Summer 2022

Teacher Perceptions on the Impact of Changes in Educational Practices and Student Learning for a COVID-19 Post-Pandemic Classroom: A Mixed Methods Study

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TEACHER PERCEPTIONS ON THE IMPACT OF CHANGES IN EDUCATIONAL PRACTICES AND STUDENT LEARNING FOR A COVID-19 POST-PANDEMIC CLASSROOM: A MIXED METHODS STUDY

By
Laine Smith

A Dissertation Submitted to the
Gardner-Webb University College of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2022

Approval Page

This dissertation was submitted by Laine Smith under the direction of the persons listed below. It was submitted to the Gardner-Webb University College of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Acknowledgements

I could not have made it this far without my tribe supporting me along the way. I would like to first thank my family. My children, Myah and Logan, supported me throughout this journey even though I missed soccer games, movie nights, and weekend visits so I could focus on my coursework. My father and sisters supported me from afar with frequent check-ins, and my older sister was always ready to jump in and helped with multiple projects.

Thank you to my friends, especially Tosha and Sheena, who were always available to lend an ear! Many thanks to Steve M. for Sunday morning hugs at church and for checking in on my progress throughout the program. Lastly, thank you to Casey for being the one to listen to my struggles and encourage me and for having more faith in me than I had in myself many times. All of you encouraged me to keep going!

A big thank you to my colleagues and former colleagues, Leslie A, Tamara Y, Robert M., Nicole B., Karen R., Darren H., Deborah M., Tiffanni C., and several other colleagues who served on project teams with me. Thank you all for supporting this journey.

To my cohort sister Megan, we started as a class of 15 and in the end, it was just four of us. I am so incredibly lucky to have formed a friendship with you early in our program so we could motivate each other. I am so proud of us! A special shout out to my adopted cohort sister, Dr. Mary Newton at my rival school; your help, words of wisdom, and encouragement through this journey were very much appreciated!

Lastly, my dissertation committee, Dr. Putnam, Dr. Van Cleave, and Dr. Newell, deserve many accolades for their commitment to this research project. This team worked

so hard! From edits, zoom meetings, and phone calls at all hours of the night, well past working hours, this project has been molded into what it is today. Special thanks to my dissertation chair, Dr. Newell, for being a constant cheerleader, working with me through my multiple topics, answering my many texts, and supporting me through the struggles! You are hands down an amazing educator; thank you for being my chair!

Abstract

TEACHER PERCEPTIONS ON THE IMPACT OF CHANGES IN EDUCATIONAL PRACTICES AND STUDENT LEARNING FOR A COVID-19 POST-PANDEMIC CLASSROOM; A MIXED METHODS STUDY. Smith, Laine, 2022: Dissertation Gardner-Webb University.

The COVID-19 pandemic disrupted educational practices around the world, changed the instructional interface of the classroom and impacted student learning. The purpose of this research study was to identify teacher perceptions of this change, understand how teachers addressed those changes in the classroom, and determine what teachers saw as the next best steps to address student learning disparities going forward.

A mixed methods approach was used to conduct this research. Participants who completed the survey and/or mini focus groups were teachers in County X during the 2019-2022 school years. A thematic analysis was conducted for each mini focus group, quantitative survey data was analyzed using descriptive statistics and a Chi Square Independence test, and qualitative survey responses were analyzed using both inductive and deductive coding. Triangulation of the survey data and mini focus group data showed how the mini focus group data supported the findings from the survey data.

Teacher perceptions of the changes caused by the COVID-19 pandemic included a negative impact on student behavior, mental health, learning gaps, student skills, and dependency on technology. Teacher perceptions also revealed positive changes in teaching practices, technology integration and home to school communication. Teachers believed funding of intervention programs for academics and mental health as well as an increase of support positions was essential to supporting students moving forward.

This study provided baseline data for changes that have occurred, identified areas of innovation, and gave insight into the face-to-face classroom following virtual and hybrid learning models widely used during the COVID-19 pandemic. The information gained from this study provided guidance for administration should an unexpected change event occur again. Understanding the lessons we learned from the COVID-19 pandemic, the principles of change theory stages of concern, and common educational practices, this research provided a roadmap to better deal with change events.

Keywords: learning gap, technology, teacher perceptions, pandemic, grading, social-emotional learning, post-pandemic classroom, change theory, self-perception theory

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Chapter 1: Introduction

Introduction

The COVID-19 global pandemic created the largest educational disruption in history, affecting approximately 1.6 billion students in more than 190 countries and across all continents (United Nations, 2020). The United Nations (2020) also reported that closures of schools impacted 94% of the world's student population, with 99% of students in lower-income countries impacted. Educational disparities before the pandemic were magnified for those vulnerable students and could have an impact beyond the current generation, "erasing decades of progress" (United Nations, 2020. p. 2).

Conversely, the pandemic also increased innovation in education. Across the world, a quick response to school closings created partnerships with radio and television and made the use of virtual learning more prevalent (United Nations, 2020). The growth of educational technology in language apps, virtual tutoring, video conferencing tools, and online software significantly surged at the pandemic's start (Li & Lalani, 2020).

Statement of the Problem

The COVID-19 pandemic caused a change in the instructional interface of education. Teachers had to address many change components that impacted student learning without going through a guided change theory process to ensure a successful implementation since it was an unexpected event.

The COVID-19 pandemic caused many teachers across the nation to quickly adapt to changes in content delivery from in-person learning to virtual, and some teachers taught both in person and online simultaneously in a hybrid setting. Educators then went back to complete in-person learning without understanding the full impact of the

pandemic on the post-pandemic classroom (a return to the traditional face-to-face classroom following the pandemic). As teachers and students across the nation returned to full face-to-face classrooms after months of virtual or hybrid learning, the impact of the educational disruption on students was unclear (United Nations, 2020).

This mixed methods study sought to examine teacher perceptions in County X of the changes the COVID-19 pandemic caused on student learning and how teachers addressed those changes and to understand the next steps that could address student learning disparities going forward.

The change away from the traditional classroom, related to the pandemic, had both positive and negative components, and a shift in focus was required of teachers to address student learning needs. Negative components of the pandemic included a learning gap in both academic and social-emotional development (Engzell et al., 2021; Horace Mann Educators Corporation, 2021), increased absences (Owens et al, 2020), disengagement (Horace Mann Educators Corporation, 2021), lack of collaborative opportunities (Horace Mann Educators Corporation, 2021), and limited access to technology (Osborne, 2021). Students, on average, were estimated to have a loss of learning equaling 5 to 9 months, with students of color having a learning loss of up to 12 months (Dorn et al., 2021; Long, 2021). During the 2020-2021 school year, approximately 25% of middle and high school students in County X failed one or more classes during the first semester, compared to 10% in the previous year (Owens et al., 2020).

Positive components included a focus on technology. Many districts invested millions of dollars in technology, and technology will play a more critical role in the

post-pandemic classroom (Walker, 2021).

Purpose and Professional Significance of the Study

This study aimed to examine teacher perceptions in County X of the changes the COVID-19 pandemic caused on student learning and how teachers addressed those changes and to understand the next steps that could address student learning disparities going forward. These findings helped understand teacher perceptions regarding the challenges faced in the post-pandemic classroom, identified innovative ideas or tools used to address educational disparities, and gathered teacher insight into rethinking educational practices.

Data were obtained utilizing a mixed methods approach using a survey and focus groups. This study focused on the overall educational changes due to the COVID-19 pandemic, including communication, collaboration, parent understanding of the teacher role, content delivery, academics, social-emotional learning, technology, and mental health. In addition, study results identified positive components incorporated into teacher classrooms due to the COVID-19 pandemic and teacher perspectives on steps needed to address disparities.

Teacher perceptual data were collected during the first year back after the rise of the COVID-19 pandemic during the 2021-2022 school year. Teacher perceptions helped identify the needs of the post-pandemic classroom and identified areas of innovation. Teacher perceptual data identified what occurred in the classroom during the 2021-2022 school year and provided baseline data about how teachers addressed those changes. Recommendations were made based on data gathered to support the post-pandemic classroom.

Setting

County X is in the top 15 largest school districts in the United States and is the largest school district in its home state. The average daily enrollment in this district during the 2019-2020 school year was 161,907 students in 191 schools. There were 116 elementary schools, 37 middle schools, 29 high schools, and nine alternative schools. At the time of the study, there were 59 Title I schools in County X. Table 1 reflects the demographics of the County X student enrollment.

Table 1

County X Student Body (%)

Demographic	Percentage
Male	51
Female	49
Caucasian	45.3
African American	22.3
Hispanic	18.4
Asian	9.8
Multiple Races	3.8
American Indian	0.2
Native American/Pacific Islander	0.1

Table 1 depicts a split student body of males (51%) and females (49%). In addition, a majority of the student body was Caucasian (45%), followed by African American (22%), Hispanic (18%), Asian (9.8%), mixed races (3.8%), American Indian (0.2%), and Native American/Pacific Islander (0.1%) subgroups. Further, approximately 31% of these students qualified for free and reduced lunch, 9% had limited English proficiency, 11% were special education students, and just under 15% of students in County X were identified as academically or intellectually gifted. This study did not include student or staff demographic information.

County X employed 19,385 people, 10,320 of whom were teachers in the 2019-2020 school year. Approximately 38% of teachers in County X had advanced degrees, and just under 1,500 were National Board-certified teachers. Study participants were classroom teachers in County X from 2019-2022.

Research Questions:

Creswell and Creswell (2018) stated that research questions should consist of one or two central questions and no more than five to seven sub-questions. The questions should inquire about the relationships among the variables and be broad in context so the questions do not limit the views of those participating in the study (Creswell & Creswell, 2018).

The following research questions guided this study:

1. What are teacher perceptions regarding the impact of the pandemic on students and education as a whole?
2. What are teacher perceptions of the positive changes caused by the COVID-19 pandemic that have impacted student learning?
3. What are teacher perceptions of the negative changes caused by the COVID-19 pandemic that have impacted student learning?
4. What strategies or approaches are teachers using to address the changes for the post-pandemic classroom?
5. What do teachers believe are the next best steps to address student learning needs in the post-pandemic classroom?

Theoretical Framework – Change Theory and Self-Perception Theory

Hall and Hord's (2020) change theory described how change occurs and explained

the steps throughout a change process. Change theory utilizes the concerns-based adoption model (CBAM), which comprises an innovation configuration map, levels of use, and stages of concern to identify issues within the change implementation. Garrison (n.d.) stated that CBAM is a model that drives change and helps leaders and researchers understand the complexities of change in education. Through CBAM, the researcher focuses on understanding the perceptions of those who implemented the change. Hall and Hord stated change is complex, and there are foundational principles of change. The COVID-19 pandemic however was not an innovation, nor a change put into place to change the interface of education, but it was a change forced upon education unexpectedly.

The foundational principles of CBAM were addressed in this study. These principles included change is learning; change is a process, not an event; individuals implement the change; and sustaining change requires additional time, interventions, and leadership (Garrison, n.d.). This study collected teacher perceptual data and the feelings and reactions related to the COVID-19 pandemic change throughout the different levels of use portion of change theory.

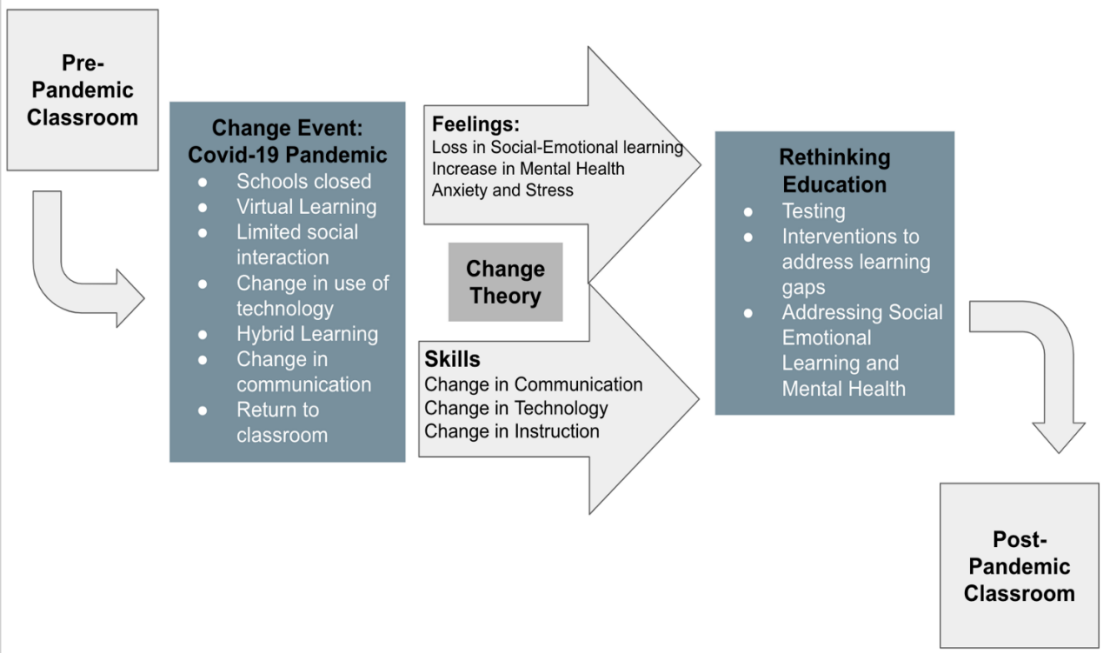
The program or initiative examined was the start of the new school year and transitioning back to a more "normal" school year. While students in County X transitioned back to classrooms at the end of the 2020-2021 school year, many teachers were teaching in a hybrid classroom where they had both in-person and online learners in class simultaneously. In addition, the school district utilized masks, socially distanced guidelines, and strict lunch procedures. The 2021-2022 school year was the first time there were no specific socially distanced requirements in the classroom and during lunch

in County X since the COVID-19 pandemic closed schools in March 2020. The study's survey items and teacher focus group questions focused on the components of the school year and the change of transitioning back to the traditional classroom setting.

Figure 1 displays how this research plan utilized the change theory framework.

