences of veteran teachers over the past two years (because of COVID-19) impact their teacher self-efficacy beliefs and outlook on their career? Building on the emerging findings of the study, a third question was added. What external factors helped support teachers' self-efficacy during these two years?

Methods

Design

The design for this research was a qualitative interview study. One of the primary goals of the study was to learn about how teachers experienced the phenomenon of COVID-19 and how teachers' sense of effectiveness and abilities in their classroom have changed during these past two years. To conduct this research, individual semi-structured interviews were conducted with a sample of seven teachers in the Summer of 2022, just over two years from when schools initially shut down. All participants selected identified as having at least 10 years of experience or more at the time when COVID-19 began to impact education in March of 2020. This sample was selected to provide insight into how experienced teachers responded to the challenges of COVID-19. With research showing that teachers typically have a high self-efficacy at the mid-point of their teaching career, it was worth exploring how these teachers were doing before COVID, that first year of virtual/hybrid teaching, and then two years after the initial school shut down. Each participant was interviewed once, with some teachers providing follow-up email comments and artifacts. As a result of the researcher's personal background and experience in education during the time of COVID-19, the researcher role was considered a participant observer, who was not known to the participants prior to the study.

Participants

The specific population being researched was high school teachers who were at or close to the mid-point of their career when COVID-19 began impacting the education system. Criterion sampling was used for this study with specific criteria needed from the sample group. Criteria for the study included that they must teach in a public high school in the state of Virginia, they must have at least 10 years of teaching experience as of the beginning of the 2019-2020 school year and have continued to teach in the same teaching role since the 2019 school year. The sample could contain any variety of genders, racial and cultural backgrounds, school districts, and content areas that they teach. To retrieve a sample with the required criteria, research flyers were sent to teachers who are members of the Virginia Education Association (VEA). The VEA is a teachers' union for the state of Virginia that consists of over 40,000 teachers in VA public schools. A research flyer requesting volunteers to participate in the research, along with a link to the interest survey, was communicated to members of the VEA through direct email and social media channels. Snowball sampling also occurred when teachers who heard about the study through the VEA shared the research flyer with other coworkers. To formally express interest in participating in the study, teachers completed an interest survey that was included on the research flyers that were distributed to Virginia educators. The interest survey questions can be reviewed in Appendix B.

There were eighteen volunteers in total who completed the interest survey, resulting in seven teachers selected to be interviewed. Of those not interviewed, seven teachers submitted the interest survey but did not fit the correct criteria. Teachers who did

not meet the criteria taught in a kindergarten, an elementary school, a middle school, a private school, and some did not have enough years of experience. Additionally, four teachers who completed the survey met the criteria but did not respond to the researcher's email follow-up for a formal interview. When the teachers who did meet the criteria responded to the follow-up email request for an interview, the interview was conducted. It should be noted, in addition to the seven interviews from the sample group, two extra interviews were conducted with teachers who misinterpreted the criteria or left out information on the interest survey. One teacher had not been teaching full time from Spring of 2020 through Summer 2022 and one teacher did not identify that they worked at a private school until the interview began. Those two interviews were not analyzed as part of this study since the teachers did not fit the inclusion criteria.

Table 2 provides details about each of the seven participants who were interviewed and selected for the sample. Each teacher's pseudonym and years of experience at the time of the interview (Summer 2022) are listed in Table 2. The highest number of years of experience was 36 years and the lowest was 13 years. The sample of teachers came from four different school districts in the state of Virginia, each working in six different high schools. School district names were removed from the data and represented as numbers in the table. Two teachers were from school district number 1, but work at two different high schools. Three teachers came from school district number 2. Rob and Marissa were the only two who came from the same school, with Jen working at a different high school in that same district. These overlapping teachers from the same district and the one pair from the same school was a result of the unintentional snowball

sampling that occurred when teachers shared the research flyer with peers. Due to the limited number of teachers who expressed interest and the limiting criteria, there was not a variety of ethnicities or races, with no teachers of color being part of the sample. All schools represented were part of the northernmost regions in the state of Virginia, containing varying demographic populations within each district. All schools are located within a range of four hours or less from Washington D.C. The Virginia Department of Education identifying region zones of each district are labeled in Table 2. Further detailed information on participants can be found in Table 2 for reference.

Table 2

Participants Selected for the Study

Participant	#1 “Jack”	#2 “Jen”	#3 “Laura”	#4 “Megan”	#5 “Marissa”	#6 “Barbara ”	#7 “Rob”
Years of Experience	27	36	13	18	18	23	22
Subject Taught	Theater	Theater & English	History	German	English	Earth Science	History
School District Identifier	1	2	3	1	2	4	2
VDOE Region Information	#4: Northern Virginia	# 3: Northern Neck	# 5: Valley	# 4: Northern Virginia	# 3: Northern Neck	# 3: Northern Neck	# 3: Northern Neck

Data Collection

To collect meaningful data about each teacher’s self-efficacy beliefs during COVID-19, each participant participated in one individual interview that lasted

approximately 1 hour, with the option for follow-up interviews if requested. Each interview was semi-structured with a focus on teacher's experiences during COVID-19 that relate to the four sources known to influence teacher self-efficacy beliefs, including mastery experiences, vicarious experiences, social persuasion, and physiological state. When interviewing the participants, several phenomenological interview techniques were used to help the teachers remember specific details and events as they occurred over the last two years (McMillan, 2016). The interview was sectioned into four key chunks of time to best support teacher memories and encourage reflection based on the changes that were occurring. The sections of time were, March 2020- August 2020, August 2020- December 2020, January 2021 - June 2021, and August 2021- June 2022. At the start of each section, the researcher described briefly what was happening with COVID-19 in the state of Virginia at that time, including the state decisions being made and what expectations schools were being told in a general sense. Teachers were then asked descriptive/narrative context questions about what their specific schools and school districts were doing during that time, to help further contextualize. They were asked descriptive structural questions to describe sequences of events as they occurred, since many different changes were happening in the initial months of the COVID-19 shut-down. This method of contextualizing and describing each period prompted the participants to recall more specifically the events that unfolded and provided insight as to how they saw it happen. Before moving on to the next section of time, imaginative variation questions were asked to encourage the teacher to reflect on how the events would have been different with different situations or supports. By asking participants to

imagine variations of how their experiences unfolded, it provided insight as to what larger meaning they took away from the events. Using these phenomenological prompt structures, the teachers were able to provide meaningful details and recollections of what they went through.

Within each section of the interview, after the teacher recalled and contextualized events, participants were asked a series of questions relating to the four main sources of teacher self-efficacy. They were asked questions about how much their successes and failures during each period were impacting their ability to adapt content. Questions were asked about how their peers worked through each period and what, if any, impact those peer-influenced vicarious experiences had on their own perspective. Teachers were prompted to explain what verbal/social responses they were receiving from students, parents, administrators, etc. and how those social interactions impacted their beliefs as a teacher during each chunk of time. There were a series of questions asking what teachers were experiencing physiologically and if they felt that those feelings impacted their ability to cope with the changes. Additional questions were asked of teachers to define their confidence as a teacher pre-COVID compared to now, and where they see their career moving forward. A complete version of the Interview Protocol that was used can be found in Appendix A. Interviews were conducted virtually to ensure the participant felt safe and comfortable during the ongoing health crisis and allowed the interviewer to better perceive the participant's facial reactions and responses, without being covered with a face mask.

Ethical Considerations

Before research flyers were sent, Institutional Review Board approval was requested and approved. Before the interviews began, all participants were presented with and asked to accept informed consent documentation that reassured teachers of confidentiality. Teachers were reminded throughout the process that participation was voluntary, and they had the opportunity to stop the interview and participation at any time for any reason. In addition, they were reminded that if there are any questions they prefer not to answer, or any information they prefer not to share, they did not have to answer the question(s). They were made aware that direct quotes will be used in the published work, but that their name and identifiable information will in no way be tied to them in the study. All recordings of the participants were deleted after the study concluded. All data was documented under pseudonyms and any identifiable details that were said by participants were removed, altered, and modified to create anonymity prior to coding.

Data Analysis

The interviews were transcribed verbatim, removed of identifiable information, and coded using the software program MAXQDA 2022 (VERBI Software, 2021). Information was coded initially using emic and in vivo coding to gather preliminary information based on the participants unique word choices and emotions. Then, the transcriptions were reviewed to search for etic codes, with the goal to begin connecting common trends across multiple participants. With these cross-interview observations, thematic coding began, which was identified and sorted into the a priori codes of the four sources known to influence self-efficacy (e.g., mastery experiences, vicarious

experiences, social persuasion, and physiological state). Major codes were the four sources of self-efficacy and sub-codes included specific topics that teachers mentioned relating to the major code. This sorting was used to observe any trends in self-efficacy and to identify where there were shared experiences of the participants during these past two years. Additional inductive codes were created based on additional insights teachers were having that did not fit within the a priori coding system. A detailed overview of the codes used is included in Table 3.

