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The Influence of the COVID-19 Pandemic on Rural Virginia Secondary Teachers' Self-Efficacy

A dissertation proposal submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy at Virginia Commonwealth University

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TABLE OF CONTENTS

Acknowledgment	iii
List of Tables	x
List of Figures	xi
List of Abbreviations	xii
Abstract	xiii
Chapter 1: Introduction	1
Statement of the Problem	3
Purpose of This Study	6
Design.....	7
Summary	7
Chapter 2: Literature Review	9
Theoretical Frameworks.....	9
Social Cognitive Theory	9
Sources of Efficacy Expectations	13
Triadic Reciprocity.	13
Self-Determination Theory.....	15
Technological Pedagogical and Content Knowledge (TPACK/TPCK).....	17
Conceptual Framework	20
Review of Literature.....	21

Search Method	21
Inclusion and Exclusion Criteria	22
Title and Abstract Screening	23
Full-Text Screening	23
<i>The Review</i>	25
Theoretical Frameworks	25
Research Designs and Theoretical Frameworks for Self-Efficacy Study Design	26
Participant Sample	26
Major Components of Approaches	27
Major Themes and Conclusions	28
Prior Experience	28
Institutional Support	29
Communication	30
Agency	31
Digital Platforms & Technology Support	31
Professional Development for Online Teaching	32
Teacher Well-Being	32
Implications	33
Need for Additional Literature	33
Chapter 3: Methodology	35

Researcher Positionality	35
Research Design	37
Sampling.....	38
Data Collection.....	39
Procedures	39
Data Analysis	41
Credibility & Trustworthiness.....	42
Delimitations	44
Summary	44
Chapter 4: Findings.....	45
Participants	45
Janice	46
Jeff	47
Charlene.....	48
Michael	49
Tammy.....	50
RQ1: How has the COVID-19 pandemic influenced teachers’ self-efficacy perceptions in instructional strategies, classroom management, and student engagement?.....	51
Instructional Strategies	52
Students’ Instructional Needs.	56

Strategies for Meeting Students’ Instructional Needs.	57
Barriers.....	58
Teacher Needs.....	60
Classroom Management	62
Student Engagement	63
RQ2: To what do teachers attribute their current self-efficacy beliefs?	66
RQ3: What role did professional development play in teachers’ self-efficacy perceptions? ...	69
PD Provided for Returning to In-Person Learning	69
PD on Classroom Management, Instructional Strategies, & Student Engagement.....	70
Takeaways & Factors for Determining Helpfulness/Effectiveness.....	73
RQ4: What are the biggest challenges teachers currently face as a result of the pandemic?....	74
RQ5: How prepared do teachers feel to successfully teach should another pandemic force schools to close?.....	76
Additional Information.....	77
Chapter 5: Discussion	79
Discussion of Findings.....	79
Teachers’ Self-Efficacy Perceptions Post-COVID	79
Agency & Self-Efficacy	80
Sources of Efficacy Expectations	81
Self-Efficacy, SDT, & TPCK.....	82

Triadic Reciprocity	83
Factors Influencing Teachers’ Current Self-Efficacy Perceptions.....	84
Role of Professional Development on Teachers’ Self-Efficacy Perceptions	85
Institutional Support	86
Professional Development.	87
Relevance.	87
Choice.....	88
Time.	89
Communication..	90
Current Post-Pandemic Challenges.....	90
Self-Efficacy for Future RTL.....	91
Limitations	92
Implications.....	94
Conclusion & Recommendations for Future Directions.....	95
References.....	99
Appendix A.....	105
Appendix B.....	106
Appendix C.....	109
Appendix D.....	112
Appendix E.....	116

List of Tables

1. Research Designs & Theoretical Frameworks for Self-Efficacy.....	26
2. Demographic Information for Participants.....	51
3. Barriers to Meeting Students' Instructional Needs.....	60

List of Figures

1. Pedagogical Content Knowledge Framework.....	17
2. Technological Pedagogical Content Knowledge.....	19
3. Conceptual Framework.....	20
4. PRISMA Diagram of Screening Process.....	24

List of Abbreviations

1. MTSS Multi-Tiered System of Supports
2. VTSS Virginia Tiered Systems of Supports
3. VDOE Virginia Department of Education
4. JLARC Joint Legislative Audit and Review Commission
5. TPACK/TPCK Technological Pedagogical and Content Knowledge
 - a. CK Content Knowledge
 - b. PK Pedagogical Knowledge
 - c. TK Technological Knowledge
 - d. TPK Technological Pedagogical Knowledge
 - e. TCK Technological Content Knowledge
 - f. PCK Pedagogical Content Knowledge
6. OTL Online Teaching and Learning
7. ERT Emergency Remote Teaching
8. EOL Emergency Online Learning
9. CRT/CRTSE Culturally Responsive Teaching/CRT Self-Efficacy
10. FACS Family and Consumer Sciences
11. S-E Self-Efficacy
12. TAM Technology Acceptance Model
13. SCT Social Cognitive Theory
14. SDT Self-Determination Theory
15. EVT Expectancy Value Theory
16. SEA State Education Agency

Abstract

The Influence of the COVID-19 Pandemic on Rural Virginia Secondary Teachers' Self-Efficacy

By Sherol L. Southerland

A dissertation proposal submitted in partial fulfillment of the requirements for the degree of
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Virginia Commonwealth University, 2023

Director: Sharon Zumbrunn, Ph.D.
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The COVID-19 pandemic has presented unique challenges for PK-12 education and exposed educators' skill deficits. Teachers had to learn new approaches to doing their jobs while navigating the mental, emotional, spiritual, and financial impact of the pandemic on their personal lives. This undertaking was even more demanding for rural school divisions, which tend to lack the resources (e.g., personnel, technology, financial) that suburban and urban school divisions have. Schools reopened in fall 2020 offering fully remote, fully in-person, and hybrid modalities, however, there was no going back to teaching as it was before the pandemic. The present study sought to understand how the pandemic has impacted rural secondary teachers' current self-efficacy perceptions and factors attributing to those perceptions. Findings indicated that teachers' self-efficacy perceptions increased as a result of the pandemic and were primarily attributed to their personal efforts and prior personal and professional experiences. The findings also revealed the need for tiered institutional support that meet teachers' post-pandemic needs.

Keywords: secondary teachers, self-efficacy, teacher self-efficacy, rural, COVID-19, pandemic, institutional support, professional development, TPCK, SDT, triadic reciprocity

Chapter 1: Introduction

I struggle with being able to actually get into the Zoom session and being able to facilitate – to teach the lessons. And I think for me, it was more so about becoming more, not positive, but feeling more confident. And being able to get on the Zoom session, I was thinking for us, like, what if I have some technical issues, and then the students may see where the teacher doesn't really know what she's doing. So that was one of my biggest challenges. And not just that, but with the other platforms that we're using. To me, it seems like everything was thrown at us, and we weren't properly trained on how to use it successfully.

These were the words of a veteran high school science teacher in a rural school division in Virginia in the fall of 2020. Used with permission, the sentiments of this teacher represented the feelings of many teachers during the school closures caused by the COVID-19 pandemic.

The COVID-19 pandemic has presented unique challenges for PK-12 education and exposed areas of strength and skill deficits, particularly in the area of technology. Teachers with little-to-no remote teaching experience had to simultaneously learn and use virtual learning platforms, convert traditional face-to-face lesson plans to remote plans without the benefit of knowing and being able to use best practices for online teaching and learning, manage virtual classrooms, and provide the support students need to be successful academically (Haverback, 2020). Teachers had to learn new approaches to doing their jobs while navigating the mental, emotional, spiritual, and financial impact of the pandemic on their personal lives. This undertaking was likely even more demanding for teachers within rural school divisions, who more often lack resources (e.g., personnel, technology, financial) compared to their colleagues within suburban and urban school divisions (Franklin, 2012). The digital divide (i.e., access to

computers and the internet) between rural and urban communities that existed before the pandemic became even more apparent during the school closures. Rural areas lag behind their urban counterparts despite efforts over the years to improve rural access to the internet and broadband (Kormos & Wisdom, 2021; Kundu & Bej, 2021; Lai & Widmar, 2021). Even within rural communities, the digital divide exists between those who live in the city limits and those who do not.

Virginia has 132 school divisions, 78 of which are rural (Virginia Department of Education, 2009). The National Center for Education Statistics (NCES) categorizes rural areas in three ways: rural-remote, rural-distant, and rural-fringe. Whereas rural-remote areas are those that are “...more than 25 miles from an Urbanized Area and also more than 10 miles from an Urban Cluster;” rural-distant areas are “...more than 5 miles but less than or equal to 25 miles from an Urbanized Area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an Urban Cluster;” and rural-fringe areas are “...less than or equal to 5 miles from an Urbanized Area, as well as rural territory that is less than or equal to 2.5 miles from an Urban Cluster” (NCES, 2022). As a systems coach working with school teams in rural divisions, I witnessed first-hand many of the challenges educators faced during the pandemic. Prior to 2020, internet access within some buildings was spotty at best. Because of the lack of internet access, some rural school divisions resorted to sending home weekly packets of school work for students to complete during the pandemic school closures. Some teachers had to participate in virtual team meetings while sitting in parking lots of their school or local establishments because they didn’t have stable internet access where they lived or at their school.

Almost three years later, schools have reopened to fully in-person and hybrid teaching and learning models. Rural schools reopened to the same pre-pandemic challenges, including access and use of technology such as logistical issues (e.g., slow bandwidth, access to internet providers, slow internet speed), lack of financial resources, teachers with limited experience using technology for instructional purposes, etc. (Kormos & Wisdom, 2021; Lai & Widmar, 2021). These challenges may affect teachers' perceptions about their ability to fulfill their professional responsibilities.

Statement of the Problem

Schools across the United States re-opened in the fall of 2020 offering fully remote, fully in-person, and hybrid modalities. Schools reopened, but there was no going back to teaching as it was before the pandemic. Schools reopened with some having strict safety protocols, including social distancing and masking. Schools reopened with students and educators alike traumatized by the effects of the pandemic. Schools reopened having to figure out how to address "learning loss" while teaching the current curriculum and preparing students for standardized testing at the end of the school year. Lastly, schools reopened with teachers accountable for actively re-engaging students who had not been in a physical classroom environment for six months to a year.

While there is growing research on the impact of the pandemic on PK-12 education, the majority of the existing literature focuses on the aforementioned school closures. This includes research on teachers' self-efficacy for online teaching and learning. The literature abounds with global perspectives and higher education foci (Kusumawati, A.J., 2020; Gültekin et al., 2020; Simon et al., 2020). More limited, however, is research examining teachers' current self-efficacy perceptions for completing their professional responsibilities, including but not limited to

instructional strategies, classroom management, student engagement, and using instructional technology. So, too, are studies exploring the impact of the pandemic on rural education in rural school districts.

Prior research has shown a relationship between teacher self-efficacy and student achievement (Donohoo, 2018; Taştan et al., 2018; Watson, 2006; Moran & Hoy, 2001;). Teachers with higher efficacy beliefs are more likely than their colleagues with lower efficacy beliefs to employ more challenging instructional practices in general (Bruce et al., 2016; Wyatt, 2016), put forth more effort to learn and acquire new skills themselves (Bruce et al., 2016; Kurtz & Knight, 2004), and persist in supporting students despite challenges in order to ensure their academic success (Bruce et al., 2016; Yoo, 2016; Viel-Ruma et al., 2010) . Teachers' self-efficacy can directly impact how they plan for and deliver instruction (Bruce et al., 2016; Bordelon et al., 2012). Therefore, the current study seeks to understand how the pandemic has impacted rural secondary teachers' self-efficacy perceptions.

Under the direction of the Virginia General Assembly, the Joint Legislative Audit and Review Commission (JLARC) conducted a study in 2021 on the impact of the COVID-19 pandemic on K-12 education in the Commonwealth. The JLARC study focused specifically on “enrollment; student well-being; student academic achievement and existing achievement gaps; and school staff and the ability of schools to full staff their operations” (Virginia JLARC, 2022, p. 1). The Commission also assessed whether schools are prepared should another pandemic arise in the future. Only one of JLARC's findings focused on staff.

Among its findings, JLARC reported the following teacher-specific findings: (1) school divisions are challenged to recruit and retain qualified teachers, (2) more teachers are leaving the profession than are entering as licensed professionals, (3) teacher morale and job satisfaction

have worsened since the pandemic started, and (4) 41% of Virginia’s teachers do not feel prepared to teach remotely should in-person instruction be disrupted again (JLARC, 2022).

When reviewing the Commonwealth’s teacher workforce, JLARC found that the pandemic worsened teacher recruitment and increased retention challenges. Specifically,

- 14,500 VRS [Virginia Retirement System] teacher plan participants left employment in FY22 (2021-22 school year) and 12,700 left during FY21 (2020-21 school year)-substantially more than the 10,950 average per year prior to the pandemic; and
- About 65 percent of those leaving the plan did not retire, but left for other reasons (such as to change careers or take a temporary break in employment), more than the 58 percent average prior to the pandemic (p. 57-58).

Additionally, the number of provisionally licensed teachers in Virginia’s school divisions increased compared to numbers prior to the pandemic. The limited experience and formal training of these teachers may affect their self-efficacy in content knowledge, instructional practices, classroom management, and student engagement, as well as other areas for which they are professionally responsible. Their ability to relate to their colleagues and build supportive relationships as they grow as education professionals is important to their self-efficacy development (Viel-Ruma et al., 2010).

The majority of teachers who responded to the JLARC survey reported lower morale and job satisfaction (72% and 67%, respectively). Nearly half reported being less able to handle their workload. “Similarly, 36 percent of high school teachers said working conditions at their school became ‘worse’ or ‘much worse’ during the past year, according to VDOE’s 2022 working

conditions survey” (p. 64). What is missing from the survey results is teachers' voices to provide the context needed to fully understand their responses.

To date, the majority of research on teacher motivation has relied heavily on quantitative research methods, leaving an important gap in the literature – an in-depth, qualitative understanding of teachers’ perceptions about what motivates their classroom behavior (Parr et al., 2021). Thus, it is important to understand teachers’ perceptions about how the pandemic has impacted their current self-efficacy using both qualitative and mixed methods approaches.

Purpose of This Study

The purpose of this qualitative study was twofold: (1) to understand the self-efficacy perceptions of rural secondary school teachers in the following areas: instructional strategies, classroom management, and student engagement since the COVID-19 pandemic through the lens of their own experiences and (2) identify factors influencing rural secondary teachers’ self-efficacy perceptions. Examining teacher self-efficacy beliefs for instructional strategies, classroom management, and student engagement is important because these areas are directly related to the teaching and learning process and subsequently, to student achievement.

Technological Pedagogical Content Knowledge (TPCK/TPACK) is teachers’ knowledge about the complex relationship between technology, pedagogy, and content knowledge that influences the integration of technology into classroom instruction (Mishra & Koehler, 2006). From this definition, one must consider how teachers’ TPCK/TPACK enhances the aforementioned self-efficacy areas of focus. The TPCK/TPACK model is discussed in more detail in Chapter 2.

To better understand how the COVID-19 pandemic affected rural secondary teachers’ self-efficacy perceptions, this study sought to answer the following research questions:

1. How has the COVID-19 pandemic influenced teachers' self-efficacy perceptions in instructional strategies, classroom management, and student engagement?
2. To what do teachers attribute their current self-efficacy beliefs?
3. What role did professional development play in teachers' self-efficacy perceptions?
4. What are the biggest challenges teachers currently face as a result of the pandemic?
5. How prepared do teachers feel to successfully teach should another pandemic force schools to close?

Design

This study sought to understand, through teacher interviews, how the COVID-19 pandemic, including decisions made by leadership, influenced teachers' self-efficacy perceptions. Interviewing teachers provided insight into factors that influence teachers' self-efficacy. A semi-structured interview protocol was used to conduct individual interviews. The interview questions probed for contextual factors that influence how teachers perceive their self-efficacy in light of the impact of the COVID-19 pandemic.

Summary

The return to in-person education following school closures in March 2020 was not a return to pre-pandemic teaching and learning as usual. What was once "normal" was no more and will never be again. The pressures associated with addressing the "learning loss" that occurred during the closure of schools have added to the stress teachers were already experiencing as a result of living through the pandemic. The goal of this study was to understand rural secondary teachers' current self-efficacy perceptions in instructional strategies, classroom management, and student engagement, and how the pandemic has influenced those perceptions.

The next chapter provides a systematic review of the literature pertaining to the influence of the pandemic on secondary teachers' self-efficacy during remote teaching and learning, details the theoretical frameworks undergirding this proposed study, and identifies the need for additional literature in order to understand rural secondary teachers' current self-efficacy three years after the pandemic forced schools to close.

Chapter 2: Literature Review

There is growing research on the impact of the COVID-19 pandemic on teaching and learning in general and particularly in PK-12 settings. This includes research on teachers' self-efficacy. The present study explored the impact of the pandemic on teachers' current self-efficacy perceptions. This chapter presents the theoretical frameworks underpinning the current study. A systematic review of the literature pertaining to secondary teachers' self-efficacy during school closures as the backdrop for examining secondary teachers' self-efficacy in the current educational environment follows. Lastly, gaps in the existing literature on secondary teachers' self-efficacy is presented.

Theoretical Frameworks

Social Cognitive Theory

Psychologist Albert Bandura, through his social cognitive theory (SCT), viewed self-efficacy as a cognitive process and defined it as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1977, p. 3). Citing Bandura’s 1997 work, Morris et al., (2017) noted that “efficacy beliefs have been found to predict the effort people put forth, how well they persevere when faced with obstacles, how effectively they monitor and motivate themselves, what they achieve, and the choices they make in life” (p. 795).

SCT is based upon the supposition of personal agency (Bandura, 1989; Bandura, 1999). In other words, individuals’ beliefs about their abilities to control events in their lives (agency) influence their motivation, goals, and the strategies they employ to achieve them (Bandura, 1989; Schunk & DiBenedetto, 2020). Bandura’s triadic reciprocity model, discussed later in this section, is born out of SCT. At the core of personal agency is self-efficacy.

Within SCT, self-efficacy not only impacts cognition and direct actions; it also impacts other motivational factors that influence outcomes. Among these factors are goal setting, effort, and perseverance (Bandura, 1989; Bandura, 1999; Schunk & DiBenedetto, 2020). For example, teachers with high self-efficacy beliefs set goals that challenge themselves and their students, are willing to put forth more effort in planning and delivering high-quality instruction and take risks to achieve those goals despite challenging circumstances. The COVID-19 pandemic presented and still presents challenging circumstances for teachers. The decisions that teachers make with regard to instructional pedagogy and their willingness to follow through despite the challenges brought about because of the pandemic reflect “essential aspects of an agentic theory...that rest heavily on beliefs of personal efficacy” (Bandura, 1999, p. 29).