Figure 1

COVID-19 Pandemic Change Theory Graphic



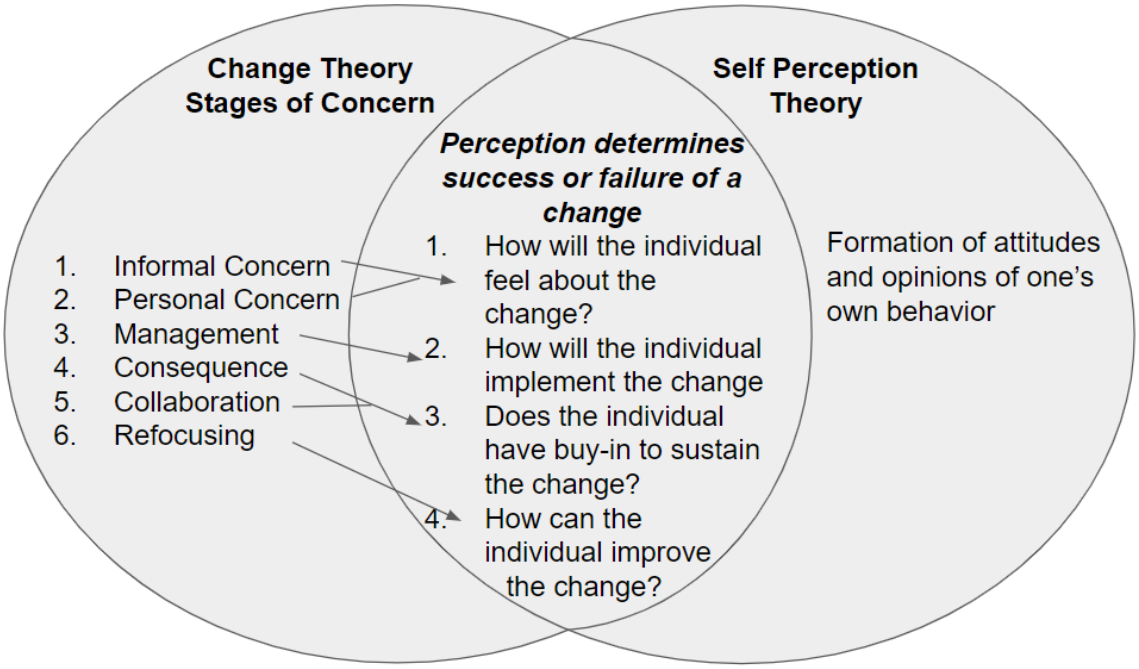
COVID-19 was the event that caused a change to occur in the pre-pandemic classroom. Due to COVID-19, County X schools were closed in March 2020, and virtual learning occurred for the remainder of the 2019-2020 school year and the beginning of the 2020-2021 school year. In addition, the pandemic led to several changes, including limited social interaction for both adults and students, a change in technology use, a hybrid learning environment from November 2020 to June 2021, and changes in communication between school and home. For County X, full return to the classroom occurred in the 2020-2021 school year. These events led to changes in both the feelings

and skills of students and teachers. All changes throughout the pandemic required rethinking educational practices and interventions for learning gaps and addressing social-emotional learning and mental health in the post-pandemic classroom.

Bem's (1972) self-perception theory included the idea that people form attitudes by observing their behavior and drawing conclusions. In the same way, attitudes cause behavior, and attitudes explain the behaviors of others in the same manner. Figure 2 shows a Venn diagram of how change theory and self-perception theory interact.

Figure 2

Change Theory and Self-Perception Theory Venn Diagram



In the beginning stages of the concern component of change theory, the individual is figuring out how the implementation of the change will affect them personally. Self-perception in these stages of implementation is important because if the individual has a negative attitude toward the change, they are not likely to have buy-in, and the success of

the implementation decreases. Conversely, suppose the individual has a positive self-perception of their abilities to implement the change. In that case, the individual will have buy-in, and the success of the implementation will increase.

Definition of Key Terms

Key terms can be defined differently based on context. Definitions of the key terms for this study follow.

COVID-19 Pandemic

Caused by the coronavirus SARS-CoV-2. COVID-19 is the term that represents the coronavirus disease that began in 2019 (John Hopkins Medicine, 2022).

Educational Technology

Digital technology (including software, hardware, and appropriate technological processes) used in classrooms that promotes active learning in a collaborative learning environment (Lazaro, 2021).

Face-to-Face Learning

Students meet with an instructor synchronously, usually in the classroom, where students are expected to by physically present (Southern Utah University, n.d.).

Hybrid Learning

Refers to teaching that is a combination of synchronous and asynchronous learning (Southern Utah University, n.d.).

Learning Gaps

The difference between what a student has actually learned and the expectations of what they had to learn by a certain point in their education (Welcome, 2021).

Post-Pandemic Classroom

The return to the traditional face-to-face classroom during the 2021-2022 school year following the virtual and hybrid classrooms used in the 2019-2021 school years in County X. No academic definition is established even though this term is widely used.

Social-Emotional Learning

> The process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. (Niemi, 2020, para. 1)

Virtual Learning

Virtual learning or e-learning is the delivery of all elements of teaching and learning through a multitude of different types of electronic media which may include the Internet, intranet, videos, satellite tv, and radio (Koohang & Harmon, 2005).

Methodology Overview

The methodology utilized for this study was a mixed methods explanatory sequential design. Creswell and Creswell (2018) stated that a mixed methods approach allows for comparing different perspectives from both quantitative and qualitative data. In a mixed methods study, qualitative results explain quantitative results to develop a more complex understanding of the changes needed. The Institute for Work and Health (2011) stated that qualitative research is important because it develops a comprehensive vision of how people understand, act, and manage different environments. Qualitative research allows for what, how, and why something is happening to be explained by those

experiencing the event.

The pandemic was still ongoing at the time of the study, and the full impact of the transition both out of and back into the classroom was unknown. Teacher perceptual information was collected through a teacher survey and focus groups to understand educators' rewards and challenges as they transitioned back to in-person teaching.

Licensed educators in County X who were teaching virtually during the pandemic and were teaching face to face with students during the 2021-2022 school year qualified to take the survey. The survey and focus group data were divided into elementary and secondary teacher responses to see if a difference occurred between the two groups' perceptions. Elementary and secondary students have major differences in independence, abilities, and behaviors; therefore, separating responses into the two levels determined whether the levels were associated with the teacher's perceptions. Suggestions made at the elementary level may not apply to the secondary level and vice versa. In addition, the open-response items on the survey were compared to teachers of the same level and allowed for analysis of the qualitative survey data prior to focus groups occurring. Focus group questions aimed to gain a deeper understanding of the quantitative survey data. While using multiple data points helped establish validity in this research study, limitations and delimitations were still present and addressed.

Limitations

Limitations are uncontrollable influences on a study (Creswell & Creswell, 2018). Limitations in this study included those that arose when conducting interviews, being a current classroom teacher myself, and the population of the focus group individuals. These limitations are discussed in depth in Chapter 3.

Delimitations

Delimitations are boundaries established by the researcher (Creswell & Creswell, 2018). The first delimitations that existed in this study included the items chosen for the survey and focus group, participants being from only a single county, and the use of convenience sampling.

Assumptions

One assumption for this study was that teachers answering the survey had similar experiences during the 2020-2021 school year, including teaching both in person and remotely and having both remote and in-person students simultaneously. All teachers were from the same county but not from the same school. Some principals within the county allocated their teaching resources differently. For example, when students returned to school on a rotating cohort, some teachers only taught face to face, some continued to instruct virtual students, and some teachers taught both in person and virtually simultaneously. Decisions made by site-specific administrators could affect the perceptions of the changes caused by the COVID-19 pandemic. A second assumption was that teachers who chose to participate in the survey and the teacher focus groups answered truthfully about their experiences. The last assumption was that the private social media page contained at least 3,000 members who qualified to participate in the survey and that roughly similar numbers of elementary and secondary school teachers were in the group.

Summary

The COVID-19 pandemic caused a change in education worldwide, making the post-pandemic classroom different from the pre-pandemic classroom. Educational issues

created by the pandemic will not disappear when students return to the physical classroom (Harriman, 2021). This mixed methods study aimed to gather teacher perceptions in County X on the changes during the pandemic. Self-perception theory and change theory built the conceptual framework used to uncover teacher perceptual data on the first year of returning to in-person learning following the pandemic and determine the overall change in the classroom during the 2021-2022 school year. This study also sought to identify the positive and negative components of the post-pandemic classroom, the strategies teachers used to address those components, and the next steps needed to move forward.

Chapter 2 includes the current literature regarding the positive and negative components of the post-pandemic classroom. Chapter 3 includes the methodology used for this study. Chapter 4 presents the study's data analysis, and Chapter 5 discusses the findings.

Chapter 2: Literature Review

Introduction

The COVID-19 pandemic had an enormous impact on education. Zhao and Watterston (2021) and Engzell et al. (2021) claimed COVID-19 was the most prominent educational disruption in history, affecting approximately 95% of the world's student population. This percentage represented approximately 1.2 billion students across 186 countries whose education was affected by the COVID-19 pandemic (Li & Lalani, 2020).

In the 2020-2021 school year, a drop in public school enrollment due to the pandemic consisted of nearly 70,000 students and a 13% decrease in kindergarten enrollment compared to the 2019-2020 school year in County X (Hui, 2021; Kummerer, 2020). At the beginning of the school year in August 2020, more than 70% of the students in the state started the school year with only virtual classes (Hui, 2021). As the school year progressed into November and December 2020, 82% of counties in the state offered some in-person classes (Hui 2021). In March 2021, the Governor ordered districts in the state to fully return students to class or offer a hybrid of in-person and remote learning (Osborne, 2021). This educational disruption caused by the COVID-19 pandemic resulted in positive and negative impacts on instruction and student learning.

Change theory and self-perception theory were the theoretical frameworks used to guide this study and are explained in the literature review. Secondly, the negative impacts caused by the pandemic are discussed, including learning loss, social-emotional learning, student achievement related to standardized testing, and the 4-year graduation rate. Student and adult mental health are discussed, including anxiety and stress. Lastly, the positive impacts of the COVID-19 pandemic are reviewed, including technology and

rethinking education moving forward.

Change Theory

Change theory using Hall and Hord's CBAM developed in 1987, is this research's primary theoretical framework. The Ohio Leadership Advisory Council (2020) stated that CBAM is a conceptual framework that helps researchers and leaders navigate the human piece of change through implementing a new educational program. CBAM utilizes the concerns of the school personnel to help leaders establish a better support system for those doing the implementation and allows for the change initiative to be more successful (Ohio Leadership Advisory Council, 2020).

Hall and Hord (2020) identified 10 principles of change that provide a framework for how people respond to and think about change. The Central Rivers Area Education Agency (CRAEA, n.d.) described the 10 principles. The first principle to change was learning. Learning was required to make a change possible, and those involved needed to learn about the change and acquire new skills to implement the change. The second principle was that change is not an event; it is a process. A change occurred when the individuals who implemented the change understood the change and became competent in the new way of doing things. It can take years for the change to occur. CRAEA stated that the third principle was that the school is the primary unit for change. Staff and leadership can either make or break the success of any change, and outside support may be necessary. The fourth principle was that the organization adopted the change, but the individuals implemented the change. The individual is ultimately responsible for successful change. For example, a school may adopt a new math curriculum, but it is up to the teacher to use and implement the new curriculum for the students. For this

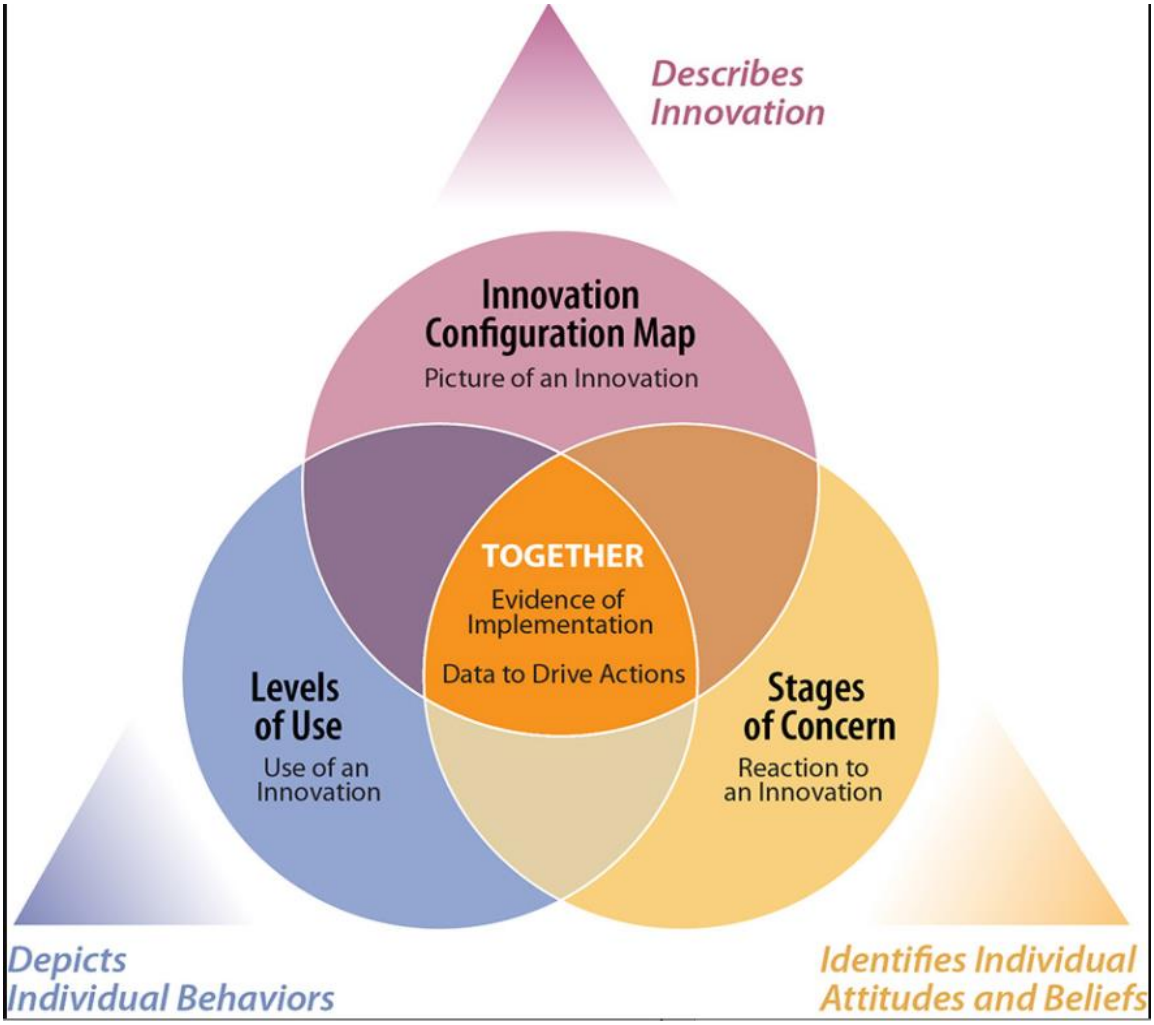
principle, Hall and Hord stated that it is essential to move slowly through changing practices to ensure everyone has been able to adjust to each practice.

