

A quantitative study of teacher self-efficacy in the midst of a global pandemic

by

Christie Maria Henderson

B.A., Wichita State University, 1997

M. E., Wichita State University, 2003

M. E., Wichita State University, 2016

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Special Education, Counseling, and Student Affairs

College of Education

KANSAS STATE UNIVERSITY

Manhattan, Kansas

2022

Abstract

Educators have endured the difficulties of teaching during a pandemic for over eighteen months. The COVID-19 pandemic has been described as the greatest challenge for our global society since World War II (Saha and Dutta, 2020). The nuances of teaching during this experience have influenced educators to reflect on their skill set and examine their continued effectiveness in the areas of student engagement, instructional strategies and classroom management. In addition, teachers and counselors have addressed their own mental health issues and the social emotional issues of their students and families. The purpose of this study was to determine the levels of teacher self-efficacy and differences between the subgroups of veteran and novice, rural and urban, and male and female. This quantitative descriptive study examined the self-efficacy of teachers during the pandemic as measured by the Teachers Sense of Self-Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The study provided a point-in time for the lasting impact of this historical event on the self-efficacy of teachers.

The results of this study indicated an overall mid-range level of self-efficacy for teachers as well as differences between select sub-groups when comparing efficacy in the areas of student engagement, classroom management and instructional strategies.

A quantitative study of teacher self-efficacy in the midst of a global pandemic

by

Christie Maria Henderson

B.A., Wichita State University, 1997
M. E., Wichita State University, 2003
M. E., Wichita State University, 2016

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Special Education, Counseling, and Student Affairs
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2022

Approved by:

Major Professor
Dr. Judith Hughey

Copyright

© Christie Henderson 2022.

Abstract

Educators have endured the difficulties of teaching during a pandemic for over eighteen months. The COVID-19 pandemic has been described as the greatest challenge for our global society since World War II (Saha and Dutta, 2020). The nuances of teaching during this experience have influenced educators to reflect on their skill set and examine their continued effectiveness in the areas of student engagement, instructional strategies and classroom management. In addition, teachers and counselors have addressed their own mental health issues and the social emotional issues of their students and families. The purpose of this study was to determine the levels of teacher self-efficacy and differences between the subgroups of veteran and novice, rural and urban, and male and female. This quantitative descriptive study examined the self-efficacy of teachers during the pandemic as measured by the Teachers Sense of Self-Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The study provided a point-in time for the lasting impact of this historical event on the self-efficacy of teachers.

The results of this study indicated an overall mid-range level of self-efficacy for teachers as well as differences between select sub-groups when comparing efficacy in the areas of student engagement, classroom management and instructional strategies.

Table of Contents

Acknowledgements.....	viii
Dedication.....	x
Chapter 1 - Introduction.....	1
Background to the Study.....	1
Theoretical Framework.....	2
Statement of The Problem	3
Purpose of the Study	5
Significance of Study	6
Definition of Terms.....	6
Chapter 2 - Review of the Literature	8
Global Impacts	8
Effects On Education	9
National Impacts	13
Theoretical Framework.....	15
Chapter 3 - Methodology	22
Participants.....	22
Inclusion Criteria	23
Research Questions.....	24
Hypothesis.....	24
Null Hypothesis	25
Instrument	25
Data Collection	27
Data Analysis	27
Data Storage.....	28
Human Subject Review.....	28
Summary.....	28
Chapter 4 - Data Analysis and Results	30
Introduction.....	30
Descriptive Findings.....	31

Years of Experience Sub-Group	35
Setting subgroup	37
Gender Sub-group	38
Limitations	40
Summary	40
Chapter 5 - Conclusion and Recommendations for Further Research.....	41
Summary of Study	41
Summary of Findings.....	42
Conclusions And Discussion	50
Recommendations for Future Research	52
References.....	54
Appendix A - Instrument	64

Acknowledgements

The journey to the PhD is made possible by the overwhelming support and sacrifices of so many. First and foremost, I would like to begin by thanking Dr. Judy Hughey who has served as my major professor throughout this journey. Dr. Hughey, your encouragement and continued support has provided a clear path through this process and has influenced my continued work as an elementary school counselor. I am indebted to you and aspire to be the counselor educator you are. To my committee members, Dr. Craft, Dr. Thompson and Dr. Carroll, your excitement about this study as well as your thought provoking questions and suggestions have made this process one of true growth. I appreciate the challenge and hope to replicate your service to others in the field of academia.

To my husband, Heath, thank you for never telling me “no” even when I am sure you want to. You believe in me long before I commit to believing in myself and my own dreams. You are forever my “always” and I cannot ever thank you enough for being easy going and flexible beyond measure. I love you big. To my daughters, Katie and Peyton, you are the greatest gift life has given to me and knowing that you’re watching motivates me to keep blazing a trail. I don’t want you to follow my trail, I want you to be motivated by it and blaze an even more impactful trail on your own as the absolute changemakers I raised you to be. To my parents, thank you for believing in me even when you didn’t understand why I needed or wanted to chase this dream. You’ve proudly cheered at every graduation and I promise this will be the last.

To my friend, co-worker and favorite administrator, Chad Schuetz, thank you for taking a chance on me as a brand new school counselor. Your advocacy for students is inspiring and you continued to offer support, guidance and “freedom and flexibility” as I found the delicate balance between research and serving students. Serving alongside you has been the honor of my career.

To my Blackmore Elementary staff family, thank you for encouraging me, taking part in my study and checking in on me through every step of this process. Blackmore is a magical place due in large part to the work you do. To my fellow USD 490 school counselors and social work colleagues, thank you for the work you do and for being a part of a team that relentlessly serves students.

To my cohort of PhD sisters traveling this journey with me, your constant reassurance, “check ins”, sharing of resources and cheering has made this journey more rewarding. As we begin our work as counselor educators I am confident we will remain fierce in our support of one another as well as a life-line when needed. I am so proud of “us”. Thank you to my book club and my circle of best friends who have provided continual support and a soft place to land when needed. My work is made possible by your support.

Finally, to my students both past and present, you are my “why”. The world is changed by your example and you have left a lasting impression on my life.

Dedication

I dedicate this dissertation to my grandparents. You loved the most unlovable me and showed me grace at a time I so desperately needed it. Grandpa Larry always championed my dreams and taught me that being close to my paint bucket is the only way to live. This dissertation and the realization of my dream is due, in part, to this very paint bucket. This one's for you, Grandpa.

Chapter 1 - Introduction

As a student who grew up attending public schools, the researcher recalls events that led to changes in the way my education was delivered. When the researcher was a second grader the community rebounded from the murder of a citizen which was linked to the BTK killer. The researcher can clearly remember the locking of the school doors and additional police presence as they walked to and from school. Additionally, there is a recollection of a latchkey program housed at the school so that students were not walking home to empty houses after school. The researcher recalls times when students sheltered in place due to severe weather and sadly remembers the impact of the tornado of 1991 that destroyed many parts of the city during her junior year of high school. Since the school was located in a heavily damaged part of town, students did not attend school for ten days as they repaired parts of the school and cleaned debris that threatened the safety of residents trying to travel to and from school and work. These events, while monumental to the researcher, do not come close to the impact and effect of the Covid-19 pandemic that has gripped the nation for over two years.

Background to the Study

In March of 2020 governors and school leaders announced the closing of schools to help mitigate the spread of the virus and keep students and staff safe. While the physical buildings were closed there was an expectation that learning for students would continue until May of 2020 which would signify the end of the school year. Teachers were asked to design and deliver “continuous learning” that would ultimately challenge their skillsets. Neither the state board of education nor the local school boards possessed a roadmap for how to deliver this type of instruction. A team of educators joined state education commissioners to develop a framework that provided parameters, but lacked specific details for how this continuous learning was to be

developed and delivered with fidelity. The beginning of the 2020-2021 school year allowed for the return to limited in-person instruction with synchronous instruction being delivered simultaneously and other districts delivering instruction completely remote. The planning, lesson delivery and assessment of student progress proved to be difficult. This was a turning point for educators and the education system as a whole (Adnan & Anwar, 2020).

Theoretical Framework

Social Cognitive Theory (Bandura, 1998) with a focus on self-efficacy is the theoretical framework for this research study. Self-efficacy is closely aligned with the research questions posed in this study (Bandura, 1998). The self-efficacy component of Social Cognitive Theory is described by the triadic relationship between a person's behavior, the characteristics of the person and the environment in which the behavior occurs are constantly interacting (Lenz, 2002) and is related to the motivation and self-determination experienced by teachers.

Self-efficacy is grounded in Bandura's Social Cognitive Theory (Bandura, 1977). Bandura (1997) first defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). The focus of this research was to identify and address the levels and differences currently being experienced in teacher self-efficacy. Teacher self-efficacy is defined as "teacher's belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated" (Guskey & Passaro, 1994, p. 4). According to Bandura's Theory, the teacher beliefs are viewed as proximate predictors of behavior, and are both influencing and influenced by environmental and behavioral factors (Barni et al., 2019; Bandura, 1977). Teacher beliefs have an effect on student outcomes because teachers with higher self-efficacy demonstrate more effective critical thinking lesson plans, (Djigic et al. 2014). Higher self-efficacy teachers experience fewer discipline issues

because their classroom management techniques are implemented with respect and fidelity, and class curriculum activities are meaningful with integration of student engagement because they demonstrate respect for student abilities and capabilities appropriate techniques (Alibakhshi et al., 2020; Barni et al., 2019).

Statement of The Problem

Schools and classrooms across the country are staffed with teachers with varying degrees of experience which allow them to design and deliver lessons for students based on standards, objectives and data (Barnesa et al, 2020). Lesson delivery relies on a strong feeling of self-efficacy for teachers which provide a foundation and support through times when they feel less than capable, are working with less resources or when they are working with students who bring needs that do not fit the experience or skill set of the teacher (Nguyen, 2020). The aforementioned feelings are part of the expected journey of a teacher and the mentoring programs initiated in many of today's school districts designed to support teachers needing coaching or staff development (Will, 2020). The response to the pandemic concerning education has influenced feelings and experiences with limited empirical research regarding perceived needed staff development or mentoring. To determine the response to the after effects on teacher self-efficacy and propose a path forward, it is necessary to first understand what the perceived teacher experience and possible impact of these experiences (Orhan & Beyhan, 2020).

Collins, et al. (2021) asserted that the trauma of the education system caused a ripple effect across all facets of education causing particular angst as the disruption to the traditional schooling structure had a direct impact on the working lives of parents and caregivers. When this is coupled with teachers who feel inept in their ability to teach students during a pandemic there is an effect on students, teachers and families which continues to complicate our ability to reach

students (Collins, et al., 2021). Roff (2021) concluded based on a study of professional development, most K-5 districts in the New York City area reported they felt ill-equipped to teach digitally and had not received a comfortable amount of staff development in this area as historically elementary students were not educated in a distance learning/technology-based structure. A common theme emerged identifying a change in beliefs, values and practices about students, curriculum and teaching approaches. As teachers began to implement digital learning activities and curriculum a vast disparity emerged which highlighted the differences in internet access for families (Orhan & Beyan, 2020).. Without this resource families struggled to stay connected and complete work which in turn raised the level of frustration for teachers when face-to-face teaching was not possible. In addition, Bellwether Education Partners (2021) found that between March and October of 2020 approximately three million students disappeared from school contact. The Bellwether data indicated that according to school records, the missing students appear to be from marginalized groups (2021). Educators have indicated that families are no longer living at their previous residence and/or struggle with poor web access which has resulted in these thousands of students effectively “disappearing” from the radar of teachers (Bellwether, 2021).