SCT extends beyond the concept of individual self-efficacy to collective efficacy. Collective efficacy refers to the shared beliefs of a group regarding their capabilities. These shared beliefs become a part of the group’s culture. They influence their collective action, use of resources, effort, and perseverance (Bandura, 1999; Kurz & Knight, 2003). Collective efficacy is an environmental influence on teachers’ personal efficacy beliefs and subsequent actions, and it influences student outcomes.

When exploring the relationship between high school teachers’ personal and collective efficacy, Kurz & Knight (2003) found a positive, moderate relationship between the two. Their findings were consistent with prior research. The moderately positive relationship indicates that while correlated, there are differing factors that influence each. More research is needed on collective efficacy and its relationship to personal efficacy to identify and understand these factors.

The construct of *teacher efficacy* originated with the RAND organization (Dembo & Gibson, 1985; Tschannen-Moran et al., 1998). The researchers at RAND conceptualized teacher efficacy as “the extent to which teachers believed that they could control the reinforcement of their actions, that is, whether control of reinforcement lay within themselves or the environment” (Tschannen-Moran et al., 1998, p. 202). Tschannen-Moran et al. (1998) provided a definition of teacher efficacy that integrates self-perception and competence, which previous models had not done. They defined teacher efficacy as “...the teacher’s belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context” (p. 233). In this integration, teachers weigh the task and situation associated with the task against their personal judgment of their competence to successfully complete the task.

Researchers have operationally defined teacher self-efficacy as follows over the years:

- “...beliefs teachers hold about their capabilities to carry out their professional tasks” (Morris et al., 2017, p. 796).
- “...perceived capabilities to help students learn.” (Schunk & DiBenedetto, 2020, p. 4).
- “SE is a construct within the social cognitive theory and represents people’s beliefs about their capabilities to ‘organize and execute courses of action required to attain designated types of performances’” (Truzoli et al., 2020, p. 941).
- “...the perceived self-efficacy represents people’s beliefs in relation to their own capacities, beliefs that determine their way of feeling and thinking, the way they find their motivation and choose to behave...” (Santi et al., 2020, p. 160).

- “Self-efficacy is a personal judgment of one’s capabilities to enact specific tasks or actions, yet it is deeply influenced by environmental and individual factors” (Narayanan & Ordynans, 2021, p. 27).
- “...self-efficacy is ‘the conviction that one can successfully execute the behavior required to produce the outcomes’” (Hawke, 2022, p. 8).
- “Self-efficacy is the capability of achieving success in an activity...Perceived self-efficacy is a person’s belief in their own capacity, which affects their behavior choices and level of motivation toward activities” (Whitehead, 2022, p. 12).

While all of these definitions include self-perception, some of them draw attention to the connection between self-perception and motivation, as well as factors that influence teachers’ self-perceptions.

Motivation is an internal process, the results of which manifest externally through a person’s actions (or lack thereof). Teachers’ beliefs about their abilities and expected outcomes influence their motivation toward accomplishing the aforementioned activities/courses of action (Bandura, 1989). Because self-efficacy is task-specific and dynamic, a person’s motivation to achieve a goal can change over time (DiBenedetto & Schunk, 2018; Eccles & Wigfield, 2002; Koul & Rubba, 1999; Schunk & DiBenedetto, 2020; Yoo, 2016). Teachers’ efficacy beliefs influence the effort they put forth when planning for and delivering instruction, managing the learning environment, how well they persevere when faced with obstacles such as those presented by the COVID-19 pandemic, how effectively they monitor and motivate themselves, what they achieve, and the professional choices they make (Morris et al., 2017).

Sources of Efficacy Expectations. Efficacy beliefs are rooted in four sources of efficacy expectations: enactive mastery accomplishments, vicarious experiences, social persuasion, and physiological and emotional states (Tschannen-Moran et al., 1998; DiBenedetto & Schunk, 2018). Mastery experiences boost self-efficacy because once a task has been perceived to be performed successfully, there is an expectation that it will continue to be successfully done in the future. Vicarious experiences involve observing behaviors as they are modeled by others. The extent to which the observer identifies with the person modeling the desired behaviors, as well as whether the observer views the model as competent and skilled at coping with challenges, affect the observer's self-efficacy perceptions. Social persuasion occurs in the form of words of encouragement, pep talks, etc. Hearing that one's abilities are believed in can be a significant motivator. Lastly, physiological and emotional states (e.g., anxiety, relaxation, sweating) are those one can experience at the thought of being faced with a task. Without the ability to self-monitor and maintain control, one's self-efficacy can be adversely affected (DiBenedetto & Schunk, 2018). Of the four, mastery experiences provide the best aid in building self-efficacy (Tschannen-Moran et al., 1998).

Triadic Reciprocity. In Bandura's triadic reciprocity model, there are three influences on human functioning that occur reciprocally: behavior, environment, and personal (Bandura, 1999; DiBenedetto & Schunk, 2018; Schunk & DiBenedetto, 2020). Motivational processes, including self-efficacy, are among the personal influences. Behavioral influences include observable manifestations of peoples' internal motivations, such as their actions and use of strategies. Environmental influences occur within three types of structures: imposed, selected, and constructed (Bandura, 1999). Examples of environmental influences include the schools, classrooms, homes, etc., and what occurs in them.

Individuals with high self-efficacy, for example, are more likely to engage in behaviors that will help them achieve their goals. In supportive environments where these behaviors are recognized and appreciated, individuals' self-efficacy will increase. In turn, they engage more actively in these environments because they believe that doing so will help them achieve their goals (Wyatt, 2016; Reaves & Cozzens, 2018; Schunk & DiBenedetto, 2020). Teachers with high self-efficacy are more likely than their colleagues with low self-efficacy perceptions to employ more challenging instructional practices in general; put forth more effort to learn and acquire new skills themselves; and persist in supporting students despite challenges in order to ensure their academic success (Bruce et al., 2010; Kurtz & Knight, 2004; Viel-Ruma et al., 2010; Wyatt, 2016; Yoo, 2016). The COVID-19 pandemic has presented challenges in every area of education. It has required more effort on the part of teachers to learn and acquire new skills, namely technological and pedagogical skills, despite these challenges, increasing the pressure on teachers to ensure students are successful.

Professional learning/development (PL/D) for teachers is an environmental influence on teachers' self-efficacy. Yoo (2016) found that professional development provided through strong teacher training programs has a positive effect on teacher efficacy overall and on how teachers appraise their own growth as a result of receiving professional development. Bruce et al. (2010) found similar results and also found that a reciprocal relationship exists between teacher efficacy and the actions teachers take post-professional development. This evidence base warrants further inquiry about the quality of the professional development provided to teachers in preparation for remote learning and returning to in-person learning during the COVID-19 pandemic, as well as whether post-PD coaching occurred to support teachers in developing the knowledge and skills

needed to effectively use virtual platforms and employ instructional practices that promote student success in both environments.

School climate is another environmental factor that influences teachers' motivation and self-efficacy (Reaves & Cozzens, 2018; Daniels, 2016). Reaves and Cozzens (2018) found that there is a connection between a safe and supportive school climate and teachers' motivation and self-efficacy. In doing so, they asserted that a positive school climate creates conditions for high teacher motivation. Specifically, teachers who felt supported and safe in their working environments reported significantly higher intrinsic motivation and self-efficacy than their colleagues who did not feel safe and supported by administration. Also contributing to a safe and supportive environment that influences teacher motivation are logistical factors, which are most often overlooked (Daniels, 2016). Daniels focused on what causes teachers to be fully engaged professionals over the course of their careers and found that logistical factors such as how the master schedule is developed and the condition of the physical environment had a direct impact on teacher motivation and engagement in creating motivating learning environments for students.

Self-Determination Theory

Self-Determination Theory (SDT) (Ryan & Deci, 2000) posits that motivation is directly connected to three universal psychological needs: autonomy, competence, and relatedness. Autonomy refers to one's independence or freedom; competence refers to possessing the required knowledge, skills, and capacity to be successful; and relatedness concerns one's connection with others. Teachers may not be able to meet the psychological needs of their students if their own needs for the same are not met (Marshik et al., 2017). As an educator with over two decades of experience, I have witnessed first-hand how pressures and restrictions

associated with high-stakes testing, administrative responsibilities, lack of quality professional development, and lack of a true collegial working environment can threaten the ability of teachers to have these needs met and to feel highly efficacious in meeting the needs of their students. It is likely that the pandemic exacerbated these pressures and restrictions.

Teacher competence is a driving factor in their self-efficacy beliefs (Bruce et al., 2010). School leaders have a responsibility to provide high-quality professional learning experiences that meet the needs of all teachers. Such quality professional learning experiences must be grounded in both the *why* and *how* behind the educational practices teachers are expected to implement. In a study of the effects of a teacher professional development program (PDP) in formative assessment on teaching and student achievement in math, Andersson and Palm (2018) looked at why teachers were able to use the professional development program to make changes in their instructional practices. Undergirded by the Expectancy-Value Theory (E-VT), they found that teachers were highly motivated to make significant changes in their instructional practices post-PDP because (1) they were inspired and had high expectations of succeeding in implementing the activities; (2) teachers found the activities learned during the PDP to have a high value and little cost for them and their students; (3) and the PDP allowed for interaction, thought processing of the content, and feedback after testing the ideas in the classroom.

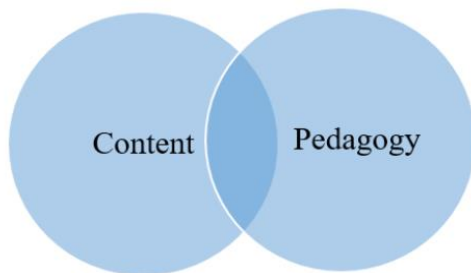
While E-VT was not foundational in this study, the aforementioned findings highlight what is important to teachers when participating in professional development. When these factors are present, teacher competence will grow regardless of the content taught. The more competent teachers feel in the content area and in the skills/strategies needed to teach effectively, the more efficacious they become.

Technological Pedagogical and Content Knowledge (TPACK/TPCK)

The pandemic forced the integration of technology into education and has ensured that it will continue to be an integral part of the teaching and learning process. The Technological Pedagogical Content Knowledge (TPACK/TPCK) model was introduced by Mishra & Koehler (2006) as an extension of the Pedagogical Content Knowledge (PCK) model put forth by Shulman in 1986, which connects content and pedagogy. Content knowledge is teacher knowledge about their respective subject area. It is the content to be taught. Pedagogical knowledge is teacher knowledge about instructional methods or practices best suited to facilitate the teaching and learning process. Shulman argued that good teaching includes both teachers' knowledge of their respective content and pedagogical knowledge with the ability to present the content in a manner that is "comprehensible to others" (Shulman, 1986, p. 9). Figure 1 represents Shulman's model.

Figure 1

Pedagogical Content Knowledge Framework



Note. The shaded area in this figure represents PCK.

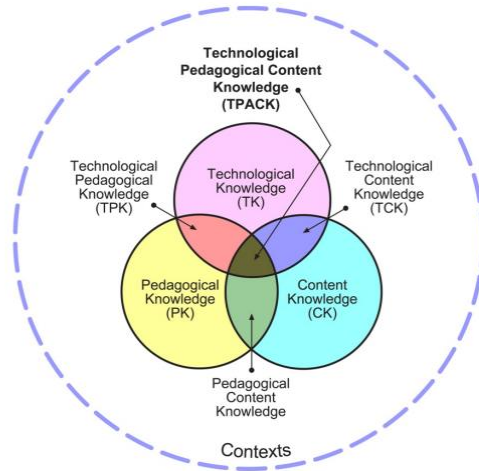
Mishra & Koehler (2006) introduced knowledge of technology as a third integral and interconnected component for good teaching. They posit:

Technological pedagogical content knowledge (TPCK) is an emergent form of knowledge that goes beyond all three components (content, pedagogy, and technology). This knowledge is different from knowledge of a disciplinary or technology expert and also from the general pedagogical knowledge shared by teachers across disciplines. TPCK is the basis of good teaching with technology and requires an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones (p. 1028-1029).

TPACK/TPCK intertwines content, pedagogy, and technology (Figure 2). In this model, each component affects and is affected by the other two such that any shifts in one area necessitate a shift in the others, which Mishra & Koehler call "a state of dynamic equilibrium" (p. 1029). Thus, teachers must possess six different types of knowledge (CK, PK, TK, PCK, TCK, TPK) and marry them together (TPCK- the overlap between content, pedagogy, and technology) to engage in high-quality instruction that produces positive student outcomes. Content Knowledge (CK), Pedagogical Knowledge (PK), and PCK were addressed above. I will briefly explain the remaining three types of knowledge reflected in Figure 2.

Figure 2

Technological Pedagogical Content Knowledge



From “What is technological pedagogical content knowledge?,” by M. J. Koehler & P. Mishra, 2009, *Contemporary Issues in Technology and Teacher Education*, 9(1), p. 63. Copyright 2009, CITE Journal.

Technology Knowledge (TK) is teachers’ knowledge about and use of both standard and advanced technologies (Mishra & Koehler, 2006; Dolighan & Owen, 2021). TK includes, but is not limited to, the internet, operating systems, computer hardware, software, and digital platforms. Technological Content Knowledge (TCK) (where content and technology overlap) concerns the relationship between teachers’ content knowledge and knowledge about which technologies can be used to best present the content for learners to understand (Mishra & Koehler, 2006; Dolighan & Owen, 2021). Technological Pedagogical Knowledge (TPK) (where pedagogy and technology overlap) is “knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning settings, and conversely,

knowing how teaching might change as the result of using particular technologies” (Mishra & Koehler, 2006, p. 1028).

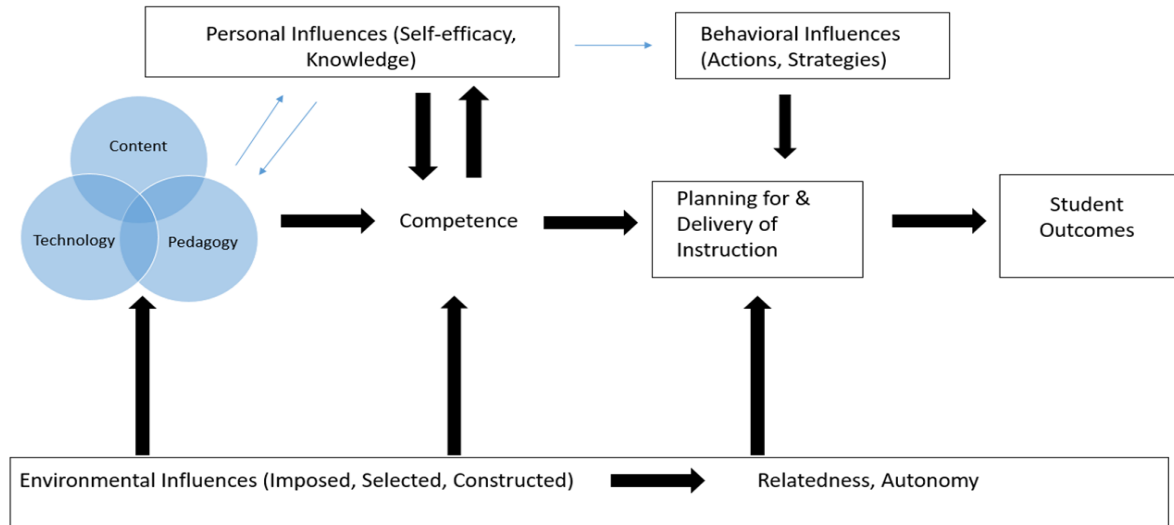
Conceptual Framework

The COVID-19 pandemic touched all three influences on human functioning as identified by Bandura’s triadic reciprocal model: behavior, environment, and personal. It also impacted SDT’s universal psychological needs of autonomy, competence, and relatedness. Lastly, it thrust education into dependence on technology for teaching and learning. In so doing, it exposed the TPACK/TPCK deficiencies of educators in general and particularly in online teaching and learning.

When merging the three constructs, their interconnectedness becomes apparent. Both TPACK/TPCK and SDT influence teachers’ self-efficacy perceptions. In turn, teachers’ self-efficacy perceptions influence the degree to which they engage in the domains of TPACK/TPCK and SDT. The following conceptual framework (Fig. 3) is built on the interconnectedness of these frameworks. Additionally, my experiences as an educator for 26 years help shape the framework.

Figure 3

Conceptual Framework



Review of Literature

Understanding teacher perceptions can be instrumental in shaping how school divisions/districts provide professional learning, coaching, and other support to improve teacher self-efficacy and, ultimately, overall student achievement. To my knowledge, there are no current reviews of the literature that focus on the influence of the COVID-19 pandemic on secondary teachers' perceptions of their self-efficacy. As background to the proposed study, a systematic review was conducted to synthesize findings of studies on secondary teachers' self-efficacy during remote/distance teaching and learning.

Search Method

Electronic searches were conducted between June 26, 2022 - July 14, 2022, using the following databases: ERIC, PsychInfo, EBSCOhost Academic Search Complete, and ProQuest. The following search terms were used for the ERIC search: (covid-19 or covid19 or "covid" or "covid" or COVID-19) AND ("teacher*") AND (secondary or "high school*" or "high-

school*") AND ("self-efficacy" or "self efficacy" or "efficacy expectation*" or "perception* of efficacy"). The search using PsychInfo consisted of the following terms: (covid-19 or covid19 or "covid pandem*" or "covid" or COVID-19) AND ("teacher*") AND (secondary or "high school*" or "high-school*") AND ("self-efficacy" or "self efficacy" or "efficacy expectation*" or "perception* of efficacy"). The following search terms were used for the EBSCOhost Academic Search Complete: (teacher efficacy or self efficacy) AND (secondary school or high school or secondary education or junior high or middle school) AND (covid-19 or coronavirus or pandemic). The search using ProQuest consisted of the following terms: (covid-19 or covid19 or "covid" or "covid" or COVID-19) AND (teacher*) AND self-efficacy.

The ERIC search yielded 49 results; the PsychInfo search yielded 13; the EBSCOhost Academic Search Complete search yielded 184 results; the ProQuest search yielded 236 results. Search criteria included scholarly peer-reviewed articles, gray literature (e.g., dissertations), and white papers published between 2020-2022. The 482 articles were uploaded into Rayyan.ai, a web-based tool used to screen, organize, and manage articles for systematic literature reviews. A search for duplicate articles ($n = 114$) was conducted, and duplicates were removed. After removing duplicate articles, inclusion and exclusion criteria were added for the remaining 368 articles to be screened.

Inclusion and Exclusion Criteria

The following inclusion/exclusion criteria, aligned with the research question, were applied during the screening process. Included studies: (a) took place during the COVID-19 pandemic, (b) occurred in a secondary education setting (i.e., middle school, junior high school, high school, both middle and high school), (c) focused specifically on teacher self-efficacy in any domain, (d) were empirical and published in a peer-reviewed journal, and (e) dissertations

that reflected a, b, and c. Exclusionary criteria included studies that (a) focused on teacher confidence rather than teacher self-efficacy, (b) occurred in primary/elementary educational settings, and (c) focused on administrators.