CRAEA (n.d.) explained the fifth and sixth principles and discussed the importance of interventions in a change process. The fifth principle stated that appropriate interventions are the key to the success of the change, and the sixth principle stated that interventions can reduce the resistance to change. The seventh principle of change was that leadership, through the administration's support, is essential to the change process. The eighth principle of change theory was that facilitating change is a team effort (CRAEA, n.d.). If everyone on the team does their part, the change process will happen with fewer disruptions. CRAEA stated that the ninth principle was about mandates. Mandates provide clear communication of priorities and expectations surrounding the change. Lastly, the 10th principle was that the context, which can include physical features (resources, structures, policies) and people's factors (attitudes, beliefs, relationships), will influence the process of learning and change (CRAEA, n.d.). These 10 principles provide an understanding of how people think and respond to change.

CBAM has three components for guiding and evaluating the change process. Those components include an innovation configuration map, stages of concern regarding innovation, and levels of use regarding innovation. Figure 3 illustrates the three components of CBAM.

Figure 3

CBAM Diagnostic Dimensions



Note. Reprinted with permission from American Institutes for Research. (2015). Concerns-Based Adoption Model (CBAM): Three diagnostic dimensions graphic. https://www.air.org/resource/cbam-concerns-based-adoption-model (see Appendix A).

Figure 3 illustrates the innovation configuration map, which provides a clear roadmap of the change implementation to guide and focus the efforts of the staff. Stages of concern identify the attitudes and beliefs of the individuals about a new program or initiative through the completion of a questionnaire, interview, and open-ended

statements that allow a leader to understand the concentration of the staff within the six stages of concern. Leadership can make plans to address those concerns. The last piece of CBAM is the levels of use tool, which helps leadership identify at which level the new program or initiative is implemented. Regular use of this tool allows for issues to be pinpointed and addressed and for the achievement of a high-quality program implementation. As the comfort level with the new program increases, school staff can move beyond their inhibitions and focus on improving student achievement (Hall & Hord, 2020). For this study, the levels of use portion of CBAM was the lens used to examine the change of transitioning back into the traditional in-person classroom setting in County X.

Change Theory Six Stages of Concern

The first component of CBAM is stages of concern. Six stages of concern help those doing the work at the center of the change process. The six stages of concern focus on people's reactions, feelings, perceptions, and attitudes toward the change. The six stages are informational concern, personal concern, management, consequence, collaboration, and refocusing.

Hall and Hord (2020) described the six stages of concern as follows: The first stage of concern is an informational concern. Those who are on this first level are gathering information about the change. The second level of concern is personal concern. Those in the second level wonder how the change will personally affect them. At this level, people think about the changes they will need to make in their routines concerning the change. The third level of concern is management. The management level focuses on the processes and the tasks of the change. Consequence is the fourth level of concern.

Those at this stage are concerned about how the implementation will affect others, such as other teachers or students. The fifth level is the collaboration stage of concern. In this stage, implementation of the change has occurred, and ideas are shared with others about the implementation. The last level of concern is that of refocusing. After collaboration has occurred, refocusing allows for tweaking of original implementations to improve on the change.

The stages of concern component works together with the levels of use component to identify the attitudes and beliefs of the individuals implementing the change and the behaviors. The stages of concern component depends on the questions asked and considers that learning experiences evolve, take place in different settings, rely on different external expertise, and change with the needs of the participant (Loucks-Horsley, 1996). In this process, questionnaires, interviews, and open-ended statements are used to gather teacher perceptual data regarding teacher attitudes and beliefs surrounding the change; this knowledge allows leaders to address concerns (American Institutes for Research, 2010).

Change Theory Levels of Use

The second component of CBAM is the levels of use. Hall and Hord (2020) explained how the levels of use focus on the behaviors of those who are changing and explain how they are acting in terms of the change. In this stage, observations and an interview tool can be used to determine the program's level (American Institutes for Research, 2021).

The levels of use help determine where a person is in the change implementation process. Hall and Hord (2020) identified eight levels of use which include non-use,

orientation, preparation, mechanical use, routine, refinement, integration, and renewal. Individuals at the non-use level do not know or know little about the change. The orientation level is the beginning of learning about the change initiative. The next level is preparation, where individuals begin preparing for the change and may gather what they need to implement it. The mechanical use level focuses on managing the day-to-day use of the change until the next level of routine, where the change is part of their routine. The next level of use is refinement, where individuals start to change their implementation of the change in hopes of obtaining better results. Integration occurs when collaboration with others regarding the change begins. Lastly, the renewal level occurs when individuals make major changes to implementation or may replace the change with something new entirely, causing the process to start over again.

The levels of use describe where a person is in the implementation of a change. Not all individuals will advance through the levels of change at the same rate, so it is essential to understand that change is a process, not an event (Hall & Hord, 2020).

Change Theory Innovation Configuration Map

The last component of CBAM is the innovation configuration map. Hall and Hord (2020) explained that change efforts might fail because the participants did not share mental images of what the implementation of change would look like.

An innovation configuration map is used to identify the major components of the innovation and describes the observable variations or the roadmap for each of the components in the change event (Ohio Leadership Advisory Council, 2020). An innovation configuration map of the change should be created for change to be successful. The innovation configuration map is a tool used to show participants what the

change or innovation will look like when the implementation of the change has occurred and is operational (Hall & Hord, 2020). The shared vision of the change event should be clearly defined, communicated clearly and continuously, and continue to move toward a quality implementation process. The innovation configuration map is a tool consistently utilized to help create the shared vision and continually remind participants of the vision and where the organization is currently operating in the change implementation process (Hall & Hord, 2020). The American Institutes for Research (2021) stated that the benefits of creating an innovation configuration map provide clear descriptions of the program, focus on the key components, describe each variation, produce flexible documents, and help those who are new to the organization to understand the expectations of the program.

Implementation Dip

When implementing change, there is no immediate upturn in results because participants in the change need to acquire new skills and shift their mindset. Burnside (2018), from the National Association of Student Personnel Administrators, described the implementation dip as a drop in performance when the implementation requires new skills and understanding. The implementation dip was part of the change effort and expected to take some time for those implementing to become comfortable. Burnside stated that change effort is affected when other factors like a crisis, competing priorities, or unexpected events get in the way of the time and effort needed for implementation. The root cause of the implementation dip was due to ability, participant willingness, distractions, monotony, and/or sustaining energy throughout the implementation. Identifying the root cause allowed the implementation of steps to increase performance

again (Burnside, 2018). For example, if the implementation dip's root causes were related to ability, steps such as professional development or training would be put into place to increase performance.

Waits (2016) listed three strategies to reduce the depth and duration of the implementation dip: empathy and understanding, a consistent path of small wins, and training and upskilling team members. Leaders who showed empathy and understanding around the uncertainties and fears individuals faced helped those individuals overcome the challenges of learning new skills. Waits noted that change is hard, so it will take time for the team to be on board. The time it takes for the team to get on board can be reduced by providing a consistent path. Not everything can change in 1 day, so a path of small benchmarks should be established and celebrated along the way. Additionally, providing a roadmap will help the individuals stay on track and gain momentum through the implementation. Lastly, Waits explained that training provides individuals with the skills and knowledge needed to implement the change and find answers to problems. Providing training indicates to the individual that the organization is committed to change and success. These three strategies will not eliminate the implementation dip, but they can help reduce the effects and shorten the dip period (Waits, 2016). Following the steps ensures a successful change.

Successful Change Criteria

Ten criteria create a successful change (Frederick, 2017), including identifying the reason behind the change and the time for the implementation. Identifying the reason for the change is vital for those who will be implementing it and will help with buy-in. Buy-in by those implementing the change is the second criterion needed. Clarification of

how the change will affect individuals at different levels is needed. The third criterion is to align the change with goals and develop progress monitoring of the change. The fourth criterion is establishing a team of individuals from various levels of the organization to oversee the implementation. This implementation team will guide the progress monitoring, help identify areas of resistance to the change, create a plan to address them (fifth criterion), and evaluate how the change will affect the culture of the environment (sixth criterion). Frederick (2017) stated that the seventh criterion is to explain expectations and make managers at every level responsible for their teams' performance. The eighth criterion is communication. It is essential to ensure clear communication with everyone in the organization through multiple channels. The last two criteria include developing professional development that helps with the adoption, checking in throughout the implementation process, and making changes when needed. Gleeson (2017) stated that it is also essential to celebrate early success to validate the vision for the change, create more buy-in, and provide data for progress monitoring. These criteria are vital for success. There are multiple reasons why a change effort in an organization can fail.

Why Change Fails

Change triggers a fear response in our brain, and naturally, humans are resistant to change (Ackerman Anderson, 2018). Ackerman Anderson (2018) stated there are five common reasons an organization change event fails. The first reason an organization may experience failure is poor planning. A plan must be in place, and leaders should not just jump in to get desired results. When there is no plan in place, the second reason for failure is inadequate support from leadership. When leadership does not plan for change,

they are not prepared to support their team through the change process. Leadership must communicate the benefits and respond to the concerns of the individuals doing the implementation. Moreover, leaders must be fully trained and able to prevent or solve issues that may arise with the change initiative. Ackerman Anderson stated the third reason change fails is a lack of resources. Considering successful change is a long-term investment, Gleeson (2017) stated that the number one reason change fails in an organization is that the change takes longer and costs more money than anticipated. The organizational efforts take longer and cost more money because the criteria for implementing a successful change were not in place, indicating poor planning. Ackerman Anderson stated that the fourth reason change fails is that the priority is on the change itself and not the people implementing it. Gleeson noted that a weak culture, a vision and mission that are not aligned, lack of buy-in and participation, not having appropriate communication (too little or too much), lack of professional development, and implementation fatigue all contribute to a drawn-out implementation, which increases funding needs. A shift in mindset is required for change to occur, and perception of the change and how it will affect the individuals is essential to understand.

Self-Perception Theory

Change requires people to gain new skills, but a shift in beliefs and attitudes is essential to implementing a change (American Institutes for Research, 2015). People respond to change differently because they look at it through their experiences and perspectives (Ohio Leadership Advisory Council, 2020). When a person goes through an experience, they observe, feel, or perform an action that can add to their own knowledge, skills, or opinions. Perception is the recognition and understanding of sensory data. Self-

perception theory played a role in the evaluation of the data when considering teacher perceptions.

Bem (1972) described self-perception theory as people forming attitudes and opinions by observing their behavior and drawing conclusions from it. Self-perception theory is the idea that attitudes cause behavior, and the person's attitude explains the behavior of others in the same way as they would explain their behaviors. This theory means a person rationalizes the behaviors of others based on their own beliefs about what constitutes acceptable or unacceptable behaviors.

Self-Perceptions Experiments

Self-perception theory has been established through a variety of experiments that examine the relationship between participants' behaviors and beliefs. In Bem's (1972) original experiment, he used a group of people who listened to a recording of a person explaining the task of turning a peg. One group of observers thought he was paid $1 to explain the task, while the other group thought he was paid $20 to explain the task. Even though both sets of observers witnessed the same explanation, those who thought he was only paid $1 believed he enjoyed the task since money was not a motivator. The perception of the other group of observers was that he was motivated by the money to record his explanation of the task. Neither group of people knew about the person's internal cognition and mood state and derived their perceptions from the information they had available to them. According to Thudium (2022), this study concluded that the participants made assumptions about the man explaining the task based on their attitudes concerning the behavior presented. Another experiment that tested Bem’s self-perception theory was based on smiling regardless of current mood or feeling. The experiment had

participants look into a mirror and smile before entering a room. This experiment collected data on the perception that if a person looked in the mirror and smiled, whether real or fake, their mood would improve if they smiled long enough (Thudium, 2022). This experiment, conducted by James Laird, had participants either smile or frown in a mirror; following the action, there was an assessment of the participants' attitudes. Those asked to smile reported being happier than those asked to frown in the experiment (Thudium, 2022). In this experiment, the behaviors caused a shift in attitude. The situation and the perception of the participants resulted in a shift in the individual's reality, as illustrated in Figure 4.

Figure 4

Self-Perception Theory Illustration

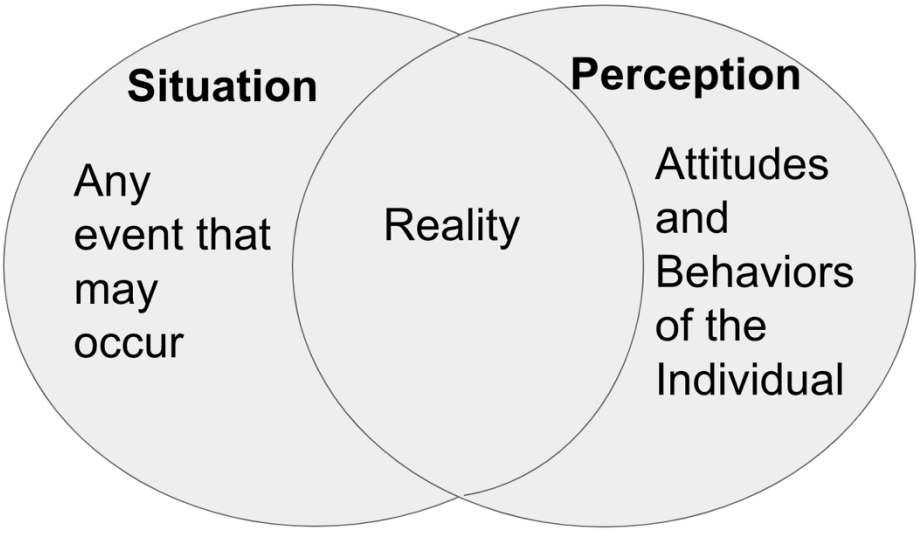


Figure 4 shows that the situation--for example, forced smiling or frowning--changed the participants' attitudes. This attitude change altered the reality for those participants who stated they felt happier after being forced to smile in the mirror before entering a room.

Thudium (2022) described another study by Psychologist Rosanna Guadagno

which examined individuals who joined extreme terrorist organizations. In that study, the researchers believed that the attitudes of those individuals followed their involvement in the organization. As those individuals committed more violent or extreme behaviors, they adjusted their attitudes to justify their actions (Thudium, 2022).

In another experiment, Zanna et al. (1981) collected data regarding participant attitudes towards religion. This study used a control group and a second group, the self-perception participants. The control groups' attitudes were measured before completing a questionnaire regarding a list of behaviors about religious behaviors they had performed in the past. At the same time, the self-perception group completed the questionnaire, and then their attitudes were measured. The self-perception group reviewed and evaluated their past religious behaviors before their attitudes toward religion were assessed. This process was repeated with the same subjects 1 month later. The study found that the predictive utility of religious attitudes was greater in the self-perception group than in the control group. The self-perception participants had a more stable religious attitude when compared to the control group since they were able to evaluate their behaviors through the questionnaire, unlike the control group. This study supports the self-perception theory that attitudes regarding religion affected the behaviors of those in the self-perception group, as compared to the control group. All these experiments show how participant attitudes toward the situation were altered based on their perceptions of the data, which altered the participants' reality of the situation.