The summary of the research in this area indicated a need to determine where teachers felt successful during this time of continuous learning (Orhan & Beyan, 2020). Allowing educators to reflect on their shared experiences and how their self-efficacy was affected increased self-efficacy (Wu, 2020).

Purpose of the Study

More than 1.48 billion students and more parents and guardians were directly affected by the change in education formats at the height of the COVID-19 outbreak in April 2020 (Heider, 2021). Basilaia & Kvavadze (2020) reported online learning practices ultimately led to lower self-efficacy, less belief in skill set and pedagogy in addition to perceived isolation and burnout amongst educators. Heider (2021) continued to report that the absence of in-person professional development led to feelings of isolation and further doubt in the skills necessary to teach children who were no longer in-person each and every day. The purpose of this study was to determine the levels of teacher self-efficacy and differences between veteran and novice, rural and urban, and male and female. The ultimate goal was to provide data that informs district and state level professional development to meet the needs of teachers as we grapple with the changes occurring in education.

Research Questions

The study will aim to answer the following research questions:

1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management?

-Do veteran or novice teachers report a higher level of self-efficacy in each of the three areas?

-Do teachers in urban or rural setting report a higher level of self-efficacy in each of the three areas?

-Do female or male teachers report a higher level of self-efficacy in each of the three areas?

Significance of Study

Brookhart and Nitko (2014) reported the importance of instructional decision-making process is based on content, outcomes and assessment data while connecting the importance of allowing teachers to have control in the decision making. The COVID-19 pandemic and the closure of brick-and-mortar schooling shifted this decision-making process into the hands of policy makers at the state and local school board levels effectively taking away the ability for teachers to exercise expertise in these matters (Basilaia & Kvavadze, 2020). Szabo (2020) recognized that even the smallest change in classroom lesson delivery needed to be met with understanding and the ability to process this change as an educator on both a personal and professional level. The data collected in this study reflect the changes encountered by teachers and the implications these changes had on lesson planning, delivery and teacher self-efficacy.

Definition of Terms

Self-Efficacy- Bandura (1997) first defined self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). The focus of this research is to identify and address the levels and differences currently being experienced in teacher self-efficacy.

Teacher Self-Efficacy: Teacher self-efficacy is defined as “teacher’s belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated” (Guskey & Passaro, 1994, p. 4).

Student engagement: Student engagement is a construct, a complex set of behaviors and experiences that address the comprehensive goals and influences of teaching and student outcomes. An emphasis is placed on the formal and informal learning opportunities that exist in

classrooms and in co-curricular events (Bowen, 1977). The definition of student engagement is developed from the original Astin's (1999) theory of involvement. Fredricks, Blumenfeld, and Paris (2004) synthesized engagement into of the three domains of behavioral, emotional, cognitive.

Teaching Experience: The number of years a teacher has been employed as a licensed PK-12 classroom teacher.

Classroom management: Behaviors, structures, and practices established in the classroom for the purpose of engaging students and creating a physically and emotionally safe climate and culture. The goal of this environment is to encourage and elicit positive student engagement, active learning, and intrinsic motivation founded in self-determination theory. Recommended strategies include a focus on cultivating and nurturing relationships with students, addressing individual/personalized learning needs, contextual meaningful learning, and positive reinforcement to strengthen desired behaviors (Reupert & Woodcock, 2010).

Instructional strategies: Constructs including processes in the teaching and learning processes designed to enhance cognitive, behavioral, and social-emotional development. The definition is comprehensive addressing individual student needs and personalized learning strategies that include assessments, development of critical thinking activities and questions, innovative teaching and learning activities, measuring student comprehension, evaluation and appropriate revision based on student data (Tschannen-Moran & Woolfolk Hoy, 2001).

Chapter 2 - Review of the Literature

Chapter 2 is a review of the theoretical framework and literature related to Self-Efficacy during the time of COVID-19 pandemic, specifically, research to be reviewed included data related to teacher self-efficacy in the areas of student engagement, instructional strategies and classroom management.

Global Impacts

The World Health Organization recognized the Covid-19 virus as a unique global challenge due to its contagiousness and lethality (Sibley et al., 2020). The COVID-19 pandemic led to global stress, anxiety, and loss including 3.3 million deaths as of May 11, 2021 (Johns Hopkins, 2021). Due to the death and loss being experienced around the world, Viner et al., (2020) reported by March 18, 107 countries had closed school buildings with an expedited movement to transition to remote education environments. One and half billion students under the age of 20 were unable to attend an on-campus school March-June, 2020 and again in 2021 (Viner et al., 2022). It is reported that the pandemic reached almost every part of the world leaving very few unaffected (Sibley et al., 2020). Research listed worldwide school closures as a first layer of response to reduce social contact and hopefully mitigate the spread of illness (Bau, 2020; Walsh et al., 2021). Yucutory-Ozkan et al. (2020) reported that one hundred forty-three countries closed schools on a country-wide level while other countries allowed the decision to be made at the local levels. To mitigate the negative consequences of the school closures, school leaders began to strategize on best practice to transition and provide continuous learning during the pandemic.

The transition to remote and digital learning implemented on virtual or hybrid models began with limited planning or teaching preparation that resulted in mixed outcomes in teaching and

learning (Liu, 2021). Lucido (2021) reported other outcomes included increased mental and physical health challenges exacerbated by sudden changes and fear of the unknown. The emotional responses and adherence to school closures and social distancing created an additional layer of difficulty for teachers. Teachers were tasked with the challenge of teaching in a new environment while questioning their perceived ability to provide the quality of instruction necessary to meet previously expected outcomes (Lucido, 2021; McKibbin & Fernando, 2020). Nasri et al. (2020) found that teachers perceptions regarding the expanded use of technology in teaching and assessment affected the feeling of work satisfaction and confidence as the pandemic continued. Quezada et al. (2020) reported that teachers, as a collective unit, felt ill prepared to make rapid adjustments in their delivery modality as this had not been an integral part of teacher preparation programs prior to the pandemic. It was suggested that the general experience of the pandemic resulted in effects on the mental and physical health of people (Sibley et al., 2020). These effects were personalized, varied and dependent upon which parts of the world a person resides in combination with the extent to which they experienced the lockdown (Sibley et al., 2020).

Effects On Education

Instability and trauma related to the COVID-19 pandemic has impacted the health of adolescents (Harris and Tarchak, 2020). Wright and Wachs (2021) reported that teachers provide imperative social support in the lives of students resulting in the avoidance of negative health outcomes for student. Experiences beginning in infancy affect individuals social, emotional, and behavioral development (Dawson et al., 2020; Malik & Marwaha, 2018; Steele et al., 1999). This support is perceived as critical for a child's development. Supporting the social emotional, academic, and career development of students is a role of all educators. Developing strong

relationships and connections with all students creates a protective factor for students that may mitigate later mental health concerns (Yoshikawa et al., 2013; Bierman et al., 2018). Students need to know and feel that they are cared for and respected as human beings and that schools provide a social network of professionals the dedicated to their welfare (Davidson & Demaray, 2007; Holt & Espelage, 2007). The Holt and Espelage (2007) research was conducted prior to the COVID-19 pandemic, but aimed to highlight the importance of building relationships with students. Social support is an unspoken and expected part of the position of classroom teacher (Reblin & Demaray, 2007; Holt & Espelage, 2007). Yuksek-Usta & Gokcan (2020) reported regular contact, described as daily check-ins with students via zoom or phone, and adherence to a schedule provided support for learning that buffered the effects of self-isolation during the pandemic. This social support was above and beyond the “normal” support provided by teachers in non-pandemic times (Bryant et al., 2020). This research further identified the important role teachers played in keeping students motivated and learning in a time of public health crisis (Yuksek-Usta & Gokcan, 2020).

Bau’s (2020) indicated the pandemic and the subsequent closure of schools reflected in a subsequent decrease in the self-efficacy of teachers. Based on the results of the Bau study, a majority (80% of 5,661 teachers) reported the lack of distance learning experience and knowledge base (Bau, 2020). Ohran & Beyhan (2020) reported another roadblock faced by teachers was a perceived significant lack of knowledge and confidence with technology necessary to make distance and online learning successful. When this was coupled with personal coping of the COVID-19 pandemic for teachers, the ability to feel success in supporting students while balancing their own social and psychological needs was greatly diminished (Bau, 2020).

The physical spaces in schools were also affected by the pandemic. When students returned to the school setting, mitigation measures that included seating arrangements, social distancing, classroom cohort groupings, masking and changes in common areas such as cafeterias and gyms were present in the school environment which made the return to the physical school environment difficult for students (MoH, 2020). Hoy & Woolfolk (1993) connected the aforementioned areas to the three areas of self-efficacy including student engagement, classroom management and instructional strategies which can be measured using The Teacher Sense of Self-Efficacy Scale (TSES).

Dos Santos (2021) cited Pre-k through 12 schools were not the only victims in the COVID-19 pandemic. Research also cited declining enrollment numbers in university teacher preparation programs. Barnes (2020) reported 19 percent of undergraduate-level and 11 percent of graduate level teacher preparation programs saw a decline in enrollment during the 2020 school year. Data collected from university faculty and staff members regarding the decline in teacher recruitment and retention noted the concern surrounding the risk in-person teaching entails (Barnes et al., 2020). The additional responsibilities required under mitigation plans, including sanitizing instruments and teaching tools, modeling and enforcing proper mask wearing, sanitizing water bottles and keeping students socially distanced, added extra stress and concern for teachers (Dos Santos, 2021). The use of video technology to deliver instruction hindered the physical development of relationships with students and requires a different set of attention retention strategies necessary to keep students engaged when they were in-person which caused additional concern for students in teacher preparation programs (Dos Santos, 2020). Collins et al. revealed attrition and burnout as reasons for the reduction of numbers in the workforce (2021). COVID-19 increased these numbers even causing 8 percent teachers to leave

before the end of their contract terms (Dos Santos, 2020). The COVID-19 Relief Bill provided 129 billion in funding for K-12 schools which was to be used to increase staff to reduce class sizes for compliance with the COVID-19 safety protocols and mitigation strategies (Abiky, 2021). Additional funding did not necessarily translate into the hiring of a large number of staff and it did little to slow the number of retirements and vacancies created by teachers who felt apprehension while teaching under the current condition (Dos Santos, 2020).

Zhengping (2020) described the experience and emotion of one educator transitioning to online teaching. Abiky (2021) emphasized the importance of educators using personalized learning as a way to help students when the switch to online instruction required a more independent, self-paced type of environment. The change in instruction created by the pandemic was an opportunity to implement new methods that might be beneficial to learners once they are back to full, in-person and traditional schooling (Adnan & Anwar, 2020). Teachers with high self-efficacy were more willing to implement innovative instructional strategies and are more supportive of change than teachers with low self-efficacy (Donohoo, 2017; Hoogsteen, 2020; Rubie-Davies et al., 2012). In addition, teachers in schools with high collective teacher efficacy hold students to higher expectations and standards (Bandura, 1997; Donohoo, 2017; Hoogsteen, 2020). Will (2020) reported the work of remote learning is difficult, at best, and requires more time, effort and energy on the behalf of teachers. The ability to provide instant feedback to students and the ability to be present became more difficult when teaching remotely using a technological platform for instructional delivery (Will, 2020).