Table 3*Major Thematic Codes, Sub Codes and Occurrences of Each*

Major Codes	Description	Sub Codes	Occurrences
Vicarious Experiences	How a person perceives they can complete a task, based solely on how others like them can do it		39
		Working Together	11
		Lack of Peer Support	4
		Observing Teachers- Different Ages/Abilities	4
		Observing Successful Teachers	2
		Peer Support/Influence	18
Mastery Experiences	Whether or not they have had previous successes or failures at a task prior to a new challenge.		173
		Classroom Management	19
		Adapting	44
		Learning New Tools	33
		Instructional Methods	65
		Previous Tech Experience	12
Social Persuasion	Influence of (families, students, administration) perception of abilities and support.		164
		Absent Students	46
		Leadership/Decision-Making	14
		Supporting Teachers	46

Connections/Relationships (Non-Peers)		58
Physiological State	A person experiencing high levels of stress might not feel confident with a task.	78
	Mental Health Coping Strategies	13
	Impact on Mental Health	6
	Burnout/Leaving Education	8
	Losing Confidence in Self	4
	Fear/Anxiety	7
	Frustration	30
	Sad	10
Mindset	The way teachers viewed the changes and made sense of everything based on their own personal beliefs and feelings.	40
Passion	Teachers talking about why they became a teacher and their passion.	18
Purpose in Teaching	Teachers talking about why they loved teaching or their purpose as a teacher.	13
Extra Hours/More Prep Time	Teachers talking about how much extra time they put into planning lessons.	9
Changes	Teacher talking about the frequent changes during a short span of time.	32
Student	Teachers talking about how students handled the events of COVID.	53
In Vivo		14
	the lost class for me.	1
	emotional journey of getting everyone to learn how to do life again	1
	And I was very excited to be able to finally meet those M&Ms	1
	life was slowly coming back	1
	community of educators	1
	I lost my stage	1
	survival mode	1
	nobody was really there	1
	a lot of debate	1

behavior just off the charts	1
we were all just becoming inventors and designers	1
everything takes longer online	1
we failed him	1
isolating	1

Findings

After coding the interviews, a detailed review began with a focus to identify any trends relating to the four main sources of teacher self-efficacy. Each interview was explored to see what teachers' experiences were when adapting to changes during the COVID-19 pandemic and how the experiences of veteran teachers impacted their self-efficacy and career. Moreover, after reviewing findings further, a third research question was added to address additional factors that helped support teachers' self-efficacy during this time.

Mastery Experiences

Reviewing results relating to teachers' mastery experiences, many teachers identified they had different skills and experiences that influenced how they perceived themselves during that time. Although no one could have ever been truly prepared for the impact of a pandemic, the sample group of teachers identified various ways that they were already prepared to handle the changing climate during COVID-19. For example, Jen identified that, prior to COVID, she had earned a master's degree in Curriculum design and Technology in the Classroom, which she stated was directly related to her ease of adapting. She said that she was very fortunate to have that academic preparation, compared to her peers who did not have any experience. Looking further, all seven interviewed teachers self-identified themselves as having already been incorporating technology into their classrooms, at least in a very basic level, pre-pandemic. Several identified that they were using the online tool, Google Classroom (an easy-to-use free

online platform), to provide digital versions of notes and collect essays/projects digitally in one space. This prior use was helpful to the teachers since they were already familiar with using technology to provide content to students, but when schools purchased more complex Learning Management Systems (online platforms where teachers could build assignments, quizzes, tests, and more for students to use in the classroom), many struggled with the new type of software. However, Barbara, a 23-year Earth Science teacher, identified that her school district had been ahead of the curve before the pandemic. Her district had become a 1:1 school about two years earlier, providing each student with their own computer to use for schoolwork and purchased a Learning Management System called Schoology. With both Schoology and the regular use of computers having already been implemented, Barbara's school district had very few adjustments to make when the pandemic shut schools down.

Although not all teachers were in a school with regular technology use, some teachers identified that their own everyday experiences in the classroom over the years helped them adjust their teaching during COVID. For example, Rob identified that he has always been the go-to teacher when assigning special education students (students with IEPs and 504 plans) to his classes. As a result, he expressed that he constantly was used to teaching large class sizes, having many accommodations to manage/track, and needing to manage different types of behavioral challenges. Faced with these types of situations daily, he commented that he had a lot of experience being adaptable when teaching and learned early on in his career that he needed to constantly reflect on what was working and be ready to adapt to anything.

During the initial years of the pandemic, interviewed teachers identified their ability to adapt their curriculum as a roller-coaster at times. They felt purpose and passion when activities were successful, but self-doubt when it was not received well. An example was when Rob found a way to adapt his interactive history projects to still be engaging online. He explained that the project they were doing would normally ask students to come to class dressed as one of the historical characters for extra credit. However, it looked a little different online:

And so [during the online teaching] they turn on their cameras [to show their costumes] when they are presenting... And one kid who was doing Peter the Great... He had a sword! And Peter the Great was really tall, but this kid was exceptionally short. And so it was really funny how he was working with that... I didn't know what a collection of swords all these kids have! But since we were not in the classroom, they were saying, 'Oh, look, here's my sword. Look, here's all of my swords' and like, wow, okay! So, playing with those kinds of ideas and things [they] couldn't do in the classroom. Or like, 'Hey, go on a scavenger hunt! Find as many areas, find these spices in your house. Because this was part of the Silk Road. So let's go have fun!' (Rob, 07/24/2022)

He did not realize it at first, but he soon discovered that teaching the students from home could be, in some ways, more exciting since he could have them use items, they found at home to engage with the content. Another example of finding a way to adapt successfully was when Jack, the 27-year theater teacher, found a way to put on performances in this virtual world:

I actually wound up doing an entire show, a mainstage thing, you know, the Zoom interface where we ... literally edited together videos that we made talking on the camera and scenes and the cutaways. You know, we eventually learned how to put on a show online. And I mean, I wasn't the only one doing that. We were all trying it... We adapted with the hope that this isn't always how it's gonna be... So I kept saying ... "We're gonna do this. I don't want it to be the best thing we've ever done because it doesn't have to be. This isn't the end. This is just survival mode." (Jack, 5/26/2022)

Although Jack himself commented that the method and quality of the production might not be what he was used to, he knew that he had to do something that the students could learn from and find meaningful during this uncertain time.

However, not all teachers faced responsive and positive experiences when adapting their curriculum. An example was Laura, the 13-year History teacher who made many attempts to adapt virtually and only saw failure. She said:

I put all this effort to make it [engaging content] available to virtual kids and then virtual kids wouldn't touch it. ... I would take an old tried and true, we could do this in the classroom. Try and make it fit. Spend an hour making it work for virtual, only to have nobody partake in or engage. And it just- each time decreased my effort to want to give them the same experience. (Laura, 06/03/2022)

These negative experiences caused her to feel that no matter how hard she tried, she would never find success teaching online. Unlike her peers that had students engaging

with projects in the virtual world, she was left feeling that her students were completely disengaged and that she was not the best teacher she could be. Overall, most of the teachers in the sample came into COVID-19 with varying levels of preparedness and mastery experiences in relevant areas. Some had technology experience, some had general experience in the classroom where they had to adapt and change, and some had additional graduate-level academic degrees. Although, that preparedness did not support all teachers in the same way, which suggests that other factors were influencing teachers' self-efficacy beliefs.

Vicarious Experiences

Even before COVID-19, teachers often placed judgements on themselves when they saw how other teachers can complete tasks compared to themselves. So, with some teachers being more naturally technology literate than others, this self-judgment continued when all teachers had to transition to online teaching. Jack commented, "I think a lot of people went through a self-deprecating phase of 'I am not good enough. I can't do it.' My colleagues are doing it... this new world of digital expectation, this digital presence. It was really stressful." An observation Megan had at her school was, "it [teacher motivation and enthusiasm] was one way or the other. Either it was like, 'None of these kids care. So, I'm not going to do anything.' And they did very, very little. Or like, 'I have to do my job. So, I'm going to create these huge lessons to make the kids try and be engaged.' And yeah, there was generally not a ton in the middle." As a result, Megan saw many of her peers giving up or not even trying, but she refused to let that negative response get to her. She commented:

I feel myself saying to a lot of my colleagues, “Don't forget the positive stuff!”