Teachers in County X have all experienced the transitions of leaving the physical classroom, teaching online, teaching hybrid, and then transitioning back into the physical classroom over the past 2 years. Self-perception theory will help identify teacher attitudes

and opinions about the positive and negative components of student learning in the post-pandemic classroom and how those attitudes and opinions influence the reality of teaching and learning in the post-pandemic classroom.

Negative Impact on Learning

Some educators returned to the classroom at the end of the 2020-2021 school year, teaching in person or in a hybrid setting (both in person and virtual). Negative components of the COVID-19 pandemic on education started to appear, including gaps in learning and social-emotional development. A survey of educators indicated that 47% thought one of the most challenging parts of returning to school after the pandemic would be the bigger gap between academically strong and struggling students, followed by 20% stating a return to a structured classroom setting would be the most challenging, and 9% indicating that students being behind in social-emotional learning would be the most challenging in returning to regular education (Horace Mann Educators Corporation, 2021).

Learning Loss

In a study conducted by the Horace Mann Educators Corporation (2021), just over 97% of educators agreed that there was a learning loss with their students during the pandemic compared to students in previous years. CB Insights (2020) conducted a survey and found that approximately 50% of parents were unsatisfied with their child's academic performance throughout the pandemic, and 70% of teachers felt that students could not adequately adapt to remote learning environments. which affected student achievement. A decline in student engagement and work completion attributed to learning loss. Student engagement declined during virtual learning; while some failed to turn on their cameras

or participate in class, other students stopped attending virtual classes (Osborne, 2021). Hamilton and Gross (2021) reported that in a teacher survey conducted in the fall of 2020, 67% of teachers noted a decline in student work habits based on completion rates.

In a study completed by West and Lake (2021), data also suggested that students were behind academically due to the pandemic. West and Lake discovered that on average, elementary and middle school students performed at lower levels than the previous year's students. They did not meet the predictions for growth, indicating slower than expected progress. West and Lake stated that students were behind the pre-pandemic expectations by several months. These data are backed up by an increase in failure rates, with a bigger impact on students from low socioeconomic backgrounds and students of color (West & Lake, 2021).

Another issue that contributed to learning loss was student absences. Hamilton and Gross (2021) stated that in a survey conducted nationally in 2020 during the pandemic, educators reported that the daily absentee rate had doubled compared to the previous year. Public school enrollment dropped by 3% overall, but for preschool and kindergarten students, a 13% reduction in enrollment occurred (West & Lake, 2021). Hamilton and Gross also reported that districts in Massachusetts and California reported an increase in the absentee rate during the pandemic. In County X, just under 9% of students had already accumulated four or more absences during the first quarter of school since returning to face-to-face instruction during the pandemic compared to just under 6% during the 2019-2020 school year (Owens et al., 2020).

Implications of Learning Loss. These post-pandemic concerns may have a bigger impact in the future. Dorn et al. (2021) estimated that unless the implementation of

interventions addresses those concerns, today's students could earn $49,000 to $61,000 less in their lifetime. While the individual impact may be small, the impact on the U.S. economy overall could amount to $128 billion to $188 billion less each year as these students enter the workforce. There was an anticipation that the dropout rate among students in the poorest countries would increase following the COVID-19 pandemic, and the completion of the primary school of students in these countries would reduce dramatically due to the economic impact of the pandemic (United Nations, 2020).

Addressing Learning Loss. UNICEF (2020) estimated that approximately 90% of countries offered some form of digital or broadcast learning during the pandemic; however, potentially, only 69% of students were reached due to a lack of accessibility to the learning. UNICEF stated that 80% of countries utilized online platforms, but only 25% of children benefited from this effort. Worldwide, UNICEF estimated that more than 1 billion students were behind, while many in poorer countries may never return to school. Many years of progress in education around the world could be in jeopardy. Addressing learning gaps to ensure academic success was vital.

Educators will need time to focus on learning gaps due to the pandemic. Schools and districts must make decisions about an extended school day, creative scheduling, differentiation, and class sizes to address deficiencies in the post-pandemic environment (Long, 2021). In a study conducted by Horace Mann Educators Corporation (2021), 53% of educators surveyed felt it was necessary to have a smaller focus on grade-level standards to ensure mastery of priority standards when returning from the pandemic. In this study, 1,000 K-12 U.S. teachers surveyed identified changes in transparency and decision-making regarding academic practices and curriculum changes were necessary.

According to the U.S. Department of Education (USDOE, 2021a), the focus for the 2021-2022 school year should have been to prioritize the health and safety of school staff and students; support social, emotional, and mental health; and ensure academic success was accelerated.

Learning Gaps – Differences in Demographics. The COVID-19 pandemic has disproportionately impacted Black, Hispanic, and Indigenous communities (Dorn et al., 2021). Dorn et al. (2021) found that students in a majority-White school were 4 months behind in math and 3 months behind in reading, while students in a majority-Black school were 6 months behind in both reading and math. Engzell et al. (2021) also stated that following the COVID-19 pandemic, there was evidence that there was a learning loss for elementary students in the subjects of reading, spelling, and math, with students from disadvantaged homes being more affected than their peers. Students from upper-income homes are afforded opportunities outside of school that enrich their learning, and their learning gaps are not as significant as their peers from lower-income households (Harriman, 2021).

Although some students returned to the classroom in the fall of 2021, Black and Hispanic students continue to be more likely to stay in a remote setting and are less likely to have access to devices, internet access, and live interaction with teachers (Dorn et al., 2021). The achievement gap will widen if these disparities continue (Dorn et al., 2021); however, academic learning gaps were not the only disparity caused by the pandemic. Social-emotional learning gaps were also a concern as students transitioned back into the post-pandemic classroom.

Social-Emotional Learning

The COVID-19 pandemic isolated and changed the lives and routines of students across the world. The need for students to have access to trusted relationships with adults and peers and access to mental health services and social services through school became apparent when the COVID-19 pandemic shut down schools, and social-emotional learning declined (Hamilton & Gross, 2021). In a study by Hamilton and Gross (2021), 77% of the school district leaders surveyed indicated that their students had decreased social-emotional development compared to the previous 2 years.

Social-Emotional Learning Concerns. Due to the pandemic, students with health and safety concerns, social isolation, remote learning difficulties, anxiety, and food and housing insecurities were returning to the traditional in-person classroom setting. These students returning to the traditional in-person classroom were behind in their social-emotional learning (Rosanbalm, 2021). In addition, some individuals who lost a loved one to COVID-19 were isolated and missed events and activities with family, friends, classmates, and teammates, contributing to their deficiency in social-emotional learning (Rosanbalm, 2021).

In a study conducted by Dorn et al. (2021) of 16,000 parents from every state, it was found that 80% of parents had some form of concern regarding the social-emotional well-being of their children since the start of the pandemic. Like the learning gaps, disparities in social-emotional learning also existed in communities of color.

Importance of Social-Emotional Learning. In a study by Horace Mann Educators Corporation (2021), 30% of educators surveyed wanted their students to have more resources surrounding social-emotional learning to support their progress moving

into a post-pandemic classroom. Additionally, 34% of educators cited the need for more paraprofessionals, and support for social-emotional learning was also a top priority. Further supporting this information was a study completed by Hamilton and Gross (2021), which found that 33% of teachers were concerned about their students' social-emotional health and were spending "somewhat" or "much more" time supporting students' social-emotional needs due to the pandemic. It will be important to focus on social-emotional learning when returning to in-person learning, as Rosanbalm (2021) stated, "After this time apart, it will take systematic, intentional, and intensive efforts to get social-emotional learning back on track" (p. 7), and "SEL instruction and coaching is going to be more critical than ever" (p. 2). Walker (2020) also agreed that student performance hinges on successful social-emotional learning, with more emphasis in preschool and elementary school. The emphasis on preschool and elementary school social-emotional learning is important because, as Rosanbalm stated, "Children with higher teacher-rated social competence in kindergarten are more likely to graduate, attend college, and have a job 20 years later" (p. 2).

Social-emotional learning for students will connect to their academic achievement. Student achievement concerning the COVID-19 pandemic was a major factor in the return to school as each state and school district assessed student achievement levels.

Learning gaps and social-emotional learning gaps will have an impact on standardized testing. In addition, this could affect the four-year graduation rate and the economy.

Standardized Testing

State assessments provide an accountability system in public schools to ensure equity, student needs identification, and targeted resource allocation (USDOE, 2021b). The USDOE (2021b) stated that flexibility in administering assessments in 2021 due to the pandemic would be needed, and test scores would be used as a data point to help educators and parents target needed interventions, resources, and support over testing for accountability purposes. Test scores would not be used to rate schools but to target struggling students with the necessary interventions and resources. Flexibility included extending the testing window into the summer or fall of 2021, remote assessments, and shortening the state assessment to ensure testing implementation was more feasible and in-person learning could be prioritized (USDOE, 2021b).

Experts disagreed regarding state testing moving into the 2021-2022 school year. Some experts believed it would be unfair, while others believed the data were important to determine student achievement levels (Harriman, 2021). During the 2019-2020 school year, for those states that did administer state exams, flexibility was granted from the federal government and states were able to make their own decisions regarding testing. States lifted testing accountability restrictions during the 2019-2020 and 2020-2021 school years, and space for educators allowed for them to adapt to the changing educational climate (Zhao & Watterston, 2021).

Fazlul et al. (2021) argued that state testing in the spring of the 2021 school year was critical to discovering the full impact of the pandemic on schools nationwide. Fazlul et al. indicated that canceling testing for the 2021 school year would create a scenario where it was nearly impossible to obtain reliable data for those students during the

pandemic. The USDOE also saw value in the 2021 spring testing. Ujifusa (2021) stated that the USDOE did not allow states to cancel standardized tests for the 2021 school year but noted the prior expectations would have to be adjusted in score reporting to provide data that are not misleading, help identify students of greatest need, and provide data that are useful to educators. The goal of giving these standardized tests was to help assess where the most prominent effects of the pandemic have occurred; however, the test scores may not reveal the full effect of the pandemic due to students who have not been able to be reached, parents opting their children out of testing, and other concerns (Ujifusa, 2021).

Dorn et al. (2021) analyzed standardized test scores of more than 1.6 million elementary students in 40 different states and compared the performance of 2021 to similar students from before the pandemic. The academic impact for K-12 students, on average, based on these data, was about 5 months behind in math and 4 months behind in reading at the end of the 2020 school year (Dorn et al., 2021). West and Lake (2021) also found that the academic impact was greater in math than in English due to the pandemic. Additionally, the achievement gaps that existed before the pandemic were widened, and moving forward, high school students were more likely to drop out of school, and students from low-income families were not as likely to continue their education after high school (West & Lake, 2021).

Walkenhorst (2021) stated that states across the country had released scores, showing a decline in standardized testing scores across the nation during the pandemic. However, the state testing scores during the pandemic cannot compare to previous years because of the alteration of defined achievement levels. Some tests were revised, and a

much lower percentage of students participated in testing due to the pandemic (Walkenhorst, 2021). The goal of testing in the 2021 school year was to identify where the pandemic has had the most dramatic effects on student achievement (Ujifusa, 2021).

The American College Test (ACT) results compared scores that measured student learning across the county. The ACT measures the skills necessary for success in postsecondary education (ACT, 2021). Nationally, ACT scores dropped from 20.7 in 2019 to 20.6 in 2020 during the pandemic, which was the lowest level in 10 years (Jaschik, 2020). The declines were more severe for Black, Hispanic, and Indigenous communities (not White or Asian) during the pandemic, with the average score decreasing from 18 to 17.7 (Jaschik, 2020). Of all the students who took the exam in 2020 during the pandemic, 26% met all four ACT college readiness benchmarks (English, reading, math, and science), and 37% met three of the four benchmarks, which was consistent with the 2019 scores (Jaschik, 2020).

Another factor that is an indicator of student achievement nationwide is the 4-year graduation rate. The 4-year graduation rate is the percentage of students who graduated on time from high school in 4 years or less (My Future NC, 2020).

4-Year Graduation Rate

America's Promise Alliance (2021) stated that during the 2018-2019 school year, the nationwide graduation rate reached an all-time high and approached the GradNation campaign goal of reaching 90% by 2020. The GradNation campaign was launched in 2010 with President Barack Obama, General Colin Powell and Alma Powell, and Arne Duncan. Significant gains occurred with the low-income Black and Hispanic students before the COVID-19 pandemic (America's Promise Alliance, 2021). However, due to

the COVID-19 pandemic, the GradNation campaign goal of a 90% graduation rate by 2020 will not be reached without dramatic single-year improvement, which is not likely due to the effects of the pandemic (America's Promise Alliance, 2021). The graduation rate is important for student success, as delays in graduation increase the likelihood of dropping out of school. High-school dropouts will have an economic impact as students who drop out are less likely to be employed, earn less money, are more likely to be involved in criminal activity, require social services, and may live shorter, unhealthy lives (My Future NC, 2020). Standardized testing scores and the 4-year graduation rate will reveal the impact of the COVID-19 pandemic and help to monitor student achievement across the nation in the post-pandemic classroom. Addressing mental health, anxiety, and stress will also increase student achievement.

Mental Health, Anxiety, and Stress

There was a significant impact on student education and mental health resulting from the COVID-19 pandemic (Chaturvedi et al., 2021). The COVID-19 pandemic and its impacts have caused changes in the way we live our lives. Uncertainty, changes in daily routines, social isolation, daycare challenges, financial pressures, job uncertainty, worries about getting sick or how long the pandemic will last, information overload, rumors, and misinformation all contribute to the worries and anxiety surrounding the pandemic (Mayo Clinic Staff, 2021). All these factors that contribute to worry, anxiety, and stress affect the brain of the individual.

One function of the brain is to make predictions about the world around us using observation (Penttila, 2020). When the brain cannot make sense of the observations, it has to work harder to find a resolution, and the consequence is stress (Penttila, 2020). The

COVID-19 pandemic created a disruption in daily life, uncertainty for the future, and a situation that put many people into a high-stress state (Penttila, 2020). Stress causes the brain to continue to look for a solution to the cause of the stress so problems like fatigue, sleep disruptions, and energy level fluctuations occur when no solution is identified (Penttila, 2020).

Adults and children respond to mental health, anxiety, and stress differently. As educators and students transitioned back into the post-pandemic classroom, it was essential to understand how mental health, anxiety, and stress affected the school climate.