Title and Abstract Screening

Each title and abstract was read and flagged as either “Include,” “Maybe,” or “Exclude” according to the pre-established inclusion and exclusion criteria. This process resulted in 48 inclusions, 28 “maybes,” and 292 exclusions based on a review of the title and abstract. Nine dissertations were screened against the inclusion and exclusion criteria, and three were added to the articles for inclusion. The inclusion and exclusion criteria were reviewed again for the 28 articles categorized as “Maybe.” These articles were excluded for one of the following reasons: wrong topic or wrong population.

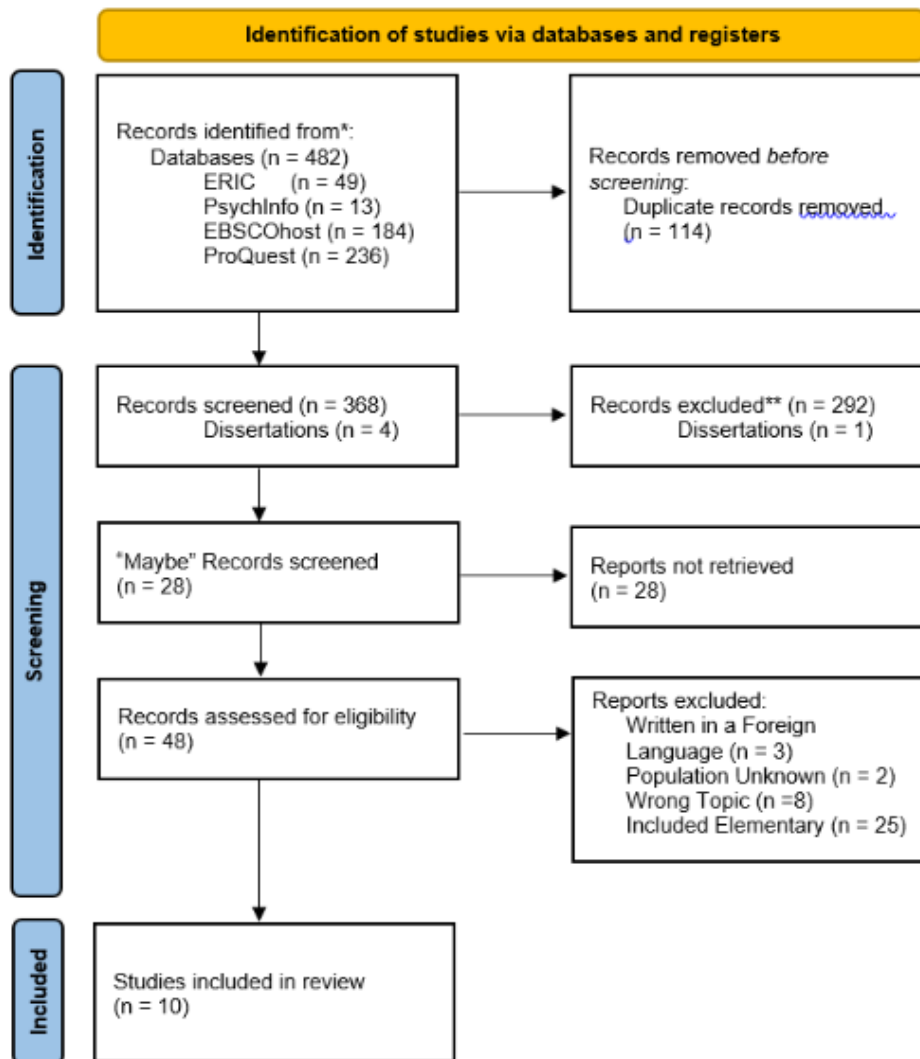
Full-Text Screening

The full studies for the 48 articles that passed the abstract screening were uploaded to Rayyan.ai for detailed screening. The three dissertations were unable to be uploaded; thus, they were fully screened outside of Rayyan.ai. In addition to the stated exclusion criteria, articles were excluded if they were written in a language other than English, included elementary/primary teachers with secondary teachers, did not specify the target population, or were not peer-reviewed. The remaining 35 studies were downloaded and thoroughly screened for the following information: (a) population type ; (b) study design; (c) gender; (d) years of teaching experience; (e) subject/content area; (f) geographic location; (g) school context (i.e., urban, rural, suburban, public, private); (h) study design; (i) definition of self-efficacy; (j) theoretical framework(s); (k) self-efficacy measures used; (l) self-efficacy measured as domain-specific; (m) research questions; (n) self-efficacy related outcomes; (o) implications; and (p)

limitations. This procedure yielded 10 studies that fully met the inclusion criteria. Figure 4 illustrates the screening process.

Figure 4

PRISMA Diagram of Screening Process



The Review

Included studies focused specifically on secondary teachers' self-efficacy perceptions for remote/online teaching. Eight studies examined middle and high school settings together; two studies focused on high school. Sample sizes across studies ranged from 12 - 380 secondary teachers. Gender and years of teaching experience were inconsistently reported. Nine studies reported heterogeneous samples; one study did not report teacher gender. Five studies included teachers across multiple content areas (core and elective); one study included only core content area teachers; one included only elective teachers; three studies did not report the content areas taught by the participants. Five of the studies occurred in the United States, and five were international studies. Settings (i.e., rural, urban, suburban) were inconsistently reported. Of those reported, one was conducted in an urban setting, one in a rural setting, and two studies included both urban and rural settings.

Theoretical Frameworks

The studies reviewed drew from several theoretical frameworks. Four studies drew from multiple frameworks: (Narayanan & Ordynans, 2021; Kundu & Bej, 2021; Pflieger, 2021; Hawke, 2022). Six studies drew from one framework (Truzoli et al., 2020; Santi et al., 2020; Dolighan & Owen, 2021; Howard et al., 2020; Whitehead, 2022; Fish & Jumper, 2021). Seven of the ten studies in this review drew from Albert Bandura's Social Cognitive Theory (SCT) to study self-efficacy. In addition to SCT, terminology such as Self-Efficacy Theory and Social Learning Theory, both credited to Bandura, were also used to study self-efficacy. Table 1 shows the theoretical frameworks and other pertinent study characteristics.

Table 1*Research Designs and Theoretical Frameworks for Self-Efficacy*

Study	Design	Self-Efficacy Defined	Theoretical Framework(s)	Self-Efficacy Domain
Narayanan & Ordynans (2021)	Mixed	Yes	Self-Efficacy Theory Construct of Control	Not Reported
Kundu & Bej (2021)	Mixed	Yes	Self-Efficacy Theory (SCT) Technology Acceptance Model	Online Teaching & Learning
Truzoli et al. (2020)	Quantitative	Yes	Herzberg's Theory for Job Satisfaction	Not Reported
Santi et al. (2020)	Quantitative	Yes	Bandura's Social Learning Theory	Digital Competency
Dolighan & Owen (2021)	Quantitative	Yes	Self-Efficacy Theory TPACK/TPCK	TPACK
Howard et al. (2020)	Quantitative	No	TPACK Self-Efficacy	TPACK
Pfleging (2021)	Quantitative	Yes	Trait Emotional Intelligence Theory Resilience	**
Hawke (2022)	Mixed	Yes	Sociocultural Theory Self-Efficacy Theory*	Culturally Responsive Teaching
Whitehead (2022)	Qualitative	Yes	Bandura's Self-Efficacy Theory	Technology
Fish & Jumper (2021)	Quantitative	Yes	Bandura's Social Cognitive Theory*	Relationships w/ Students Online instruction

*Used self-efficacy and confidence interchangeably

**Examined variance in secondary school teachers' perceived levels of self-efficacy that can be explained by trait emotional intelligence

Study Design

Study designs in this review included qualitative, quantitative, and mixed methods. The studies reviewed included: one qualitative (Whitehead, 2022); six quantitative (Truzoli et al., 2020; Santi et al., 2020; Dolighan & Owen, 2021; Howard et al., 2020; Pfleging, 2021; Fish & Jumper, 2021); and three mixed methods (Narayanan & Ordynans, 2021; Kundu & Bej, 2021; Hawke, 2022).

Participant Sample

The participants in the studies varied in their years of teaching experience. Two studies included first-year teachers and teachers with two-to-five years of experience (Narayanan & Ordynans, 2021; Hawke, 2022). Two studies included teachers with six-to-11 years of experience (Narayanan & Ordynans, 2021; Pfleging, 2021; Hawke, 2022). Five studies included

teachers with 12+ years of teaching experience (Dolighan & Owen, 2021; Howard et al., 2020; Pfleging, 2021; Hawke, 2022; Fish & Jumper, 2021). One study included teachers with online teaching experience (Dolighan & Owen, 2021). Four studies did not report years of teaching experience (Kundu & Bej, 2021; Truzoli et al., 2020; Santi et al., 2020; Whitehead, 2022).

Major Components of Approaches

Studies within the literature found for this review defined teaching and learning during the school closure interchangeably as distance education, distance learning, remote learning, online teaching and learning (OTL), emergency remote teaching (ERT), and emergency online learning (EOL). While not all studies provided an operationalized definition, some did. Santi et al., (2020) used Appana's (2008) definition of distance education as "a formal learning activity conducted when students and teachers are separated by (geographical or temporal) distance and supported by communication technologies (television, computers, e-mail and mail)" (p. 159). "Whitehead (2022) defined distance learning and remote learning as "...learning which occurs over a distance and is supported by technology via synchronous or asynchronous applications or paper instructional resources" (p. 12). Howard et al. (2020) defined OTL as "delivering learning content, materials and creating experiences using online platforms or tools, e.g., learning management systems, for 80% or more of a subject" (p. 145). Whitehead (2022) defined ERT as "The act of instructing from a distance via mobile device or computer when a tragedy such as a pandemic occurs and the teacher is required to perform instructional duties atypical of traditional in-person classrooms" (p. 11). Hawke (2022) defined EOL as "...the educational practices schools utilized due to the COVID-19 pandemic of 2020" (p. 12).

These studies examined teachers' self-efficacy perceptions in general, as well as in the following domains: Technological Pedagogical and Content Knowledge (TPACK/TPCK),

culturally responsive teaching (CRT), and technology (Technology Acceptance Model - TAM). The TAM examines motivational factors affecting teachers' use of technology (Kundu & Bej, 2021; Chuttur, 2009). The TPACK/TPCK framework focuses on technology integration in classroom instruction (Dolighan & Owen, 2021) and includes four features: TPCK - knowledge about complex relationship between technology, pedagogy, and content that influences pedagogy; TPK - knowledge about how information and communication technology is used in instruction; TCK - knowledge about how technology can support content delivery; TK - knowledge about technology (Howard et al., 2020). Two studies used self-efficacy and confidence interchangeably (Hawke, 2022; Fish & Jumper, 2021).

Major Themes and Conclusions

Findings from this systematic literature review highlight factors influencing secondary teachers' perceptions of their self-efficacy during the early stages of the COVID-19 pandemic. Two main themes emerged from this review: prior experience and institutional support.

Prior Experience. When examining secondary teachers' self-efficacy perceptions for providing culturally responsive teaching during EOL, Hawke (2022) found that the one ESL teacher in the study reported the highest CRTSE score. The training ESL teachers receive in instructional practices aligns with the tenets of CRT. Other teachers reporting higher levels of CRTSE were those who had received "prior cultural training through previous job experiences" (p. 92-93). Hawke also found that teachers' CRTSE scores aligned with their ability to define and describe CRT practices they employed.

When examining technology efficacy (or lack thereof), Whitehead (2022) found that teachers who had experience using the Google Suite (including Google Classrooms) or had participated in professional development prior to the pandemic were more comfortable using it during the initial school closure in March 2020. Similarly, Dolighan & Owen (2021) and Fish & Jumper (2021) reported the same. “Teachers who reported using board-approved online teaching platform (D2L or EDSBY) prior to the transition to online had significantly high $p < .01$ levels of online teaching efficacy” (Dolighan & Owen, 2021, p. 105). “The FCS [family and consumer sciences] teachers in this study reported that when they had previous experience using an online modality to each...the teachers were more confident in their ability to teach effectively online” (Fish & Jumper, 2021, p. 22).

Institutional Support. For the purposes of this review, institutional support is operationalized as the actions taken by division/district and school leaders/administrators to prepare teachers for the switch in teaching modalities and pedagogies, as well as those taken to support teachers in doing their jobs effectively during school closures due to the COVID-19 pandemic. It refers to the systems or infrastructure in place that supports educators in carrying out their job responsibilities successfully and with fidelity. Kundu & Bej (2021) reported that teachers’ S-E perceptions influenced their perceptions about the institutional support they received. Likewise, institutional support influences teachers’ S-E perceptions (Santi et al., 2020). Despite not having a blueprint for how to prepare for education during a global pandemic, administrators at both the division/district and school levels still bear the responsibility of ensuring that teachers are prepared to do their jobs effectively.

Examples of institutional support include but are not limited to, professional learning/professional development, instructional coaching, access to equipment and resources,

agency, policy, funding, technical support to troubleshoot issues with digital platforms, teacher well-being, and communication. These are examples of the environmental influences domain of Bandura's triadic reciprocity model. The levels of institutional support teachers are provided play an integral role in their self-efficacy perceptions (Howard et al., 2020). Eight of the ten studies found a connection between institutional support and teachers' self-efficacy perceptions during school closures.

Communication. It is important that school divisions/districts have a clear vision, goals, and plan for teaching and learning that are undergirded by policies that promote sustainable infrastructure. Because of the pandemic, technology has become an integral part of the education system. Thus, it is just as important that divisions/districts clearly establish and communicate a clear vision, goals, plans, and policies for online teaching and learning (Howard et al., 2020; Truzoli et al., 2020; Whitehead, 2022). This plan must also include how teachers will be supported in accomplishing job-related tasks, as this has a positive influence on teachers' S-E perceptions (Kundu & Bej, 2021; Truzoli et al., 2020).

Another aspect of communication important to teacher S-E is feedback from administrators (Kundu & Bej, 2021; Fish & Jumper, 2021). "...district communication that the teacher was doing a good job was positively related to all the variables of self-efficacy" (Fisher & Jumper, 2021, p. 22). For the FACS teachers in this study, the frequency and content of the messages they received directly influenced their perceptions of their abilities to both relate to students and provide engaging, quality online instruction.

Agency. Agency - individuals' beliefs about their abilities to control events in their lives - influences motivation, goal setting, and deployment of strategies to achieve those goals (Bandura, 1989; Schunk & DiBenedetto, 2020). At its core is self-efficacy. Teachers' internal locus of control and their S-E perceptions were found to be strengths and protective factors (Narayanan & Ordynans, 2021; Truzoli et al., 2020). In contrast, some teachers experienced a loss of agency as it pertains to pedagogical decisions during OTL. Administrative decisions (external locus of control) about instructional methods took control from teachers. In some instances, teachers were given directives to facilitate a pre-loaded curriculum rather than teach (Whitehead, 2022). This loss of autonomy resulted in a decline in teachers' S-E perceptions about their teaching abilities (Whitehead, 2022).

Digital Platforms & Technology Support. The need to switch to OTL necessitated that school leaders quickly identify digital learning platforms and train teachers to use them. The lack of technology efficacy became evident quickly. Teachers reported receiving minimal professional development and technology support to troubleshoot issues (Howard et al., 2020; Santi et al., 2022; Whitehead, 2022). Whereas many teachers felt frustrated with having to figure out how to use and troubleshoot the new platforms, those who received technology support reported higher levels of S-E for online teaching (Dolighan & Owen, 2021; Whitehead, 2022).

Professional Development for Online Teaching. Key to high S-E perceptions in each of the aforementioned aspects of institutional support is professional learning/development. The sudden shift to non-traditional teaching modalities showed deficits in teachers' skills (Whitehead, 2022). Teachers who had participated in PD for online teaching prior to the pandemic reported higher efficacy levels for teaching online and need to continue learning and trying new pedagogical approaches (Dolighan & Owen, 2021; Howard et al., 2020). Teachers with weak S-E perceptions expressed receptivity to professional development to improve in this area (Howard et al., 2020). Those teachers who reported high S-E perceptions are a resource that can be leveraged to support their colleagues in planning for and delivering online instruction (Howard et al., 2020). Technology is an integral part of teaching and learning. School leaders and pre-service programs must ensure that teachers possess the TPACK, CRT, and content-specific skills necessary to provide high-quality instruction (Dolighan & Owen, 2021; Howard et al., 2020; Fish & Jumper, 2021; Hawke, 2022; Whitehead, 2022).

Teacher Well-Being. Pflieger (2021) examined the connection between teachers' trait emotional intelligence and their perceived levels of self-efficacy. Trait emotional intelligence describes how people manage their emotions, as well as their understanding of how they impact social interactions. Well-being is among its four factors. The main and unexpected finding of this study was that "teachers with a greater sense of well-being were more likely to have higher levels of self-efficacy" (p. 77). In terms of institutional support, administrators must make teacher well-being a priority through policies and environmental supports (e.g., mental health services, life skills) (Pflieger, 2021; Truzoli et al., 2020).

Implications

The findings in this review highlight the importance of professional learning/development in increasing teachers' self-efficacy perceptions. Professional learning/development was the common thread across both prior experience and institutional support. Teachers possess varying skill levels with regard to technology use and online teaching and learning. Division and school leaders need to understand instructional staff's current abilities and identify the high-quality professional learning and subsequent support needed that will enable teachers to do their jobs effectively. Teachers need both universal and targeted professional development and coaching on designing meaningful and engaging online instruction, managing the online learning environment, and using learning management systems.

Need for Additional Literature

The impact of the COVID-19 pandemic on the education system is fertile ground for researchers because we are still living through it. While there has been burgeoning research over the past two years on teacher self-efficacy, the majority of this work has focused on teachers' technology self-efficacy in response to the forced closure of schools that lead to an abrupt switch in teaching modalities from in-person to online. Schools across the United States reopened in the Fall of 2020 at varying rates and with varying modalities. Developing and navigating a new "normal," schools reopened with traumatized students and educators and with the latter accountable to actively re-engage the former to address "learning loss" and prepare them for standardized testing at the end of the school year.

Given these challenges, more research is needed on the current effect of the pandemic on education, particularly on the state of teachers' self-efficacy. How has the pandemic affected teachers' self-efficacy perceptions? What institutional factors are contributing to teachers' self-

efficacy perceptions? How has the forced integration of technology into the curriculum during the school closures in 2020 affected current technology integration into classroom instruction? Has there been an improvement in teachers' TPACK/TPCK self-efficacy? Do teachers feel equipped to do their jobs effectively if another pandemic happens?

The impact of the COVID-19 pandemic on secondary rural teachers' self-efficacy beliefs has not yet been explored. Exploring how the pandemic has influenced rural secondary teachers' self-efficacy perceptions will provide insight and add to the growing literature on the impact of COVID-19 in educational settings.

Chapter 3: Methodology

Chapter Three describes the methodology used in this study. After discussing my positionality as a researcher, the purpose of the study is outlined, followed by the research questions that guide this study. The research design will be presented, including its justification. Information about the population, data collection protocol, and the data collection process will be presented, followed by how the data was analyzed.