Education Week Research Center (2020) reported teachers themselves assigning, collecting work and using digital tools they had not previously implemented to teach their students before brick-and-mortar schools were closed. It was noted that the broadband

infrastructure left many rural and families living below the poverty line without the necessary internet access that would allow for reliable and ongoing instruction and connection with teachers and other educators (Anderson et al., 2020). The gap in internet access and sufficient devices particularly for English Language Learners and students identified with disabilities perhaps to be at a greater disadvantage during this time (Orhan & Beyhan, 2020). While the approaches varied greatly, children were essentially attending school from whatever remote location was accessible while parents and caregivers struggled to find responsible daycare while meet employment responsibilities (Baloran, 2020).

National Impacts

Families felt the effects of the COVID-19 pandemic both social-emotionally and financially (Sibley et al., 2020). The trauma influenced by isolation and the lack of access to face-to-face social emotional support and mental health services impacted the processing of trauma for students and their families (Troughakos, et al., 2020). Chavez & Sperry (2020) reported students returned to classrooms and were still carrying unpacked trauma and continued to present with additional trauma based on their experiences. The lack of school structure and pandemic related trauma including but not limited to the death and loss experiences of students intensified the responsibilities felt by teachers including the pressure to meet the academic and social emotional needs of students. The United States Department of Labor (2020) connected the monthly unemployment claims to the increase in abuse and neglect of children. When brick and mortar schools were closed, children were forced to complete schooling requirements in their home environments. Often, they potentially found themselves with caregivers who were coping with their own mental health struggles which potentially could have affected students mentally and physically (Damian et al., 2020). The COVID-19 pandemic caused an impact on health,

anxiety, and work resulting in feelings of hopelessness and loss of control permeating all areas of life (Sibley, et al., 2020). Teachers during the pandemic demonstrated tenets Self-Determination Theory (2000) by being committed to goal progress and attainment. The internal motivation that directed teachers to seek personal and professional success during the pandemic, also has been cited as the impetus of stress, anxiety, and depression, in part, due to a feeling of powerlessness, incompetence, and a lack of success (Trougakos, et al, 2020). With the uncertainty caused by the pandemic work goals became unclear and often high frustration was present in their quest to meet the goal (Yukse-Usta & Gokcan, 2020). When applied to classroom teachers, the closing of schools and the transition to online instruction delivery was unexplored territory for many educators which added stress to their already difficult task (Yukse-Usta & Gokcan, 2020). The aforementioned study highlighted the importance of recognizing the need for fulfillment for employees while understanding the impact this has on health and anxiety. Researchers recommended anxiety mitigating measures including straining in emotional coping, resilience and stress management as ways to combat the effects of the pandemic (Orhan & Beyhan, 2020). Trougakos, et al. described the pandemic as having detrimental implications on the teaching environment (2020). COVID-19 impacted the global workforce, however no workforce more forcefully than education. The targets were described by Trougakos, et al. as constantly changing are without the safety, routines, and structures traditionally provided by the school setting. It is these structures that create safety and predictability and create a culture and environment in which students thrive (Trougakos, et al., 2020). The closures to school interrupted these routines and students became socially isolated which hinders social-emotional development and impedes academic growth (Yukse-Usta & Gokcan, 2020).

Commissioners, school board members, legislators and school staff members shared their thoughts on plans proposed for reopening in-person school facilities post-pandemic. These thoughts addressed the continued issues of equity as it related to the education of students with disabilities and those learning English as a second language (Basilaia & Kvavadze, 2020). The U.S. Department of Education advised on March 17, 2020 the online learning opportunities that must be accessible to all students or to provide an equally effective alternative for those who could not access remote learning. These equitable opportunities included the delivering of paper lessons to students by adding Wi-Fi connectivity on school buses that became roving hot spots in neighborhoods allowing students the ability to access the network, translating online materials into multiple languages and provided audio-recorded instruction and lesson to those who would benefit (Basilaia & Kvavadze, 2020). While these practices were being implemented, researchers were concerned for the growing amount of screen time children were engaged in and the effect this had on language development and attention span (Butler-Henderson, et al., 2020). Concerns grew on how the video technology platforms allowed for privacy issues and opportunities for the public to infiltrate these platforms while teachers were in the midst of instruction (Basilaia & Kvavadze, 2020).

Theoretical Framework

Social Cognitive Theory (1998) is the theoretical framework for this research study and is illustrated in the triangle of triadic reciprocal causation. Self-efficacy is a major tenet of the theory and is closely aligned with the research questions posed in this study (Bandura, 1998). The self-efficacy component of Social Cognitive Theory explained the triadic relationship between a person's behavior, the characteristics of the person and the environment the behavior occur are constantly interacting (Lenz, 2002). Bandura proposed that if one component of this

triangle changed, the results affect the other two points of the triangle. The model demonstrated self-efficacy as the judgement of an individual's capabilities to organize and execute behaviors required to attain expected levels of performances. (Bandura, 1998). Self-efficacy is cultivated on success or achievement (Bandura, 1986). These definitions are especially relevant to teacher outcomes and perceived performance levels experienced during the pandemic.

Self-efficacy is not a general personality trait, rather a model of human agency and relates to specific skills or situations (Donohoo, 2017). Donohoo and Katz (2017) emphasized the influence of teacher self-efficacy by titling an article, "When teachers believe, students achieve" (p.20). The underlying basic premise of self-efficacy theory is that "the personal mastery (efficacy expectations or self-efficacy) and success (outcome expectations) determine whether an individual will engage in a particular behavior" (p. 10). A person's motivation is increased when engaged in behaviors that are believed to produce desired and positive outcomes (Lenz, 2002) This feeling of confidence in behavior, "self-efficacy" predicts performance (Lenz, 2002). Incentives and guides for future actions are influenced by a person's goals and aspirations which are a direct reflection of value systems. The personal views of potential obstacles and opportunities for success ultimately create self-efficacy and this will impact the trajectory their lives, personally and professionally (Bandura, 2002).

Bandura (1998) identified four sources for self-efficacy including mastery experiences, vicarious experience, verbal persuasion and psychological information. Mastery experiences are reported to be the most powerful source of self-efficacy with vicarious experiences reported as a secondary source for the development of self-efficacy (Adams and Forsyth, 2006; Bandura, 1997; Donohoo, 2017; Goddard, 2001; Goddard et al., 2004). When a person experiences success, self-efficacy is increased. Failure may decrease self-efficacy when occurring early in the

learning process. Once a person has become proficient in the skill area, a failure will not have as large of an impact on self-efficacy (Bandura, 1998). If a person is confident in ability, failure is seen as situational. However, if a person has low self-efficacy failure may be seen as an affront to personal skill capabilities (Bandura, 1997). While vicarious experiences, which are the result of observing others, are a source of self-efficacy, they are a weaker source than direct experiences. When engaging in the observation of others, people can reflect on example set by the person and determine the degree of difficulty of the task being observed (Bandura, 1997). These observations allow for a comparison to measure a person's own capability and serve as a benchmark for estimating their own success (Bandura, 1977). The expectation for future outcomes come from the expectations constructed by people who observe their own, as well as others conditional responses and relations to the events occurring around them. These observations often set the tone for vicarious experiences (Bandura, 2001). Social persuasion, including discussions and feedback from other educators, has been reported to be a powerful tool for increased self-efficacy (Beauchamp et al., 2014). Verbal persuasion is another source for self-efficacy. Verbal persuasion alone has limited power (Bandura, 1997; Goddard et al., 2004; Hoogsteen, 2020). However, when paired with mastery experiences or verbal persuasion and presented by an individual with a strong identity connection, robust credibility or gravitas has potential to impact educator self-efficacy. Instructions, and feedback given by colleagues provide support and encouragement that will serve to influence individuals they can succeed (Goddard et al., 2004; Hoogsteen, 2020). According to Bandura (1997) the fourth source of self-efficacy is physiological and affective states. These states provide information about affective arousal in select situations. Tension, anxiety and depression can trigger feelings of inadequacy and fatigue and pain can lend itself to causing a person to feel low in the area of self-efficacy. Success is

anticipated in situations that are low stress when they are feeling physically capable and able (Lenz, 2020). The more efficacious the view of one's capabilities are, the stronger the impact on our choices, our effort, level of perseverance, and the stress and depression felt when addressing situations that make one feel vulnerable (Bandura & Abrams, 1986).

Gage & MacSuga-Gage (2017) referred to effective teaching to include delivering instruction while maintaining a managed classroom and ensuring student engagement in the curriculum with few distractions. Teachers indicated classroom management as one of the most challenging aspects of their work (Reinke et al., 2011) which further compounds feelings of low self-efficacy in the area of classroom management (Freeman et al., 2014). Choa et al. 2017 found that the self-efficacy of teachers can be task and/or content specific and can vary according to the types of tasks the teacher is asked to complete, students in the classroom, and the given circumstances depending on the day. Teachers with high self-efficacy create classrooms that offer high-quality, differentiated lesson planning, varied lesson delivery and classroom management that allows for safety and high levels of student engagement (Barni et al., 2019; Caprara et al., 2006; Djigic et al., 2014; Woolfolk et. al., 1990). Teachers who reported high levels of self-efficacy also reported more meaningful relationships with students and interactions in ways that meet both the academic and behavioral needs of students (Poulou, 2017).

Instructional strategies, as measured by the teacher self-efficacy instrument, are positively influenced when the teacher is given the opportunity to apply these skills in an authentic setting (Tschannen-Moran and McMaster, 2009; Bruce et al., 2010). Tschannen-Moran and Woolfolk-Hoy (2007) found that veteran teachers reported higher self-efficacy with instructional strategies which were boosted by prior successful experiences and verbal persuasion provided by trusted colleagues and administrators. Qualitative data gathered through

interviews suggested that student's poor performance on academic tasks lowered the feelings of teacher self-efficacy as teachers began to question the quality of their instructional delivery (Gale, et al., 2021).

Klassen and Chiu (2011) reported higher self-efficacy in teachers in the area of classroom management specifically for practicing teachers reflective of extended time in the classroom when compared with preservice teachers. Gale et al. (2021) reported beginning teachers showed a lower level of self-efficacy in classroom management which was further explained in qualitative interviews revealed that the lack of successful experiences contributed to this data. Woolfolk et al. (2005) found that teacher self-efficacy in the area of classroom management grows as teachers gain more experience with managing their own classroom. Higher workload stress was associated with lower feelings of self-efficacy in the area of classroom management and was most often reported by teachers with more years of teaching experience (Klassen and Chiu, 2010).

In the area of student engagement, Gale, et al. (2021) found that 67% of teachers describe increases in self-efficacy when they experienced successful lessons in which students are engaged. Conversely, negative experiences lessen the feelings of self-efficacy in student engagement particularly after a classroom observation during which a peer or administrator observes lower student involvement in the lesson (Gale, et al., 2021). The relationships and interactions between teachers and students are key to the effective teaching and learning in classrooms (Bishop & Berryman, 2009).

Perera et. al. (2019) found that teachers who feel competent in the area of classroom management fostered a desire to remain in the profession. Teachers who felt confident in the area of student engagement and classroom management reported being more effective at coping with

demands in the context of school reforms (Schwab, 2019). When teachers have a higher level of self-efficacy, they are more prepared to address students with behavioral challenges (Wu et al., 2019).

Miller et. al. found that teachers with higher levels of self-efficacy project confidence in their abilities through their interactions with students in their classrooms (2017). Milner (2002) teachers with grit and persistence reported higher levels of self-efficacy and this translated into higher student engagement which ultimately impacted the growth of the teacher.