Mental Health – Differences in Demographics

Panchal et al. (2020) stated that students of color, including Black and Hispanic communities, experienced larger gaps concerning mental health. Further, the pandemic disproportionately affected communities of color, and historically these communities have had difficulties accessing mental health care (Panchal et al., 2021). Limited access to health care for Black and Hispanic communities created larger inequities as these communities experienced disproportionately higher rates of COVID-19 cases, negative financial impacts, and deaths (Panchal et al., 2021).

Mental Health, Anxiety, and Stress in Adults

Adults and children handle the effects of mental health, anxiety, and stress differently. In a Noam (2020) study, a survey of school leaders about the emotions their staff experienced during the COVID-19 pandemic showed that 95% of the emotions administrators identified were negative, with anxiety being the number one feeling of their staff. Administrators' other emotions included "overwhelmed, sad, stressed, frustrated, uncertain, and worried" (Noam, 2020, p. 134). The results of this study echoed

other studies completed in the United States and China.

Cullen et al. (2020) conducted a study of over 1,200 people in 194 counties in China at the beginning of 2020, and 54% of respondents felt the psychological impact of the COVID-19 pandemic was moderate or severe, while 29% of respondents indicated having moderate to severe symptoms of anxiety. These negative impacts were echoed in another study conducted by the Kaiser Family Foundation in July 2020. Fifty-three percent of adults stated that worry and stress related to the COVID-19 pandemic were harming their mental health. These data showed an increase from 39% reported in May 2020 (Penttila, 2020). These data supported the idea that the longer a person experiences a stressor, the more likely they are to experience continued effects of depression, anxiety, or stress-related diseases later in life (Penttila, 2020). Changes in the body occur when it is under stress.

Dunne (2020), for instance, stated that chemicals released during anxiety could affect many decision-making processes; patience; empathy; and control of thoughts, emotions, and actions. Chronic stress can cause a disconnect between brain cells and the prefrontal cortex, an area of the brain that controls wisdom and judgment (Dunne, 2020). This disconnect between brain cells and the prefrontal cortex can affect educators' decision-making abilities and co-worker relationships, classroom management, and student engagement (Dunne, 2020). Additionally, as Tsang et al. (2021) noted, stress can cause disruptions in sleep, which have other impacts. Tsang et al.'s study of 900 sets of twins during the COVID-19 pandemic found that many adults reported changes in their usual sleep patterns, which correlated with self-reported mental health difficulties. A disruption in sleep patterns could increase feelings of stress, anxiety, and depression,

which will influence student and staff performance (Tsang et al., 2021).

The Duke Institute for Brain Sciences (2021) described a study conducted by Dr. Kevin LaBar, a professor of psychology and neuroscience, that echoed similar results. LeBar found that the COVID-19 pandemic can impact psychological and cognitive functions, including sleep, memory, and decision-making. His research investigated how emotions impacted brain function using neuroimaging methods in healthy individuals and compared them with psychiatric disorders. In an interview conducted by the Duke Institute for Brain Sciences, Labar stated that emotions bias cognitive processes in the human brain. These impacts can exacerbate feelings of incompetence, and the negative bias created by the prolonged pandemic can affect decision-making, even if the decisions are unrelated to the source of the anxiety (Duke Institute for Brain Sciences, 2021). Mental health, anxiety, and stress in adults caused by the COVID-19 pandemic will have an impact on an individual's professional and personal life. The impact of mental health, anxiety, and stress will also affect students.

Mental Health, Anxiety, and Stress in Students

Dorn et al. (2021) surveyed over 16,000 parents from every state. They found that 35% of parents were concerned about their child's mental health for all grade levels, with a slightly lower percentage for elementary-aged children due to the pandemic. Imran et al. (2020) stated that children were experiencing fear, uncertainties, changes in routines, isolation, and parental stress due to the pandemic. Dorn et al. found that parents reported that their children of all ages increased anxiety, depression, social withdrawal, isolation, and irrational fears due to the pandemic. Imran et al. discussed that children became more vulnerable to negative psychological impacts due to the lack of complete understanding

of the pandemic, limited coping strategies, and lack of communication skills. Quarantine was another stressor that added to negative psychological impacts (Brooks et al., 2020). In the review of 24 different research papers written on the effects of quarantine due to the pandemic, Brooks et al. (2020) noted that those who had a negative psychological effect, which included post-traumatic stress disorder and symptoms of stress, anger, and confusion, were related to those individuals who underwent quarantine.

Students do not process mental health, anxiety, and stress the same way as adults. Nelson and Carver (1998) discussed the idea that stress is unhealthy for the developing brain and could lead to memory problems in students. In addition to memory problems, The Center for Treatment of Anxiety and Mood Disorders (2021) stated that obesity, heart problems, cancer, diabetes, and other problems increase when a child lives with toxic stress. The COVID-19 pandemic increased risk factors for students to experience toxic stress through the disruption of traditional social networks, absence of protective relationships, and a lack of interpersonal connections (Czulada et al., 2021). Toxic stress can increase depression, substance abuse, smoking, teen pregnancy, suicide, domestic violence, and sexually transmitted diseases (The Center for Treatment of Anxiety and Mood Disorders, 2021). In short, children who experience toxic stress risk lifelong health and social problems (The Center for Treatment of Anxiety and Mood Disorders, 2021). Signs of toxic stress include a lack of self-regulation, impulse control, poor coping skills, and poor stress management. This toxic stress causes these children to have more trouble learning in school, increased distrust of adults, and difficulty forming healthy relationships (The Center for Treatment of Anxiety and Mood Disorders, 2021). Panchal et al. (2021) reported that 56% of young adults ages 18-24 in the U.S. have symptoms of

anxiety or depression, and they are more likely to report substance abuse, suicidal thoughts, and poor mental health.

Hamilton and Gross (2021) stated that the rates of anxiety and attempted suicide during the pandemic increased among all students, specifically girls. In an analysis of emergency room visits for people ages 11-21, there was an increased rate of suicidal thoughts and attempts since the beginning of the pandemic. According to Yard et al. (2021), mental health-related emergency room visits increased 31% in 2020 during the pandemic compared to 2019. There was also an increase in suicide attempts by girls ages 12-17, and by March 2021, the suspected attempts of suicide were 51% higher than before the pandemic (Yard et al., 2021).

An increase in negative mental health, stress, and anxiety occurred due to the COVID-19 pandemic in adults and children. This has caused changes in the body, disruptions in sleep patterns, and impacts on working memory and decision-making abilities for many adults and children. The world will continue to experience the negative effects of the COVID-19 pandemic; however, some positives have resulted in the educational change that has occurred since 2019.

Positive Impacts on the Post-Pandemic Classroom

The COVID-19 pandemic also brought about positive impacts on education: Educators improved in their delivery of content virtually (Chakraborty et al., 2020), students gained valuable skills (Osborne, 2021), some students excelled (Hamilton & Gross, 2021), technology infrastructure increased (CB Insights, 2020), technology funding for hardware and software increased (CB Insights, 2020), virtual learning options were more widely offered, and an opportunity to rethink education was afforded (Li &

Lalani, 2020).

In a study conducted among college-age students, 68% of students agreed virtual teaching improved immensely during the pandemic and became a strong alternative when limiting in-person education was necessary (Chakraborty et al., 2020). Educators grew during the pandemic, with increased collaboration between teachers, increased use of new teaching techniques and strategies, and increased self-efficacy (Osborne, 2021). In the study by EdNC, teachers noted overall that they were very proud of themselves for their ability to adapt and respond to the challenges of the pandemic (Osborne, 2021).

In a study by EdNC, Osborne (2021) reported that 1,400 participants, including educators, parents, and students, responded to what they believed went well and did not go well during the COVID-19 pandemic. Respondents reported things that went well including some students gaining valuable skills like self-efficacy, improved behavior for students who struggle with self-confidence, a gain in independence, and improved time management skills. Other positive outcomes listed from the responses included an increase in communication between home and school; a better understanding by parents of the role of the teacher; and many colleges and districts, including County X, providing an entirely virtual option for the 2021-2022 school year and future years (Osborne, 2021). Hamilton and Gross (2021) stated that some students excelled during the pandemic and benefited from the change to more flexible and less-distracting environments. Hamilton and Gross added that independent learning allowed for growth in time management skills and self-direction.

For some students, the COVID-19 pandemic improved student skills, independence, behavior, and time management skills. Home and school communication

and a better understanding of the teacher role were also positive attributes associated with the COVID-19 pandemic. Growth in educational technology was also a positive outcome of the COVID-19 pandemic.

Technology

The COVID-19 pandemic brought educational technology to the forefront of importance in education to allow students to continue learning from home. A quick transition with no preparation, limited bandwidth in many areas of the world, and limited training for teachers and students brought forth the insufficiencies of technology and an initially poor virtual learning experience (Li & Lalani, 2020). The COVID-19 pandemic revealed that investment in technological infrastructure was needed to ensure reliable access to students, including adding access points to buses that can be driven to areas of need or creating cellular or fiber networks (Schaffhauser, 2021). Remote learning resulted in many school districts handing out devices that allowed for remote learning. Many districts across the nation are now one-to-one with technology, creating equal access for students; and through the forced remote learning caused by the COVID-19 pandemic, students have already learned how to use these technology tools as they transition back into the post-pandemic classroom and will continue to utilize them in the post-pandemic classroom (Smith System, 2021).

Many technology tools not initially developed for educational purposes, such as Zoom, G Suite tools, and social media, were used throughout the pandemic and could have opened the door to looking outside of education to explore other technologies for educational use (Schaffhauser, 2021). Less than 5% of the $1.6 trillion spent each year is on educational technology (CB Insights, 2020), so there is room for exploring other

technology used in the post-pandemic classroom.

Attention to technology access is of great importance to ensure students have access to their instructors and online materials, and many teachers will continue to use the tools they used in virtual learning during the pandemic (Schaffhauser, 2021). While technology integration may have been a forced transition throughout the COVID-19 pandemic, integrating new technology can provide more possibilities for both the teacher and the student (Magomedov et al., 2020). Some students across the nation thrived in a forced technological environment during the pandemic, and some experts believe that online education will become an important part of education (Li & Lalani, 2020). Online platforms such as Google Classroom, Schoology, and Canvas that were limited in use prior to the pandemic became immensely important as they were required so students could meet with their teachers synchronously to receive direct instruction and interact with their classmates (Chakraborty et al., 2020).

Examples of districts prioritizing technology following the COVID-19 pandemic include the Sonoma Valley Unified School District. This district upgraded the post-pandemic classrooms with modern technology (Herold, 2021). Another example was in Portland Public Schools, where a $128 million bond will allow every classroom in the district to have a Wi-Fi access point, a Chromebox computer, a teacher microphone, a voice amplification system, and two screen-sharing devices (Wong, 2021). Other school systems across the country have also increased their technology programs. Increased technology programs allow teachers to continue using tools they used during remote teaching and provide access to technology for all students.

The COVID-19 pandemic created a starting point for implementing online

education at every grade level and has many positive attributes for self-motivated and self-disciplined students (Xie et al., 2020). The benefits of online education include flexibility, equity, innovation, global access, efficiency, and the ability to obtain degrees and certifications (Xie et al., 2020). An et al. (2021) agreed that online learning makes learning more accessible, expands learning opportunities for students, and allows educators to continue considering unforeseen emergencies. Moving forward, Xie et al. (2020) predicted incorporating artificial intelligence and mobile education, online education, and traditional education, as dual options will promote educational equity through accessibility.

Possible Use of Technology in the Post-Pandemic Classroom. As information technology continues to advance, a technological-based platform for education reform and opportunities for innovation in education exist (Xie et al., 2020). Technologies that can be explored and introduced to education include biometric technologies such as a finger, face, or eye recognition software that can be used to identify students or track their engagement in class. Another technology that can be explored and introduced into education is the use of gamification through storytelling, problem-solving, earning badges, and leveling up, or being awarded points can be used to incorporate game design elements and increase motivation and engagement (CB Insights, 2020). Gamification also allows instant feedback through dashboards that show class rank among peers, creating an environment of healthy competition and motivating students to try harder on their assignments (CB Insights, 2020). Other technologies such as virtual reality, artificial intelligence, and game-based platforms will have to be adapted for educational purposes as they pose some privacy concern issues, such as lack of trained individuals to operate

the infrastructure, and barriers associated with the building of networks hinder the EdTech and digitization of education (CB Insights, 2020).

Technology played a key role during the COVID-19 pandemic. There are many possibilities for incorporating technology more into education to improve both student achievement and school security in the post-pandemic classroom. Aside from the positive and negative impacts caused by the COVID-19 pandemic, an opportunity to rethink education was presented by the COVID-19 pandemic.

Rethinking Education

The educational disruption caused by the COVID-19 pandemic afforded an opportunity to reevaluate and reassess education. The United Nations (2020) stated the world before the pandemic no longer exists, and education must be more inclusive, equitable, and flexible. United States Education Secretary Miguel Cardona, for instance, asserted to the Washington Post that the COVID-19 pandemic could be an opportunity to rethink education and emphasized that it was crucial to continue to think about how schools can evolve to ensure student success (St. George et al., 2021). Because of the pandemic, one-way educators began to rethink education was by identifying the needs regarding standards. Support in early literacy and math is essential, and critical actions for economically disadvantaged students and students of color who were at risk before the pandemic will need intensive support (West & Lake, 2021). West and Lake (2021) stated the academic situation due to the pandemic needed to be addressed quickly.

Hamilton and Gross (2021) highlighted another priority in rethinking education post-pandemic: identifying innovations to improve social-emotional learning and meeting mental health needs. Social-emotional learning is important because it helps students

build foundational life skills, including self-reflection, collaboration, resilience, and problem-solving, which are needed for academic success (Hamilton & Gross, 2021). Concerning the pandemic, Noam (2020) stated, "Focus on healing. Be intentional in shaping a positive school climate and community. Provide mental health resources and ample opportunity for students to meet with trusted and trained adults" (p. 174). Rethinking how the school day is structured to focus on healing and providing social-emotional and mental health supports is crucial to student success.

A change in the physical learning space was also a consideration in the post-pandemic classroom because as Wong (2021) stated, the pandemic demonstrated a flexible learning space as key to future classroom configurations to meet the needs of 21st century learners. Virtual learning during the pandemic had students working from the comfort of their own homes in flexible learning spaces. In school, flexible learning spaces include different shaped tables with casters for easy movement, stools, soft seating, rolling chairs, and moveable walls to create larger learning spaces. Flexible learning spaces create active learning environments, and students are more likely to be productive when comfortable (Douglas, 2017).

Rethinking education in terms of being more inclusive, equitable, and flexible is important in the post-pandemic classroom. For a successful transition back into the post-pandemic classroom, it is important to identify innovations that meet the academic, social-emotional, and mental health needs of students.