Researcher Positionality

Born, raised, and educated in a rural county in Virginia, I am sensitive to the reality of life in a rural community. I am entering my 27th year as an educator. I have been a high school English teacher, high school administrator, and division-level administrator. In my current work as a systems coach with the Virginia Department of Education's Virginia Tiered Systems of Supports (VTSS), I have coached division and school teams on implementing multi-tiered systems of supports for all students. I have coached division and school teams in both urban and rural communities. As the State Education Agency (SEA) Lead VTSS systems coach, I support state coaches who provide direct coaching support to school divisions.

In addition to systems coaching, VTSS provides professional learning (PL) for division and school teams that are in VTSS cohorts. One of those PL events is *Effective Classroom Systems (ECS)*. School teams receive PL around 10 evidence-based practices from which they are encouraged to identify and implement those that work best within their contexts. Pre-pandemic, we held in-person events throughout the Commonwealth and would repeat these events twice to accommodate geographic travel. For several years, I asked teachers who attended the ECS PL and were in my rotation the following question: *Would you say that there are teachers in your building who honestly do not feel that they can make a difference in the lives of*

their students? There was not one teacher or administrator who answered that question with a “No.” This deeply troubled me because a teacher who enters the classroom with this belief is already defeated, and the students will suffer as a result. I looked around the room and wondered whether the answer would be the same at the other 50 or so tables in the room. My follow-up question was: *If you know that your teachers/colleagues feel this way, have you considered asking them why they feel this way?* No one had.

Teacher efficacy directly influences how teachers plan for and deliver instruction, which impacts student achievement. Understanding why teachers do and do not feel efficacious and how their efficacy influences their pedagogy is crucial to improving teaching and learning for both teachers and students. This understanding is what leads to meaningful change that influences educational practice. This understanding is just as important for school and division-level administrators as it is for teachers because all three (in my professional opinion) have a responsibility to ensure educational environments that are conducive to the success of teachers and students. As an educator, I feel a responsibility to help improve teaching and learning for both teachers and students. Understanding teachers’ perceptions of their self-efficacy and the factors influencing it position me to help both teachers and school/division leaders understand their role in improving and sustaining high teacher self-efficacy, especially as we continue living with the effects of the pandemic.

I believe that the pandemic had a primarily negative impact on teachers’ sense of self-efficacy when schools reopened. Included with that is how school divisions prepared teachers to teach and manage student behavior in the online classroom in 2020, as well as the preparation to return to in-person learning. Because of the lack of pre-pandemic human, material, and financial resources, I believe that teachers in rural divisions have been more adversely impacted than their

peers in urban and suburban communities. I have also had conversations with a few teachers (1-5 years of experience) who shared that the school closure caused by the pandemic forced them to seek out creative ways to engage their students on their own. These teachers reported an increased sense of self-efficacy. The more seasoned teachers with whom I spoke reported a decreased sense of self-efficacy, adding that they didn't feel adequately prepared to teach and manage an online classroom effectively.

With regard to the systems and organizations that are the subject of my research questions, I am positioned as both an insider and an outsider. My professional role as the SEA Lead VTSS systems coach is what positions me as an outsider, especially in school divisions that are struggling. As a technical assistance provider for the VDOE, I have to be intentional in communicating that my purpose is not evaluative. My positionality as an insider comes from my having grown up and being educated in a rural county, which enables me to readily identify with both the strengths and challenges of teaching in a rural school division. Having been a high school English teacher and administrator whose student teaching was done at a middle school also positions me as an insider. I understand the secondary context and its complexities.

Research Design

I used a qualitative research design in this study. A transcendental phenomenological approach (Creswell & Poth, 2018), which consisted of collecting and analyzing data through teacher interviews, was used. "Phenomenology is a form of qualitative research that focuses on the study of an individual's lived experiences within the world" (Neubauer et al., 2019, p. 90). The transcendental approach focuses on understanding a particular phenomenon through the lived experiences of those impacted by it and highlights commonalities in those experiences. It highlights what was experienced and how it was experienced by those involved. With this

approach, researchers control for their biases so as not to influence data collection and analysis (Neubauer et al., 2019). In the context of this study, the COVID-19 pandemic is the phenomenon.

A semi-structured interview protocol was used to answer the following research questions:

1. How has the COVID-19 pandemic influenced teachers' self-efficacy perceptions in instructional strategies, classroom management, and student engagement?
2. To what do teachers attribute their current self-efficacy beliefs?
3. What role did professional development play in teachers' self-efficacy perceptions?
4. What are the biggest challenges teachers currently face as a result of the pandemic?
5. How prepared do teachers feel to successfully teach should another pandemic force schools to close?

Sampling

Core content area and elective teachers have similar, yet different, pressures when it comes to student outcomes. Core content area teachers have the pressure of preparing students to pass the Standards of Learning End-of-Course tests. Depending on the program of study, elective teachers are under pressure to ensure that students pass certification exams to earn vocational credentials. Thus, it is important that both groups are represented in the study.

Given that this study occurred near the end of the school year when some divisions were preparing to break for the summer and others were taking mandated state assessments, convenience sampling was used to identify participants. I recruited participants among nine of the 34 rural school divisions in Virginia. Any teacher who indicated a willingness to participate in the study was contacted.

Data Collection

The following demographic information was collected: years of teaching, level (middle or high), content or elective teacher, level of education, gender, age, and race/ethnicity (Appendix A). Qualitative data was collected via semi-structured individual interviews (Appendix B). Interviews were conducted via the Zoom virtual platform and lasted approximately 60-80 minutes. They were audio recorded for subsequent transcription via Otter.ai, an online platform for recording and transcribing meeting notes, immediately following each interview.

Procedures

After receiving IRB approval, a letter explaining the purpose of the study and the intended use of its findings (Appendix C) was emailed to superintendents in the identified rural school divisions. Superintendents were asked to provide the email addresses of the secondary teachers in their school division so the study opportunity could be shared with them.

For recruitment purposes, once permission was granted, a four-question electronic recruitment questionnaire was emailed to all middle and high school teachers. The Dissertation Study Information Form (Appendix D) was embedded in the directions of the questionnaire. After reading it, teachers were asked to complete the recruitment questionnaire, which consists of the following: (1) *Enter your email address. You will be contacted via email if you are selected as a study participant.* (2) *Are you a core content teacher or an elective teacher? (Check the appropriate box.)* (3) *Are you a middle school or high school teacher? (Check the appropriate box.)* (4) *Are you willing to participate in a confidential individual interview in the future for a second data collection?*

After verifying their willingness to participate, participants were emailed a link to a Google form containing a list of interview dates and times from which to choose. A separate Zoom link for the interview at the agreed-upon date and time was emailed to each participant. The email include the meeting passcode and an alphanumeric code for each participant to use to rename themselves at the time of the interview so their name would not be visible on the screen or recorded. A reminder email was sent to each participant in advance of the scheduled interview. Each participant was placed in the Zoom waiting room upon logging on. Participants who had not already renamed themselves prior to coming into the Zoom room were renamed prior to the start of the recorded interview. At the end of each interview, participants were informed that they would be sent a copy of the transcription for review and feedback. They were also informed that any names mentioned during the interview would be redacted, and the redaction would be reflected in the transcript in all capital letters.

The audio recording from each interview was renamed using the assigned alphanumeric code and uploaded to Otter.ai for transcription. Each transcript was scanned, and names of individuals, schools, and divisions were redacted. I used member checking to ensure that I did not misinterpret the participants' responses. Post-interview, each participant received the following email with their transcript attached: *Attached is the transcript for your review and feedback. Please review your responses to the questions to ensure they capture your intent. I redacted the names (see text in ALL CAPS) of school divisions, schools, and individuals explicitly named during the interview. The transcription software does not always get each word correct, and I do not want you to edit your responses for grammar/mechanics. Any quotes from your responses used in the dissertation will be edited for that.* Participants were asked to provide

any needed clarifications and corrections within 24-48 hours of receipt. All participants reported that the transcripts were accurate and that they had nothing additional to add.

Data Analysis

Analysis of the qualitative data took different forms: memos, coding, thematic analysis, and narrative analysis. Memoing occurred throughout the data analysis process. Prior to transcription, I listened to the audio of each interview, wrote memos on what I heard in the data, and developed tentative ideas about categories (Creswell & Plano Clark, 2018; Maxwell, 2013). I compared these initial memos, looking for potential categorial themes and any contextual relationships that emerged. Memoing helped me check my assumption about the pandemic's influence on teachers' self-efficacy perceptions, which I will discuss in Chapter 5.

ATLAS.ti qualitative data analysis software was used to analyze the interview transcripts and develop codes. Because a phenomenological method was employed, each transcript was read two times after it was imported into ATLAS.ti. Notes were taken during the first read. During the second read, keywords and phrases related to the research question topics were identified. I used memoing during this process to document my observations of connections, reflections, reactions, and insights gleaned. This documentation informed the narrative analysis of the data. Themes were identified that informed the development of both textual (what was experienced) and structural (how it was experienced) descriptions of the participants' experiences.

The codebook (Appendix E) consisting of substantive categories was developed during the second read, as the keywords and phrases from participants' responses (Creswell & Plano Clark, 2018; Maxwell, 2013) were analyzed for commonality across the responses and connection with the research questions. Using a process called horizontalization (Creswell & Poth, 2018), I reviewed the transcripts and highlighted significant statements that provide an

understanding of teachers' perceptions of how the pandemic affected their self-efficacy. These statements were used to identify overarching themes in participants' responses. The overarching themes, in turn, informed the narrative analysis.

RQ4 and RQ5 were not related to self-efficacy. RQ4 sought to gain an understanding of current challenges participants face as a result of the pandemic. RQ5 was based upon the JLARC study, which reported that 41% of teachers do not feel prepared to teach remotely should schools be forced to close again. For both, I looked across participant responses to identify commonalities, understanding that they may or may not be linked to teachers' post-pandemic self-efficacy perceptions.

Credibility & Trustworthiness

There are two main validity threats to qualitative inquiry: researcher bias and reactivity/reflexivity (Maxwell, 2013). Researcher bias or subjectivity pertains to the researcher seeking findings that support the researcher's preconceptions about the research problem. Researcher bias is a relevant threat because of my positionality as a practitioner (secondary teacher and administrator). My experiences over 26 years in the profession shape my beliefs that (1) teachers have a responsibility, along with administration, in developing their capacity to meet students' educational needs regardless of who the students are and despite factors beyond their direct control, and (2) teacher efficacy directly influences how teachers plan for and deliver instruction.

Reactivity/reflexivity refers to the researcher's influence on the individuals or settings studied. Reactivity is a potential threat to validity because of my positionality in my professional work as the State Education Agency (SEA) Lead Virginia Tiered Systems of Supports (VTSS) Systems Coach. Many rural school divisions in Virginia are in one of the VDOE's VTSS

cohorts. Even though interviews will be conducted individually, participants could feel inclined to describe their efficacy level as higher than it actually is because of my connection with the VDOE and a desire to impress the researcher. Reactivity also could also present itself as participants may externalize their responses, taking no personal professional responsibility for building their capacity to meet students' educational needs despite the challenges presented by the pandemic.

To mitigate against reactivity and researcher bias and ensure trustworthiness of the findings, memoing, member checking, and triangulation were used during this study. I memored throughout the research process, noting and reflecting on connections with my experiences and perspectives. Doing so enabled me to document my thoughts and reactions throughout the study to ensure they did not interfere with the development of the interview protocol and data analysis. The interview protocol asked open-ended questions. This structure enabled comparisons of responses to identify cross-contextual similarities, contradictions, inconsistencies, confirmations, and consistencies. Open-ended questions allowed participants to respond freely to questions and objectified recurrent themes across responses, even if those themes contradict my beliefs as the researcher. Additionally, asking open-ended questions prevented me from leading participants to provide responses that confirmed my beliefs.

Member checking was conducted to ensure the credibility and trustworthiness of the data collected. By sharing the interview transcripts with participants and soliciting feedback on their accuracy, I ruled out the possibility of me misinterpreting their responses. Collecting data from teachers from more than one rural school division (triangulation) allowed me to better determine the "generality of the explanations" and reduced "the risk of chance associations and of systemic biases" (Maxwell, 2013, p. 128) that I developed from analyzing the responses.

Delimitations

Three delimitations are reflected in this study: division type, school level, and self-efficacy focus areas. This study was delimited to rural school divisions in a particular region in one Mid-Atlantic state that implement Multi-Tiered Systems of Supports through the state's Department of Education. A second delimitation was a sample consisting of only middle and high school teachers. This allowed the focus to be solely on the secondary context. The third delimitation was the context for self-efficacy. Self-efficacy is task-specific and dynamic. For the purposes of this study, the content/context was limited to instructional strategies for their respective content area, classroom management, and student engagement.

Summary

This chapter has provided a description of the research design chosen for this study. Additionally, it has provided a detailed description of the methodology that was used to select participants, collect data, analyze the data collected, and minimize threats to the credibility and trustworthiness of the findings.

Chapter 4: Findings

The purpose of the present study was to (1) understand the self-efficacy perceptions of rural secondary school teachers in the following areas: instructional strategies, classroom management, and student engagement since the COVID-19 pandemic through their lived experiences, and (2) identify factors influencing rural secondary teachers' self-efficacy perceptions. Five specific research questions guided the study:

1. How has the COVID-19 pandemic influenced teachers' self-efficacy perceptions in instructional strategies, classroom management, and student engagement?
2. To what do teachers attribute their current self-efficacy beliefs?
3. What role did professional development play in teachers' self-efficacy perceptions?
4. What are the biggest challenges teachers currently face as a result of the pandemic?
5. How prepared do teachers feel to teach successfully should another pandemic force schools to close?

Using a qualitative research design, I collected data through semi-structured interviews. In this chapter, I will introduce the five participants. A table showing participant demographics will follow. Findings for each research question will then be presented.

Participants

Eight teachers initially stated that they would participate in the study. One teacher did not submit the form to select an interview date/time. One was assigned to cover the main office during the initial interview date/time and only had availability during a time that another teacher had already confirmed. One teacher did not show up for the scheduled interview and was not responsive to attempts to reschedule. The final participant sample consisted of five teachers across two rural school divisions: Walnut County Public Schools and Bagley County Public

Schools. Walnut County Public Schools is a rural school division located in the south central part of the state. It consists of three fully accredited schools: one elementary, one middle, and one high. The division is predominantly white and serves under 1,300 students. The division is considered to have a high poverty rate. 3.2% of the division's teachers are from outside of the field of education and 15.2% of teachers in the division are provisionally licensed.

Bagley County Public Schools is a small school division located on the southern border of the state. It consists of three elementary schools, one middle school, and one high school. Two of the three elementary schools are fully accredited and one is accredited with conditions. The middle school, Orange Middle, is accredited with conditions, and the high school, Apple Grove High, is accredited. The division, is predominantly African-American/Black, serves a little over 1,400 students. The division is considered to have a high poverty rate. 7.2% of the division's teachers are from outside of the field of education and 13.6% of teachers in the division are provisionally licensed.

Four teachers (Janice, Jeff, Charlene, and Tammy) are from Bagley County. Janice, Jeff, and Tammy teach at Apple Grove High School, and Charlene teaches at Orange Middle School. Michael teaches at Manual Middle School in Walnut County. Table 2 displays the demographic information for the participants.

Janice

Janice is a career switcher who will be entering her 10th year as a teacher in Fall 2023. She teaches at Apple Grove High School, where she teaches introductory and advanced early childhood education classes, and also serves as the Career & Technical Education (CTE) Coordinator for Bagley County Public Schools. Janice's transition into teaching was not a

smooth one. She described the division’s lack of understanding of the differences between CTE curriculum needs and core curriculum needs.

When I first came in 2013, I had to actually build my program because the teacher before really didn't leave anything. And at that time, in career and technical education, they didn't really know how to help us with our curriculum. They were trying to fit us in the core, but it was really struggling.

Janice shared the challenges she faced as a new teacher without an educational background.

Because a lot of CTE teachers, we came directly from the field. I didn't go to a teachers' college, so I had to take a course in curriculum and instruction. I had a lot of the other courses, like human development, but that really didn't help. So I just took a CTE curriculum instruction course. A lot of the struggle was trying to do lessons and learning what you want to do. And so through the course of the years... Since I've become a teacher here, I've gotten my Master's in education. That really helped me to understand... what it is that I want to put in these students based on the information that I had. I truly understand what I have to do now. But it was a process.

Jeff

Jeff is a career switcher teaching collaborative Algebra I at his alma mater for 23 years. He also coaches the track teams at the school. Jeff came into education from the “business world” with “a math degree in business and accounting.” He attributed his evolution as a teacher to “advances in technology.”

Originally, I’d probably say I was very much old school as far as my teaching style, but now I use technology on a daily basis, and I encourage my students to use it as well... There are just so many advantages that technology has brought to teaching that I just find

that originally, I didn't see it, but now I see it. And it has been a great advantage for my students and me. In my opinion, the results have been produced on standardized testing.

Charlene

Charlene has been a pre-algebra teacher for 22 years and has been teaching at Orange Middle School for several years. She credits her evolution in teaching to mentorship:

...taking heed to what my mentors have modeled for me...I had to put that into play to become an elite teacher for the past two years, which means I had to take everything that was learned and apply that and also give that same encouragement to other teachers.

Charlene also credited “the change that the world is making for us today” to her evolution, using “going from textbook style to technology” and “from individual studies to group-based studies” as examples.

Three of her classes are collaborative with a special education teacher in her classroom. Charlene identified teaching inclusion classes as a focus for her professionally. Regarding noticeable changes in her teaching strategies, she shared:

My noticeable changes are coming through the collaborative setting with my inclusion students. And I think that is also where my growth and concentration is - how to take students with disabilities to the next level and make sure that they are career and college ready. So that includes additional planning and making sure that the accommodations for those students are met efficiently and with fidelity. So planning and research in understanding the needs of the individual students.

While acknowledging that the ultimate goal for any teacher is meeting the instructional needs of all students, Charlene expressed doubt that “it is actually attainable” due to the “challenges and

deficiencies that are in one classroom.” Charlene is “leery” when it comes to change, adding that “immediate change” is a “downfall” for her.

Michael

Michael has been teaching for 23 - 24 years. In that time, he has taught English in five school divisions/districts across the United States, at a school for autism, at a gifted K-8 program, been the principal of a Catholic school, and was a professor of teacher preparation. He left education for a period of time to run his family’s business. Michael just completed his second year at Manual Middle School and is currently “trying to get [his] credential in administration.” He describes himself as “kind of like Mary Poppins. I never hang around too long. I kind of get blown away.”

In describing his evolution as a teacher, Michael shared that his focus has changed: “When I was younger, I was much more focused on what I was teaching; now, I’m much more focused on what they’re learning.” He has

become much more loose in how [he] does things. I used to be very, very regimented, very get things done. Now, granted, I still have a lot of that, but I’m much more open to experimentation and how I do things. I feel more comfortable with that. Because I kind of know what works and what doesn’t work now.