Like honestly, there's two people that I work with who I am very close with, who this year [2021-2022 school year], I just really couldn't be around a lot, because it's like, COVID broke them. Like they just were so- everything was negative, everything was wrong. And it's just... it was almost toxic. Like, I just can't be around this... (Megan, 06/16/2022)

With some teachers taking on an extremely negative and dejected stance, it was clear to see the teachers who were giving up and those who were determined to do their best.

In fact, some teachers were able to embrace the challenge and worked together as a team, surrounding themselves with a group of content-related peers for support. Marissa said, “We just kind of got it together. There was one [teacher] who [was] much more technologically savvy than the rest of us. Not that we aren't, but just much more, and just dug in. ‘Okay, I figured out how to do this, I figured out how to do this...’ and would share those resources.” Working as a team, Marissa said they would consistently plan units together; “We'd say, ‘Okay, someone's going to take the test, someone's going to take the warmup, someone's going to take...’ and then we would rotate it for the next unit so that you weren't always doing the same thing.” This form of teamwork was not uncommon at this time with teachers who wanted to keep trying, even though they might not have skills as others did. Some teachers, who were the only teachers of that content in their building, found a way to overcome the challenge of not having anyone to work with by using technology to meet. For example, Megan, being the only foreign language teacher in her school building, used the online video platforms made available to teachers

to meet virtually with other foreign language teachers in her school district. She said, “It just wasn't even a thing that crossed people's minds, the technology was there, but nobody knew about it... And yeah, we work[ed] together and ... they share[ed] activities on Google with me so that I could change them to German.” For her, technology opened a door to a type of collaboration that she never experienced before and that helped her adapt. Similarly, Rob, who was a singleton AP history teacher, was able to rely on his other AP teacher peers for planning support, even though they were not the exact same content as him. Reflecting on these past two years, he said, “If it weren't for the other two AP teachers that I have a good relationship with, you know, I may have considered moving on, but they're... a key piece. That's very important to me.” Moreover, different teachers responded differently to their peers during this time. Some relied on each other to divide and conquer, while some saw others being more successful and felt that they were not good enough.

Social Persuasion

Another source that influenced self-efficacy beliefs included how students interacted with teachers during online learning and the messages teachers were receiving from their school leadership and community. As seen in the code map in Appendix C, coded segments about connections with students and absent students were closely related to teachers' beliefs about their ability to adapt and provide instruction. This insight suggests that student engagement (or lack of engagement) had a significant role in how teachers handled the challenges of teaching online. Moreover, teachers in the sample each expressed a mix of levels of support from their school leadership community and outside

community that impacted how confidently they took on the new challenges of online teaching and if they were able to recover from any setbacks.

Absent Students

Looking at individual interviews, Jack commented on the fact that absent students often made him, and his peers feel upset and lacking in confidence. He explains:

[He would feel a self-deprecating feeling] a few times when I felt like I wasn't providing enough, or doing enough. But right when I would feel that and I decided to have a supercharged day, the kids wouldn't be there with me...

Because they weren't physically with me, or their cameras weren't on or they weren't there or- and there was no one around... It became very isolating. And I just felt like, you know, I was-, I felt like a YouTuber hoping people are watching me. (Jack, 5/26/2022)

These comments demonstrate that disengaged students were crushing any confidence he had when teaching. Laura even reached a point where she was ready to give up completely. She said, "I don't want to say I gave up on the virtual kids, but I stopped trying to coordinate those virtual classes. I really stopped putting effort into office hours because ... you know, you sat there for an hour looking at a blank screen waiting for kids to show up." Echoing her feelings of despair, Marissa said "... it's probably the loneliest I've ever been as a teacher." This insight shows just how much teachers relied on the student-teacher interaction when teaching. In fact, Rob needed to take time to stop and reflect on why he was feeling the emotions he felt. He opened up during the interview, saying, "And I have to actually kind of say that it was psychologically very hard for me. I

didn't realize actually how important the performing aspect of teaching was to me. I always thought, yeah, I enjoy being in the classroom. But then when you get it just kind of yanked away... It was hard.” Moreover, all teachers in the sample group expressed frustration, sadness, or other types of emotions with how little students were engaging. Comparatively, Barbara felt that the lack of student presence when teaching online was not as emotionally draining as when they are in person. She explains her feelings, “emotionally, it's a bit harder when you can see them because they don't care.” So, although she felt that the lack of students in a virtual class was a challenge, staying blissfully ignorant about whether students were listening or not took slightly less of an emotional toll on her. In her eyes, it was more hurtful to watch a person outright ignore her, rather than to just not see it at all and try to convince herself they are there, and they are engaged. Reviewing all the participant’s interviews, each teacher made comments about how they struggled with the lack of engagement with students, but some struggled more than others.

School Leadership and County Support

Reviewing the comments from teachers in the sample and comparing the different types of messages they were receiving from their school and district leadership, it is insightful to see the types of both positive and negative support given to teachers. Table 4 provides a consolidated overview of the reported types of support each teacher identified as receiving from their school, administration, and county. The table shows that teachers who were from the same county did have slightly different perceptions of the support they received. This variety of responses could provide insight into how the teachers’

individual experiences with their schools impacted how supported they felt. It is important to note that Table 4 was created based on the interview responses from these seven teachers and from their own recollection of events. This is not a comprehensive table.

Table 4

Teacher- Reported Support Received during COVID-19

Teacher	Subject	District	Technology Resources: Hardware and/or Software	Administration Support	County/District Support
Jack	Theater	1	Yes	Yes	Some
Jen	Theater & English	2	Some	Yes	Yes
Laura	History	3	Yes*	No	No
Megan	German	1	Yes	Some	No
Marissa	English	2	Yes	Yes	Some
Barbara	Earth Science	4	Yes*	Yes	Yes
Rob	History	2	Yes	Some	Yes

*School later took away/stopped paying for some of the software they had purchased in 2020-2021.

Looking at specific examples, both Barbara and Jack commented that each of their respective schools were practically throwing new technology at them to use, such as webcams, microphones, and extra computer screens. Barbara was even given a new iPad.

Additionally, Rob commented that when his school was going to teach in a concurrent format (some live students and some virtual students) they gave him and his peers new laptops, high-end cameras, and TV screens to view the virtual students. Going along with these tools, some schools gave the added support of time and resources for the teachers to learn. Megan's school planned a whole week of asynchronous learning (no live classes) before they transitioned to concurrent teaching, in order give them time to set up their rooms and practice with the tools. Further, both Marissa and Jen commented that the Instructional Technology Resource Teachers at their buildings were extremely helpful in providing one-on-one support and resources to help the teachers adapt.

Moreover, some teachers commented on how their leadership showed support through their actions and words. Jen talked briefly about how her school was requiring that classes be set up as similarly as possible to promote consistency if students had to change teachers during that time. Although, when she saw a problem with that expectation, she expressed her concern and was given the support she needed. She commented:

...I even asked the principal to meet with me about that, because they were saying, everything has to be the same. Everything has to be the same. And I told him, I said... I think it was a class of 19 students, and 12 were speakers of other languages. And I said, "I really think this is going to make them struggle even more [moving at the pace of all the other students]." He said, "You're fine. Do what you feel is best." (Jen, 06/02/2022)

In this situation, she expressed concern for students of a special population being able to adjust and the principal allowed her to use her own professional judgment and did not force the requirement. Experiencing changes in her own school, Barbara had a similar experience of support. She said:

That [virtual and hybrid] school year [teachers] were given more tools and more space to be professionals, at least in my county... than I ever had before. So not only do we have time to collaborate, you know, we were given time and space to do things our way, in a way. And communication was outstanding that year. We got information from the School Board Office, we got information from our administrators, we got information from parents, we got information from kids. I mean, I just felt like there was a whole communication thing that was happening that has never happened before. (Barbara, 07/13/2022)

By having the “time and space” to do what they felt was best, Barbara and her peers felt the confidence to embrace the changing climate of teaching, knowing that they had the time and professional respect to do whatever needed to be successful.