Neto et. al. found that higher self-efficacy in teachers translated into a higher level of willingness to experiment with instructional strategies in an effort to raise student engagement (2018). Research aimed at studying teachers who engage students in all modalities of learning, including online, found that higher teacher self-efficacy translated into online learning activities that require critical thinking, are challenging, and engaging (Hampton et al., 2020).

Caprara et. al. (2011) assert that when teachers are provided adequate instruction (staff development) their negative feelings of self-efficacy lower. Additionally, Schunk and Meece (2006) suggest that observing other colleagues who bear similarities to their own teaching style will positively impact the feelings of self-efficacy. A relationship exists between the teaching experience and the willingness to adopt new and innovative teaching, engagement and classroom management strategies (Poulou et al., 2018). Suprayogi et al. (2017) found that teachers with five or less years of experience seem more eager to adopt new practices while teachers with twenty or more years of experience are more likely to resist change and are often highly critical of new practices thus leading to effects in teacher self-efficacy.

Viewing through the lens of self-efficacy theory allowed for the framing of the study moving forward. The literature review revealed a universal path traveled by educators

throughout the entirety of the Covid-19 pandemic. While the literature indicated challenges in providing instruction both remotely and in-person, the concerns for the health of educators, the difficulties in keeping a connection with students and the impact on the number of applicants for teacher preparation programs, questions abound regarding the connection between self-efficacy of teachers and the impact of their experiences based on the last 18 months of teaching. This study examined the self-efficacy differences between veteran and novice teachers, urban and rural and female and male. The questions on the self-efficacy survey completed by participants allowed for the evaluation of various activities required in their daily work during the past 18 months. The survey examined efficacy in decision making, influencing school resources, instruction, discipline, enlisting parent and community involvement, as well as creating a positive school climate. The goal of this study was to explore the effects of the Covid-19 pandemic on the self-efficacy of teachers. Nguyen (2020) reported teacher attrition in Kansas has declined identifying issues such as salary and working conditions. The results of Nguyen's study lent themselves to the continued research determining the current level of self-efficacy amongst teachers in the midst of a global pandemic.

Chapter 3 - Methodology

This chapter provides the methodology conducted in this study. This quantitative study employed the use of survey data to report the current feeling of teacher self-efficacy as the country continues to navigate the COVID-19 pandemic. The use of descriptive data allowed for the reporting of various subgroups and three distinct areas of teacher self-efficacy. The Teacher Sense of Self Efficacy Scale allowed for streamlined data collection in Qualtrics. The Scale measured the feelings and views of teachers based on their experiences and allowed for a comparison between various district sizes, years of experience and geographical locations in the state. The following research question were addressed in this study.

1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management amongst teachers?

-Do veteran or novice teachers report a higher level of self-efficacy in each of the three areas?

-Do teachers in urban or rural setting report a higher level of self-efficacy in each of the three areas?

-Do female or male teachers report a higher level of self-efficacy in each of the three areas?

Participants

The sampling used for the study was non-probability/non-random sampling, specifically convenience sampling. This type of sampling involved collecting data from locations that the researcher deemed convenient. Etikan et al. (2016) explained this type of sampling provides easy

access to willing participants that are known to the researcher and allows for participants who are readily available.

Participants in this study were teachers from school districts in a midwestern state. The districts included schools from different geographical regions. Each geographical region included teachers who were novice teachers (those having 3 or less years of experience) and veteran teachers (those with 20+ years of experience). The qualifiers for categorizing teachers mirrored those on the Department of Education website. The teachers in these districts planned and delivered lessons for students in their classrooms. Inexperienced teachers are defined as having less than three total years of experience. Fully licensed teachers hold a valid teaching certificate/license. The definitions for “suburban/rural” and “urban” for this study were based on the qualifiers used by the state department of education in the state of this research study to determine the setting of each school district.

Inclusion Criteria

Teachers in participating districts were sent an email explaining the study and inviting participation. Integral to encouraging participation was the explanation of the long-term vision based on the results of this research study. Demonstrating the long-term effects and needs as a result of teaching during a pandemic allowed for conversation around changes to post-pandemic professional development while consideration was also given to the adjustments necessary to our teacher preparation programs. Teachers who believe their voices have an impact on issues affecting them every day will see the importance of their views. Participation in this study was encouraged but remained voluntary.

Research Questions

1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management amongst teachers?

-Do veteran or novice teachers report a higher level of self-efficacy in each of the three areas?

-Do teachers in urban or rural setting report a higher level of self-efficacy in each of the three areas?

-Do female or male teachers report a higher level of self-efficacy in each of the three areas?

Hypothesis

1. The self-efficacy of teachers, as reported using the Teacher Sense of Self-Efficacy Scale will reveal scores on the lower end of the scale when computing the mean scores of unweighted items for student engagement, instructional strategies and classroom management.

2. There is a significant difference between veteran and novice teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by the results on The Teacher Sense of Self Efficacy Scale.

3. There is a significant difference between urban and rural teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by the results on The Teacher Sense of Self Efficacy Scale.

4. There is a significant difference between male and female teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by results on The Teacher Sense of Self Efficacy Scale.

Null Hypothesis

1. The self-efficacy of teachers, as reported using the Teachers Sense of Self-Efficacy Scale (TSES) reveal scores at the higher end of the scale when computing the mean scores of unweighted items of student engagement, instructional strategies and classroom management.

2. There is no significant difference between veteran and novice teachers in the areas of student engagement, instructional strategies and classroom management as evidences by the results on The Teacher Sense of Self Efficacy Scale.

3. There is no significant difference between urban and rural teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by the results on The Teacher Sense of Self Efficacy Scale.

4. There is no significant difference between male and female teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by results on The Teacher Sense of Self Efficacy Scale.

Instrument

To research the impact on self-efficacy, the researcher used The Teacher Efficacy Scale-short form (Hoy & Woolfolk,1990). The scale presented twelve items with a self-reported score on a scale including 1 (no control), 3 (very little control), 5 (some influence), 7 (quite a bit of influence), or 9 (a great deal of influence). The scale included items on their feelings of self-efficacy in the areas of student engagement, instructional strategies and classroom management.

This scale was field tested in three different studies. Through the field testing, the number of items were reduced and two forms of the scale were developed offering a long form featuring 22 items as well as a short form with 12 items. The first field test included 224 participants which included 146 pre-service teachers taking classes at The Ohio State University and 78 inservice teachers. The second field test included a sample of 217 participants made up of 70 pre-service teachers and 147 inservice teachers (with 3 failing to indicate their teaching status). The third field test served as an opportunity to refine the instrument and included a sample size of 410 participants of which 103 were pre-service teachers and 255 were inservice with 38 failing to report their teaching status. The overall results from the analysis of this tool indicated the instrument is considered reasonably valid regardless of the use of the short or long form. The instrument proved to move beyond the previous measures of teacher self-efficacy by including the measurement of a wider variety of teaching tasks including support of student, teacher effectiveness with students who show a higher degree of capability, being creative in teaching approaches and the use of alternative forms of assessment and flexible teaching strategies. The construct validity of the scale was tested by examining the correlation of this measure with existing measures. Participants responded to the instrument as well as previously studied measures of Teacher Self-Efficacy including the Rand Items as well as the Gibson and Dembo TES. The scores on the instrument were positively related to the Rand items ($r = 0.18$ and 0.53 , $p < 0.01$) as well as the Gibson and Dembo measure ($r = 0.64$, $p < 0.01$). Correlation of $p < 0.01$ indicates a strong correlation to measure personal teaching efficacy. The results of this study indicate this tool is positively correlated with other measures of teacher self-efficacy (Hoy & Tschannen-Moran, 2000).

To gather the necessary demographic data needed for subgroup analysis, drop down menus were provided for participants when administering the survey. These down menus allowed for participants to choose their gender and the opportunity to identify whether they were an experienced (more than three years of teaching) or an inexperienced teacher (three years or less). The survey response also included their reporting if their school district is an urban or rural school district. The name or location of the district is not included.

Data Collection

Following approval from the researcher's dissertation committee, the IRB application was submitted to the Institutional Review Board (IRB). Once the study was approved, an email was crafted and emailed to leaders in districts responsible for approving research studies describing the study and asking for permission to approach participants in their district about completing the survey. The consent form included an explanation of the study and information pertaining to the confidential nature of the data collected. While demographic data was collected as a means for data analysis of subgrouping, no personally identifiable information about any participant were collected or stored through completion of the survey.

Data Analysis

Descriptive statistical methods were used to evaluate the results of the data collection. The use of percentages, measures of central tendency (mean scores) and variability (standard deviations) were calculated to address the overarching research question. The use of analysis of variance (ANOVA) were used for the sub questions which allowed the researcher to examine differences between the identified groups (veteran/novice teachers, urban/rural teachers and male/female teachers).

For the overarching research question, the researcher followed the format of Hoy and Moran and computed the unweighted means of the items that load each of the following factors; efficacy in student engagement, efficacy in instructional practices and efficacy in classroom management. To determine the reliability of the responses to the questions the Cronbach's Alpha score were determined. The use of ANOVA allowed for the analysis of the unweighted mean items revealed the existence of a statistical difference amongst the subgroups identified by the researcher.

Data Storage

All data were coded and stored on University OneDrive to protect confidentiality. Responses were collected in the aggregate. Only the Principal Investigator and PhD student researcher had access to the data.

Human Subject Review

There were no anticipated ethical concerns regarding this study. However, contact information was included in the informed consent and was shared with the participants. The study began following the approval of the committee and the University Institutional Review Board (IRB).

Summary

This chapter outlined the research questions, hypothesis, design, setting, sample, instrumentation, data collection, data analysis procedures, and ethical concerns. The research questions and hypothesis examined the current teacher self-efficacy in the areas of student engagement, instructional strategies and classroom management amongst teachers, differences with veteran or novice teachers in each of the three areas, teachers in urban or rural setting in each of the three areas, and in female or male.

Chapter 4 - Data Analysis and Results

Introduction

The purpose of this study was to explore and identify the current level of teacher self-efficacy. It was hypothesized that the overarching self-efficacy score for teachers would fall on the lower end of the scale when using descriptive statistics to analyze survey data. Further, the researcher hypothesized that there would be a significant statistical difference between veteran and novice teachers, male and female teachers and teachers who served in urban and rural/suburban settings. The use of a descriptive study allowed for the reporting of various subgroups as well as three distinct areas of teacher self-efficacy. The use of The Teacher Sense of Self Efficacy Scale allowed for streamlined data collection and measured the feelings and perceptions of teachers based on their experiences and allowed for a comparison between various district sizes, years of experience and geographical locations in the state. The following research questions were addressed in this study.

1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management amongst teachers?

- Do veteran or novice teachers report a higher level of self-efficacy in each of the three areas?

- Do teachers in urban or rural setting report a higher level of self-efficacy in each of the three areas?

- Do female or male teachers report a higher level of self-efficacy in each of the three areas?

Descriptive Findings

The first three questions on the survey asked respondents to identify demographic information that was used to form groups for analysis. The three areas offered were gender, school setting and years of experience. These three areas were subject to the use of descriptive analysis looking at the frequencies of each choice. Below are three tables displaying the demographics represented in the study.

For this study, 361 respondents completed the survey in Qualtrics. The breakdown of the gender is represented in Table 1.

Table 4.1

Gender Descriptions

Gender	N	%
Male	60	16.6%
Female	298	82.5%
Prefer not to say	2	0.6%
Prefer to Self-Describe	1	0.3%

Gender representation in the survey included more female educators than male with two respondents choosing to opt out of identifying gender with one choosing to self-describe. The respondent that chose to self-describe did not include any descriptors. Two respondents chose to not identify their gender.