Michael’s dissertation was on the cognitive effects of play on adolescents and he incorporates play as a natural teaching strategy. He credits his time at the school for autism for “reshap[ing] the way [he] thought about teaching.” His experiences taught him “how to love kids in a different way.” Since that time, he has begun every class by telling his students that he loves them and that love “motivates everything” he does. He believes that if he teaches his students “how to think and...how to read and...how to write” rather than focus on standardized tests, they will do just fine.”

Tammy

Tammy is a retired military veteran who served for 24 years. She has been teaching the JROTC program at her alma mater for nearly five years. She never imagined that she would ever be teaching kids, let alone have a passion for it. She said, "I've always been altruistic...I never really had any dealings with kids, though. And until that...camp, you know,...I never knew I had a passion for it." While enlisted, Tammy worked with "18 different organizations" that were "all about outreach, dealing with kids." She also worked at several mentoring camps for young men sponsored by a prominent celebrity. Reflecting on those experiences, Tammy said, "I would have never said this 10 years ago, but I now firmly believe that when you find your purpose, you will know it in your spirit." It was at one of those camps that Tammy said she found her purpose. Recounting the experience, she said, "I woke up at three o'clock [a.m.] and could not go back to sleep. And I woke up knowing that I just got a sign that this was my purpose."

It was around this time that Tammy was contacted by the JROTC lead where she was stationed about teaching because of the "lack of diversity and the extreme lack of female diversity." Regarding her preparation to be an instructor, she shared:

There's like no course that you take, that you pass these classes and you're certified. You almost are selected, or you say you want to do it. I am one of the only people I know that was selected. I was kind of streamlined through the process, if you will. I didn't have to do a lot of the stuff that was on the paper that said needed to be done.

Her transition into teaching was an adjustment, as teaching certification is not required of JROTC instructors. During her first year, she

was strictly by the book, strictly about the lesson plan based on my expectations for the day. Then I learned that as things happen, during [certain] times of the year, students in

the class, their dynamic, you have to adjust. I adjust my teaching style, strategy and lessons based on the outcome I expect from our students.

Tammy described her evolution as a teacher.

I have learned gained a deeper appreciation for the students and what they bring to the table, a deeper appreciation for the different teachers at the school who have professional relationships with these kids and kind of allow them to kind of be themselves more than just, you know, schoolwork if you will. In the military, there's one way to do things, but I'm learning as a teacher that, you know, there's no rank in the classroom; the kids come with their own set of concerns. And it's best to kind of manage those concerns before, during, or after instruction....I think the bottom line of what I'm trying to say is I pay attention more to the emotional stance of the students. I pay attention to their actions [versus] their words.

Table 2

Demographic Information for Participants

Name	Gender	Race/Ethnicity	Years Teaching	Highest Degree	Content Area	School Level	Division/School
Janice	Female	Black/African-American	10+	Master's Degree	Elective	High	Bagley Co./ Apple Grove
Jeff	Male	Black/African-American	10+*	Bachelor's Degree	Math	High	Bagley Co./ Apple Grove
Charlene	Female	Black/African-American	10+*	Bachelor's Degree	Math	Middle	Bagley Co./ Orange
Michael	Male	White	10+*	Doctorate	English/Language Arts	Middle	Walnut Co./ Manual
Tammy	Female	Black/African-American	4-6	Master's Degree	Elective	High	Bagley Co./ Apple Grove

*Over 20 years of teaching experience
 Career Switchers: Janice, Jeff, Tammy

RQ1: How has the COVID-19 pandemic influenced teachers' self-efficacy perceptions in instructional strategies, classroom management, and student engagement?

The first question explored teachers' perceptions of how the pandemic has influenced their self-efficacy for teaching their respective content, classroom management, and student engagement. I operationalized self-efficacy during the interview as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p. 233).

Instructional Strategies

All participants positively described their current self-efficacy for teaching, indicating that it has increased in some respect since the pandemic despite the barriers they face. Noticeably, two participants equated their self-efficacy with confidence and motivation rather than as factors influencing their self-efficacy.

Janice shared:

I feel that I provide an array of opportunities for my students because we can provide work-based learning opportunities. For me, providing hands-on, that's basically the basis for all our CTE courses. And, I'm encouraging core teachers to, you know, tap into what we have to do. So I feel that I'm able to raise up other students...when I'm finished with them, they are interested or not interested. They realize they're not interested or interested in working with programs in a career in early childhood or child development.

Of all participants, Janice was the only one who shared how the emotional impact of the pandemic on her personally ("That's when I started suffering from anxiety.") bled into her self-

efficacy as a teacher during the pandemic. Having had to build the curriculum for her program pre-pandemic, she was again facing, “How am I going to teach this?” She purchased an online curriculum and embedded an “online internship” into the advanced class so the students would not miss the internship experience.

In reflecting on her teaching experiences after the pandemic, Janice said everyone was able to “mask” the social-emotional impact during the first year back, but it really showed this past school year.

I would say my confidence level was down at some point because I did feel like, ‘Okay, what am I doing?’...I felt like I was missing this year. I felt like I was all over the place. I allowed these distractions. I can’t blame the students.

She has had to “cut some things out” of the curriculum to avoid sensitive topics that could possibly be triggering for students. She shared, “It seems like I hit a nerve, hitting a lot with my curriculum.”

Jeff really likes math, and his efficacy in content knowledge has never been an issue for him. He shared, “I have 100% confidence in my abilities. I’ve been doing it for a while...I started out in the business world. I tried to learn from every year, from my mistakes, or from things that happened.” Having data from the instructional technology resources has changed how Jeff plans for instruction. He said, “I used to try to go more on what I saw or what I thought personally...Now, I think I do evaluate the data more...as far as my preparation...It’s easier to do now since the pandemic.”

Like Jeff, Charlene shared that she has learned how to use student data readily generated from online resources to tailor instruction and remediation to student needs. When it comes to her self-efficacy, Charlene shared that she has always been “self-motivated” and described

herself as “a person of curiosity.” She stressed the importance of having time to process so she “can motivate [her]self to go forward.” The immediate change brought about by school closures didn’t give her the chance to process to say, “Yes, I can or No, I can’t. I have to have a process period.” Like Janice, Charlene struggled because she “didn’t really know where to start.” Despite her reluctance to change, she didn’t want to “disappoint [her] students. She said,

I knew that as an educator, I had to hit the ground running, which meant that I needed to do my independent learning...I’m a planner. I have to have something visually in front of me. I have to have a map and know where to get started.

Getting started for her was learning the Zoom platform. Lesson planning was time-consuming.

Charlene recalled the considerations:

With me having inclusion classes, I had to make sure that those breakouts and small group instruction still went on. But how was I actually going to do that? It was time-consuming [referring to] what those plans were going to visually look like. How would I execute them with fidelity? And most importantly, will I be actually truly meeting the needs of those students? As time progressed and we were able to get into the swing of things, I learned that it was best that I communicated with my parents most frequently.

She stated that her confidence in teaching her content has “strengthened tremendously” since the pandemic, adding that she learned things about herself that she would never have learned pre-pandemic, like “what I’m actually capable of doing.” When asked for an example of what she learned about herself, Charlene said:

I don't have to be in a traditional classroom to be effective anymore. I can do virtual classes. I will be able to translate everything that could be possibly done in the

classroom... There are so many different innovative strategies that I didn't know existed that I'm able to do now and do well.

Michael stated that he is "self-efficacious" because the majority of his teaching experience has been at rural schools. He stated:

I have always learned to just do it on my own, that I will never be given the funding. I will never be given the consideration. I will never be given the understanding to do what I think needs to be done. And so I've always been efficacious in doing those things on my own.

He was a principal when the pandemic started and returned to the classroom in the 2021-2022 school year. Like Janice and Charlene, he was challenged with how to teach his curriculum. Michael taught a "scripted course that was not scripted for the internet. And everything had to be done by hand." He shared that he had to take materials to his students' homes when the parents didn't come to pick up the work. He feels that he has become more efficacious since the pandemic because the school administration's "concerns are on other things." He shows up and does his job, adding that there are "no real major complaints that [he] can't weasel [his] way out of."

Tammy's self-efficacy in the JROTC content is rooted in her military service. She said, "I think just living and breathing the standard for 24 years helps because teaching JROTC is much less about what you teach. It's more about how you relate and share your experiences to make somebody else better." She said that she gives it everything she has. Given that she is not trained as a teacher, Tammy feels that she does "okay" at the job, but also feels that she can do better.

To gain a deeper understanding of participants' self-efficacy perceptions in the area of instructional strategies, I asked participants to describe their students' instructional needs,

specific strategies they use to meet those needs, whether they believe they can meet the instructional needs of all of their students, barriers to doing so, and what they feel they need in order to do so. What follows are their responses.

Students' Instructional Needs. Responses about students' instructional needs reflected two distinct areas: academic skills and support needs. Janice and Michael reported, "A lot of students don't want to read...I realized it's because they can't read." Michael said:

It's just learning how to read. And this is a gap that has been getting more and more profound. I am finding that we are teaching kids how to be functionally illiterate through SOL testing because we are teaching them every strategy to support getting the right answer without actually comprehending what they are doing...We're just not teaching them to read, and we just pass them to the next grade. We say that they'll get it there.

Support needs, as described by Jeff, Charlene, and Tammy, refer to teacher behaviors that are needed in order for them to be positioned to meet students' academic needs. No two identified the same support needs, which included structure and repetition (Jeff): "I think it's important that we have structure, and then they need repetition."; resources for visually impaired students (Charlene): "This past school year, this is the first time I have experienced visually impaired students."; and student self-efficacy beliefs (Tammy):

I think the ability to relay to them that they can meet my intent. They say, 'I don't think I can do that.' I say, 'Yes, you can. Let's break it down and get to how you can manage it in smaller pieces.'

Strategies for Meeting Students' Instructional Needs. Janice and Tammy teach elective classes that are mixed grade levels. They both reported using peer helpers to help students. Janice said, "I stand in front of the class, and we read." Additionally, she shared:

I've been really blessed to have a peer mentor, but I ask for one every year. That's a smarter student who is a completer of the program. I let them know I need them to work with a student who is struggling. Usually, I'm able to pick the right person because I've worked with them so that they could have compassion and patience for this student.

Tammy said,

I teach three different classes in the same class period because I have students levels 2, 3, and 4. And one year, I had levels 1, 2, 3, and 4, so I was teaching four different classes in the same 90 minutes. And this past year, I had three different classes. So I have the senior class to help the juniors, and then I'll spend time with the middle, and then I'll go back and forth.

She also shared that she saw the "emotional downside of the students" from COVID when school re-opened, adding that "their fuses were short...they needed a little bit more regulation with their time." To address this, Tammy shared that she started using role play to teach the application of leadership values and provided this example:

So I will have kids roleplay something, and then the students will have to figure out which value is being exemplified in this example of this role play. For instance, you have a young lady. She's going out to the club, and she wants to wear this tiny dress. What army value does she need to take into account before she goes to the club?

Michael shared that he is “very routine oriented” and believes in having structures, adding “the stability is one thing that it gives them. And being flexible with what they need.” Similarly, Jeff shared that he and his collaborative teacher provide structure and the needed repetition. With regard to repetition, he shared:

Let’s say that for some reason, they are not necessarily receiving it in a proper way from me. To have another viewpoint or that other voice in the classroom, I think, has really helped with the output - with the production inside the classroom in the results we’ve seen with the kids over the last two years.

Charlene’s response focused on the needs of her visually impaired students because it is a new area of professional growth for her as a teacher. She called herself an “advocate” for those students and shared the electronic resources that she uses, adding, “Some of my regular ed students also benefited from that support.”

Barriers. When asked whether they felt they could meet all of their students’ instructional needs, only Janice and Jeff said yes despite existing barriers. Janice stated, “I can meet those expectations, even with the challenges and the distractions.” Jeff linked his belief to students’ mindsets and his connection with the community:

I think no matter what their goal is... whether it's on one extreme or the other, if they want to be successful, I think inside of my classroom, we're able to meet that need...I'm able to meet their needs. For one, I'm teaching in the area where I'm from. So I think that helps.

Charlene expressed doubt: “I don’t know if it is actually obtainable - meeting their needs.

That is the ultimate goal...the challenges and deficiencies that are in one classroom without the support of a collaborative teacher. I don't think that could be realistically a goal." Tammy responded, "There is just so much stuff that you have to kind of adjust and take account for. My belief is that you just simply cannot address everything for everybody every time. Sometimes something will just take precedence." She continued, "We have a terrible issue with kids and behavior...I do think that first year back, we did more with emotional health than we've ever done before, making sure that kids were okay."

Unlike the other participants, Michael didn't share whether he is able to meet all of his students' instructional needs. Instead, his response focused on division leadership as the barrier he sees to doing so.

...I find in my community that we cannot do an initiative more than two years. If we do something for two years, we get board with it. We drop it. We try to do something new when everything says you have to do something for at least five years.

Social-emotional needs/trauma and attendance were identified by most as barriers. Table 3 shows the barriers to meeting all of their students' instructional needs identified by participants.

Table 3*Barriers to Meeting Students' Instructional Needs*

Barrier	Frequency Across Responses
Student resistance to assistance due to embarrassment	Janice
Attendance <ul style="list-style-type: none"> • Truancy, Skipping • Suspension • School-related activities during the school day 	Janice, Jeff, Tammy
Social-emotional needs/Trauma from home life	Janice, Charlene, Michael, Tammy
Parental support (Lack of)	Jeff
Limited resources at a Title I school	Charlene
Receipt of IEP accommodations in a timely manner	Charlene
Collaborative teacher pulled to cover classes	Charlene
Lack of a systemic K-12 approach	Michael
Priority of passing SOL tests over comprehension/skill development	Michael

Teacher Needs. Responses to what they feel they need as teachers in order to meet their students' instructional needs fell into two categories: what they need from students and what they need from school administration. Charlene and Jeff articulated needs from students: attendance (Janice) and retention of basic math skills (Jeff). Jeff shared:

I would say their retention level from what they have gotten from elementary school...I can tell that they don't necessarily know their basic multiplication tables and that type of stuff, but I somewhat blame that on the use of technology. You know, calculators are incorporated into the classroom very early in elementary school now.

Janice, Charlene, Michael, and Tammy identified needs from the administration:

professional development, unencumbered planning time, mental health counselors, and fair and consistent disciplinary practices. Charlene and Tammy identified relevant professional development. With regard to professional development, Charlene said, “We need to make sure that those professional developments are tailored to the dynamics of the school...we need to learn strategies to support the parents so they can be a support system to the students outside of the classroom.” She also shared that teachers need time to learn the professional development content “before just being pushed into the classroom.” Tammy shared the need for teachers to have “sensitivity training” because of some of the things they say to students.

Janice expressed the need for unencumbered planning time. She shared that she used to have time to plan and make sure her classroom was set up when she first started teaching; however, “those kinds of things don’t exist anymore.” She continued, “My planning time - a lot of times, it doesn’t exist...sometimes I have to go and assist, or we have to go cover another class. That is what we had to do a lot.” Michael shared the need for systemic K-12 approaches. Although four participants identified social-emotional needs/trauma from home life as barriers to meeting students’ instructional needs, only Tammy stated the need to “absolutely have mental health counselors in our school. We simply must.” Recounting a disciplinary incident she witnessed, she also articulated the need for fair and consistent disciplinary practices:

We must also, in my opinion, have better abilities to manage the kids that don’t do the right things...He never threw a punch. Both kids got 10 days. That’s not how you do business. It makes the kids have a bad taste in their mouths about leadership.

Classroom Management

Descriptions of self-efficacy for classroom management (CM) ranged from “I have a unique management system” (Janice) to “I’m the king of my castle” (Michael), and all participants shared positive self-efficacy beliefs. Their management styles followed one of two approaches: strict or through a social-emotional awareness lens. Janice and Charlene articulated classroom management styles that reflect a social-emotional awareness lens and the importance of relationships and shared that the pandemic changed their approach to classroom management. Janice described her CM style as “unique” because she has her “students to a point now that they’ll say things such as ‘Will you pray for me?’” She said

I’ve gotten to a point where I don’t believe in kicking the student out. I believe [in asking] ‘What’s going on? What happened to you?’ instead of saying, ‘You’re getting on my nerves. I don’t do that anymore. I just get quiet for a minute.

Since the pandemic, Janice said that she handles distractions differently. She tries “to discern and put in place those things once [she] realizes what this one needs.” Because of the importance of effective communication, Janice will occasionally “do a session on communication.” Janice refers to her classroom as a village and tells her students, “Once I’m your teacher, I’m in your life for the rest of your life and for the rest of my life” because she wants them to know that her classroom is a safe space.

Like Janice, Charlene shared that behaviors have been more challenging post-pandemic, but the CM “component wasn’t the fact that the students were misbehaving...they were misunderstood because of their social-emotional learning gap. I am confident now. I wasn’t then [beginning of the pandemic].” While she was confident pre-pandemic, Charlene shared that she had to learn new ways to connect with her students “to make sure the engagement process was

meaningful and that their voices were heard.” This, according to Charlene, was a learning process for her. She learned “to be a good listener” and “how to be easy and not talk at them and give them time to respond, time to process.”

Jeff, Michael, and Tammy described strict classroom management styles that have not changed since the pandemic. Michael said that he is good at classroom management, adding that the students he writes referrals on “work for, earn, and deserve it.” The key for him is, “If you think it’s going to happen, it will happen. If you pretend like it’s gonna happen, it will happen.” Jeff shared that he establishes what he expects “and doesn’t back off.” He went on to share his disagreement with those who say, “We can’t have the same expectations for every kid” because students who “get to high school and are in general education and not in alternative school, that means they know how to act.” He said that he loves all of his students and tells them that their backgrounds don’t matter, and neither does it matter whether he knows their family members. His bottom line is respect. “I require them to respect me. My thing is you have to respect me. If you liked me, it’s a plus. Respecting me is a must.” Tammy said, “I do well with classroom management. So when it comes to classroom management, I have one level, and that is complete quiet. The only time you can talk is if you’re talking to me.” Where she differs from Jeff and Michael is that she “focused a little bit more on the emotional well-being” in her approach to instruction.

Student Engagement

Of the five participants, Michael explicitly stated that student engagement has been difficult:

It has been more difficult to get my students to engage than in previous years. So this year was very experimental for me...some things [texts] my kids used to absolutely love,

they're not engaged with anymore. And then there's some stuff that they used to not connect with, but they're now connecting with.

When Janice described her self-efficacy for student engagement, she talked about the way the early childhood curriculum is designed. She said,

I've been really using the curriculum, and that encourages leadership...relevant activities for them...I really love Major Clarity. That's a platform we use, and it has a self-assessment. So, I've been really pulling them in, helping them to see a visual picture of where they want to go.

Here is also where Janice's social-emotional awareness and the importance of establishing positive relationships with students are evident. She said,

I'm more conscious of trying to speak to the trauma without them feeling like something is wrong with them. Before the pandemic, it was a struggle to get them to talk. And I find that the more transparent I am with them this year...because a lot of stuff that I've revealed this year, I hadn't revealed. And I think it's because I just didn't want to, but this year was a year that I felt I had to let them know...I wasn't born like this. All my tribulations have made me into who I am, and I feel that I am a great person.