Comparatively, some teachers expressed varying degrees of a lack of support from their school and county leadership. Laura talked about how one of her peers went to their school leadership, asking for support. She said that her peer, “... cried to the principal and said, how miserable she was and how terrible everything was and the principal kind of dismissed it and said... ‘Well, this is just like everybody's first year teaching all over again.’” Later, even though she had heard about her peer receiving that

response, Laura tried to ask the administration for support since she was struggling with adjusting and ready to give up. When Laura retold the conversation, she said:

And then I talked to the principal firsthand, and I said, "I'm going gray.... My hair's falling out from stress." And her [the principal's] reaction was once again to put that it's like first year... the same thing that she told the other colleague. And I got teary, which I don't really do. I'm a stiff upper lip New Yorker. And then she told me she thought I should seek counseling. And I'm still not really over that. I said, "Are you willing to provide counseling for the entire building? Because I think we all need it." (Laura, 06/03/2022)

After this anecdote, Laura became visibly upset in the interview, suggesting that she still was struggling with the way the conversation went. Both her and her peers were reaching out to their leadership for any kind of support but left being told that everyone is feeling the same way and not really acknowledging what they needed. Laura later in the interview commented, "I would say the biggest thing was just a lack of support. We just didn't feel supported. Not by admin, not by central office ... and we just feel like nobody heard us." However, she was not the only teacher who felt a lack of support from her school leadership. Rob commented that one of his administrators directly prevented his department from meeting as a group. He said that they would still meet in small groups with their grade-level peers, but they were expressly told to not meet as a whole group. This action hindered their ability to work as a proper team when dealing with the events as they were unfolding. In another example, when talking about coming back in the building to teach, Megan said, "I didn't trust their [school leadership's] decision making.

I didn't trust, they were gonna keep me safe if I did go back in. So we've switched as a family to staying home.” While Megan could not fully know what the environment would look like if she chose to return to the building to teach, she felt a lack of trust with her school and county that they would not have her health and best interests in mind. Overall, although these examples are from a small sample size, it provides a snapshot of the variety of experiences these teachers had. While some teachers in the sample thrived knowing they had the tools, time, and respect to do what they had to do, others felt unsure and lost without support from their leaders.

Community Support and Influence

Further, social persuasion among these teachers was also impacted from the messages from students’ families and communities during these two years. Jen, having been teaching for 36 years, commented on how negative the public view of teachers was during this time. She said, “you hear these negative comments from the public. It was- I had to stop listening. I had to stop reading things because it was striking too close to the heart. It was very, very disturbing.” In another example, Marissa talked about how much she later struggled with classroom management when the students came back full-time the year after the virtual/hybrid school year. She got to the point where she directly reached out to all the families of her students for help. Emailing everyone, she said “I need your help because your kids ... don't know how to act in school. And so I'm looking for volunteers to come in because I can't do it alone.” Marissa said she received a response from one parent (from the 90 students she taught), but even that one parent never showed up when she gave them dates/times to join. She later said in the interview,

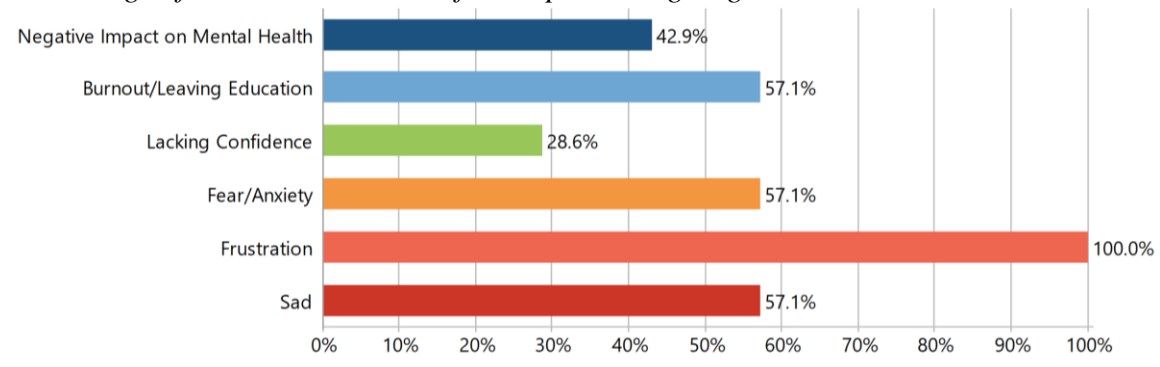
“I don't know, I feel like it's, it's really an interesting field to be in to be a highly educated person. But treated as less than.” These examples show how deeply they were affected when the community and families of the students they taught did not respect them enough to acknowledge how hard they were trying. As a result, whether it was the emotional toll of absent students, the lack of personal support from school leaders, or hurtful interactions from the community, teachers were experiencing a lot more negative feedback and social interactions than they were prior to COVID-19.

Physiological/ Mental State

Exploring the emotional state of teachers, each participant in this study had been teaching for at least 10 or more years prior to COVID-19. As a result, participants were not only experiencing stress and sadness from the changes happening around them, but they had to also rethink everything they knew from the 10 or more years in their career. The code map in Appendix C shows that “frustration” codes were very closely related to absent students, which provides insight to how much teachers were emotionally invested in their ability to not only teach, but to have students connect and engage with the content. When students were not there, or not showing they were there since their cameras were off, teachers identified that they felt emotions ranging between loss and frustration. It is significant to observe in Figure 1 the negative emotions teachers expressed that were impacting their mental health.

Figure 1

Percentage of Teachers who Identified Experiencing Negative Emotions



Note. This chart identifies the percentage of the seven teachers in the study whose responses were coded with these specific emotion codes throughout the interviews. For example, a code that shows 100% means that all seven teachers interviewed in this study identified that type of emotion at least once in their interview.

Almost all teachers mentioned feelings of burnout, sadness, and fear, with several openly discussing specific mental health struggles. Talking about the overall transition to teaching virtually, Rob commented that, “A lot of teachers were absolutely kind of traumatized and devastated by teaching in this [virtual] way.” With all the experience teachers had in education, it was observed that the most common feeling among the teachers interviewed was frustration. Since their teaching practices were no longer as successful as they were before COVID-19, online teaching brought changes to their skills that they never considered before. Since many students did not have their cameras on, Jen described the frustration of teaching virtually as like “talking to M&Ms” because the only

visual teachers had of their students was a colorful dot with their initials. Unlike in the physical classroom where teachers used to be able to see if a student was not paying attention or falling asleep, now students were dots on screens that may or may not be listening. Relating to this feeling of performing to an unknown audience, Marissa tried to make light of her sadness by trying to hype herself up. She said, ““Okay... you are Jimmy Fallon. And you're putting on a show. And hopefully they're going to tune in and continue to come back' ... You were a talk show host and hopefully people are liking what you're doing.” With all these negative emotions bringing down teachers’ mental and emotional states, there was a clear negative impact towards teachers’ physiological state, which decreased their personal confidence and belief in their ability to be the teacher they once knew themselves to be.

Nonetheless, although these participants discussed ways their mental health suffered during this time, many teachers made efforts to cope and recover from the emotional strain. Several found ways to manage stress through various coping methods, including faith, positive affirmations, physical tasks, and volunteering. As an example, when Rob was reflecting on what helped him get through the events of the past two years, he said it was a combination of peer support and his faith in God. He commented that his faith in God is “this idea that you're not in you were in control to begin with, and that God is, and so he's going to take care of you.” Similarly, when talking about how she handled the levels of frustration she had with herself, her county, and overall situation, Jen said, “... every morning, I would draw a dove on my wrist and I wrote ‘Grace,’ like, you know, where the olive leaf would be. I wrote ‘Grace’ there. And every time I felt like

it- I looked at it. And it just made me calm down.” By drawing a visual cue on herself to look at when she was overwhelmed, she created her own emotional anchoring point. It would help her remind herself that she is not going to be perfect, but she needs to keep trying. As another example, Jack talked about how his biggest obstacle was feeling isolated from his creative world. He commented, “I lost my stage,” but he soon found that building things was an effective way for him to cope:

I just started building stuff, like my real life, because I'm a tech teacher and I build things. I started just building stuff in my garage, and in my yard. I started an entire carpentry business. I built glider swings. And it was crazy, I built four of them like big double whacking, swings and gave one to my in-laws, one to my parents and I just kept building. I could build a planter box, I built like a shed, I built like a fire pit. I just all of a sudden have all this time on my hands when the school day was done, and I'm so used to like building sets and doing things and being at school till five, six o'clock, and none of that was just gone, you know. And so I needed, you know,- Some people baked, you know, everybody baked and made sourdough and got puppies, and everyone had their own way of dealing. But mine was to build. That was my mental health therapy. (Jack, 5/26/2022)

Unlike Rob and Jen who used spiritual beliefs and positive affirmations, Jack relied on movement and craft to adjust mentally and emotionally. Since his school theater environment would include building sets, it made sense that in his isolating world of being stuck at home, he found solace in building. Laura, the teacher who was identified as having the highest number of coded segments relating to stress and anxiety, explained

how she was able to find some comfort by fostering and rescuing animals at the local animal shelter. She said, “As a teacher, that's part of why we have the job we do is because you want to feel like you have a purpose in your life. And when I didn't, I think that's part of what really was getting me down. So I found it somewhere else. I could look and be like I saved 10 animals. That's what I could do.” Throughout the interview, Laura talked often about how her passion for teaching was rooted in the connections and growth she saw in her students. So, being unable to engage with and support students, she was able to find some comfort by caring for animals. It is insightful to observe the unique coping strategies teachers used to manage the mental and emotional toll of COVID-19 and how many were able to find ways to recover and push through the negative emotions.