The survey offered respondents the option to identify their teaching settings. The two choices included urban and suburban/rural. Definitions from the census bureau used to distinguish suburban/rural from urban was more than 25,000 was urban and less than 25,000

defined as suburban/rural. These definitions are consistent with the Department of Education.

The descriptions of settings is represented in table 2.

Table 4. 2

Teaching Setting

Setting	N	%
Urban (Population of 25,000 or more)	183	50.7%
Suburban/Rural (Population less than 25,000)	178	49.3%

Note: Data from this question reflects a fairly even distribution across both settings with urban educators being slightly more represented.

The final demographic identified asked respondents to identify their experience category which allowed them two choices. Definitions from the state department of education website were used to create categories for respondents to choose from. The data from these choices are represented in table 3.

Table 4.3

Years of experience

Experience	N	%
Novice- 3 or less years of experience	115	31.9%
Veteran - 4 or more years of experience	245	67.9%
Missing	1	0.3%

Note: Data from this table reflects there were more veteran teachers who responded to the survey.

The use of simple percentages, measures of central tendency (mean scores) and variability (standard deviations) were calculated to address the overarching research question. The researcher followed the format of Hoy and Moran and compute the unweighted means of the items that load each of the following factors; efficacy in student engagement, efficacy in instructional practices and efficacy in classroom management. To determine the reliability of the responses to the questions the Cronbach's Alpha score will be determined.

Efficacy in student engagement is the first factor analyzed. The unweighted means of the following questions were input into SPSS.

1. How much can you do to motivate students who show low interest in school work?
2. How much can you do to get students to believe they can do well in school work?
3. How much can you do to help your students value learning?
11. How much can you assist families in helping their children do well in school?

These questions and their corresponding data were combined in SPSS to create a composite variable named “Student Engagement”. The mean, standard deviation and the range of this new variable were computed and the following table represents the results.

Table 4.4

Student Engagement Mean				
Variable	Mean	Standard Deviation	Minimum	Maximum
Student Engagement	6.1632	1.34542	2.0	9.0

Note: The mean for student engagement suggests a feeling between “some influence” and “quite a bit of influence” when considering the data set as a whole.

Efficacy in instructional strategies is the second factor analyzed. The unweighted means of the following questions were input into SPSS.

5. To what extent can you craft good questions for your students?
9. How much can you use a variety of assessment strategies?
10. To what extent can you provide an alternative explanation or example when students are confused?
12. How well can you implement alternative strategies in your classroom?

These questions and their corresponding data were combined in SPSS to create a composite variable named “Instructional Strategies”. The mean, standard deviation and the range of this new variable were computed and the following table represents the results.

Table 4.5

Instructional Strategies Mean				
Variable	Mean	Standard Deviation	Minimum	Maximum
Instructional Strategies	6.4805	1.46334	2.75	9.0

Note: The mean for instructional strategies suggests a feeling between “some influence” and “quite a bit of influence” when considering the data set as a whole.

Efficacy in classroom management is the third and final factor analyzed. The unweighted means of the following questions were input into SPSS.

1. How much can you do to control disruptive behavior in the classroom?
6. How much can you do to get children to follow classroom rules?
7. How much can you do to calm a student who is disruptive or noisy?
8. How well can you establish a classroom management system with each group of students?

These questions and their corresponding data were combined in SPSS to create a composite variable named “Classroom Management”. The mean, standard deviation and the range of this new variable were computed and the following table represents the results.

Table 4.6

Classroom Management Mean				
Variable	Mean	Standard Deviation	Minimum	Maximum
Classroom Management	6.4321	1.49672	1.50	9.0

Note: The mean for classroom management suggested a feeling between “some influence” and “quite a bit of influence” when considering the data set as a whole.

RQ 1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management?

The level of self-efficacy for each of the three composite variables reported a range of 6.0 to 6.48. This scores firmly between “some influence” and “quite a bit of influence”. For this

research question, the null hypothesis reported the self-efficacy of teachers, as reported using The Teachers Sense of Self-Efficacy Scale revealed scores at the higher end of the scale when computing the mean scores of unweighted items of student engagement, instructional strategies and classroom management. This indicates inaccuracy with scores in the 6.0-6.48 range which scored in the middle of the scale.

The next step in the data analysis was to answer the sub-questions which study the difference in means between subgroups in each of the three composite variables for self-efficacy. To complete this data analysis, an ANOVA was used to compare the mean data for each group using the three composite variables.

Years of Experience Sub-Group

The first ANOVA for experience looked at the differences between means for student engagement. Novice teachers had a mean of 6.43 and veteran teachers had a mean of 6.02.

Table 4.7

One-Way Analysis of Variance of Student Engagement by Years of Experience

Source	df	SS	MS	F	p
Between groups	1	13.086	13.086	7.40	.007
Within groups	357	631.288	1.768		
Total	358	644.374			

Note: A one-way ANOVA revealed that there was a statistically significant difference in the mean scores between veteran and novice teachers with Novice teachers reporting a higher level of self-efficacy $F(1, 357) = 7.40, p = .007$.

The second one-way ANOVA examined the between means in instructional strategies. Novice teachers had a mean of 6.3894 and veteran teachers had a mean of 6.5163.

Table 4.8

One-Way Analysis of Variance of Instructional Strategies by Years of Experience

Source	df	SS	MS	F	P
Between groups	1	1.246	1.246	.581	.446
Within groups	356	763.052	2.143		
Total	357	764.298			

Note: A one-way ANOVA revealed that there was no significant statistical difference in the mean scores between veteran and novice teachers on the variable of instructional strategies

$F(1, 356) = .581, p = .446.$

The final one-way ANOVA ran for this sub-group examined the difference in means for classroom management. Novice teachers had a mean of 6.5196 and veteran teachers had a mean of 6.3837.

Table 4.9

One-Way Analysis of Variance of Classroom Management by Years of Experience

Source	df	SS	MS	F	P
Between groups	1	1.445	1.445	.645	.422
Within groups	358	801.703	2.239		
Total	359	803.148			

Note: A one-way ANOVA revealed that there was no significant statistical difference in the mean scores between veteran and novice teachers on the variable of classroom management

$F(1, 358) = .645, p = .422.$

The null hypothesis for this subgroup stated “There is no significant difference between veteran and novice teachers in the areas of student engagement, instructional strategies and classroom management as evidences by the results on the instrument.” The variable of student engagement showed the sig value was smaller than .005 which means the null hypothesis was rejected for this variable with novice teacher scoring higher. There was no significant difference between the subgroups of veteran and novice teachers in the areas of instructional strategies and classroom management.

Setting subgroup

The first one-way ANOVA ran for the setting sub-group examined the differences between means for student engagement. The mean for teachers in the urban setting is 5.8388 and the mean for teachers in a suburban/rural setting is 6.4986.

Table 4.10

One-Way Analysis of Variance of Student Engagement by Setting

Source	df	SS	MS	F	P
Between groups	1	39.168	39.168	22.962	<.001
Within groups	358	610.682	1.706		
Total	359	649.850			

Note: A one-way ANOVA revealed that there was a statistically significant difference in the mean scores between veteran and novice teachers on the variable of student engagement with teachers in the suburban/rural setting reporting higher levels of self-efficacy $F(1, 358) = 22.962, p < .001$.

The second one-way ANOVA ran for setting sub-group examined the differences in the means for instructional strategies. The mean for teachers in an urban setting was 6.0288 while the mean for suburban/rural teachers was 6.9449.

Table 4.11

One-Way Analysis of Variance of Instructional Strategies by Setting

Source	df	SS	MS	F	P
Between groups	1	75.302	75.302	38.887	<.001
Within groups	357	691.311	1.936		
Total	358	766.614			

Note: A one-way ANOVA revealed that there was a statistically significant difference in the mean scores between veteran and novice teachers on the variable of instructional strategies with teachers in the suburban/rural setting reporting higher levels of self-efficacy $F(1, 357) = 38.887, p < .001$.

The final one-way ANOVA for the setting sub-group examined the means for classroom management. The mean for teachers in the urban setting is 5.9699 and the mean for teachers in a suburban/rural setting is 6.9073.

Table 4.12

One-Way Analysis of Variance of Classroom Management by Setting

Source	df	SS	MS	F	P
Between groups	1	79.282	79.282	39.141	<.001
Within groups	359	727.180	2.026		
Total	360	806.462			

Note: A one-way ANOVA revealed that there was a statistically significant difference in the mean scores between veteran and novice teachers on the variable of classroom management with teachers in the suburban/rural setting reporting higher levels of self-efficacy $F(1, 359) = 39.141, p = <.001$.

The null hypothesis for this subgroup stated “There is no significant difference between urban and rural teachers in the areas of student engagement, instructional strategies and classroom management as evidenced by the results on the instrument”. In all three of the variables there was a significant difference in the means of novice and veteran teachers.

Gender Sub-group

The first ANOVA ran for gender sub-group examined the differences between means for student engagement. Males had a mean of 6.3250 and females had a mean of 6.1448.

Table 4.7

One-Way Analysis of Variance of Student Engagement by Gender

Source	df	SS	MS	F	P
Between groups	3	10.007	3.336	1.856	.137
Within groups	356	639.843	1.797		
Total	359	649.850			

Note: A one-way ANOVA revealed that there was no significant statistical difference in the mean scores between male and female teachers on the variable of student engagement

$F(3, 356) = 1.856, p = .137$.

The second one-way ANOVA ran for the gender sub-group analyzed the differences in means for instructional strategies. Males had a mean of 6.4667 and females had a mean of 6.4941.

Table 4.8

One-Way Analysis of Variance of Instructional Strategies by Gender

Source	df	SS	MS	F	P
Between groups	3	6.128	2.043	.954	.415
Within groups	355	760.485	2.142		
Total	358	766.614			

Note: A one-way ANOVA revealed that there was no significant statistical difference in the mean scores between male and female teachers on the variable of instructional strategies

$F(3, 355) = .954, p = .415.$

The final one-way ANOVA ran for gender analyzed the differences in the means for classroom management. Males had a mean of 6.5583 while females had a mean of 6.4237.

Table 4.9

One-Way Analysis of Variance of Classroom Management by Gender

Source	df	SS	MS	F	P
Between groups	3	15.466	5.155	2.327	.074
Within groups	357	790.997	2.216		
Total	360	806.462			

Note: A one-way ANOVA revealed that there was no significant statistical difference in the mean scores between male and female teachers on the variable of instructional strategies

$F(3, 357) = 2.327, p = .074.$

The null hypothesis for this subgroup stated “There is no significant difference between male and female teachers in the areas of student engagement, instructional strategies and classroom management as evidences by the results on the TSES.” For each of the three composite variables the sig value was larger than 0.05 which means the null hypothesis was accepted. There was no significant difference between the subgroup of gender in the composite variables of student engagement, instructional strategies and classroom management.

To determine the reliability of the responses to the questions in the survey and analysis of Cronbach's Alpha as conducted. The Cronbach's Alpha score was .945 which is considered high so it is concluded that the questions used on the survey for this research study are highly reliable.

Limitations

Although the sample size for this research study included over 350 respondents, this is only a small fraction of the teachers in the state. The demographic of the sample size was not examined so the applicability of this data to districts with diverse employee demographics might be low considering the lack subgroup research in this study.

Summary

The methodology and analysis implemented in this chapter addressed the data in relation to the research questions set forth in this study. The results of the data confirmed a difference in a few sub-groups across various components of teacher self-efficacy. This chapter included descriptive findings and results of data collection and analysis of this data. Chapter five will provide implications of the data, a summary of the findings and recommendations for future studies.