Jeff described his self-efficacy in student engagement along the lines of consistent routines and procedures. He said, "There's a routine in my class. You know that when you're here, you get called on. They know when their turn is coming up. So they are attentive because they usually want to ask and make sure they are prepared."

Like Janice, Tammy and Charlene described their self-efficacy for student engagement through a trauma/social-emotional wellness lens. Charlene stated, "We had no idea the depth of what our students may have experienced while at home." Because of this, she engaged her

colleagues in conversation about student engagement as a means “to better prepare” her lessons. Specifically, Charlene shared that she had to change her mindset about how students are to respond. She said she realized that student “responses do not always have to be the student responding verbally to me.” She started using Padlet because students could choose whether to be anonymous, adding, “I learned that the old ways were good, but they weren’t the best ways.”

Tammy’s initial response to describing her self-efficacy for student engagement focused on her awareness of how they show up. Since the pandemic, she has really focused on building a relationship with her students. She stated, “When it comes to student engagement, I paid very close attention to the kids. They don’t know that...some of them found out later that I really pay attention to them. And they were like, ‘Wow.’” Because the JROTC curriculum is fully online and self-paced, aside from the physical training and demonstrations that are a part of the curriculum, Tammy said that she engages students by “subsidizing those instructions.” She engages students in discussing current events of interest to them. Tammy shared

So a lot of times, our lessons lead to real-world things that are happening. They’re vaguely connected to the lesson plan but still are a way for them to grow and become more knowledgeable about the world and become a better citizen, which is the outcome of what you want from a JROTC student.

Finding #1: Overall, the COVID-19 pandemic positively influenced teachers’ self-efficacy. Teachers’ descriptions of their experiences during and post-pandemic revealed that they had to navigate instructional choices, classroom management, and student engagement without explicit guidance from school administration. Teachers had to take personal ownership of their and their students’ success. This independent navigation gave teachers agency and autonomy in their

decision-making and enabled them to add transferable skill sets back to in-person teaching and learning.

RQ2: To what do teachers attribute their current self-efficacy beliefs?

The second research question explored contributing factors to participants' current self-efficacy beliefs for instructional strategies, classroom management, and student engagement.

With regard to instructional strategies, Janice said rest was number one for her. She also shared that her Christian faith is the main factor in her self-efficacy perceptions overall. She said

God would show me who I am. I had to bring that back to my remembrance...I just had to get built up. I mean, for me, when I get physically tired, emotionally tired, that's when I start really looking down on myself.

When I asked Janice what contributed to her self-efficacy beliefs in CM, she said, "I realized that this is what I needed to do...I didn't feel like I was impacting. I'm impacting now." She shared that her increased self-efficacy in student engagement is the result of using a curriculum that is intentional about providing more active opportunities for students to engage, sensitivity to what students are going through, and her decision to be transparent with her students. When talking about her self-efficacy in student engagement, again, Janice's reliance on her faith is a sustainer. She shared:

God showed me that regardless of how they treat [me], God is gonna give me that strategy...because it is an individual. We've got to deal with them on an individual basis so that when you get them together, as a group, every one of them knows that you care, that you know them, and then have that respect. That's how I'm able to be able to deal."

Similar to Janice, Charlene's faith in God has the most influence on her. Specifically, she shared:

What has the most influence on me is prayer. I live by Proverbs 16:3: 'Commit your works to the Lord, and your plans will be established.' So, each day that I go in, it's always with prayer. Everything else, I let the Lord guide and lead me to whatever that day is supposed to bring.

Charlene credits her self-efficacy for student engagement to "continuously educating [herself] on the psychological and emotional components," adding that she is "continuously learning that it's okay to not be right all the time. It's okay to fail because that failure allows you to grow."

When describing his self-efficacy across the board, Michael shared his encounters with administration at his previous schools as a result of complaints by his colleagues. He attributed his self-efficacy to the pandemic. He shared, "In a way, the pandemic has given me more efficacy because their concerns are on other things... There are no real complaints that I can't weasel my way out of."

Jeff and Tammy attributed theirs to personal and professional experiences. Jeff credits his self-efficacy for student engagement to "all the good teachers I've had... They made sure that we all got engaged every day inside that classroom somehow." He also shared that coaching has also impacted his self-efficacy, "being involved with students outside of the classroom, my competitive nature... So I want to create the best opportunity for them to be successful." Tammy credited her self-efficacy for student engagement to her upbringing, adding that her "grandmother was always paying attention."

Jeff and Tammy also attributed their current self-efficacy beliefs for classroom management to personal and professional experiences. Personally, Jeff said, "I respected the

teachers who treated us all the same when I was in school. It didn't matter. Professionally, Jeff shared that he has had seven or eight principals since he became a teacher. He recounted an experience regarding a student who had exceeded the allowable absences in order to pass his class. Despite the excessive unexcused absences, the student still had an A average in the class. Jeff shared that the student "could basically teach the class," and even though he advocated for the student because of the student's grade, the principal held fast to the policy because making an exception for this student wouldn't have been fair to the other students. Contrasting that principal's leadership style to that of his current principal, Jeff said, "You very seldom see that now. We make exceptions for what I call inappropriate behavior sometimes because society now is different. People can be ready to sue you for anything they want to, and parenting is so different."

Tammy attributed her self-efficacy in classroom management to her military service and her upbringing. She shared, "Growing up with my grandmother and my grandfather was in World War II. So, we weren't allowed to do a lot of talking. So, I've always been disciplined and structured."

The increase in Jeff's self-efficacy for instructional strategies has come through his ability to use instructional technology to teach the content as a result of the pandemic. Using the available technology to teach the content gives him the data he needs to "better serve the kids than maybe prior to the pandemic."

Finding #2: Analysis of the interview data revealed several contributing factors to the increase in teachers' self-efficacy perceptions, all of which are based on the participants' personal efforts or prior professional experiences. With regard to instructional strategies, factors include the use of data to inform planning for instruction, incorporation of instructional technology in the

delivery of instruction, and consideration of students' social-emotional well-being. The main factor influencing increased self-efficacy for classroom management is understanding and consideration of students' social-emotional well-being in addressing behavioral issues. Factors contributing to teachers' increased self-efficacy for student engagement include instructional technology, sensitivity to students' home lives/personal trauma, and prior personal and professional experiences. Absent from contributing factors to their increased self-efficacy beliefs is support from administration.

RQ3: What role did professional development play in teachers' self-efficacy perceptions?

This research question explored professional development provided in preparation for the return to in-person teaching and learning, as well as professional development provided since schools reopened. Probes inquired specifically about professional development related to instructional strategies, classroom management, and student engagement. Additionally, participants were asked to share their primary takeaways from the PD provided, as well as what factors made the provided PD helpful/unhelpful or effective/ineffective.

PD Provided for Returning to In-Person Learning

Responses varied among all participants regarding specific professional development (PD) for returning to in-person learning. Janice, Jeff, and Tammy teach at the same school and had different perspectives about the PD provided in preparation for schools to reopen. Janice shared that "special speakers" were brought in during the mornings of teacher week (the week before students return). She said, "I know it's required for us to have PDs, but the quality of the PDs have been okay." Jeff said, "We did training. We've been trained on so many platforms to incorporate...And then we've had the social-emotional learning aspect of the kids returning." Tammy said, "We had a couple of meetings, but they weren't really to outline anything as

support for the students. Everything I did for students, I did based on what I thought maybe best.” Charlene, who works at the middle school, said,

There were professional development opportunities, and the opportunities were more geared toward safety. We had frequent professional developments that were on making sure we dialogue with our parents, how to make sure that we’re checking on parents, but also encouraging parents to support us at the school. So, we had multiple sessions on that, and they were useful.

Michael said, “I saw none. There was no directed transition from online to in-person, which is particularly weird because...we tend to have younger teachers just because we have more turnover.” He went on to talk about having worked with a group of student teachers who were hired to teach summer school. Michael went on to say,

None of them had actually taught in a classroom before their student teaching experience. They taught what they were teaching in COVID. So we have a whole group of teachers that are in their third year teaching, but it’s the first time they’ve ever taught face-to-face.

PD on Classroom Management, Instructional Strategies, & Student Engagement

Because Apple Grove High School gives teachers a choice about which professional development sessions to attend, Janice, Jeff, and Tammy provided very different responses.

Janice attended sessions on classroom management and instructional strategies. She said

We’ve had some PDs dealing with classroom management because there have been a lot of behaviors, and teachers have been getting stressed out early on in the school year. We had one on doing the lesson plans because they changed them. They’ve been okay, but I feel that we need more. I feel that we need a week of PD and then let the students come the next week.

Janice went on to talk about the relevance, or lack thereof, of professional development as it pertains to CTE. Her comments indicate the difference between the needs of core and elective content area teachers because of the structure of those courses. She said, “As far as career and technical education, we’ve needed more. When we’re all together, the questions we have...a lot of times, it’s like, ‘Do we have to do this?’ We’re still asking those questions, you know.”

As the CTE coordinator for the division, she shared that while sitting in a training on a new platform, she realized that the CTE courses hadn’t been considered. She shared, “You know, so again, CTE was starting to feel like we have to figure it out again...So I think that we just need to have some consideration about where we are.” She went on to say that her teachers were pulled to cover classes this past school year during the time they would have been administering their certification tests, which put them behind. She’s had to work to keep her teachers motivated:

This year, they were so discouraged. They were needy. I found that I had to really check on and encourage them. I always tell them, ‘Well, you know, we are different because we didn’t go to school. So you do you and feel confident. I’ve got you. I’ve got your back. Do you so that you can pour into that student. You know, because if your attitude is that ‘Look, I’m done,’ then you’re gonna not do right by the student.

Unlike Janice, Jeff and Tammy did not attend any professional development sessions on classroom management. Jeff said, “I’ve never chosen to go to the classroom management ones because that’s never been an issue for me...I really can’t speak to the training. I’m not saying that I don’t need it, but I’ve just never really had any issue with classroom management.” Jeff also didn’t articulate having attended any professional development on student engagement; rather, he shared what he does in his classroom at the beginning of the school year to begin developing

relationships with his students and an instructional strategy he uses to engage them in using their math skills.

Tammy described a professional development session she attended that was facilitated by a colleague who taught English. She said,

I always find his teaching style to be very dynamic, very engaging if you will. So some of those PDs involved how to relate to the students more on different topics combined. I don't know, like to build on the synergy of one topic and kind of like combine a lot of things. I don't know what the title of these professional developments are. Some of them are about integrating media into your presentations, [and] how to do that kind of stuff.

She also shared that she hadn't attended a lot of professional development sessions, adding that she mostly gets observed. She said that the principal came into her class once while the class was doing a role play, but the lessons she learned were from the post-observation discussions with the assistant principal and Title I specialist after they observed her class. Those discussions were about "integrating more media into my presentations." With regard to professional development on instructional strategies, she described the same disconnect Janice did between core and elective content areas. Specifically, Tammy shared:

We had PDS about lesson plans and stuff like that, but the lesson plans don't really pertain to JROTC. I sit in on some of them simply because we're not trained teachers. We are instructors, and we don't have to have a teaching certificate to do JROTC.

Michael said that Walnut County is "remarkably good at professional development," adding that they "have opportunities at least once a week." He continued, "They're pretty good

about paying for people to do different professional developments, but there is really nothing specific about it.” He shared that he has been participating in professional development on writing “because we have found that writing has taken a particular hit.”

Despite saying that the division is good at professional development. He said that he dislikes “imposed professional development.” He continued:

I like being able to have a choice and require that I do it, but don’t require that I have to pick and choose what is valuable to me because what I’m interested in is far different than, say a new teacher’s interest or a mid-teacher’s because I’m interested in those advanced techniques and weird ways of doing things because, after twenty-something years, you get bored.

Takeaways & Factors for Determining Helpfulness/Effectiveness

The biggest takeaway for Janice from the professional development sessions she participated in was “how to handle students who are in crisis with an outlook on how to proceed and not take it personally.” She gleaned the importance of “just taking a deep breath, picking our battles, or steps we were given to take.”

Jeff’s takeaway was “collaborative group activities that they promote with the kids.” Even though he thinks they are good, he said, “I’m not too much big on the rotational thing. As a teacher, kids moving around the classroom a lot, that’s not me.” He stressed the importance of having the “right mix of students,” adding that he and his collaborative teacher “can create the right mix of students by where they sit in class.” Then, they have to maintain that mix.

Charlene’s takeaway also focused on the collaborative setting. She said, “In a collaborative setting or if you have a co-teacher and if anyone walked in the room, they would never know who was the general ed teacher.” She described the strategies she learned as “very

personal” for her because she “was allowed to perform on the special ed spectrum and learn different strategies that I didn't know how to use.”

Neither Tammy nor Michael identified takeaways. With regard to determining whether the professional development sessions attended were helpful or effective, Janice, Michael, and Tammy indicated relevance as the factor. For example, Janice said CTE asks, “‘Is this gonna be relevant to us as CTE?’ And so, we walk away and feel like it’s a waste of time.” Tammy shared that those she attended were helpful because “...it was something I simply didn’t know to begin with because, again, JROTC instructors are not trained like a teacher.” Jeff said that the timing “of when they are offered” is a factor in determining the effectiveness of the professional development provided. Charlene said that she considers professional development helpful if they reflect “true 21st-century learning strategies” because they gear “toward what colleges are asking or gearing toward what local businesses are needing.”

Finding #3: Professional development provided a minimal role in participants’ overall self-efficacy perceptions.

RQ4: What are the biggest challenges teachers currently face as a result of the pandemic?

This research question went beyond the barriers participants faced in meeting their students’ instructional needs. It explored the global challenges they face as teachers due to the pandemic. Janice said, “I would say the social piece for the students. That’s really why I just had to readjust my curriculum.” Charlene, Michael, and Tammy identified attendance as the biggest challenge. Charlene shared:

I’m constantly facing how to make sure chronically absent students are still receiving the instruction they need because some chronically absent students are not absent because they are sick. It’s because they are taking care of siblings or they’re taking care of family

members...So, the challenge is how do I bridge the gap between absenteeism and making sure we meet state standards.

Similarly, Tammy said:

Kids really have to go to work. Their parents started relying on the few dollars they brought in per month or week. And these kids got a taste of buying their own clothes” and having “a few dollars in [their] pocket. And so them not coming to class, not understanding the importance of being educated, is my biggest challenge.

In addition to attendance, Michael shared that learning loss is a huge challenge for him, adding that by the time students get to him in middle school, he’s “not supposed to be teaching them how to read. [He’s] supposed to be teaching them language skills.” Like Michael, Jeff identified learning loss as his biggest challenge; however, through a different lens. From Jeff’s perspective, learning loss has been talked about “too much openly” such that it “kids and students the opportunity to use it as an excuse.” Acknowledging that learning loss occurred during the pandemic, Jeff feels that it shouldn’t be “an excuse for underachieving now.” He shared his belief that learning loss has been “used as a crutch universally,” not just in Bagley County Public Schools. Jeff shared

I don’t like for the pandemic to be used as an excuse for them not to do. Now, we are two years removed from it, and now too much stuff is readily available even in this small rural community for kids to have the opportunity to be successful.

Finding #4: Student absenteeism was identified the most as the biggest challenge for participants, followed by learning loss. Regarding learning loss, the participants who identified it did so from differing perspectives. One participant identified the social-emotional wellness of students as the biggest challenge.

RQ5: How prepared do teachers feel to successfully teach should another pandemic force schools to close?

Janice, Jeff, Charlene, and Tammy stated they feel prepared to teach successfully should another pandemic force schools to close. Consistent in their rationales is their experience during the COVID-19 pandemic. Janice said, “I feel that it will be okay because we’ve gone through it. Again, I was more successful independent, actually, with implementing my curriculum.” Jeff said,

...with my prior experience, available technology, if technology is available to the kid in the house...as far as presenting material to them, Oh, I don’t think there would be a major difference...Outside of the wifi connectivity and availability, I don’t think there would be a major difference. Just the personal things, you can’t slap five with them, you can’t touch them, or give them a hug if need be. That social part of it, but the academic part, I don’t think it would be a major barrier.

Charlene said, “I am very confident that I have compiled enough resources. I’ve compiled enough evidence-based strategies, that in the event this should happen again, I can be successful and my students will be successful.” Tammy echoed the sentiments of her Bagley County colleagues when she said, “I’m gonna always be prepared. I’ll build on what we did last time.” Additionally, she shared things she feels administration needs to do differently if another pandemic forced schools to return to remote teaching and learning.

...there’ll be some differences that I would ask admin to do. One would be there has to be attendance [policy] in some capacity...During that planning block, there should be different blocks during your planning block. That should be open time for any kid to

come in, if they can, or whatever, even phone calls...admin has to be consistent. We have to stand behind our teachers. We have to set a standard and stick to it.

Michael said,

I think, personally, I know what to do. But whether or not I will get the resources to make it work correctly. But honestly, if there's another pandemic, I'm old enough to go back to the university. Online instruction is something that's not easy. Like, you really have to think about it; you have to plan it...otherwise, it's just wasted time.

Finding #5: Four of the five participants feel prepared to teach remotely should another pandemic occur. Their experiences during the COVID-19 pandemic has increased their self-efficacy in instructional strategies, classroom management, and student engagement.

Additional Information

Participants were asked whether there was any additional information they would like to share that will enable me to understand better how the pandemic has influenced their self-efficacy for teaching, including instructional strategies, classroom management, and student engagement. Janice, Jeff, Charlene, and Tammy provided additional information. Janice's and Tammy's responses focused on what they need from the administration: social-emotional support and consistent standards. Regarding social-emotional support, Janice stated

We teachers need to be looked after more as far as mental and emotional...when the expectation is high for teachers to perform and have great results on their tests, I think that we need more support - emotional support. We have things going on at home or in our families. And we just need for administrators to be more discerning. Maybe that's the word - recognize.

Tammy shared the need for consistent standards.

If I'm gonna be consistent, and somebody's not gonna be consistent, then I'm gonna end up being the bad guy. So, I just think there should be some rules put in place, and the rules need to be enforced by all, but so far, I haven't seen that happen.

Jeff reiterated the positive impact of technology integration: "The use of technology has improved student engagement more in my room...[students] want to use it more...So for math, for my subject area, I think it just has been enhanced more." Charlene stressed the importance of building relationships with parents and students:

...letting [parents] know that even though school has changed the way instructional delivery has changed, that you are available and you are a partner with them. I think letting students know that they are human. They are capable. If they make mistakes, pick yourself up, and I'm going to be right here to support them.

Chapter 5: Discussion

The purpose of the present study was to understand how the COVID-19 pandemic influenced rural Virginia secondary teachers' self-efficacy in instructional strategies, classroom management, and student engagement through their lived experiences, and explore factors influencing their self-efficacy perceptions. Study data included perceptions of five teachers across two school divisions. This chapter interprets the study findings in light of existing literature. Additionally, the limitations of the study, implications for practice, and recommendations for future research are discussed.