Other Findings

Personal Mindset & Perspective

Results from these interviews show that each teacher struggled with their mastery experiences, vicarious experiences, social persuasions, and personal physiological state to varying degrees and there is no obvious trend with age, experience level, school, or content area. However, it is interesting to notice there is a trend in teachers' mindsets and personal perspective when they detail what they were going through during these two years. Looking at personal mindset considering Carol Dweck's research, she suggests that a person's success at completing new or challenging tasks does not necessarily relate to natural intelligence or skill, it comes from a person's mindset (2006). Specifically, she says that a person has either a fixed or a growth mindset (Dweck, 2006). Fixed is when a person believes that they are allotted only one set of skills and abilities in life and that

there is no room for growth, so those people tend to stop trying at the first hint of failure or not face the challenge at all. Comparatively, a growth mindset is one where people believe that there is always room for growth and that, if they work hard enough, they can achieve anything (Dweck, 2006).

Considering Dweck's perspective on mindset when reviewing the findings of this research, some teachers approached the challenges of COVID-19 with a growth mindset whereas some had a fixed mindset. For example, teachers made growth mindset comments about how they feel that they have been through so much at this point in their career, they know they can get through anything else that comes their way. Jen commented that she has now been able to "step back and say, hey, you know, it was just the thing. I'll get through it. We'll get through it ... And I think I'll continue that." Marissa addressed her own mindset by saying, "I just feel like, what I have learned with myself, over the course of the years is that I can roll with the punches. I can make anything work. And if it doesn't work, I'll make it work for me and what's best for my students." Additionally, Megan stated that she personally always enjoyed and thrived on the ebb and flow of teaching, "... seeing, 'okay, they don't get it' and [then] helping them and going around and adjusting and things like that." Jack stated that "I have had to invent and reinvent myself more times in the last three years than in my entire career.... I feel like there's nothing that I haven't tried to do or experienced... Every day I've had to learn new inventive ways to do this job." While Jack and Megan viewed challenges and obstacles in the classroom as an opportunity to grow and thrive, others like Jen and Marissa used self-reflective growth techniques as a reminder that they will get through these challenges as

they always have done. Moreover, one of the most direct examples of teachers demonstrating a growth mindset through COVID-19 was when both Barbara and Rob identified that their perspective has always been, “Semper Gumby.” Rob explained:

There had been a phrase in education, even before COVID, [a] kind of a play on the Marine Corps phrase of Semper Fi, called Semper Gumby. He was the guy that was always bending. And so with that idea of being always flexible, that was kind of the rule..., you know, you accepted it as long as it wasn't like some kind of, you know, critical kind of moralistic hole you're putting yourself in. Or you weren't building yourself up on a hill that you're willing to die on. You're like, “Okay, sure. This week, we're doing this. Okay.” “You want me to clean my desks every class? Okay.” So, yeah, I just generally rolled with it. And, again, not trying to find a hill to die on [made] my mental state a lot easier. (Rob, 07/14/2022)

It is significant to observe that two teachers from two different school districts both learned the same lesson of “Semper Gumby” in their teaching careers. Both Rob and Barbara suggested in their interviews that education has always been full of trying times and that being adjustable and ready to grow during those times is the key to getting through it. These direct examples from teachers demonstrate how many of them viewed the challenges they went through as a growth experience.

In contrast, some teachers developed a fixed mindset during COVID-19, especially if they experienced a lot of negative social persuasions and failures. For example, Laura made several comments during her interview about how she personally

does not like change and when COVID changed everything she knew about teaching, she struggled. One example was when Laura was giving a lesson that she had previously successfully taught every year pre-pandemic. However, the students were so disconnected from the content and school itself that they did not engage with the lesson she was trying to teach, and it was not working as she wanted. The result was that she became frustrated and quit: “I just went to my desk and I legit just quit in the middle of class. And we didn't finish the curriculum, we didn't finish the year. I posted stuff online... And I'm not proud of it.” At this point in the interview, she became very emotional when reflecting on the event. This teacher had previously expressed that she had many failures during these two years with teaching online, which continued even when they were back in person. Everything that she had been successful at as a teacher had changed for Laura, which was an added challenge for someone who did not like change. As a result, she developed a fixed mindset on the situation that she was never going to get those students to engage in the content, so she gave up.

Resiliency

Further exploring the teachers who demonstrated a growth mindset, many even demonstrated examples of resiliency. Several teachers in this study not only grew from the challenges, but they recovered quickly after setbacks. For example, Jen talked about how she and her co-teacher were missing the fact that they were going to be unable to say goodbye to their students (in April of 2020), so they decided to do something to properly say goodbye. She said:

We bought these yard flamingos, and we put bow ties on them, and put [school abbreviation] theater company 2020 on them. And then we took chords to the seniors. And we went to all of their houses and delivered them to them. So that was something that helped us. And the joy on their faces. When they saw us, we didn't let them know we were coming, we contacted the parents. So [it was] a big surprise for them when we came... I'm very proud that we were able to do that. And the thing that I did is, I wrote all of my seniors, a special letter, you know, personal little notes, and I sent them all to them, because I just felt like I needed to say goodbye to them and best wishes. (Jen, 06/02/2022)

Also, in an anecdote from Barbara about how she continuously tried to build connections with students while teaching virtually, she talked about how she and her co-teacher put their Bitmoji images (self-created avatar images teachers made for their virtual classrooms) on Christmas cards, which they mailed out to each one of their students. She said that those cards helped her create a connection with the students, even if they never responded to her or said anything about them. Additionally, Jack took it upon himself to find a way to still put on a full theater production during that virtual year. He and a peer organized an outdoor theater group outside of school for his students to participate in. With that group, he was able to organize several plays that year with about 30 of his own school students after school. Overall, these examples of how teachers attempted to connect with their students despite the virtual year, suggest a resilient perspective of wanting to do anything and everything rather than giving up.

Discussion

Reviewing each of the research questions, this study first sought to explore the specific experiences of teachers going through changes in teaching during the COVID-19 pandemic. The findings of this study suggest that teachers struggled the most with the loss of student connection and engagement when they had to teach virtually, which had varying degrees of impact on their physiological and mental states. This finding relates to research previously mentioned in the literature review about teacher self-efficacy from Hajovsky et al. (2019). This study on teacher self-efficacy identified that closeness and positive engagement with students in the classroom setting directly impact teacher's individual self-efficacy beliefs. Looking closer at current findings, each teacher in this study addressed the negative emotions they felt when students were no longer engaging and interacting with them while teaching online. Some described it as an isolating experience, while others described it as frustrating to teach with students being both physically and emotionally absent. Some even expressed that they felt they lost their whole purpose as a teacher since the passion of teaching often comes from connecting with students and seeing them grow. These feelings of loss are like other COVID-19 studies mentioned, by Narayanan and Ordynans (2022) and Soncini et al. (2021), where they found teachers expressed a type of "disorientation" and disconnect from teaching when they no longer had students with them.

Also, findings from the current study show varying degrees of uncertainty impacting self-efficacy, with constant changing of the teaching format and school leadership decision-making. Specifically, a common trend teachers identified was the varying degrees of responses and reactions from their peers and school divisions over the past two years. While some teachers observed their peers shutting down and giving up on teaching, others worked extra hours to get everything perfect for their online lessons. These peer reactions impacting self-efficacy relate to what Usher and Pajares identified as vicarious experiences from peers (2006). Similarly, Usher and Pajares' suggestion of social persuasion impacting self-efficacy could be found in the response of how school administration and leaders provided more support to teachers than other schools (2006). Observations from participants about the ever-changing teaching environment and responses in schools were felt by all teachers in different ways. Moreover, these shared experiences among the participants about their emotional reaction to the loss of student engagement and the varying degrees of unpredictability in schools suggest that teachers went through dramatic and emotional changes during COVID-19.