Summary

The COVID-19 pandemic impacted education in many ways. Ninety-five percent of the world's student population was affected by the disruption caused by COVID-19

(Engzell et al., 2021; Magomedov et al., 2020). Negative impacts included increased absentee rates and learning gaps in math and reading with larger gaps occurring among minority students and those who were already behind before the pandemic (Dorn et al., 2021). There was also a negative impact on social-emotional learning. Rosanbalm (2021) stated that children with higher-rated social-emotional skills were more likely to graduate, attend college, and have jobs. Mental health, anxiety, and stress were also negative components of the COVID-19 pandemic occurring among students of all ages. The impact of the COVID-19 pandemic was not just on students; teachers and school leaders also reported a negative impact related to anxiety, stress, and mental health.

There were also positive impacts that resulted from the pandemic. Osborne (2021) stated educators grew during the pandemic and increased use of new teaching techniques and strategies. Some students thrived in distance education; technology devices in many districts increased; and student technology use and the use of online platforms like Google Classroom, Zoom, and Schoology became the norm during the pandemic. Some students excelled during the pandemic and benefited from the change to more flexible and less distracting environments (Hamilton & Gross, 2021). The ability to rethink education going forward to address discrepancies in learning and reexamine state testing positively impacts education.

Since there is little information available about the post-pandemic classroom, this study intended to explain how educators were currently addressing the learning gaps and social-emotional needs of students following the return to in-person learning during the 2021-2022 school year. The study identified the positive and negative impacts of the COVID-19 pandemic in the post-pandemic classroom compared to the pre-pandemic

classroom. Chapter 3 explains the methodology for this research study.

Chapter 3: Methodology

Introduction

The study used an explanatory sequential design where the qualitative data followed the quantitative data (Edmonds & Kennedy, 2017). This chapter consists of an explanation of the research design, research questions, procedures, participants, data collection procedures, and data analysis.

This research study aimed to examine the post-pandemic classroom in County X by identifying teacher perceptions of the changes that occurred due to the educational disruption caused by the COVID-19 pandemic. In addition, this research study gathered qualitative data about how teachers in County X addressed educational disparities after returning to full face-to-face learning during the 2021-2022 school year.

The mixed methods study collected teacher perceptual data through a survey instrument and focus groups at the elementary and secondary levels. The triangulation of qualitative and quantitative data provided additional insight needed to answer the research questions (Creswell & Creswell, 2018). The data were collected during the 2021-2022 school year after a return to face-to-face instruction occurred after students were forced into remote learning due to the pandemic. Teacher perceptions were collected on the changes incurred due to the pandemic's positive and negative impacts on student learning. These data provided leadership in County X insight into challenges teachers faced and how teachers addressed those challenges in the 2021-2022 school year.

Academic achievement data comparison to previous years was impossible due to changes in the achievement levels, tests, and waivers given to states for a lower

participation rate in state testing (Walkenhorst, 2021). Utilizing state testing scores would not be comparing the same data types since there were many changes surrounding state testing from the 2019-2020 school year through the 2021-2022 school year.

Research Questions

The following research questions guided this study:

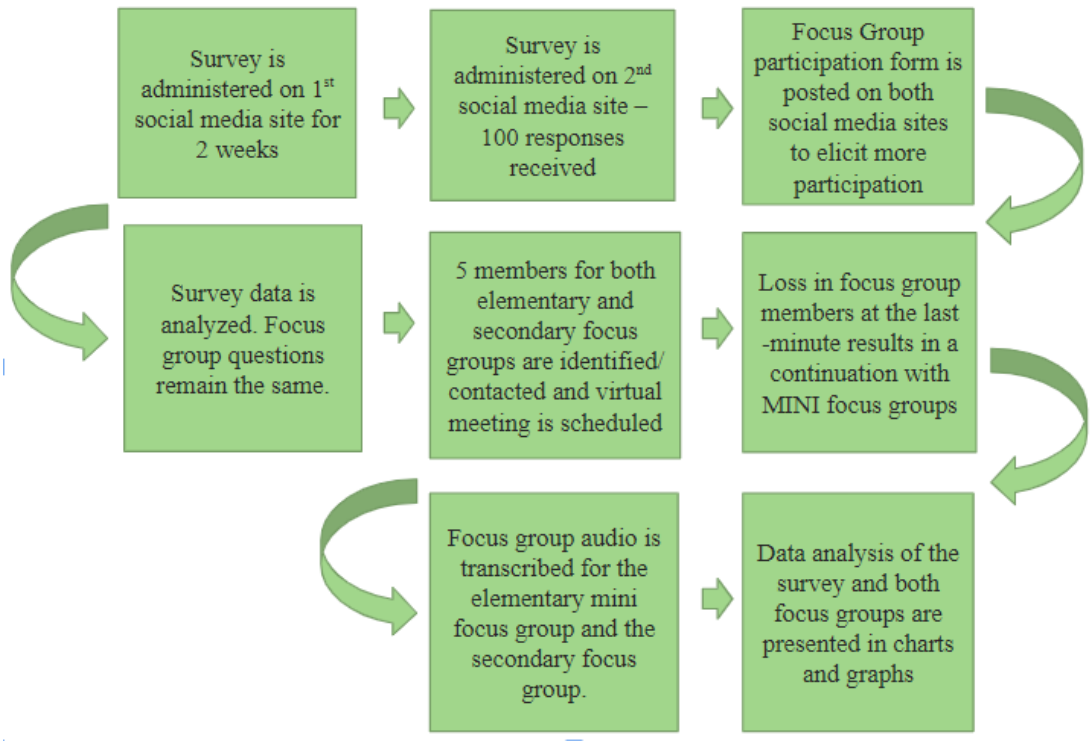
1. What are teacher perceptions regarding the impact of the pandemic on students and education as a whole?
2. What are teacher perceptions of the positive changes caused by the COVID-19 pandemic that have impacted student learning?
3. What are teacher perceptions of the negative changes caused by the COVID-19 pandemic that have impacted student learning?
4. What strategies or approaches are teachers using to address the changes for the post-pandemic classroom?
5. What do teachers believe are the next best steps to address student learning needs in the post-pandemic classroom?

Methodology Overview

Figure 5 shows an overview of the methodology. A survey instrument and two focus groups were used to collect data for this study.

Figure 5

Research Methodology Overview



The first part of the data collection occurred through the survey instrument. Field and pilot testing occurred before the survey was deployed. A second social media site was used to elicit the minimum number of responses (100) after 2 weeks on the first site did not meet the minimum number of responses. The chi-square test for independence and descriptive statistics were used to analyze the quantitative data. The inductive coding of participant responses was used to analyze the open-ended survey items.

After completing the initial analysis of survey items, participants who volunteered to be focus group members were contacted to schedule meeting times, and a meeting was held via the Google Meet platform. To explain and elaborate on the survey data, one elementary and one secondary mini focus group were conducted. The mini focus groups

were recorded, and the recordings were transcribed and analyzed using a combination of inductive and deductive coding processes.

Table 2 shows how the research questions were aligned to the data collection instrument, the type of methodology, the type of data collected, and the method of analysis.

Table 2

Methods Table – Research Overview

Research question	Data tool(s)	Method	Data to be collected	Method of analysis
What are teacher perceptions regarding the impact of the pandemic on students and education as a whole?	Teacher survey Focus groups	Mixed methods (quantitative and qualitative)	Teacher responses about each of the components of the post-pandemic classroom	Subgroup breakdown of elementary and secondary teachers using chi-square–Survey Items 14-17 Descriptive Statistics Items Part 2–1,3,5,7,9.11 Thematic analysis inductive coding and deductive coding focus groups, and inductive coding of Survey Items Part 2–2,4,6,8,10,12,13 Triangulation
What are teacher perceptions of the positive changes caused by the COVID-19 pandemic that have impacted student learning?	Teacher survey Focus groups	Mixed methods (quantitative and qualitative)	Teacher responses about the POSITIVE components of the post-pandemic classroom	Subgroup breakdown of elementary and secondary teachers using chi-square–Survey Items 14-17 Descriptive Statistics Items Part 2–1,3,5,7,9,11 Inductive coding. Deductive coding, Focus groups and inductive coding of Survey Items Part 2–2,4,6,8,10,12,13 Triangulation
What are teacher perceptions of the negative changes caused by the COVID-19 pandemic that have impacted student learning?	Teacher survey Focus groups	Mixed methods (quantitative and qualitative)	Teacher responses about the NEGATIVE components of the post-pandemic classroom	Subgroup breakdown of elementary and secondary teachers using chi-square–Survey Items 14-17 Descriptive Statistics Items Part 2–1,3,5,7,9,11 Inductive coding and deductive coding focus groups, and inductive coding of Survey Items Part 2–2,4,6,8,10,12,13 Triangulation

(continued)

Research question	Data tool(s)	Method	Data to be collected	Method of analysis
What strategies or approaches are teachers using to address the changes for the post-pandemic classroom?	Teacher survey Focus groups	Qualitative	Teacher responses about strategies they are using in their classrooms	Inductive coding and deductive coding of focus groups, inductive coding of Survey in Part 3-1 Triangulation
What do teachers believe are the next steps needed to address student learning in the post-pandemic classroom	Teacher survey Focus groups	Qualitative	Teacher responses about the next steps needed	Inductive coding and deductive coding of focus groups. inductive coding of Survey Items in Part 3-2, Triangulation

Table 2 lists the two instruments used to collect data for this research study. The survey and focus groups addressed all five research questions. The data from the open-response survey items and the focus groups helped give meaning to the survey Likert scale item results and clarified survey findings (Wolff et al., 1991).

Survey Overview

The survey checklist (Appendix B) created by Creswell and Creswell (2018) aided in the creation of the survey for this study. The survey (Appendix C) consisted of Likert scale items, open-response items, and select all that apply items on the impact of COVID-19 on student learning. The private County X teacher union Facebook page distributed the survey. After IRB approval, the County X teacher union local chapter reviewed and approved the survey for the social media site. The social media post with the survey link was active for 2 weeks, with reminders every 3 days encouraging teachers to participate in the survey.

Focus Group Overview

The focus group protocol (Appendix D) created by Creswell and Creswell

(2018) provided the format for the focus group outline (Appendix E) for this study. Two focus groups, elementary and secondary, were conducted following the survey. The focus groups used for this research included teachers who volunteered to be part of the focus group via the teacher survey. There were two teachers in the elementary mini focus group and three teachers in the secondary mini focus group. Questions were asked based on responses from the teacher survey that required more in-depth responses, such as negative student behaviors, social-emotional learning, and learning gaps. These focus groups took place via Google Meet before the end of the 2021-2022 school year. Each focus group lasted approximately 1 hour.

Validity

Field testing and pilot testing established validity for this study. Creswell and Creswell (2018) stated that pilot testing is crucial because it helps to establish the content validity and provides an initial evaluation and an opportunity to improve questions, format, and instructions. Field testing ensures the quality of the instrument (Hays & Brown, 2005).

Field Testing and Pilot Testing

The reliability of the instruments used for this research study utilized field and pilot testing. Field and pilot testing ensured alignment between the instrument and the research questions, clearly stated questions, and rewording of bias or leading questions.

Survey. Field testing occurred first, in which the survey utilized a sample of the target audience on the subject matter. Field testing is a strategy that selects a few individuals from the industry who provide feedback on the quality of the questionnaire or interview questions connected to the topic (Hays & Brown, 2005). Educators did field

testing outside of County X and with one teacher within County X who was not on either social media page, so no teacher was eliminated from potentially participating in the survey. There were two educators from each level (elementary and secondary). The field testing participants examined the questions and instructions for clarity and alignment to the research questions. Each field testing participant shared an individual copy of the survey instrument via a Google document. Participants provided feedback by typing in different colors directly on the survey instrument, including thoughts, questions, or alignment issues. I reviewed the feedback from each participant, and adjustments to the survey were made based on this feedback.

Pilot testing occurred following the completion of the field testing, and changes were implemented on the survey. Connelly (2008) stated that pilot testing is a small sample conducted prior to a larger study, and pilot testing can prevent major problems before the large study is completed. Pilot testing was necessary to establish the validity of the survey. Sincero (2012) stated that the advantages of conducting a pilot survey include determining the correctness of the instructions, determining the effectiveness of the questions in answering the research questions, and helping to eliminate unreliable results. Connelly stated that a study sample should be 10% of the anticipated responses for the parent study. For this reason, the pilot testing used 10 educators outside of County X, so no teacher was eliminated from participating in the parent study. Pilot testing also helped establish the amount of time it took for a participant to complete the survey.

Creswell and Creswell (2018) stated that field testing and pilot testing are important to establish the content validity of scores for the instrument because they provide an initial evaluation of the internal consistency of the items and help to improve

the format, instructions, and questions.

Focus Groups. Field testing of focus group questions utilized the same procedure. The individuals conducting the survey instrument field testing also evaluated the focus group instructions and questions. Each individual received a copy of the Google document. Field testing participants reviewed the focus group protocol to ensure clear instructions, question wordings, and alignment of the focus group questions to the research questions.

Participants and Research Population Sample

A convenience sampling of teachers from County X provided the participants for the study. The county served just under 162,000 students in 191 schools, and a sampling of teachers at each level across the entire county was possible due to the large number of teachers in the district. Some of the teachers who participated in the survey completed a Google form to indicate a willingness to participate in the focus groups following the completion of the survey. Teachers could choose to participate in the survey and the focus group, or they may have chosen to just participate in the survey or the focus group. The social media sites also provided recruitment for the focus groups after the survey instrument was closed using a Google form on the same social media sites.

Survey

For the survey, Graglia (n.d.) indicated that a population of 3,000 to 10,0000 would require 100 participants for a 10% margin of error. The private social media page used to gather participants represents 7,600 members from County X; however, not all members were current teachers in County X. Some may have moved to other counties, left teaching, retired, were not licensed, or were not teaching throughout the 2019-2022

school years and would therefore not meet the qualifications for participation in this research. An assumption was that at least 3,000 members were eligible to take the survey. Several steps ensured the 90% confidence level, including reminder posts every 3 days for 2 weeks. After 2 weeks, there were not enough responses to the survey, so a second social media site was utilized for 3 days to reach the minimum number of 100 survey responses. A more considerable margin of error of 10% was allowed due to the unknown number of qualified survey participants on the second social media site.

For the survey instrument, a total of 100 responses provided data. There were 51 elementary participants and 49 secondary participants.

The second social media site allowed educators across County X to participate in the survey with one access point. The sample of teachers was limited to those who were members of the private social media page. The state teacher union's private social media page solicited educators to participate in the survey and focus groups. Members in this large group (7,000+ members) included union and non-union members, teacher assistants, retired teachers, and education allies. The social media page shares educational information and political decisions that affect education (Page administrator, personal communication, October 18, 2021).