Chapter 5 - Conclusion and Recommendations for Further Research

Summary of Study

Teacher self-efficacy is defined as “teacher’s belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated” (Guskey & Passaro, 1994, p. 4). According to Bandura’s Theory, the teacher beliefs are viewed as proximate predictors of behavior, and are both influencing and influenced by environmental and behavioral factors. Teacher beliefs have an effect on student outcomes because teachers with higher self-efficacy demonstrate more effective critical thinking lesson plans. Teachers with higher self-efficacy experience fewer discipline issues because their classroom management techniques are implemented with respect and fidelity. Student engagement is higher in classrooms with highly efficacious teachers and the strategies while delivering instruction are done so successfully which impacts the self-efficacy of teachers.

There is significant research on the impact teacher self-efficacy on the areas of classroom management, student engagement and instructional strategies (Barnesa et al., 2020). The more efficacious the view of teaching capabilities, the greater the impact on teacher choices and effort and level of perseverance. Conversely, when teachers do not feel efficacious and experience challenging situations, stress and depression are increased due to vulnerability (Bandura & Abrams, 1986). However, the research is limited in examining the current level of teacher self-efficacy in the mid-western part of the country at this point in the COVID-19 pandemic. This research supports the goal of understanding the current perceived self-efficacy of educators to inform future staff development needs in response to post-pandemic teaching.

Included in chapter five are the findings and conclusions of this study and the significance of the finding. Using the research questions as a guide to this discussion allow a greater understanding of the overall feelings of self-efficacy and implications and recommendations for future research.

Summary of Findings

The summary of this study revealed an overall feeling of self-efficacy that scored in the middle part of the scale. While there were differences in the groups studied, the overall mean for the groups on all measures scored in the middle range. The scores on the scale allowed teachers to self-evaluate with the overarching scores scoring in the range of 6.0 to 8.0 which indicated that the respondents felt some control to a quite a bit of control over the areas of student engagement, classroom management and instructional strategies.

1. When measured using The Teacher Sense of Self Efficacy Scale, what is the current level of self-efficacy in the areas of student engagement, instructional strategies and classroom management amongst teachers?

Gage & MacSuga-Gage (2017) referred to effective teaching to include delivering instruction while maintaining a managed classroom and ensuring student engagement in the curriculum with few distractions. The first composite variable studied was student engagement. Included in this variable is the feeling that teachers can impact the belief students have on how well they can do in school, the impact teachers have on how students value learning and the tools teachers have to assist families in assisting their children in school (Hoy & Tschannen-Moran, 2000). The data gathered on this variable found that the feelings of teachers firmly scored in between “some influence” and “quite a bit” influence. The mean of 6.16 indicated more feelings of “some influence”. Bandura asserted that teacher belief is viewed as a proximate predictor of

behavior which when applied to the results on the measure teachers feel they have quite a bit of influence over the engagement of the students in their classroom (Bandura, 1997).

The second composite variable studied was self-efficacy in the area of instructional strategies. This variable included the extent to which teachers can craft good questions, use a variety of assessment strategies, provide alternate explanations and examples when needed and the ability to implement alternative strategies in the classroom. Instructional strategies, as measured by the TSES, are positively influenced when the teacher is provided the opportunity to apply these skills in an authentic setting (Bruce et al., 2010; Tschannen-Moran and McMaster 2009). The results of the survey administered revealed a mean of 6.4805 which placed teachers firmly between “some influence” and “quite a bit of influence” however unlike student engagement which was closer to the “some influence” score, the mean of this measure would indicate teachers are closer to the “quite a bit” of influence score as a whole. The use of instructional strategies in a setting that is well controlled allows for more precision which increases self-efficacy. When viewing these results through the lens of Bandura’s theory, it would be assumed that the belief that teachers have quite a bit of influence on instructional strategies which means that the behavior of the respondents in this survey would reflect this range of scores.

The final composite variable studied was classroom management. This variable included the teacher’s feeling about their ability to control disruptive behavior, have students follow classroom rules, calm students who are disruptive or noisy and establish a classroom management system to use with each group of students. The research revealed an overall mean of 6.4321 which scored between “some influence” and “quite a bit” of influence with a trend toward the higher level in this composite variable. The feeling of being able to control a

classroom lends itself to the ease in using instructional strategies and engaging students.

Bandura's theory applied to this result would allow for the prediction of teachers who are acting in ways that reflect the feeling of having strong influence over classroom management.

The overall findings of this question indicated that teachers felt a collective sense of efficacy that falls firmly between "some influence" and "quite a bit" of influence. The lower end of the scale was hypothesized before the data was collected therefore the null hypothesis proved to be accurate in this research question. Teachers who reported high levels of self-efficacy also reported more meaningful relationships with students and interact in ways that meet both the academic as well as behavioral needs of students (Poulou, 2017). The current state of self-efficacy does not reflect a high level, therefore there is a potential for an impact on the relationships and interactions with students which ultimately impact student achievement. Bandura's theory asserted that teachers are highly influenced by their beliefs and the range of scores for this research question indicates that the belief that teachers have of influence in their classroom in the areas of student engagement, classroom management and instructional strategies would translate into actions that reflect efficacious teachers.

Sub-question A: Do veteran or novice teachers report a higher level of self-efficacy in each of the three areas?

Klassen and Chiu (2011) reported higher self-efficacy in teachers in the area of classroom management specifically for practicing teachers reflective of extended time in the classroom when compared with preservice teachers. The data collected in this study indicated no significant statistical difference in the mean scores of veteran and novice teachers in the area of classroom management. The differences in this result and the prior research could be attributed to the

experiences of teaching in a pandemic which is reflected in this current study, but not reflected research conducted prior to the pandemic.

Suprayogi et al. (2017) found that teachers with five or less years of experience seem more eager to adopt new practices while teachers with twenty or more years of experience are more likely to resist change and are often highly critical of new practices thus leading to effects in teacher self-efficacy. However, data collected in this study indicated no significant statistical difference in the mean scores between veteran and novice teachers. Bandura's theory of self-efficacy emphasized the importance of the individual's perceptions of personal capabilities as key indicators of successful outcomes. The perceptions of both novice and veteran respondents indicate that while both groups show a mean between 6.3 and 6.5 there is not statistical differences in these groups thus both groups hold the perception that they have some influence over the instructional strategies used in their classrooms.

The relationships and interactions between teachers and students are key to the effective teaching and learning in classrooms (Bishop & Berryman, 2009). The data collected in this study revealed a statistically significant difference in the mean scores between veteran and novice teachers with novice teachers reporting a higher level of self-efficacy in the area of student engagement. The mean score for the novice teachers was 6.43 while the mean (*M*) score for the veteran teachers was 6.02. The *p* value of .007 indicates there is a difference with novice teachers reporting a higher feeling of self-efficacy in the area of student engagement. Bandura's theory of self-efficacy asserted that individuals are empowered by a feeling of control over their success. These results indicated novice teachers feel they have more control over the interaction with students in their classrooms. The student-teacher relationship represents a foundational key to student achievement and self-efficacy and is developed through successful interactions.

Moulding et al. 2014 found that novice teachers receiving feedback from peers and supervisors positively impacted their overall levels of self-efficacy at the beginning of their career as these supports are often present during a teacher's probationary period.

The overall findings of this sub-question revealed the means for each group in this composite variable scored within the "some influence" and "quite a bit" of influence. While there is a significant difference between the groups in classroom management yet no significant statistical difference in instructional strategies and student engagement, each sub-group scored within the trend of "middle" level self-efficacy. The feeling that teachers have some control over these aspects of their classroom addressed the feelings of success Bandura's theory identify as an integral part of developing highly self-efficacious teachers.

Sub-question B: Do teachers in urban or rural setting report a higher level of self-efficacy in each of the three areas?

Schools and classrooms across the country are staffed with teachers with varying degrees of experience which allow them to design and deliver lessons for students based on standards, objectives and data (Barnesa et al, 2020). When examining the impact on the composite variable of classroom management, the data revealed a higher level of classroom management with the teachers serving in a rural/suburban. The means for both groups scored within the "some influence" and the "quite a bit" of influence scores on the scale with teachers in the urban/rural areas scoring a mean of 6.9073 with those teachers serving in the urban setting with a mean of 5.9699. The mean for teachers in the rural/suburban setting almost reached the score for "quite a bit of influence" while the score for those teaching in the suburban setting was closer to the "some influence" score. The expectations for managing a classroom were complicated with Covid mitigation measures which varied according to local health orders. For some rural and

suburban settings there were instances of fewer mitigation strategies which might have accounted for less need for classroom management interventions. Bandura's Self-Efficacy Theory relies on successful experiences which impact the belief in future opportunities. Throughout the COVID-19 pandemic, teachers experienced varying levels of success with classroom management and these experiences affect the mean score for both groups.

The change in instruction created by the pandemic was an opportunity to implement new, creative and innovative methods that might be beneficial to learners once they return to full, in-person and traditional schooling (Adnan & Anwar, 2020). The data collected for instructional strategies indicated teachers serving in a rural/suburban setting reported a higher level of self-efficacy in the composite variable of instructional strategies. The mean score for these teachers was 6.9449 which is extremely close to the "quite a bit" score on the scale. Conversely, the teachers in the urban setting were represented by a mean score of 6.0288 which is significantly different and reveals a lower feeling of self-efficacy in implementing new methods and strategies in their classroom. Bandura's theory of self-efficacy indicated the importance of past behavior influencing the feeling of efficacy in situations where new strategies are implemented. This data indicated that teachers in the rural/suburban settings draw on more successful past experiences with instructional strategies which translate into a higher mean when these teachers self-reported using the self-efficacy scale.

Social support is an unspoken and expected part of the position of classroom teacher (Reblin & Demaray, 2007; Holt & Espelage, 2007). This support is paramount to engaging students in learning whether in the classroom environment or in the remote environment. The data on the composite variable of student engagement revealed a statistically significant difference in the mean scores between veteran and novice teachers in the variable of student

engagement with the teachers in the suburban/rural setting reporting higher levels of self-efficacy. Those teaching in the urban setting had a mean of 5.8388 and those in the suburban/rural settings scored a mean of 6.4986. This difference indicated those in the suburban/rural settings are close to the feeling of having “quite a bit of influence” when engaging the students in their classrooms while those in the urban settings reported a mean closer to the “some influence” score. Bandura’s theory of self-efficacy recognized the relationship between the positive belief in the skills of the teacher and the successful outcomes when using these skills to engage all students (Bandura, 1997).

The overall findings in this subgroup found the teachers serving in the rural/urban setting report a higher level of self-efficacy in all three of the areas measured by the Teacher Self-Efficacy survey. When reflecting on the mitigation measures implemented in urban and rural districts, a relationship might exist that could be explored in a further study on this topic.

Sub-question C: Do female or male teachers report a higher level of self-efficacy in each of the three areas?

The trauma influenced by isolation and the lack of access to face-to-face social emotional support and mental health services impacted the processing of trauma for students and their families (Troughakos et al., 2020). This trauma often translates into the classroom and manifests itself in the need for higher levels of classroom structure and management. Self-efficacy in the area of classroom management reflects Bandura’s theory (1997) in the assertion that successful application of a strategy will allow for growth in the feeling of success and efficacy. The data from this study reported no significant difference in the feelings of self-efficacy of males and females in the area of classroom management. Males scored a mean of 6.5583 while females

scored a mean score of 6.4237. Both of these means reflected a feeling of self-efficacy that scored between “some influence” and “quite a bit of influence”.