The second research question sought to identify how teacher self-efficacy beliefs and perspective on teaching among veteran-level teachers, with at least 10 years of experience, were impacted over these two years. Interviews from the sample group found that each teacher struggled to varying degrees within the four areas that have been identified to impact teacher self-efficacy: mastery experiences, vicarious experiences, social persuasion, and physiological state (Usher & Pajares, 2006). However, teachers who personally embraced a growth mindset when faced with challenges, rather than a

fixed mindset, were more likely to quickly adapt to the changes and recover their self-efficacy beliefs. This finding was also observed in a previously mentioned COVID-19 study by Ma et al., where they found that teachers with personal adaptable qualities were more likely to improve during COVID-19 (2021). As addressed in current findings, Jen talked about how she wrote individual letters and visited the homes of her seniors with yard flamingos, Jack, along with a peer, developed an outdoor theater program separate of school, and Barbara sent Christmas cards to her students share holiday cheer. These examples show an adaptable and growth-based mindset since each teacher took active steps to overcome their extreme feelings of loss, which were impacting their social persuasion and physiological/mental states. Observations among the sample of experienced teachers, each of whom had personally identified strong teacher self-efficacy beliefs before the pandemic, show that they were able to recover their self-efficacy beliefs quickly if they also had a strong adaptable and resilient mindset. If teachers did not have a sense of adaptability and growth, they had a challenging time finding new ways to overcome setbacks and it took them longer to recover. At the end of all the interviews, each teacher identified that they had regained at least some of their teacher self-efficacy beliefs and feelings toward their career. Some teachers felt they had recovered completely, stating that after all they had been through, they were at the prime of their career. Whereas some teachers said they still had a lot they needed to do and learn to get back to where they were before as an educator.

The final research question, exploring the external factors that helped support teachers' self-efficacy, was added after an initial review of the findings. The findings

showed that, although each teacher received varying types and levels of support, the best and most significant support came from positive vicarious experiences of peer support and from positive social persuasion. For example, collaborative planning with peers and support in the form of resources made teachers' ability to adapt to online teaching easier. Each participant identified that peer comradery and collaboration were critical during those two years. Megan, who did not have a coworker of the same content in her building, found meaningful support in teachers who taught other foreign languages at her school. She even commented on how valuable the new concept of virtual meetings was to her since it allowed her to collaborate with other German teachers in ways that she had never done before. Some teachers, if they had a group of peers teaching the same content at the school, mentioned how they were able to divide and conquer, which eased the workload and helped fill gaps for teachers who lacked the technology skills. Some participants who taught specialized classes, even though they were not able to divide and conquer as other teachers, still relied on the emotional support from their peers.

Additionally, teachers who were provided reliable online tools, resources, and training support, were better able to adapt their teaching methods with positive mastery experiences. Comparatively, teachers who did not have the resources or support to be successful were more likely to have failed mastery experiences and were less easily able to adjust. For example, Barbara's school that was 1:1 with student computers before COVID-19 did not struggle with the initial transition to online learning since they were already comfortable with both the technology and the tools. However, schools who were not used to students using computers in the classroom struggled to keep up with the

demands of learning the tools, while also being expected to use them effectively. This observation about proper training connects to findings from current COVID studies that found teachers who had access to, and prior use of online teaching tools were less overwhelmed than their non-technological peers (Baroudi & Shaya, 2022; Buric et al., 2021; Dolighan & Owen, 2021; Ladendorf et al., 2021). Overall, although each teacher in this study had unique experiences with the external support they were receiving, they all identified that they were more successful at adapting their content and learning the new resources when they had their peers and other school supports assisting them. As a result, it is suggested that positive experiences of external social persuasion and supportive vicarious peer experiences were connected to teachers' self-efficacy beliefs recovering.

Supporting Educators

Based on these findings, there are a few significant observations about teacher's experiences during COVID-19 and how their self-efficacy was impacted that could provide valuable insight to the education career overall. Even though some teachers were more prepared, with knowledge, resources, or skills coming into COVID-19, the most significant factors in how well teacher self-efficacy adapted and recovered were based on external supports teachers received from their peers, school, and district, in addition to the individual teacher's mindset (Dweck, 2006). Moreover, having high teacher self-efficacy beliefs before the pandemic did not necessarily relate to continued high self-efficacy and overall success during COVID-19. In a previously mentioned study conducted on the stress and wellness of teachers before and after COVID-19, researchers found that leadership decisions and school climate were often directly related to teacher

mental health changes (Herman et al. 2021). Knowing this, school districts should evaluate the decisions made and the ways that they supported teachers during COVID-19. Both the physical resources and overall support from school leaders should be assessed to see how effectively they helped teachers. Further, that knowledge should be used to plan what tools teachers need moving forward when faced with both post-pandemic realities of education and the everyday challenges in the classroom.

Looking further, seeing that veteran teachers who had a growth-based mindset were more able to quickly recover their teacher self-efficacy beliefs, it can be suggested that schools consider how wellness and adaptability workshops could be beneficial to their teachers. Even though an individual's growth or fixed mindset can be based on personality and outlook on life, there could be ways that schools can support teachers' growth mindset in the classroom (Dweck, 2006). As an example, a study conducted in the Netherlands by Brassey et al. (2020) sought to provide emotional flexibility training to workers to improve their adaptability to changing and emotional environments in the workplace. Their study suggested that emotional flexibility is a skill that can be developed through mindfulness training and self-help strategies that help workers focus on what is important to them and not focusing on negative or avoidance behaviors in the workplace (Brassey et al., 2020). Specifically, these trainings encouraged workers to identify their own core values in life and to prioritize their values over any uncertainty or avoidance caused by changes in their career. Encouraging them to accept changes in the workplace as an unavoidable reality, these treatments helped workers take on a detachment of negative thoughts to prevent becoming emotionally caught up in them. For

their study, they used a control group to compare the success rate of the treatment over time and their results showed significant increases in emotional flexibility after the workshops, when compared to the control group (Brassey et al., 2020). Further, their results identified the participants as having an improved general self-efficacy score after participating in these emotional flexibility trainings.

Relating this study to the experiences of teachers during COVID-19, the most significant issues teachers faced were the emotional struggles from the loss of their student connections, lack of needed support, and the ever-changing teaching environment during the past two years. Although some teachers had a personal growth mindset and were able to quickly overcome those emotional changes, others took on a more fixed mindset, which caused them to struggle with regaining their self-efficacy beliefs. Therefore, this research done in 2020 by Brassey et al. could be considered as an additional level of support that schools and districts provide teachers if they reach out needing support with changes at the school or emotional challenges they face with students and/or parents. Helping teachers view challenges in the classroom as opportunities to grow, will not only support teachers to be more adaptable with any future school-wide changes, but it would support teachers in handling the day-to-day emotions that often come with teaching. Even before COVID-19, studies were often conducted on teacher stress, well-being, and burnout in education, which suggests that offering workshops on wellness, adaptability, and mindfulness will always be a relevant skill for teachers in the workplace. Furthermore, school leaders and supporters should work to support educators by providing resources, tools, and educational specialists for when

teachers need support teaching. Schools should consider workshops and training that will support teachers' emotional adaptability when faced with changes or challenges they have in the classroom. Giving teachers the tools to succeed and support for when they fail will provide teachers with everything they need to be the best educators they can be.

Limitations

Limitations for this study include limitations involving the participants chosen in the sample. With this research asking teachers to explain their feelings and beliefs about events during the initial stages of COVID-19, there could be a limited range of how much teachers remember since the events took place just over two years ago. Therefore, time could have had an impact on the accuracy and depth of the data being collected. To attempt to ensure credibility when facing the limitation of time, the interview was structured into four time periods, with each chunk of time being introduced with a brief contextual reminder of what was happening with COVID-19 (i.e., March 2020, the Governor of Virginia shut down school districts for an undefined amount of time). Further, each participant was offered the option to provide notes/memories that they might have forgotten after the initial interview was conducted. Also, due to the limited number of teachers who completed the interest survey and the specific criteria those teachers needed to meet, there were no teachers of color who participated in the study and some instructional content areas were not represented among the sample. This causes a limitation in the depth, richness, and variety of the data that was collected and could be a direction for continued research.