Mini Focus Groups

The mini focus groups consisted of two teachers for the elementary mini focus group and three for the secondary mini focus group. Krueger and Casey (2014) stated that the ideal size of a regular focus group is between five and eight participants; however, as participants have more expertise or may have strong feelings about a topic, the focus group size should be limited to five to six participants. Both the primary and secondary

social media sites elicited participation in focus groups. In the 24 hours prior to the scheduled focus groups, multiple participants withdrew their agreement to participate due to unforeseen circumstances. Though there were originally five participants in the elementary focus group and five participants in the secondary focus group, by the time the focus groups took place, there were two participants and three participants respectively. In order to maintain the integrity of the study and to respect the time of the participants who could attend, the mini focus groups were held at the originally agreed-upon time.

The Google form did remain posted on both social media sites, with posts every 3 days continuing to elicit participation up until the time of actual focus groups. The data analysis for a mini focus group does not differ from a full focus group, but the number of perspectives is limited. Krueger and Casey (2014) stated that the disadvantage of a mini focus group is that the total range of experiences is limited due to the smaller group size. Mini focus groups of two to five participants can be used when few participants come forward or are hard to reach (Nyumba et al, 2017). In a study conducted by Baptie et al. (2020), a mini focus group was conducted with two participants. Dilshad and Latif (2013) stated that mini focus groups can be used when the topic needs to be explored in greater depth where participants have substantial experiences to share in relation to the topic. Mini focus groups consist of individuals with a high level of expertise (Nyumba et al, 2017). All the teachers who participated in the mini focus groups taught through the beginning of the COVID-19 pandemic in the 2019-2020 school year in the same county through the return to in-person learning during the 2021-2022 school year, which qualifies them as having experience with the topic being addressed. . The mini focus

group can still provide rich and in-depth information since group dynamics are more relaxed, and all participants have an opportunity to share their experiences (DJS research, n.d.). The change to mini focus groups and the circumstances surrounding the smaller number of teacher participants is discussed in detail in the limitations section in Chapter 5.

Instruments

Both quantitative and qualitative data were collected through the teacher survey using the Qualtrics site. Survey items using a Likert scale and choose all that apply provided quantitative data, while open-ended items provided qualitative data. Focus group questions also provided qualitative data.

Survey

A survey collects information from a population sample and provides responses that explain the population's trends, attitudes, or opinions (Creswell & Creswell, 2018). Surveys are valuable to researchers because they are inexpensive, flexible in the delivery modes, and dependable if given anonymously (DeFranzo, n.d.).

The purpose of the survey for this study was to gather teacher perceptions on the positive and negative impacts on student learning during the COVID-19 pandemic. The survey method was the preferred method for this study due to the ability to collect a large sample of responses throughout County X in a short time. The survey was cross-sectional and was collected over 17 days. A 10% margin of error required 100 participants; the number of participants would increase to 370 to 385 to reduce the margin of error to 5%. The target audience from the social media page determined this participation number. While there were over 7,000 members of the social media site, not all members would

qualify to take the survey and were screened through the survey instrument to determine participation eligibility through a series of screening questions.

Convenience sampling gathered responses from two social media sites. Creswell and Creswell (2018) stated that convenience sampling utilizes participants chosen based on availability and convenience. Both social media sites were private groups specific to teachers and employees in County X. The survey did not include stratification except for identifying the level at which each educator taught. Creswell and Creswell stated that stratification requires that the characteristics of the population members are known to the specific characteristics represented in the sample population. Stratification was not used because each individual is part of a smaller school-based site, so the specific characteristics of the population are unknown. The characteristics of those who are members of the private social media site are unknown other than being an educator or ally in County X.

The first part of the survey consisted of four items that asked about participant teaching license status; at which level of education they taught during the 2019-2022 school years; and whether they taught in a physical classroom, remotely, or both to ensure each educator experienced the same change process during the COVID-19 pandemic. Participants checked each of the options applied to them for the screening questions. If they did not meet all criteria for participation, the survey ended for the participant. The second part of the survey focused on teacher perceptions of changes during the COVID-19 pandemic. This section addressed the positive and negative components in the classroom due to the pandemic that impacted teaching practices. The survey consisted of 15 Likert scale items, two “check all that apply” items, and six open-

response items. This part of the survey focused on the management, consequence, and collaboration stages of concern related to the change theory framework. Table 3 is an alignment table that shows the alignment of survey items regarding each research question and theoretical framework.

Table 3

Alignment Table for Survey Items

Survey item	Question	Change theory stage of concern
Items 1-4 (screening questions)	N/A	N/A
From 2019-2022, weekly updates and communication were shared between administration and staff concerning educational practices.	1	Collaboration
How did communication change at your site due to COVID-19? (open-ended)	1	Collaboration
From 2019-2022 academic collaboration with other teachers (PLCs, Special Ed, specialists, etc.) occurred regularly (at least weekly). (Likert scale)	1	Collaboration
How did academic collaboration change at your site due to COVID-19? (open-ended)	1	Collaboration
Parents better understand the role of the teacher due to COVID-19 (Likert scale)	1	Consequence
From 2019-2022 my general content delivery practice changed (Likert scale)	1	Management
In what ways did COVID-19 affect the way you deliver content to your students? (open-ended)	1	Management
Which of the following components is having a positive impact on student learning in a post-pandemic classroom? (Check all that apply)	1,2	Consequence
Which of the following components is having a negative impact on student learning in a post-pandemic classroom? (Check all that apply)	1,3	Consequence
My classroom management procedures are the same in the post-pandemic classroom compared to my pre-pandemic classroom (Likert scale)	1,3	Management/ Consequence
Describe any changes that have occurred with your in-person classroom management from 2019-2022 (open-ended)	1,3	Management/ Consequence
Technology integration in my classroom from 2019-2022 (Likert scale)	1,2	Consequence
Student time management skills from 2019-2022 (Likert scale)	1,3	Consequence
Student self-efficacy from 2019-2022 (Likert scale)	1,3	Consequence
Home and school communication from 2019-2022 (Likert scale)	1,2	Consequence
Student behavior (in-person teaching) from 2019-2022 (Likert scale)	1,3	Consequence

(continued)

Survey item	Question	Change theory stage of concern
Student self-confidence from 2019-2022 (Likert scale)	1,3	Consequence
Student to-student discourse from 2019-2022 (Likert scale)	1	Consequence
Student-to-teacher discourse from 2019-2022 (Likert scale)	1,3	Consequence
Learning gaps from 2019-2022 (Likert scale)	1,3	Consequence
Student dependency on technology from 2019-2022 (Likert scale)	1,3	Consequence
Student mental health from 2019-2022 (Likert scale)	1,3	Consequence
During the 2021-2022 school year, how did you address the negative components of COVID-19? (open-ended)	1,4	Refocusing
Moving forward, what positive components of the pandemic will you continue to use in your classroom?	1,5	Refocusing
Moving forward, what do you feel are the most important steps to take to overcome the educational disruption caused by the negative components of COVID-19? (open-ended)	1,5	Refocusing

Table 3 is an alignment table that shows the evaluation of the survey items, the research questions each survey item answered, and the change theory lens. To avoid framing the items in a leading way, the Likert scale items were designed for participants to rate each component on a scale from negative to positive using five categories. The first research question pertains to any changes in education overall, so general items that did not have a specific positive or negative component would fall under the first research question. Each item on the survey aligned with the collaboration, management, consequence, or refocusing stages of concern.

Hall and Hord (2020) described the management level as the change that comes with the beginning of implementation and how much time it will take to implement the change. The consequence level describes how the implementation will affect others. Lastly, the collaboration stage describes the ideas shared about implementation with

others. Survey items focused on the change from the 2019-2022 school years allowed survey participants to answer targeted questions about communication, academic collaboration, parent understanding of the teacher role, content delivery, and positive and negative components of the post-pandemic classroom. For each topic, Likert-based responses could range from strongly disagree to strongly agree.

The last section also consisted of three open-response items that allowed participants to elaborate on how change occurred from 2019-2022 and share their perceptions of what will come next in the post-pandemic classroom. This part of the survey focused on the refocusing stage of concern. Hall and Hord (2020) stated that refocusing allows for tweaking original implementations to improve the change. These questions helped the researcher obtain qualitative data about the current classroom experience and how change has positively and negatively impacted student learning. In addition, qualitative data collected on the survey helped determine if focus group questions needed to be adjusted to gain a deeper understanding of responses from the survey.

Focus Groups

Focus groups allow researchers to experience participant discourse through collective memories and shared knowledge that is not possible through individual interviews or observations (Kamberelis & Dimitriadis, 2005). Focus groups aim to obtain data from a specifically selected group to gain an in-depth understanding of social issues (Nyumba et al., 2017). In relation to this study, social issues include the perceptions and concerns teachers have in relation to change in education due to the COVID-19 pandemic. Survey instruments do not allow for recording interaction among participants

or for attitudes and/or feelings about the questions and topics to be shared, so focus groups helped gain further understanding of the current post-pandemic classroom. Focus groups also confirm survey results, help to elaborate, clarify survey findings, or suggest new explanatory categories unanticipated in the original research design (Wolff et al., 1991). Clinical Nursing (2016) also conducted an explanatory mixed methods design in which a behavior scale gathered quantitative data and two follow-up focus groups. At least two focus groups are needed to identify 80% of the themes within the data of varying focus group sizes (Guest et al., 2016). Two mini focus groups as well as open-ended response items on the survey provided qualitative data to answer all research questions in this study.

When conducting a qualitative interview or focus group, Creswell and Creswell (2018) suggested using an interview protocol for asking questions. Creswell and Creswell's sample interview protocol can be found in Appendix D.

The focus group protocol for this research can be found in Appendix E. Table 4 provides an alignment table that lists the focus group questions, the research questions, and the stage of concern that relates to each question.

Table 4

Alignment Table for Focus Group Questions

Focus group question	Research question	Change theory stage of concern
Can you describe your teaching position from the 2019-2022 school year, including the mode of instructional delivery during this time?	N/A	N/A
What changes have you noticed about your students this year compared to the 2019-2020 school year?	1,4	Consequence
What in your teaching practice has changed this year compared to the 2019-2020 school year?	4	Management and consequence
What is the most negative impact on student learning caused by the pandemic, and how are you addressing it?	3	Consequence/ refocusing
What is the most positive impact on student learning caused by the pandemic, and how?	2	Refocusing
What are the most important aspects of the post-pandemic classroom to focus on moving forward?	5	Refocusing

The focus group started with an opening question in which participants discussed their teaching position during the 2019-2022 school years, including the mode of instructional delivery. Creswell and Creswell (2018) stated the first question should have participants talking about themselves to establish comfort in the focus group setting.

The next section consisted of five content questions in which the focus group participants discussed changes they noticed in their students, positive and negative components that affected student learning, moving forward, and focusing on the most important aspects to focus on in the post-pandemic classroom.

The closing section of the focus group asked for any closing thoughts participants wanted to share regarding the impact of COVID-19 on student learning and permission to

follow up to clarify specific points if necessary. The closing assured them of their privacy, their right to withdraw their answers, and the plan to destroy the data.

Focus group participants were from different school sites within County X. There were not enough focus group participants after using the first social media site, so a second social media site for teachers in County X was used to solicit participation. The Google document used to solicit participants utilized both social media pages. The Google document remained posted, and reposts were made every other day, continuing to encourage participation until the scheduled focus groups. After 10 days, a few more participants were solicited, creating a group of five participants for each focus group; however, after scheduling the groups, two secondary and three elementary teachers dropped out as late as 1 hour before the scheduled time. The focus groups continued with a mini focus group to honor the time of those already committed, and a limitation of a smaller focus group was added to the study. When consent to participate in the focus group was obtained, meeting times that would work for all participants were found. Both focus groups used the Google Meet platform, and the meeting was recorded. Focus group interviews were transcribed for analysis. All data, including survey responses, focus group recordings, focus group transcripts, and all associated data analysis files will be deleted and destroyed after 3 years following the completion of the research. Federal regulations require researchers to keep data for 3 years after the completion of the research (University of Virginia, n.d.).

Data Analysis

Data were analyzed using different methods for the survey responses and the focus group responses. Quantitative data were analyzed using descriptive statistics and

the chi-square independence test, and qualitative data were analyzed using a thematic coding process.

Survey

For the survey portion of the research, Qualtrics (www.qualtrics.com) was used to collect the survey responses. Using inductive coding, Likert scale questions were presented through graphs while analyzing free-response questions for common themes.

Quantitative Survey Data. Data analysis for the open-ended response questions on the survey utilized inductive coding. Inductive coding does not start with preconceived codes in the data, but the codes emerge from the collected data. Using inductive coding when using a thematic analysis allows the researcher to identify, analyze, and report repeated patterns within the data.

The Likert scale items on the survey were presented in descriptive statistics using a table to show the number of responses for each category or a chi-square independence test. Using the chi-square independence test allowed for evaluation of elementary and secondary data. This test showed if there was a correlation between the level of teaching and teacher perceptions about changes that occurred during the COVID-19 pandemic. Analysis utilizing data tables and charts showed the distribution of responses for each question. “Select all that apply” questions were displayed in a chart to show the frequency of teachers who selected each option. A written narrative was included with each visual representation of the data to explain the data. The data were analyzed and interpreted to explain the meaning and importance of the data.

Qualitative Survey Data. Each of the open-response items on the survey was analyzed using inductive coding. The first step was to read through the data multiple

times. I took notes on keywords and phrases repeated in responses and created an initial set of codes in the Quirkos program. I highlighted each piece of data and did a drag and drop into the appropriate code. An "other" category contained items that did not fit a particular category. A table was created to display the codes generated and showed the response frequency for each code. A narrative explained the coded data.

Focus Groups

The elementary and secondary focus group data underwent a thematic analysis beginning with inductive coding. A second round of deductive coding utilized a priori codes related to the change theory theoretical framework. Kiger and Varpio (2020) stated that a thematic analysis could help identify the social, cultural, and structural components that may influence the experiences of an individual. The thematic analysis of both the elementary and secondary focus groups answered Research Question 1 regarding teacher perceptions of the overall impact of the COVID-19 pandemic on student learning. Kiger and Varpio also stated that an inductive approach to thematic analysis provides a broader and more expansive approach to the data because it is not limited to preconceived codes.