Before discussing the findings, I want to briefly revisit the conceptual framework (Figure 3) undergirding the current study. It shows the interconnectedness between Bandura's Triadic Reciprocity Model, which identifies three influences on human behavior: personal, behavior, and environmental (Bandura, 1999; DiBenedetto & Schunk, 2018; Schunk & DiBenedetto, 2020); Ryan & Deci's Self-Determination Theory (SDT), which posits that motivation is directly connected to three universal psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000); and the Technological Pedagogical Content Knowledge model introduced by Mishra & Koehler (2006). As previously stated, TPACK/TPCK and SDT influence teachers' self-efficacy perceptions. In turn, teachers' self-efficacy perceptions influence the degree to which they engage in the domains of TPACK/TPCK and SDT.

Discussion of Findings

Teachers' Self-Efficacy Perceptions Post-COVID

The first research question explored the pandemic's influence of teachers' self-efficacy perceptions. Analysis of the data found that overall, the COVID-19 pandemic positively influenced teachers' self-efficacy. This finding contradicted my belief that the pandemic

negatively influenced teachers' self-efficacy perceptions. This belief was based on interviews I had conducted with rural secondary teachers during my doctoral coursework and from the feedback from school and division leaders during the pandemic as I carried out my job responsibilities.

Teachers' descriptions of their experiences during and post-pandemic revealed that they had to navigate instructional choices, classroom management, and student engagement without explicit guidance from school administration. Teachers had to take personal ownership of their and their students' success. This independent navigation gave teachers agency in their decision-making and enabled them to add transferable skill sets back to in-person teaching and learning. Memoing helped me bracket and contextualize my during-pandemic experiences described in the previous paragraph with the descriptions provided by participants during this study. While I believe that teachers have a responsibility in the development of their self-efficacy, I had not considered the possibility of the pandemic creating an environment for growth of teachers' agency.

Agency & Self-Efficacy

Agency, individuals' beliefs about their abilities to control events in their lives influence their motivation, goals, and the strategies they employ to achieve them (Bandura, 1989; Schunk & DiBenedetto, 2020). Self-efficacy lies at the core of personal agency. The decisions that teachers make with regard to instructional pedagogy, classroom management, and student engagement, as well as their willingness to follow through despite the challenges brought about because of the pandemic, reflect "essential aspects of an agentic theory...that rest heavily on beliefs of personal efficacy" (Bandura, 1999, p. 29).

As previously stated, participants described their self-efficacy for instructional strategies, classroom management, and student engagement positively. Responses reflected a personal commitment to their professional responsibilities as teachers despite the challenges they've experienced since the pandemic. Teachers felt left to their own devices to navigate curriculum and instructional decisions and were able to articulate what they learned clearly. Not receiving explicit guidance from school administration pushed teachers to seek new learning on their own and empowered them, even if unintentionally, to make decisions about what and how to teach during the pandemic. This increased agency resulted in an increase in teachers' self-efficacy beliefs, as their newly acquired skills and techniques transferred to their in-person teaching experiences post-pandemic.

Sources of Efficacy Expectations

Of the sources of efficacy expectations: enactive mastery accomplishments, vicarious experiences, social persuasion, and physiological and emotional states (Tschannen-Moran et al., 1998; DiBenedetto & Schunk, 2018), mastery experiences provide the best aid in building self-efficacy (Tschannen-Moran et al., 1998). Mastery experiences boost self-efficacy because once a task has been perceived to be performed successfully, there is an expectation that it will continue to be successfully done in the future. Enactive mastery accomplishments and physiological and emotional states were described by participants in the current study. Janice's, Jeff's, Charlene's, and Tammy's confidence in their abilities to teach successfully should another pandemic force schools to close is based on the success they experienced during the COVID closures. While they didn't have a lot of time to become proficient with the online platforms and instructional technology prior to RTL, they learned through trial and error and were able to incorporate their new learning after returning to in-person instruction. The agency they exercised in employing

new strategies and determining which were successful with their students has increased their expectation of success should schools be forced to close again.

Physiological and emotional states (e.g., anxiety, relaxation, sweating) are those one can experience at the thought of being faced with a task. Without the ability to self-monitor and maintain control, one's self-efficacy can be adversely affected (DiBenedetto & Schunk, 2018). Janice's shared experience of how she "started suffering from anxiety" when schools closed and she had to figure out how to teach the CTE curriculum is one such example of how her self-efficacy for teaching decreased. It wasn't until she purchased and started using an online curriculum that she eventually experienced mastery accomplishments, as evidenced in her students' performance outcomes. She said, "I was more successful independent, actually, with implementing my curriculum and the results that I got." Janice reportedly experienced another drop in her self-efficacy during this past school year as she faced having to adjust her curriculum to avoid triggering trauma-related responses in her students.

Self-Efficacy, SDT, & TPCK

The TPCK model represents a marrying of technology, pedagogical, and content knowledge that enables high-quality instruction to occur. The more knowledgeable teachers are, the greater their capacity and skills to be successful. In the current study, teachers needed the TPCK domains for instructional strategies, classroom management, and student engagement. Strong knowledge of each of these components forms the competence component of SDT. The literature has shown teacher competence to be a driving factor in their self-efficacy beliefs (Bruce et al., 2010). Greater competence leads, in turn, to increased self-efficacy in the aforementioned areas. The current study showed that while all participants possessed strong

content knowledge, there was variation in their pedagogical and technological knowledge during and post-pandemic.

Having not been trained as educators, Janice and Tammy lacked an understanding of pedagogical language and practices and proficiency with instructional technology to teach their elective content courses even though they lived their content through their professional experiences prior to becoming teachers. Added to this imbalance was the challenge of having to identify appropriate pedagogical practices and instructional technology to teach their content during the pandemic with little-to-no guidance from administration. Charlene, although trained as a math teacher, was also challenged with knowing the best pedagogical practices to implement when schools shifted to RTL. Lack of knowledge and understanding in the aforementioned areas disrupted the needed “state of dynamic equilibrium” of the TPACK model (Mishra & Koehler, 2006). Their experiences reflect the need for additional administrative support and resources.

Triadic Reciprocity

Behavior, personal, and environmental influences occur reciprocally in human functioning according to Bandura’s triadic reciprocity model (TRM) (Bandura, 1999; DiBenedetto & Schunk, 2018; Schunk & DiBenedetto, 2020). Self-efficacy, a motivational process, is a personal influence, as is knowledge. As explained above, the extent of teachers’ TPACK influences their competency level, which directly influences teachers’ self-efficacy perceptions. In turn, their self-efficacy perceptions influence the degree to which they are willing to engage in developing their TPACK. The current study shows the reciprocity that exists not only within Bandura’s model, but also among the three frameworks.

Jeff’s experience is a perfect example of the reciprocity that exists between the personal and behavioral influences domains of TRM, and the competence domain of SDT. Initially, Jeff

was resistant to using instructional technology to teach the Algebra I content, describing himself as “old school.” However, as his knowledge about instructional technology increased (TPK), his overall knowledge (TRM) and competence (SDT) increased. His increased competence in the area of instructional technology increased his teaching self-efficacy (TRM), which seemed to also increase his willingness to learn about more instructional technology to support teaching Algebra I and also prompted changes in how he planned for instruction (TRM) to “better meet the needs of [his] students.” The result of which was an increase in positive student outcomes.

Factors Influencing Teachers’ Current Self-Efficacy Perceptions

The second research question explored contributing factors to participants’ current self-efficacy perceptions. Analysis of the interview data revealed several contributing factors to the increase in teachers’ self-efficacy perceptions, all primarily based on the participants’ personal experiences/efforts or prior professional experiences. Responses reflected a personal commitment to their professional responsibilities as teachers despite the challenges they’ve experienced since the pandemic.

With regard to instructional strategies, factors include the use of data to inform planning for instruction, incorporation of instructional technology in the delivery of instruction, and consideration of students’ social-emotional well-being. The main factor influencing increased self-efficacy for classroom management is understanding and consideration of students’ social-emotional well-being in addressing behavioral issues. Factors contributing to teachers’ increased self-efficacy for student engagement include instructional technology, sensitivity to students’ home lives/personal trauma, and prior personal and professional experiences. Absent from contributing factors to their increased self-efficacy beliefs is support from administration. I found it interesting that not one of the five teachers attributed their current self-efficacy perceptions to

support provided by the administration. The literature shows that institutional supports provided to teachers can play an integral role in their self-efficacy perceptions (Howard et al., 2020). Agency, as discussed above, is one example of institutional support. Based on the teachers' perceptions of contributing factors, their sense of agency came as a result of choices they had to make outside of administrative guidance.

These findings draw particular attention to the environmental influences domain of TRM. Examples of environmental influences include the schools, classrooms, homes, etc., and what occurs in them. Bandura (1999) described three types of physical environmental structures: imposed, selected, and constructed. The imposed environmental structure is one that participants have no control over. The governmental restrictions during COVID, the decisions made by school division leaders to switch to RTL, and social distancing requirements when schools reopened are examples of such structures. Selected environmental structures are ones in which participants choose from among pre-established groups with which to associate. Constructed environments are those participants create that meet their needs. None of the participants attributed their current self-efficacy perceptions to selected (e.g., department team, grade level team) or constructed environments (e.g., peer groups) in or outside of the schools. This raises questions about the influence of the pandemic post-pandemic school culture and collective teacher efficacy.

Role of Professional Development on Teachers' Self-Efficacy Perceptions

This research question explored the role of professional development on teachers' self-efficacy perceptions. The findings of the current study indicate that professional development provided a minimal role in participants' overall self-efficacy perceptions. The overarching themes across all participant responses were the relevance of and choice among the professional

development that was offered. Timing of professional development emerged as a secondary theme. Additionally, the difference between professional development that met the needs of core versus elective content area teachers within the same building also emerged.

Institutional Support

Included in environmental influences (TRM) for teachers is institutional support. As explained in Chapter 2, institutional support refers to the systems of infrastructure in place to support educators in successfully carrying out their job responsibilities with fidelity. Examples of institutional support include, but are not limited to, professional learning/professional development, instructional coaching, access to equipment and resources, agency, policy, funding, technical support to troubleshoot issues with digital platforms, teacher well-being, and communication. The levels of institutional support teachers are provided play an integral role in their self-efficacy perceptions (Howard et al., 2020).

Research conducted on secondary teachers' self-efficacy during the switch from in-person to RTL showed that institutional support influences teachers' self-efficacy perceptions (Santi et al., 2020). The findings of the current study add to the growing body of literature on the effects of the pandemic on teacher self-efficacy in two ways: (1) by identifying gaps in institutional support for teachers post-pandemic and (2) by highlighting teacher self-efficacy in rural school divisions as lines of research.

Professional Development. School and division leaders have a responsibility to provide high-quality professional learning experiences that meet the needs of all teachers. Such quality professional learning experiences must be grounded in both the why and how behind the educational practices teachers are expected to implement. Michael spoke to the specific need for systemic approaches to meet students' instructional needs. Providing relevant, high-quality professional development opportunities for school staff (not just teachers) is one of those systemic approaches.

Relevance. Relevance was reflected in the findings in terms of general professional development all teachers need versus content-specific professional development, as well as the degree/intensity of needed professional development. The responses to the relevance (or lack thereof) of professional development indicate the importance of tiering the professional development/learning provided for teachers, specifically, what all need versus what some need versus what individual teachers need. Included in this tiered system of support for professional development must be explicit examples of the application of their new learning in the context of their content areas and coaching to support fidelity of implementation and skill development. This requires leaders at both the school and division levels to collect data on teachers' professional development needs. It appears from the responses that the administration in both divisions made assumptions about what teachers needed. These assumptions inadvertently marginalized elective content area teachers.

Choice. Offering teachers a choice about which PD opportunities to attend was the only positive representation of institutional support shared by all participants. However, choice does not equal relevance. As one participant shared, his interests/needs are not necessarily the same as a new or “mid-teacher” who teaches the same content. His interests are in different ways to teach the content to keep from getting bored. His perspective reflected the sentiments of other participants pertaining to relevance - not just what, but also how. This raises another issue that leaders must address if they are going to positively influence teacher self-efficacy: balancing PD needed to address existing gaps with those designed to foster innovative instructional practices.

Additionally, the length of time in teaching does not necessarily equate to skill mastery and should not be an automatic pass when it comes to participating in professional development. While the veteran teachers who participated in this study appreciated being given choices about which PD offerings to attend, the responses of some revealed that they would have benefited from attending the classroom management, student engagement, and other instruction-related PD that new and specifically identified teachers were required to attend.

Time. Participants expressed the need not only for more relevant PD but also for time to process and understand what they have learned before being expected to implement it with positive results. This sentiment echoes the literature on the impact of professional development that allows participants time to process the content and obtain feedback after testing their new learning. Allowing this time builds teacher competence, which is a driving factor in their self-efficacy perceptions because teachers have a higher expectation of successful implementation of what they learned (Bruce et al., 2010).

When professional development occurs is also a time factor connected to the effectiveness of professional development for teachers. This implies an understanding of building dynamics and teachers' responsibilities. The week before students return at the beginning of the school year is known as "Teacher Week." This week is filled with procedural tasks, department meetings, room setup, and division-mandated activities in preparation for students to return. There is little time for professional development. Professional development calendars may offer one PD day per marking period, which is typically sit-and-get, then go implement. For example, teachers who fill other roles or have other obligations related to the content they teach may not be able to access the one-time professional development offerings. School administrators must consider how to ensure these teachers are able to access the professional development content in a way that meaningfully informs their practice.

Communication. Communication is another element of institutional support that impacts teacher efficacy. Charlene shared that her school provided professional development for teachers on how to dialogue with parents. The literature reflects the positive influence of clearly established communication plans that include how teachers are supported in accomplishing job-related tasks on teachers' self-efficacy perceptions (Kundu & Bej, 2021; Truzoli et al., 2020). These plans must address communication with both internal and external stakeholders. Teachers and building-level administrators alike need support and guidance in navigating sensitive conversations with families whose reliance on their children in the aforementioned ways impedes students' attendance at school.

Current Post-Pandemic Challenges

This research question asked participants to share general challenges they currently face as a result of the pandemic. Student absenteeism and learning loss were the overarching themes in the findings. While absenteeism in the context of truancy and suspensions were mentioned as concerns in the context of lack of consistency by school administration, participants looked through a different lens when discussing it as a challenge. Students are not just not coming to school; rather, they are serving in adult capacities in their home lives (e.g., caregivers for family members, working to help support their families and themselves). Teachers are working with students as best as they can to ensure that students get their work. Again, absent from the responses were efforts of school and division leaders to mitigate this issue. Although it fell to the teachers to address, absenteeism continues to be a systemic issue that teachers cannot address alone.

Self-Efficacy for Future RTL

The final research question asked whether teachers felt prepared to engage in RTL should another pandemic force schools to close. Aside from one participant (Michael) who stated that he would return to working at the post-secondary level, participants were confident that they would be prepared to teach remotely should another pandemic force schools to close because of their experience during COVID-19. Being in a position to sink or swim, these teachers chose to swim by educating themselves and finding resources on their own to support teaching their content while having to learn how to use multiple platforms for instructional delivery. Through the pandemic, teachers acquired a certain level of autonomy and agency. They learned what they could do to support themselves and their students, which significantly increased their self-efficacy perceptions. This finding adds to the literature on the positive influence of prior experiences with online teaching and learning on teachers' self-efficacy beliefs. Teachers with prior experience using online teaching modalities were more confident about their abilities.

Michael had the least experience with RTL during the pandemic, as he was a principal of a Catholic school when the pandemic began. He bragged about how he foresaw the school closures and had prepared his teachers, so they never had an interruption in teaching and learning. Coming back into the classroom near the end of the pandemic, he shared that teaching online isn't easy. This raises the question as to whether his earlier comments were over-inflated to present himself in a positive light as an administrator given his critical comments about leadership at Manual Middle and in Walnut County. It also raises the question as to whether his teachers would share the same perspective he conveyed. His rationale for returning to post-secondary education should another pandemic occur was rooted in his concern about lacking the resources needed to be successful. Although he didn't elaborate on the resources he

believed would be needed, his response leans into the need for institutional support by administration.

Institutional supports identified by teachers included clearly articulated and consistent attendance and grading policies, consistent enforcement of adherence to those policies by staff, supporting teacher decisions when enforcing those policies, and emotional support for all teachers (core and elective) under the weight of high-performance expectations during adverse situations. This finding adds to the existing literature on institutional support needed by teachers during the pandemic. Interestingly, professional learning/development was not explicitly identified as a need should schools be forced to close again.

Limitations

There are several limitations to the current study: timing, sample size, and research design that must be considered when interpreting the findings and their application. The limitations are connected and are presented in the order of their impact on the other. First, the timing of the study was a major limitation because some of the school divisions contacted were preparing to end the school year, and other divisions were in the middle of End-of-Course Standards of Learning assessments by the time IRB approval was granted in mid-May. Had the study been conducted a month earlier, the aforementioned factors would not have been barriers. Secondly, one superintendent informed me that my request was the third request her division had received for teachers to participate in research studies this school year. Thirdly, the interviews were conducted after the school year had ended. I wonder how participants' responses would have been different had they been conducted during the school year. While these factors are not ones that I could control for, they raise the issue of potential fatigue on the part of participants.

The second major limitation of the current study is the number of participants who participated. As explained in Chapter 3, nine rural school divisions in a specific region of the Commonwealth were initially contacted for recruitment purposes. Of the nine, three superintendents responded and either provided the email addresses for their secondary teachers or requested the email verbiage from me for them to send to their staff. A teacher, who works in one of the non-responsive divisions whose school year ended in May, emailed me about participating in the study a month into data collection, adding that the division had just sent it out. The small participant size limited perceptions to primarily one division. Because only one participant was from a different school division, triangulation of self-efficacy perceptions for commonalities across multiple rural school divisions was not possible.

Finally, the research design of the current study does not lend itself to a holistic examination of the impact of the pandemic on rural Virginia secondary teachers' current self-efficacy perceptions. The study was originally designed to be a quan->QUAL mixed methods study for that purpose; however, the design had to be changed due to the low response rate of those willing to participate. While having the descriptions of teachers' experiences through their own lenses is essential for understanding the depth of the pandemic's impact on teachers' self-efficacy perceptions and adds a much-needed qualitative lens to the growing research in this area, having quantitative data to show how teachers rated their self-efficacy and TPCK would have enabled me to dig deeper during the interviews for explanations of the ratings, as well as identify any inconsistencies between teachers' ratings and their described experiences.

In addition to the limitations stated above, the boundaries of the present study are also limitations that must be considered when interpreting the findings. This study was limited to rural school divisions, secondary teachers within them, and only one state. Broadening the scope

of this study to include rural elementary school teachers would provide insight for individual school divisions into the influence of the pandemic teachers' self-efficacy division/district-wide, which would provide division leaders with the data needed to problem solve around the institutional support needs of teachers and make data-informed decisions how to best support teachers in a post-pandemic context. Broadening the scope of this study to rural school divisions/districts across multiple states would provide a better understanding of the pandemic's influence on rural teachers' self-efficacy nation-wide. Even more so, would broadening the scope to include urban and suburban school divisions.