Another limitation and validity concern with the research was the potential for participant bias to influence the results. Specifically, with the research study advertised through the VEA community and then shared among peers, there was potential for volunteers to have felt either very negative or very positive after the events of COVID-19. Due to the nature of the research, being focused on how teachers coped with events, there was a chance that teachers who felt one way or another were more drawn to the interview, since they thought those were the types of teachers needed for the research. To combat this potential bias, participants were asked a wide range of questions during the interview that encouraged teachers to reflect on both the good and the bad experiences in the past two years. Also, participants were asked several self-reflective questions that encouraged them to think through the events with more than yes or no answers to combat any fixed thinking. Through these types of questions, responses from teachers were less likely to be exclusively negative or positive, which helped combat potential for participant bias feeling one way or the other.

Finally, there are validity concerns in the research due to potential researcher bias. Knowing that the researcher experienced the events of COVID-19 while working in a non-teaching role in the public school system, there could be concern for bias with data analysis and interpretation of results. To combat these issues of trustworthiness, member checking, peer debriefing, external audit, and researcher reflections were utilized. Also, each component of the interview process, such as the interview protocol, details of the findings, analysis, and conclusions were presented to a peer and an external researcher for a review. The external researcher and peer checked for any leading questions in the

protocol, false interpretations of the coded data, and false or unsupported conclusions in the research. Another attempt to ensure as little researcher bias as possible was the use of researcher reflections. These reflections were written regularly in a memo journal to reflect on findings and keep opinions in check and separated from final conclusions.

Future Directions

Although this current study provided several insights on how experienced teachers adjusted during COVID-19, there are many directions where this research can continue. Future COVID-19-related research could be conducted on how teachers' self-efficacy changed among teachers with five or fewer years of experience. It will be insightful to learn how new teachers, with less experience and typically lower teacher self-efficacy at that point in their career, managed the changes in a profession that they had not yet become familiar with. In addition, comparative research could be done on how public-school teachers' self-efficacy changed compared to private-school teachers. Specifically, one teacher who was interviewed, but not used in this current study because she worked at a private school, had an entirely different tone than other teachers. Compared to the teachers who worked at a public school, she described the continuous support she received from her school and how her teaching was minimally impacted during COVID-19.

More importantly, future research should be conducted on the emotional flexibility training that some companies provide, as referenced from the Brassey et al. research (2020). Research on the companies that offer the training and its result on employee retention could prove beneficial when attempting to provide similar

opportunities to educators. With a result of this current study identifying that teachers with a growth-based mindset were able to recover their teacher self-efficacy beliefs more quickly, it can be suggested that adaptability and emotional flexibility could be an asset to educators of any age, regardless of their years of experience. Therefore, future research should be conducted on if any school districts in the United States have attempted to provide similar wellness or adaptability training and how that training impacted their teachers. Even though COVID-19 had a significant impact in recent years, concerns about teacher burnout have been noticed before COVID. As a result, it could be insightful to explore if emotional and wellness support can benefit school districts by keeping high quality teachers in the classroom.

Conclusion

With so many teachers currently leaving the profession, it is important to take a closer look at what teachers went through during these past few years to hopefully prevent teachers from leaving education because of burnout, a consequence of low self-efficacy (Federicova, 2021; Toropova et al., 2021). This exploration into the experiences of veteran-level teachers during COVID-19 suggests that experience in the classroom is often not enough to protect them from emotional and mental stressors in their workplace. Whether it is caused by a lack of support from administration, a lack of student engagement, a lack of appreciation from the community, or a lack of time to get their work done, teachers are faced with many different decisions and challenges every single day. In this study, teachers who ended the interviews saying they are at the prime of their career as an educator were the same teachers who said they received support when it was needed over these past two years. Even though it appears that the worst of COVID-19 changes are in the past, schools still must take the time to evaluate the needs of their teachers and provide them with the support that they require. If students going through school hope to get a quality education, they need to be taught by confident, skilled, and supported educators.

Appendix

Appendix A- Interview Protocol

The following are the questions that were asked in the interview. Any sub-questions beneath the initial question were used for further prompting and detail when needed or appropriate. Based on the participants' responses, additional questions were added and noted.

Hello and thank you for taking the time to talk to me today. Before we begin, do you have any questions about the informed consent form that you completed earlier?

To be sure that we have an accurate record of today's conversation, I am going to supplement my notes with audio and video-recording our interview. Is this ok?

Today is (Date/Time), and I am speaking with (participant). I am going to be asking you a few general questions, then a series of questions that follow a timeline of the past two years. I will explain more about the structure as we go forward. If there is anything you do not feel comfortable answering, that is not a problem; just let me know, and we can skip that question.

Introductory Questions

1. Tell me about your teaching career overall.
 - a. How many years have you been teaching?
 - b. What degrees/licenses do you currently hold?

- c. Has teaching been your only profession? What was your previous profession?
 - d. What content do you teach? Have you always taught that same content?
2. Tell me about how you felt about your teaching career prior to COVID.
 - a. What did you consider your greatest strength?
 - b. What did you consider your greatest weakness?
3. Were there any other significant life events occurring over the last two years/during COVID-19?

March 2020- August 2020: Governor Shut down Schools for remainder of school year

Contextualization

4. Tell me about how your school adapted to the initial changes of COVID-19 in March of 2020.
 - a. Were you and your peers still expected to teach content in those initial months after the Governor's school closing order?
 - b. What did that look like?
5. Tell me about how you feel you personally handled these changes during those first few months of COVID.
 - a. How did you experience any added worry, fear, anxiety, etc.?
6. Tell me about what you observed from your peers during this time.
 - a. Were your peers feeling the same as yourself?

7. Tell me about your social interactions and professional support you were receiving.
 - a. How did the school administration communicate and support you?
 - b. How was your interaction with students and families?

Anything else you would like to add about this time in your career?

August 2020-December 2020: New School year- Many schools started virtually

Contextualization

8. Tell me about the format of how your school started the 2020-2021 school year (virtual, hybrid, in-person).
 - a. What were teacher expectations?
 - b. What were student expectations?
9. Tell me about the training or resources you received at the start of the school year to support you moving to a new teaching format.
 - a. Were there any specific people or resources you relied on the most as the year began?
10. Tell me about how you feel you personally handled these changes during those first few months.
 - a. How did you experience any added worry, fear, anxiety, etc.?
11. Tell me about how your teaching practices changed to adapt to the new school year.
 - a. What teaching strategies were successful? Unsuccessful?
 - b. What was the biggest obstacle you faced when teaching your content?

- c. Were there any strategies you knew from previous experiences that helped you during this time? Assessment methods?
12. Describe any collaboration you had with your peers with planning content and organizing curriculum.
- a. Were you meeting and planning with your peers more or less than in past years?
13. Tell me about your classroom management and student behaviors with this new teaching format.
- a. Was it successful? How did you adapt?
- Anything else you would like to add about this time in your career?

January 2021-June 2021: Mid- Year, many schools started to bring students back to school

Contextualization

14. Describe any additional changes that occurred at this time.
- a. What was the biggest challenge for you doing this time?
 - b. (If applicable) Tell me about the training or resources you received to support you moving to a new teaching format.
 - c. (If applicable) Tell me about a typical class period/day teaching hybrid.
 - d. (If applicable) Describe how the students acted when they were learning in a hybrid format.
15. Tell me about how your teaching strategies developed throughout the year.

- a. Were there routines, methods, or teaching strategies that were more successful than others?
 - b. Was there a unit/topic that was more challenging to teach in the new format compared to previous experiences?
 - c. How did you help students reach higher level learning and critical thinking with your content?
16. Tell me about how your peers experienced this second half of the school year.
- a. What similarities and differences did you see with their experience to yours?
17. Tell me about your student and family interactions during this time.
- a. How did you feel support from families as the school year progressed?
18. Tell me about how you observed students' academic growth overall this year.
- a. How were students adapting after abnormal instruction and routine?
- Anything else you would like to add about this time in your career?

August 2021- June 2022: Many schools back to in-person

19. Tell me about how your teaching method is now, in the current format.
- a. Are you relying heavily on online materials?
 - b. Are there components of your teaching that you changed completely from last year?
 - c. Are your assessment methods the same? Different?
 - d. (If in-person) Are there components of your teaching that you were able to go back to when you went back to teaching in-person?

20. Tell me about how you personally are doing during this new school year.
 - a. Are you experiencing any worry, fear, anxiety, etc.? Why?
21. Tell me about your peer collaboration now, compared to previous years.
 - a. Were you meeting and planning with your peers more or less than last year?
22. Tell me about your student interactions this school year.
 - a. How much do you feel you can motivate students who show low interest in schoolwork in the current learning environment?
 - b. How much do you feel you can help your students value learning?
 - c. How has classroom management changed?
23. Describe the professional support you have received this year from administration and families

Looking Forward

24. Describe how you feel you are as a teacher now, after all of these changes.
 - a. How do you feel about this change?
25. Tell me what lessons or takeaways you will remember from these past two years.
 - a. About yourself as a teacher or as a person
 - b. What goals do you have moving forward?
26. What do you want the public to know about teaching this year and the effects it has had on teachers?