Education Week Research Center (2020) reported teachers assigning, collecting work and using digital tools they had not previously implemented to teach their students before brick-and-mortar schools were closed. These instructional strategies were implemented when schools transitioned to online learning and became part of the flexible approaches administered by teachers as students began returning to school and teachers found themselves using these as they balanced continued remote instruction with in person instruction. Examining the data on instructional strategies, there were no significant differences between males and females in the area of instructional strategies reflected in this study. Males scored a mean of 6.5583 while females scored a mean of 6.4237. Both means scored between “some influence” and “quite a bit of influence” on the scale for teacher self-efficacy. A tenant of Bandura’s theory of self-efficacy states that vicarious experiences often form the self-efficacy of teachers. As professional development occurs and teachers reflect on the success of varied instructional strategies, the self-efficacy of teachers is impacted (Bandura, 1997).

This feeling of being cared for directly translates into the connections teachers create when they engage students in learning. Results from the research indicated no significant differences in the feelings of self-efficacy between males and females in relation to student engagement. The mean for males was 6.3250 while females scored a mean of 6.1448. Both of the means represent a feeling of self-efficacy between “some influence” and “quite a bit of influence” with males scoring closer to the higher level of influence. Belief in ability reflects action which Bandura asserts is indicative of higher levels of self-efficacy.

The overall findings on this sub-question indicated that when studying for gender differences in self-efficacy there would appear to be no significant differences in self-efficacy in the areas of student engagement, classroom management and instructional strategies. The overall gender make-up of the state's education system might be different than the data set of this study which had 60 male respondents and 298 female respondents. These results could potentially be different if the number of males and females were more evenly distributed.

Social Cognitive Theory (Bandura, 1998) provided a theoretical framework with which to explore this data. Self-efficacy is grounded in Bandura's Social Cognitive Theory (Bandura, 1977). This research served to address the levels and differences in the aforementioned self-efficacy beliefs held by teachers which can influence how they serve students in their classrooms. This study revealed that self-efficacy is dependent upon the setting in which the teacher is working in and can be influenced by their years of experience. The beliefs teachers hold have an effect on the achievement and outcomes for students. Teachers with higher self-efficacy demonstrate more effective critical thinking lesson opportunities and these teachers often experience fewer discipline issues due to higher levels of classroom management and more purposeful student engagement strategies (Bandura, 1998).

Conclusions And Discussion

The purpose of this study was to determine the levels of teacher self-efficacy and examine any differences between veteran and novice teachers, teachers in urban and rural/suburban settings, and male and female teachers. The research suggested that for the sample population studied the feeling of self-efficacy is between "some influence" and "quite a bit" of influence on all measures while indicating there is some differences in the subgroups

chosen for the study. The mean differences in the subgroups provide a springboard for further investigation to determine if other factors impact the feelings of self-efficacy in teachers.

This new research, as a moment in time look at teacher self-efficacy suggests that while the feelings of self-efficacy are in the mid-range, teaching during a pandemic might have had an effect on the overall feeling of self-efficacy. Teachers are not reporting high levels which are reflective of the numbers of teachers leaving the profession either through retirement or the decision to change career paths. This research reported teachers in rural/suburban settings feeling higher levels of self-efficacy in classroom management, instructional strategies and student engagement. The rural/suburban districts chosen for this study were some of the first to drop their COVID-19 mitigation measures which allowed for a departure from masking, allowed for more flexible groupings of students and brought all students back to in-person instruction earlier than the urban setting participants. Allowing teachers the freedom to use flexible groupings allow for a closer match between academic interventions and the instructional needs of the students. The closer the match of interventions the more capable students feel which translates into less work avoidance and less behavior incidents when academic demands are presented to students. The teachers in the urban setting who participated in the study are still working in classrooms where masking is required each day and flexible groupings are not allowed which means less opportunities to provide differentiated instruction to small groups

The results of this study might have been influenced by the timing of this research. The study was conducted at a time where COVID-19 case rates are declining and the mitigation restrictions were lifted. The feeling of being able to return to “normalcy” provided hope for people. This hope might have translated to higher self-efficacy scores as teachers see many of their perceived roadblocks coming to an end. If this research was completed a year ago the data

might have offered a different picture. This study offered a “moment in time” look at teacher’s feelings while a longitudinal study would have allowed for a picture of true impacts throughout the pandemic.

The teachers in districts that participated in this study could use this data to look at long-term staff development plans in an effort to be responsive to the feelings of teachers. As urban school districts begin to make changes to their mitigation measures, follow up data collection could inform their immediate and future staff development plans.

Many veteran teachers have been in education long enough to see a significant number of policies and programs. Often when a new initiative is introduced veteran teachers rely on their experiences and they know that eventually things will go back to “normal”. COVID-19 has changed education. Our educational response to the pandemic has provided new ways of education and an understanding that there will likely never be a return to the ways in which we were educating pre-pandemic.

Recommendations for Future Research

Based on the conclusions from the current study, future research needs to be conducted to determine the precise needs of educators post-pandemic. These needs might be in the categories of instructional, student engagement, classroom management and/or mental health and self-care. As more is discovered about the instructional needs of students to fill the gaps in learning, teachers will need additional instruction in strategies. Differentiation is an approach proven to be effective with students. This approach would also benefit educators in the staff development they receive. Further research would inform decision makers and stake holders of these needs and allow for exploration of different modes and types of staff development to meet these needs.

While this study was quantitative, further qualitative research would provide specific personalized data. The stories and experiences shared by educators would provide a complete picture of the effects of the pandemic and aid in designing responsive professional development moving forward. This type of research can be completed through case studies but also the use of focus groups.

Students rely on teachers to provide academic, social, and career supports. As educators look forward to a post-pandemic world, data based professional development will need to be designed to help teachers grow so they are able to meet the needs of each and every student in their classroom.

References

- Adnan, M. & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2 (1). pp 45- 51.
- Abiky, A. W.,B. (2021). Lessons Learned for Teacher Education: Challenges of Teaching Online Classes During COVID-19, What Can Pre-Service Teachers Tell Us? *Revista Argentina De Clínica Psicológica*, 30(2), 110.
- Alibakhshi, G., Nikdel, F. & Labbafi, A. (2020). Exploring the consequences of teachers' self-efficacy: a case of teachers of English as a foreign language. *Asian. J. Second. Foreign. Lang. Educ.* 5, 23, <https://doi.org/10.1186/s40862-020-00102-1>
- Anderson R, Boussetot T, Katz-Buoincontro J, Todd J. Generating buoyancy in a sea of uncertainty: Teachers creativity and well-being during the COVID-19 pandemic. *Front Psychol.* 2020;11:614774
- Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215
- Bandura, A. (1998). *Self-efficacy: The exercise of Control*. W.H. Freeman.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology* (Vol. 52, pp. 1-26). Palo Alto: Annual Reviews, Inc.
- Bandura, A. (2002). Growing primacy of human agency in adaptation and change in the electronic era. *European Psychologist*, 7, 2-16.

- Bandura, A., & Abrams, K. (1986). Self-regulatory mechanisms in motivating, apathetic, and despondent reactions to unfulfilled standards. Unpublished manuscript, Stanford University, Stanford.
- Barnesa, R., Hall, R., Lower, V., Pottinger, C. & Popham, A. (2020). Lessons from an An online teacher preparation Program: flexing work experience to meet student needs and regulators' requirements in the United States. *Journal of Education for Teaching*, doi: 10.1080/02607476.2020.1802203
- Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARSCoV-2 coronavirus (Covid-19) pandemic in Georgia. *Pedagogical Research*, 5(4), 1- 9.
- Bay, B. (2020, August 16). BAU distance education report. <https://bau.edu.tr/haber/15707-bau-uzaktan-egitim-raporu>
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change; Vol. VII. Factor affecting implementation and continuation* (Rep. No. R-1589/7-HEW). Santa Monica, CA: RAND. (ERIC Document Reproduction Service No. 140 432)
- Bishop, R., & Berryman, M. (2009). The Te Kotahitanga effective teaching profile. *Set*, 2, 27–33.
- Bond, M., Buntins, K., Bedenlier, S. *et al.* Mapping research in student engagement and educational technology in higher education: a systematic evidence map. *Int J Educ Technol High Educ* 17, 2 (2020). <https://doi.org/10.1186/s41239-019-0176-8>
- Bowen, S. (2005). Engaged learning: Are we all on the same page? *Peer Review*, 7(2), 4-7.
- Burley, W. W., Hall, B.W., Villeme, M.G., & Brockmeier, L.L. (1991, April) *A path analysis of the mediating role of efficacy in first-year teachers' experiences, reactions, and plans*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

- Bonanno, G. A., Brewin, C. R., Kaniasty, K., & Greca, A. M. L. (2010). Weighing the Costs of Disaster: Consequences, Risks, and Resilience in Individuals, Families, and Communities. *Psychological Science in the Public Interest*, 11(1), 1-49.
- Brookhart, S. M., & Nitko, A. J. (2014). Educational assessment of student (8th ed.). Pearson
- Bryant, D. J., Oo, M., & Damian, A. J. (2020). The rise of adverse childhood experiences during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12, S193-S194.
- Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2011). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *British Journal of Educational Psychology*, 81, 78–96.
- Collins, C., Leah, R., Liana, C. L., & Scarborough, W. J. (2021). The Gendered Consequences of a Weak Infrastructure of Care: School Reopening Plans and Parents' Employment During the COVID-19 Pandemic. *Gender & Society*, 35(2), 180-193
- Crawford, J., Butler-Henderson, K., Rudolph, J., & Glowatz, M. (2020). COVID-19:20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Teaching and Learning (JALT)*, 3(1)
- Davidson, L. M., & Demaray, M. K. (2007). Social support as a moderator between victimization and internalizing–externalizing distress from bullying. *School psychology review*, 36(3), 383-405.
- Donohoo, J. (2018). Collective teacher efficacy research: productive patterns of behaviour and other positive consequences. *J Educ Change* 19(3):323–345
- Donohoo J, Katz, S. (2017). When teachers believe, students achieve. *Learn Professional* 38(6):20–27
- Etikan, I. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1.

- Fredericks, J.A., Blumenfeld, P.C., & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109.
- Freeman J, Simonson B, Briere D.E., MacSuga-Gage A.S. (2014) Pre-service teacher training in classroom management: A review of state accreditation policy and teacher preparation programs. *Teacher Education and Special Education*. 37:106–120.
- Gale, J., Alemdar, M., Cappelli, C., & Camp; Morris, D. (2021). A mixed methods study of self-efficacy, the sources of self-efficacy, and teaching experience. *Frontiers in Education*, 6. <https://doi.org/10.3389/feduc.2021.750599>
- Guskey, T. (1989). Attitude and perceptual change in teachers. *International Journal of Educational Research*, 13, 439-453.
- Hall, B., Burley, W., Villeme, M., & Brockmeier, L. (1992, April) An attempt to explicate teacher efficacy beliefs among first year teachers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.
- Hampton, D., Culp-Roche, A., Hensley, A., Wilson, J., Otts, J. A., Thaxton-Wiggins, A. & Moser, D. K. (2020). *Self-efficacy and Satisfaction With Teaching in Online Courses*. *Nurse Educator*.
- Heider, K. L. (2021). Isolation, Burnout, and a Lost Sense of Belonging: Combating the Challenges of Distance Education During a Pandemic. *Distance Learning*, 18(1), 25-35.
- Hillyer, J., Stolp, S., & York, M. (2021). Common Discourse: Reflections on Pandemic Literacy Teaching. *Journal of Adolescent & Adult Literacy*, 65(1), 103-107
- Holt, M. K., & Espelage, D. L. (2007). Perceived social support among bullies, victims, and bully-victims. *Journal of youth and adolescence*, 36(8), 984-994.
- Hoy, W.K. & Woolfolk, A.E. (1993). Teachers' sense of efficacy and the organizational health of schools. *The Elementary School Journal* 93, 356-372.