Implications

Despite the aforementioned limitations, the current study does have implications for practice. The current study adds to the growing body of knowledge about the lingering effects of the COVID-19 pandemic on education, particularly on teacher efficacy. This study provided a glimpse into the challenges teachers continue to face as a result of the pandemic. We see the role that teachers have in increasing their self-efficacy, as well as the responsibility school leaders have in doing the same. Teachers had to decide how they were going to show up. In essence, the COVID-19 pandemic forced teachers to take the initiative for their own professional growth during a time when there was no clear road map to follow if they and their students were going to be successful.

At the core of every response that contributed to this study is the importance of institutional supports and their influence on teachers' self-efficacy. In fairness to school and division leaders, they were not able to provide a road map to guide teachers through the pandemic because they didn't have one for themselves. As previously stated, educators at every level were flying the education-through-a-pandemic plane as they were building it. Despite not

having a blueprint for how to prepare for education during a global pandemic, administrators at both the division/district and school levels still bear the responsibility of ensuring that teachers are prepared to do their jobs effectively.

The findings of this study present a call to action for leaders to recognize that education will never be the same again and that teachers need more support to attain expected achievement goals. Institutional support comes in many forms: professional learning/professional development, instructional coaching, access to equipment and resources, agency, policy, funding, technical support to troubleshoot issues with digital platforms, teacher well-being, and communication. The findings of this study call for school and division leaders to audit existing systems in place to support teachers, determine their effectiveness in meeting teachers' post-pandemic needs, and make needed changes in order to fulfill their responsibility in fostering high teacher self-efficacy.

Conclusion & Recommendations for Future Directions

There is no question that the COVID-19 pandemic presented unique challenges for PK-12 education. It laid bare the strengths and deficits in education. It revealed the strengths and cracks in the infrastructure of school divisions and the humanity of those who labor in it and who are served by it. It revealed areas, including teacher efficacy, that have always needed more attention if living out the various mission and vision statements of school systems is to truly become a reality. Three years later, the education system is still building the post-pandemic plane while flying it, so to speak. Concerns continue to exist around teacher shortages and turnover (Goldhaber & Theobald, 2023), as school divisions in the Commonwealth of Virginia face recruitment and retention challenges (JLARC, 2022).

Teacher self-efficacy is an important topic of study now more than ever, especially in the aftermath of the COVID-19 pandemic. There is growing research on the impact of the pandemic on teaching and learning in general and particularly in PK-12 settings. The current study adds to the literature on this phenomenon by exploring the pandemic's influence on rural secondary teachers' perceptions of their self-efficacy, in particular.

Teachers' efficacy beliefs influence the effort they put forth when planning for and delivering instruction, managing the learning environment, how well they persevere when faced with obstacles such as those presented by the COVID-19 pandemic, how effectively they monitor and motivate themselves, what they achieve, and the professional choices they make (Morris et al., 2017). Because self-efficacy is task-specific and dynamic (DiBenedetto & Schunk, 2018; Eccles & Wigfield, 2002; Koul & Rubba, 1999; Schunk & DiBenedetto, 2020; Yoo, 2016), exploring teacher self-efficacy beliefs for instructional strategies, classroom management, and student engagement is extremely important post-pandemic because these areas are directly related to the teaching and learning process and, subsequently, to student achievement. The first step in improving teachers' self-efficacy post-pandemic is to understand how the pandemic has affected their ability to fulfill their job responsibilities now that schools have re-opened. The findings of the current study are an important step in that direction, especially in rural school divisions.

As previously stated, understanding teacher perceptions can be instrumental in shaping how school divisions/districts provide professional learning, coaching, and other support to improve teacher self-efficacy and, ultimately, overall student achievement. The findings of the current study add to the growing body of literature on the after-effects of the pandemic on education. They set the stage for more in-depth exploration and examination of the pandemic's

footprint on teachers' self-efficacy perceptions and the institutional support they need in order to fulfill their professional responsibilities successfully. The findings highlight the need to examine the effectiveness of institutional supports in post-pandemic education and their collective impact on teacher efficacy. A reciprocal relationship exists between teacher efficacy perceptions and institutional support. This line of research could help school and division leaders ensure systems are in place that foster high teacher efficacy and, ultimately, positive student outcomes.

Additionally, the findings of the current study also highlight the need for future research that closely examines the institutional support needs of career switchers, particularly elective content area teachers, as they transition into the education profession. The participants' descriptions of their experiences clearly reflected a disruption in the equilibrium that is crucial within TPCK for high-quality education to occur. While their content knowledge was high because of their prior professional experiences, they lacked knowledge of pedagogical practices and instructional technology that support teaching their content.

Given that historically, most teacher efficacy research has been conducted quantitatively (Parr et al., 2021), more qualitative research is needed to understand teachers' lived experiences. The current study helps address that need by providing an in-depth, qualitative understanding of teachers' perceptions of their self-efficacy and its attributions. In order to truly understand the extent of the impact of the pandemic on teachers' self-efficacy, more mixed-methods research needs to be conducted.

Teachers are on the frontline of every decision made in schools. They are the boots on the ground, making policy and practice come to life. What worked pre-pandemic may no longer work. As we seek to create a new normal for education post-pandemic, a normal that fosters student and teacher success, teachers' voices about the institutional support they need to be

highly efficacious education professionals must be considered and used to inform decisions made by school and division/district leaders. Having said that, voice alone does not necessarily equate to higher self-efficacy. Rather, teachers seeing their voice actively reflected in the decision-making process around policy, professional learning/development, instruction, technical assistance, etc., can be a contributing factor to increased self-efficacy.

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Appendix A

Demographic Questionnaire

Age Range:

- A. 21-24
- B. 25-29
- C. 30-34
- D. 35-39
- E. 40+

Years of Teaching:

- A. 0-3
- B. 4-6
- C. 7-9
- D. 10+

Education Level:

- A. Bachelors Degree
- B. Masters Degree
- C. Post-Masters Certificate
- D. Doctorate

Primary Level Taught:

- A. Middle School
- B. High School

Content Area:

- A. English/Language Arts
- B. Math
- C. Science
- D. Social Studies
- E. Elective

Gender (Please write in.): _____

Race/Ethnicity (Please write in.): _____

Appendix B

Preliminary Interview Protocol

Good Morning/Afternoon/Evening. Thank you for consenting to participate in this confidential interview as a follow-up to the survey you completed during the first data collection. The goal of this interview is to understand better your perceptions of your self-efficacy since the COVID-19 pandemic through the lens of your own experiences. I am interested in all of your viewpoints – both positive and negative.

Your participation in this interview is voluntary, and you can withdraw your participation at any time. The interview will be recorded to capture all of your comments; however, no identifying information will be collected or recorded to ensure confidentiality. You have been asked to use a pseudonym instead of your name. After the interview, the audio recording will be transcribed, and you may be asked to review the transcript to ensure accuracy.

Before we begin, I will review some guidelines that will help the interview run smoothly.

- Ensure you are in a space where you have privacy, preferably with a closed door, so others do not overhear our conversation.
- Please silence and put away your cell phone so we can concentrate on the conversation.
- When responding to the questions, please omit specific names of individuals (i.e., colleagues, administrators, students, family members).

Do you have any questions before we begin?

1. How long have you been teaching, and what is/are the name(s) of the course(s) you teach?
In general, how would you describe the ways in which your teaching has evolved over the year(s)?
 - a. Probe [if the participant is unsure of how to respond]: For example, are there any noticeable changes in the teaching strategies that you use most often?
2. [If applicable: You touched a bit on this in your previous answer, but I'm interested in hearing more ...] Describe your students' instructional needs and some of the strategies you use to meet those needs.
 - a. Probe [if unclear]: Please describe your students' instructional needs in (subject).
 - b. Probe [if unanswered]: To what extent do you believe that you are able to meet all of your students' instructional needs?

- i. [If not provided]: Please list some barriers that you experience when trying to meet all of your students' instructional needs.
 - c. Probe: In your opinion, what will better assist you in meeting all of your students' instructional needs?
3. I'm particularly interested in your teaching experiences during and after the COVID-19 pandemic. Please describe your teaching experiences during and post-COVID-19.
 - a. Probe [if unanswered]: Please describe your teaching experiences during the pandemic.
 - b. Probe [if unanswered]: Please describe your teaching experiences *after* the pandemic.
4. Please list and describe the professional development opportunities provided for school staff in preparation for returning to in-person teaching and learning.
 - a. Probe: Tell me about specific PD opportunities related to classroom management, student engagement, and instructional strategies (for returning to in-person).
 - b. Probe: What were some of the primary takeaways that stuck with you during that PD?
 - c. Probe: In your opinion, what factors made these PD opportunities helpful/not helpful or effective/ineffective?
5. How often do you integrate technology into your instruction?
 - a. Probe: What type(s) of technology and/or online learning tools have you integrated into your instruction?
 - b. Probe: What, in your opinion, encourages or prevents you from integrating technology and/or online learning tools in your instruction?

Self-Efficacy

For the purposes of this study, self-efficacy is defined as *“the teacher’s belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context”* (Tschannen-Moran et al., 1998, p. 233).

6. Please describe your level of self-efficacy in teaching (subject).

- a. Has your self-efficacy in teaching (subject) changed since the pandemic?
 - i. If so, how?
 - ii. [Probe (if changes occurred)]: What factors contributed to your self-efficacy levels changing?
7. What experiences do you attribute to your teaching self-efficacy?
 - a. Probe [if unclear]: For example, professional development, mentorships, observations, etc.?
8. How would you describe your self-efficacy in classroom management?
 - a. Has your self-efficacy in classroom management changed since the pandemic?
 - i. If so, how?
9. What experiences do you attribute to your self-efficacy in classroom management?
10. Please describe your self-efficacy levels in regard to student engagement.
 - a. Has your self-efficacy in student engagement changed since the pandemic?
 - i. If so, how?
11. What experiences do you attribute to your self-efficacy in student engagement?
12. What are the biggest challenges you currently face as a teacher as a result of the pandemic?
13. How prepared do you feel about successfully teaching your students should another pandemic occur that forces schools to close? Why?
14. Is there any additional information you would like to share that will enable me to understand better how the pandemic has influenced your self-efficacy for teaching, including instructional strategies, classroom management, and student engagement?

Thank you, again, for participating in this interview. Once the audio has been transcribed, I will share it with you for feedback on its accuracy.

Appendix C

Letter to Division Superintendents

Date

Superintendent's Name

School Division

Street Address

City, State Zip Code

Dear Superintendent's Name:

I am working on a study entitled *Charged or Challenged: A Mixed Methods Study of the Influence of the COVID-19 Pandemic on Rural Virginia Secondary Teachers' Self-Efficacy* in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University. The purpose of this study is to examine the influence of the COVID-19 pandemic on rural secondary teachers' perceptions of their self-efficacy. Specifically, this study seeks to (1) identify rural secondary teachers' current self-efficacy perceptions in the following areas: instructional strategies, classroom management, student engagement, (2) identify rural secondary teachers' technological pedagogical content knowledge (TPCK/TPACK), and (3) identify, through teachers' voices, factors influencing their current self-efficacy perceptions.

This study consists of two phases: survey completion and individual interviews. The goal of this study is to understand the influence of the COVID-19 pandemic on rural secondary teachers' perceptions of their self-efficacy through the lenses of their own experiences. Findings from this study may be presented at meetings or published in papers, but your school division's name, schools' names, or names of participants will not ever be used in these presentations or papers.

At this time, I am requesting the email addresses of secondary teachers in your school division in this study. Enclosed is the study information and consent form that will be provided to all secondary teachers. I welcome the opportunity to answer any questions you may have about this study, including the intended use of its findings. I can be reached via email at slsoutherland@vcu.edu. Should you grant my request for the email addresses of secondary teachers in your school division, please complete and return the consent form that is included in this letter.

Thank you in advance for considering this request.

Sincerely,

Sherol L. Southerland
Doctoral Candidate
Department of Foundations of Education
VCU School of Education

DIVISION PERMISSION TO CONDUCT RESEARCH

Date: _____

Dear Institutional Review Board:

The purpose of this letter is to inform you that I give Sherol L. Southerland permission to conduct the research study titled *Charged or Challenged: A Mixed Methods Study of the Influence of the COVID-19 Pandemic on Rural Virginia Secondary Teachers' Self-Efficacy* at the school(s) listed below. My consent enables Ms. Southerland to obtain the email addresses of secondary teachers at the schools listed below.

Names of schools approved to participate in the above-referenced study: _____

Name and email address(es) of division staff/department with permission to provide email addresses of secondary teachers: _____

Sincerely,

(Superintendent/Designee)

(Title)

Appendix D

Dissertation Study Information and Consent Form

DISSERTATION STUDY INFORMATION & CONSENT FORM

TITLE: The Influence of the COVID-19 Pandemic on Rural Virginia Secondary Teachers' Self-Efficacy

VCU-IRB #: HM20027027

RESEARCHER: Sherol L. Southerland, Doctoral Candidate, Educational Psychology,
Virginia Commonwealth University School of Education; email:
slsrutherland@vcu.edu

If any information contained in this document is not clear, please ask the doctoral candidate conducting the study to explain any information that you do not fully understand. You may take home this information sheet to think about or discuss with family or friends before making your decision.

PURPOSE OF THE STUDY

The purpose of this study is to explore the influence of the COVID-19 pandemic on rural secondary teachers' perceptions of their self-efficacy. Specifically, this study seeks to (1) identify rural secondary teachers' current self-efficacy perceptions in the following areas: instructional strategies, classroom management, student engagement and (2) identify, through teachers' voices, factors influencing their current self-efficacy perceptions. The goal of this study is to understand rural secondary teachers' perceptions of their self-efficacy through the lenses of their own experiences. You are being asked to participate in this study because you have been identified as a rural secondary teacher.

DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

Your participation in this research study is voluntary, and you can withdraw your participation at any time. This study consists of participation in a confidential individual virtual interview via Zoom that will last approximately one hour. The interview will address topics associated with your perceptions of your self-efficacy in instructional strategies, classroom management, and student engagement since the COVID-19 pandemic, as well as factors attributing to your perceptions. The interview will be recorded; however, no identifying information will be collected or recorded to protect your confidentiality. You will be asked to use an alphanumeric code instead of your name. After the interview, the audio recording will be transcribed, and you may be asked to review the transcript to ensure accuracy.

RISKS AND DISCOMFORTS

This study involves minimal risks. The primary risk of participation is an unanticipated breach of confidentiality. Several procedures have been put in place to minimize this risk and to protect participants' identities and the information provided during data collection. These procedures include the use of unique alphanumeric ID codes instead of participants' names, systematically storing study documents in separate areas so data collection material cannot be associated with signed consent forms, the secure storage of study materials, and the reporting of results in summary or aggregate form. There should be few discomforts associated with participation in this study; however, sometimes, talking about our professional expertise and experiences can be uncomfortable. You do not have to talk about any subjects you do not want to discuss, and you may leave the interview session at any time.

BENEFITS TO YOU AND OTHERS

You may not get any direct benefit from this study, but the information learned from teachers who participate may help us identify factors through which to improve secondary teachers' self-efficacy.

COSTS/PAYMENT FOR PARTICIPATION

There are no costs for participating in this study other than the time you will spend in the interview session. You will not receive compensation for your participation.

ALTERNATIVES

The alternative is to not participate in the study.

CONFIDENTIALITY

Potentially identifiable information about you will consist of interview notes and recordings. Data is being collected only for research purposes. Each interview transcript will be identified by a unique code to manage and analyze the data collection. Individuals who participate in the interviews will be identified by a unique ID number, not names. All data will be stored separately from research data in a locked area. All personal identifying information will be kept in password-protected files, and these files will be deleted five years after the completion of the study. Access to all data will be limited to study personnel. The interview sessions will be recorded via Zoom, but no names will be recorded. While in the waiting room for the interview, you will be asked to rename yourself using a pseudonym so that your name will not be recorded. The notes will be stored in a locked cabinet. After the information from the audio recording is transcribed, the recording will be deleted.

I will not tell anyone the information you provide; however, information from the study and the consent form signed by you may be looked at or copied for research or legal purposes by the Institute of Education Sciences or by Virginia Commonwealth University.

What we find from this study may be presented at meetings or published in papers, but your name, school, or school division will not ever be used in these presentations or

papers.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. If you decide to withdraw from the study, please contact the doctoral candidate or Dr. Sharon Zumbrunn via the email addresses below. If you decide to withdraw from the study and would also like your data withdrawn, I will be able to remove individual interview transcripts from the data analyses and reporting. You may also choose not to answer particular questions that are asked in the interview session.

Your participation in this study may be stopped at any time by the study staff. The reasons might include:

- The study staff thinks it necessary for your health or safety;
- You have not followed study instructions; or
- Administrative reasons require your withdrawal.

QUESTION

If you have any questions, complaints, or concerns about your participation in this research study, contact:

Sharon K. Zumbrunn, Ph.D.

Principal Investigator

Associate Professor and Director of Doctoral Studies

Department of Foundations of Education

VCU School of Education

Email: skzumbrunn@vcu.edu

The researcher named above is the best person to call for questions about your participation in this study.

If you have any general questions about your rights as a participant in this or any other research, you may contact:

Office of Research

Virginia Commonwealth University

800 East Leigh Street, Suite 3000

P.O. Box 980568

Richmond, VA 23298

Telephone: (804) 827-2157

Contact this number to ask general questions, to obtain information or offer input, and/or to express concerns or complaints about research. You may also call this number if you cannot reach the research team or if you wish to talk with someone else. General information about participation in research studies can also be found at <http://www.research.vcu.edu/irb/volunteers.htm>.

Appendix E

Codebook

Code	Definition	Example Quote
Agency	Ability to control one's decision-making; self-initiated actions	"...I knew that as an educator, I had to hit the ground running, which means if I need to do my independent studies, my independent learning to make sure that I do not disappoint my students..."
Choice	Teacher selection of what to participate in or attend	"If we [veterans] chose to sign up, yes, you were more than welcome, but it was mostly geared toward our new staff and those who needed the classroom support."
Personal	Pertaining to teachers' individual experiences	"...all of the good teachers I've had. They made sure that we all got engaged every day inside that classroom somehow."
Professional	Acquired through teachers' prior work experiences	"I think just living and breathing the standard for 24 years helps because teaching JROTC is much less about what you teach. It's more about how you relate and share your experiences to make somebody else better."
Relevance	Close connection to or applicability to teachers' needs	"As far as career and technical education, we've needed more...because a lot of times, it's like, 'Do we have to do this?' and we're still asking those questions."
Time/Timing	Includes when professional learning/development is offered; the extent to which teachers have the opportunity to process new learning, process what is expected, plan for implementation, and practice skill development	"...that we have time, that we're given an opportunity to learn those materials before just being pushed into the classroom."