Anything else you would like to add about this time in your career?

General prompts to continue conversation:

- What did you mean when you said...
- Can you tell me more about...
- How did you feel about...
- Tell me about....
- Describe a time when...

Appendix B- Participant Interest Survey

Informed Consent Form- <https://1drv.ms/w/s!ApSIN7QwtTwUjVZZk68fg7h8w1tA?e=gU3fAC> *

The informed consent is to provide your acknowledgement that the information you provide here will be used in the selection process of this research, but will be kept confidential at all times.

Please check this box acknowledging that you agree to the informed consent form linked above.

Please identify the date this form is being completed *

MM DD YYYY

__ / __ / ____

How many years have you been a classroom teacher?

Your answer _____

What subject/content do you teach?

Your answer _____

What grade(s) do you teach?

Your answer _____

Select all that apply

I teach in a public high school in the state of Virginia

I have been a classroom teacher since Fall 2019

I have changed the subject I teach within the past 2 years

I have changed the grade level I teach within the past 2 years

What format of teaching was your school/district at the START of the 2020-2021 school year?

- 100% Virtual Teaching
- Hybrid Teaching - A hybrid teaching model is when some students receive in-class, face-to-face instruction while other students receive out-of-class, online asynchronous instruction.
- Concurrent Teaching- In a concurrent classroom, the teacher is teaching one group of students in class while simultaneously teaching another group of students online.
- 100% In-Person
- Other

What format of teaching was your school/district at the END of the 2020-2021 school year?

- 100% Virtual Teaching
- Hybrid Teaching - A hybrid teaching model is when some students receive in-class, face-to-face instruction while other students receive out-of-class, online asynchronous instruction.
- Concurrent Teaching- In a concurrent classroom, the teacher is teaching one group of students in class while simultaneously teaching another group of students online.
- 100% In-Person
- Other

What was your experience using online resources and tools to support your teaching prior to COVID-19?

- 1 2 3 4 5
- No Experience A lot of Experience

What was your experience teaching online/virtually prior to COVID-19?

- 1 2 3 4 5
- No Experience A lot of Experience

How much do you believe you can keep students engaged when they are given challenging tasks?

	1	2	3	4	5	
Very Little	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A Great Deal

How much do you believe you can influence student academic success?

	1	2	3	4	5	
Very Little	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A Great Deal

How much do you believe you can relate your content to your students in meaningful ways?

	1	2	3	4	5	
Very Little	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A Great Deal

Interview Contact Information

Please provide the following information to be contacted about participating in a virtual interview.

First Name *

Your answer _____

Last Name *

Your answer _____

Non- Work Email *

Your answer _____

Non- Work Email *

Your answer

Non-Work Phone Number *

Your answer

What is your preferred contact method? *

Email

Phone

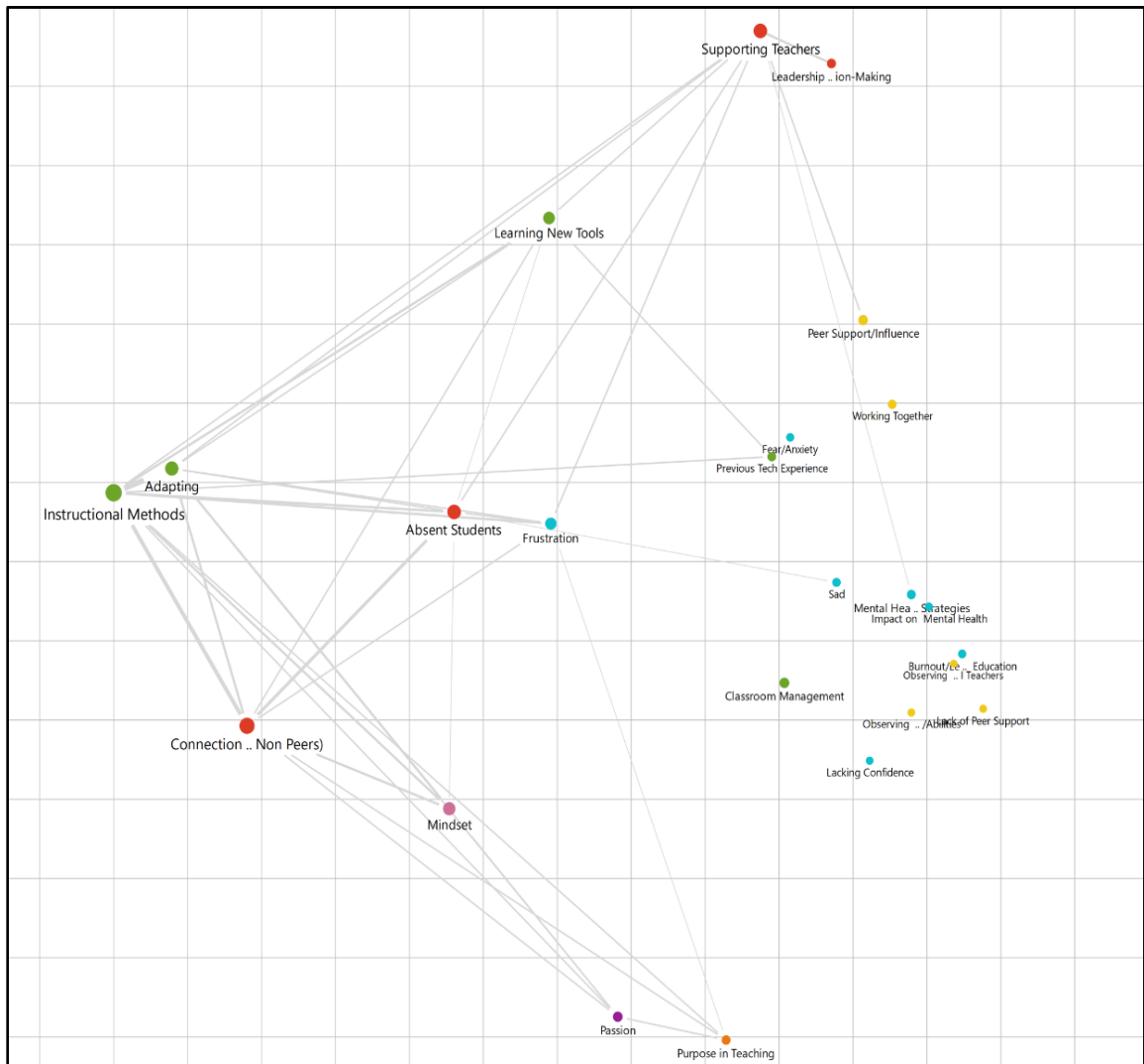
All interviews will be 100% anonymous and will not share any identifiable information.

Please contact Sarah Conley sconley4@gmu.edu if you have any questions or concerns. This research is being conducted as part of a Master's Program Thesis through George Mason University.

Submit

Clear form

Appendix C- Code Map



Note. The size of the dots is reflective of the frequency of code in the documents. The lines and distance between dots reflect the proximity of codes within three paragraphs in a document.

Appendix C, shown above, is a code map of all relationships between the codes. Each dot identifies the frequency of how often the code appeared in the interviews,

shown by how big or small the dot is displayed, the larger the dot, the more often it was found in the data. Also, the figure identifies how closely the codes appeared throughout the interview, based on how closely they are located. The color of each dot is reflective of the code groupings related to the study. Green codes are associated with mastery experiences, red is associated with social persuasion, yellow relates to vicarious experiences, and blue dots identify physiological state. Some insightful connections observed in this code map include, teacher's comments mentioned with adapting and instruction, coded segments about absent students were frequently mentioned with frustration, and comments about supporting teachers and decisions by leadership were often mentioned together. It is also insightful to observe that codes relating to vicarious experiences (yellow dots) and physiological states (blue dots) were often closely related. This could suggest that interactions with peers were a significant influence on teachers' mental state.

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Biography

Sarah Conley received her Bachelor of Science in Secondary English Education from Slippery Rock University in 2015. Moving to Virginia to pursue her teaching career, she has been working in public-school systems since January of 2016. She has taught in both middle school and high school, where she has gained experience with students ranging from grades 6-12. In Fall of 2020, she decided to attend George Mason University to receive her Master of Science in Educational Psychology. After receiving her master's degree, she will continue to work in education, with the hope of providing support to both students and teachers alike.