Hoy, A. W., and Spero, R. B. (2005). Changes in Teacher Efficacy during the Early Years of Teaching: A Comparison of Four Measures. *Teach. Teacher Education*, 21, 343–356.

Johns Hopkins University and Medicine. (2020). *COVID-19 global tracking*

Kaden U. COVID-19 school closure-related changes to the professional life of a K–12 teacher. *Education Science*. 2020;10(6):165.

Klassen, R. M., and Chiu, M. M. (2010). Effects on Teachers' Self-Efficacy and Job Satisfaction: Teacher Gender, Years of Experience, and Job Stress. *J. Education Psychologist*, 102, 741–756. doi:10.1037/a0019237

Klassen, R. M., and Chiu, M. M. (2011). The Occupational Commitment and Intention to Quit of Practicing and Pre-service Teachers: Influence of Self-Efficacy, Job Stress, and Teaching Context. *Contemp. Educ. Psychol.* 36, 114–129. doi:10.1016/j.cedpsych.2011.01.002

König, J.; Jäger-Biela, D. & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*.

Lee, K. (2020). Coronavirus: universities are shifting classes online – but it's not as easy as it sounds.

Lenz, E. R., & Shortridge-Baggett, L. M. (2002). *Self-efficacy in nursing: Research and measurement perspectives*. Springer Pub.

Lizana PA, Vega-Fernandez G, Gomez-Bruton A, Leyton B, Lera L. (2021). Impact of the COVID-19 pandemic on teacher quality of life: a longitudinal study from before and during the health crisis. *Int J Environ Res Public Health*, 18:3764.

MacIntyre PD, Gregersen T, Mercer S. Language teachers' coping strategies during the Covid-19 conversion to online teaching: correlations with stress, wellbeing and negative emotions. *System*. 2020;94:102352.

- Marton, K., & Stephens, L. F. (2001). The New York Times' conformity to AAPOR standards of disclosure for the reporting of public opinion polls. *Journalism & Mass Communication Quarterly*, 78(3), 484-502.
- McKibbin, W. J., & Fernando, R. (2020). The global macroeconomic impacts of covid-19: Seven scenarios. *SSRN Electronic Journal*.
- Miguel Dos Santos, L. (2021). The Relationship between Workforce Sustainability, Stress, and Career Decision: A Study of Kindergarten Teachers during the COVID-19 Pandemic. *Sustainability*, 13(20), 11521.
- Miller, A. D., Ramirez, E. M., & Murdock, T. B. (2017). The influence of teachers' self- efficacy on perceptions: Perceived teacher competence and respect and student effort and achievement. *Teaching and Teacher Education*, 64, 260-269.
- Milner, H. R. (2002). A case study of an experienced English teacher's self-efficacy and persistence through " crisis" situations: Theoretical and practical considerations. *The High School Journal*, 86(1), 28-35. Retrieved from:<https://www.jstor.org/stable/40364343>
- MoH (2020c, July 17). COVID-19 outbreak management and working directory.
- Morris, D. B., Usher, E. L., and Chen, J. A. (2017). Reconceptualizing the Sources of Teaching Self-Efficacy: A Critical Review of Emerging Literature. *Educational Psychology Review* 29, 795–833.
- Moulding, L. R., Stewart, P. W., Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education*, 41, 60-66

- Nasri, N. M., H. Husnin, S. N. D. Mahmud, and L. Halim. 2020. "Mitigating the COVID-19 Pandemic: A Snapshot from Malaysia into the Coping Strategies for Pre-service Teachers' Education." *Journal of Education for Teaching*. doi:10.1080/02607476.2020.1802582.
- Neto, R. D. C. A., Rodrigues, V. P., Stewart, D., Xiao, A., & Snyder, J. (2018). The influence of self-efficacy on entrepreneurial behavior among K-12 teachers. *Teaching and Teacher Education*, 72, 44-53. doi:10.1016/j.tate.2018.02.012
- Nguyen, T. (2020). Teacher attrition and retention in Kansas: A case study of geographically rural states with persistent teacher shortages. *Online Journal of Rural Research & Policy*, 15(1).
- Orhan, G., & Beyhan, Ö. (2020). Teachers' perceptions and teaching experiences on distance education through synchronous video conferencing during COVID-19 pandemic. *Social Sciences and Education Research Review*, 7(1), 18-44.
- Perera, H. N., Calkins, C., & Part, R. (2019). Teacher self-efficacy profiles: Determinants, outcomes, and generalizability across teaching level. *Contemporary Educational Psychology*, 58, 186-203. doi:10.1016/j.cedpsych.2019.02.006
- Poulou, M. (2017). An examination of the relationship among teachers' perceptions of social-emotional learning, teaching efficacy, teacher-students interactions and students' behavioral difficulties. *International Journal of School and Educational Psychology*, 5(2), 126-136.
- Poulou, M. S., Reddy, L. A., & Dudek, C. M. (2018). Relation of teacher self-efficacy and classroom practices: A preliminary investigation. *School Psychology International*, 40(1), 25-48. <https://doi.org/10.1177/0143034318798045>
- Phelps, C., & Sperry, L. L. (2020). Children and the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12, S73-S75

- Quezada, R. L., C. Talbot, and K. B. Quezada-Parker. 2020. "From Bricks and Mortar to Remote Teaching: A Teacher Education Programme's Response to COVID-19." *Journal of Education for Teaching*. doi:10.1080/02607476.2020.1801330.
- Reinke WM, Stormont M, Herman KC, Puri R, Goel N. 2011; Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*. 26:1–13.
- Roff, K. (2021). Superintendents' Experiences with Distance Learning Practices in K–12 Public-School Districts in New York During the COVID-19 Pandemic. *International Journal of E-Learning & Distance Education*, 36(1), 1-37.
- Ross, J. A. (1994). The Impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching and Teacher Education*, 10(4), 381-394.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Sahu P. Closure of universities due to Coronavirus disease 2019 (COVID-19): impact on education and mental health of students and academic staff. *Cureus*. 2020;2019(4):4–9.
- Schunk, D. H., & Meece, J. L. (2006). Self-efficacy development in adolescence. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 71–96). Greenwich: Information Age Publishing.
- Schwab, S. (2019). Teachers' student-specific self-efficacy in relation to teacher and student variables. *Educational Psychology*, 39(1), 4-18. doi:10.1080/01443410.2018.1516861
- Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H. J., Milojev, P., Bulbulia, J., Osborne, D., Milfont, T. L., Houkamau, C. A., Duck, I. M., Vickers-Jones, R., &

- Barlow, F. K. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *American Psychologist, 75*(5), 618-630.
- Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of differentiated instruction in the classroom. *Teaching and Teacher Education, 67*, 291–301.
- Szabo, Z. (2020). Teaching in pandemic conditions: A narrative about what changes and what stays. *International Journal of Education and Psychology in the Community, 10*(1), 241-248
- Trougakos, J. P., Chawla, N., & McCarthy, J. M. (2020). Working in a pandemic: Exploring the impact of COVID-19 health anxiety on work, family, and health outcomes. *Journal of Applied Psychology, 105*(11), 1234-1245.
- Tschannen-Moran, M., Anita, W. H., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.
- United States Department of Labor. (2020). News release: Unemployment insurance weekly claims report. <https://www.dol.gov/ui/data.pdf>
- Walsh S, Chowdhury A, Braithwaite V, et al. Do school closures and school reopenings affect community transmission of COVID-19: A systematic review of observational studies. *BMJ Open* 2021; 11:e053371.doi:10.1136/bmjopen-2021-053371
- Wookfolk, A. E., Rosoff, B., & Hoy, W. (1990). Teachers' sense of efficacy and their beliefs about managing student. *Teaching and Teacher Education, 6*(3), 137–148.
- Wright, M. F., & Wachs, S. (2021). Self-isolation during the beginning of the COVID-19 pandemic and adolescents' health outcomes: The moderating effect of perceived teacher support. *School Psychology, http://dx.doi.org/10.1037/spq0000460*
- Wu, Z. (2020). "Responsive" Teaching: Addressing COVID-19 Pandemic-Inflicted Online Teaching Challenges. *The Armed Forces Comptroller, 65*(3), 42-45.

- Wu, Y., Lian, K., Hong, P., Liu, S., Lin, R. M., & Lian, R. (2019). Teachers' emotional intelligence and self-efficacy: Mediating role of teaching performance. *Social Behavior and Personality: An International Journal*, 47(3), 1-10.
- Yukse-Usta, S., & Gokcan, H. N. (2020). COVID-19 through the eye of children and mothers. *International Journal of Social Sciences and Education Research*, 6(2), 187- 206.
- Zavlis, O., Butter, S., Bennett, K., Hartman, T. K., Hyland, P., Mason, L., McBride, O., Murphy, J., Gibson-Miller, J., Levita, L., Martinez, A. P., Shevlin, M., Stocks, T. V. A., Vallières, F., & Bentall, R. P. (2021). How does the covid-19 pandemic impact on population mental health? A network analysis of covid influences on depression, anxiety and traumatic stress in the uk population. *Psychological Medicine*, <http://dx.doi.org/10.1017/S0033291721000635>

Appendix A - Instrument

Henderson Teacher Self Efficacy Survey

Q1 How would you describe your gender?

- Male
 - Female
 - Non-binary / third gender
 - Prefer not to say
 - Prefer to Self Describe _____
-

Q2 In what setting do you teach?

- Urban (Population of 25,000 or more)
 - Suburban/Rural (Population less than 25,000)
-

Q3 How would you describe your teaching experience?

- Novice- 3 or less years of experience
- Veteran - 4 or more years of experience

Q1 How much can you do to control disruptive behavior in the classroom?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

Q2 How much can you do to motivate students who show low interest in school work?

- 1- Nothing
 - 2
 - 3- Very Little
 - 4
 - 5- Some Influence
 - 6
 - 7-Quite a Bit
 - 8
 - 9- A Great Deal
-

Q3 How much can you do to get students to believe they can do well in school work?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

Q4 How much can you do to help students value learning?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite A Bit
- 8
- 9- A Great Deal

Q5 To what extent can you craft good questions for your students?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9-A Great Deal

Q6 How much can you do to get children to follow classroom rules?

- 1- Nothing
- 2
- 3- Very little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

Q7 How much can you do to calm a student who is disruptive or noisy?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite A Bit
- 8
- 9- A Great Deal

Q8 How well can you establish a classroom management system with each group of students?

- 1- Nothing
 - 2
 - 3- Very Little
 - 4
 - 5- Some Influence
 - 6
 - 7- Quite A Bit
 - 8
 - 9- A Great Deal
-

Q9 How much can you use a variety of assessment strategies?

- 1- Nothing
- 2
- 3- Very little
- 4
- 5- Some Influence
- 6
- 7- Quite A Bit
- 8
- 9- A Great Deal

Q10 To what extent can you provide an alternative explanation or example when students are confused?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

Q11 How much can you assist families in helping their children do well in school?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

Q12 How well can you implement alternative strategies in your classroom?

- 1- Nothing
- 2
- 3- Very Little
- 4
- 5- Some Influence
- 6
- 7- Quite a Bit
- 8
- 9- A Great Deal