Kiger and Varpio (2020) outlined the six steps to performing a thematic analysis; the first step was to familiarize me with the data. In this step, I read through the qualitative data multiple times for each open-response question; I took notes on items of interest, questions, and possible connections present in the data to identify common keywords or ideas presented in the data. The second step was to generate the initial codes. In this step, I used my notes to generate the codes and put them into the Quirkos program. The Quirkos program organized the codes within the data; each code was a different color. I went through the data, highlighted the data pieces, and did a drag and

drop of the data into the code category with which it belonged. Generating new codes for data that did not fit the original codes allowed for organization for each piece of data. After completing all the coding, the third step was searching for common categories with the codes. Combining codes into common categories where the data were related showed how codes were related. In the Quirkos program, the code categories are moveable, so a map begins to take shape as codes are combined into common categories. The categories created a map, which provided a visual from which to identify a theme that explains the data. Kiger and Varpio stated that utilizing inductive coding occurs when the themes come right from the coded data so the categories align to the original data. The fourth step was to review the categories. In this step, Kiger and Varpio stated that there are two levels in the analytical process which include looking at the data in each category to determine the correct location for the data. The second level ensures that the individual themes are meaningful, and the categorical map represents the data set. The fifth step was to define and name the themes, which consists of examining the data to produce an abstract explanation. The last step was to produce the report. In this step, I created a table explaining how the codes, categories, and themes were related to each data set. I wrote the final analysis narrative and described the findings of the analysis. This procedure was done separately for each focus group.

The second round of coding for the focus group used deductive coding, which utilized a priori codes from the change theory theoretical framework. The codes used included collaboration, management, consequence, and refocusing. I went through the data, highlighted the data pieces, and did a drag and drop of the data into the code category with which it belonged. The data for each a priori code were examined to

connect this study to the theoretical framework and answer the research questions.

Triangulation

Triangulation of the quantitative and qualitative data compared the results of the survey instrument and the two focus groups. Triangulation is essential because it establishes the validity of the research results by combining data from multiple sources (Carter et al., 2014). The data from the survey and focus groups were combined to show the connections between the data, how the focus group data supported the survey data, and how the data presented answered the research question. Triangulation of the quantitative and qualitative data in narrative form provided a full analysis of data based on the research questions of this study.

Summary

Understanding teacher perceptions related to the change in the educational climate exposed challenges from the current school year and gathered perceptions on rethinking education moving forward. The explanatory sequential mixed methods study gathered qualitative and quantitative data on teacher perceptions. The survey instrument provided the initial data that informed the focus group questions. Chapter 3 provided the methodology for this research study. Chapter 4 presents the qualitative and quantitative data from the survey instrument and focus group interviews.

Chapter 4 Results

Introduction

The purpose of this research study was to gather teacher perceptions in County X about the changes caused by the COVID-19 pandemic that impacted student learning, understand how teachers were addressing those changes, and understand what teachers saw as the next best steps in addressing student learning disparities going forward into the 2022-2023 school year. Chapter 4 presents the data gathered from the survey and focus group instruments.

Research Questions

The following research questions guided this study:

1. What are teacher perceptions regarding the impact of the pandemic on students and education as a whole?
2. What are teacher perceptions of the positive changes caused by the COVID-19 pandemic that have impacted student learning?
3. What are teacher perceptions of the negative changes caused by the COVID-19 pandemic that have impacted student learning?
4. What strategies or approaches are teachers using to address the changes for the post-pandemic classroom?
5. What do teachers believe are the next best steps to address student learning needs in the post-pandemic classroom?

An analysis of responses to the survey items and focus group questions is in this chapter, along with the triangulation of both instruments.

Methods and Procedures

A survey gathered both quantitative and qualitative data from 100 qualified teacher participants. After the survey was complete, inductive coding and descriptive statistics were used to analyze the data. After the data analysis of the survey data, two focus groups (one elementary group and one secondary group) were conducted, which provided qualitative data to elaborate on the survey responses.

Study Participants

The survey was conducted anonymously from two popular social media teacher sites specific to County X. To qualify to take the survey and participate in the focus groups, teachers needed to be certified, work in County X from 2019-2022, have taught in both virtual and/or hybrid formats during the 2020-2021 school year, and have taught in person during the 2021-2022 school year. These sample selection criteria ensured that all teachers responding to the survey had experienced the same change event within the same county.

Data Analysis

Data from the survey were analyzed and presented using descriptive statistics and the chi-square independence test for quantitative data, while qualitative items were analyzed using inductive coding.

Each focus group underwent thematic analysis beginning with the first round of inductive coding. The second-round deductive coding was done using a priori codes related to the change theory theoretical framework, and themes were identified. Triangulation of the focus group data and the survey data was done by categorizing the data from the survey responses and the focus groups according to the research questions.

Triangulation of the survey, elementary focus group, and secondary focus group provided a comprehensive analysis to answer each research question. All data were presented based on the research question answered.

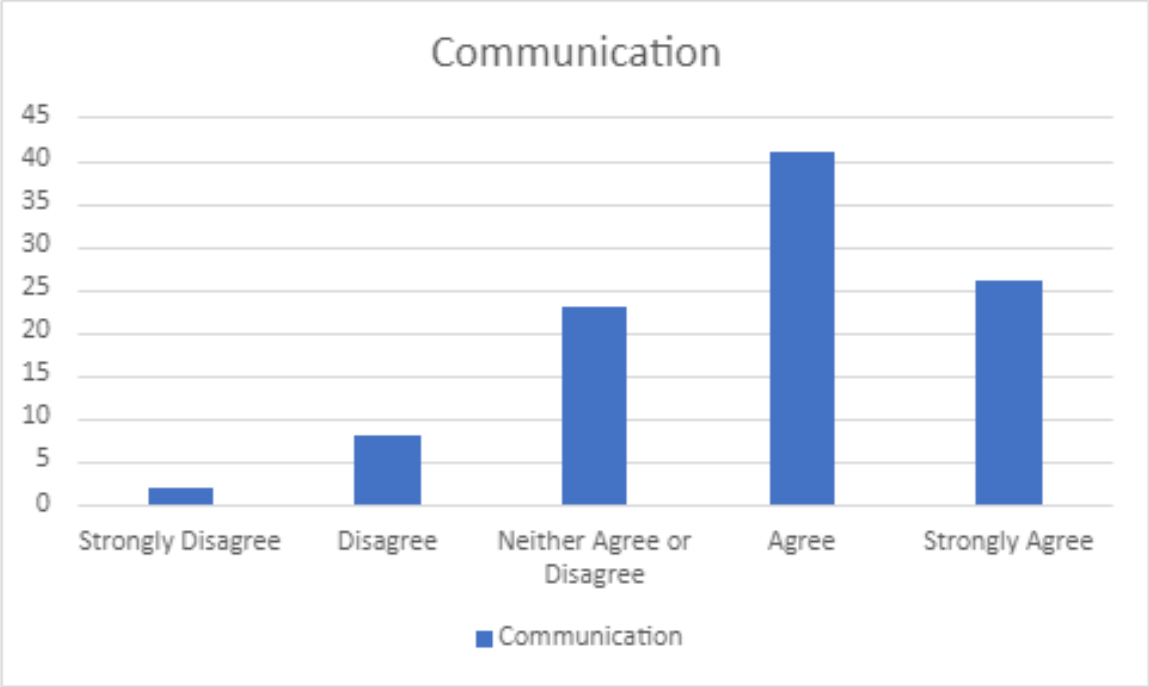
Research Question 1: What Are Teacher Perceptions Regarding the Impact of the COVID-19 Pandemic on Students and Education as a Whole?

The first research question was an overarching question that determined the overall change components that affected students and learning caused by the COVID-19 pandemic.

Survey. Many items in the survey addressed Research Question 1, including Part 2, Items 1-12 and 14-17. Question 1 asked teachers whether they agreed or disagreed with communication occurring weekly at their site, followed by an open-response question where teachers could explain the change. Teachers recorded their responses to this question from their experience from the 2019 school year through the 2022 school year. Figure 6 shows that teachers agreed that weekly communication occurred between administration and staff regarding educational practices.

Figure 6

Survey Question 1: Communication at Least Weekly Between Administration and Staff



*N=100

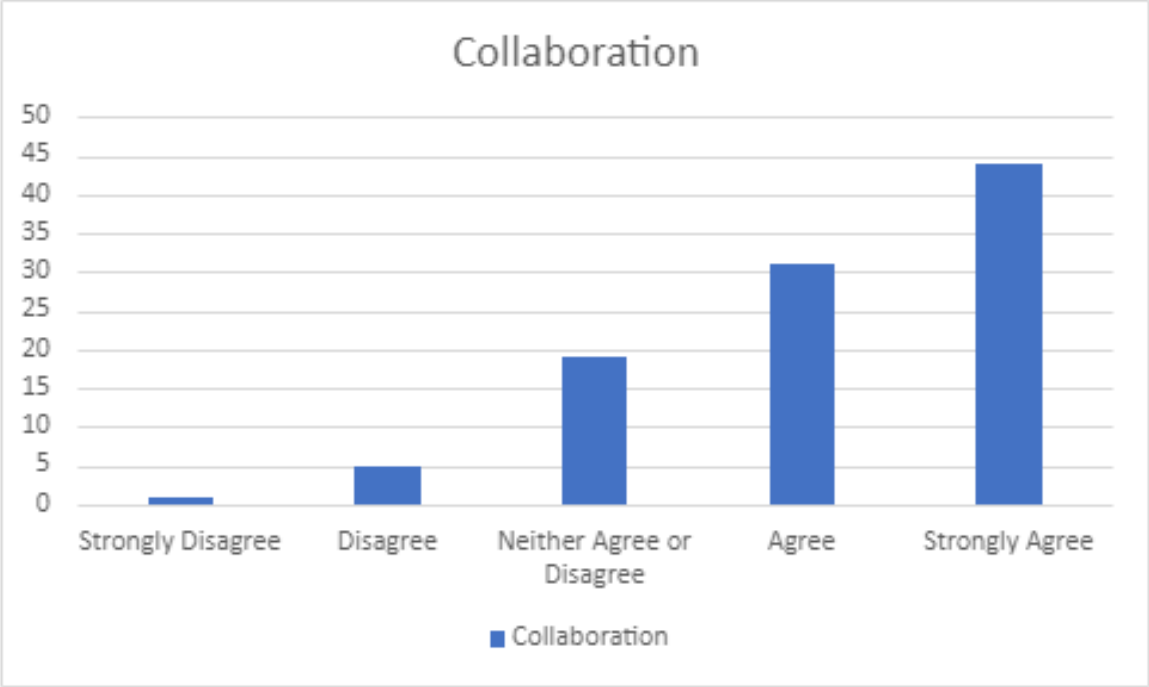
Sixty-seven percent of teachers agreed or strongly agreed that communication occurred at least weekly between staff and administration, while only 9% disagreed or strongly disagreed. There were 35 open responses given that further explained the data in Figure 6. The inductive coding of this question generated the following codes: more frequent communication (15 responses), increase in district communication (three), improved communication (two), daily communication (two), weekly communication (five), no change (three), in the dark (three), and decrease in communication (two). Of the 35 respondents who left qualitative answers for this question, 27 teachers stated that there was some sort of improvement or increase in the frequency of communication. The other eight responses noted no change, a decrease in communication, or feeling they were "in the dark." Overall, teachers felt that communication increased between administration

and staff, and these data showed that communication between administrators and staff frequently occurred.

The next question measured survey responses about collaboration occurring at least weekly. An open-response question followed in which participants could explain any change in the collaboration that occurred at their site. Figure 7 shows that overall, teachers agreed that from 2019-2022, academic collaboration with other teachers occurred at least weekly.

Figure 7

Survey Question 3: Collaboration at Least Weekly



*N=100

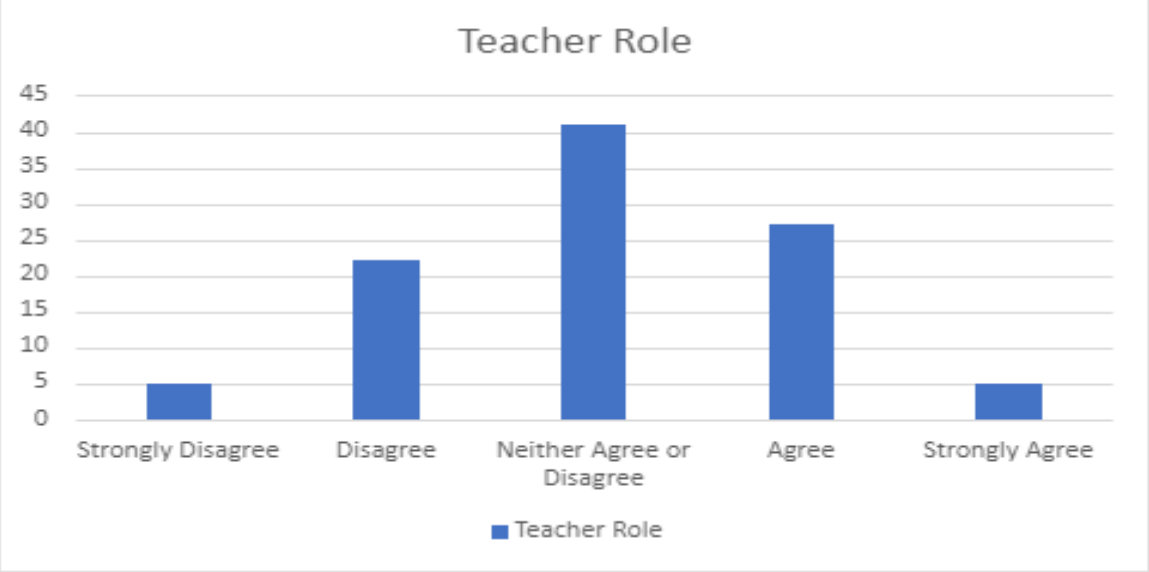
Seventy-five percent of teachers surveyed agreed that collaboration occurred at least weekly, while 6% disagreed. Inductive coding of the 30 qualitative responses from the open-response question regarding collaboration from 2019-2022 generated the following codes: met more frequently (11), decrease when returning to in-person (two),

virtual collaboration (eight), collaboration was only within professional learning communities (six), decreased collaboration during virtual (one), collaboration shifted from data to virtual teaching methods (one), and collaboration was harder during virtual learning (one). The qualitative data supported teachers who met more frequently during virtual teaching. However, some teachers expressed a decrease in meetings since returning to in-person teaching during the 2021-2022 school year. These data showed that collaboration between teachers was occurring, but the frequency and content of those collaboration meetings may have shifted from 2019-2022.

Survey Question 5 asked teachers whether they felt parents better understood the teacher's role, followed by an open-response question for participants to explain their thoughts. Figure 8 shows the breakdown in responses regarding teacher perceptions of parents better understanding the teacher role.

Figure 8

Survey Question 5: Parents Better Understand the Teacher Role



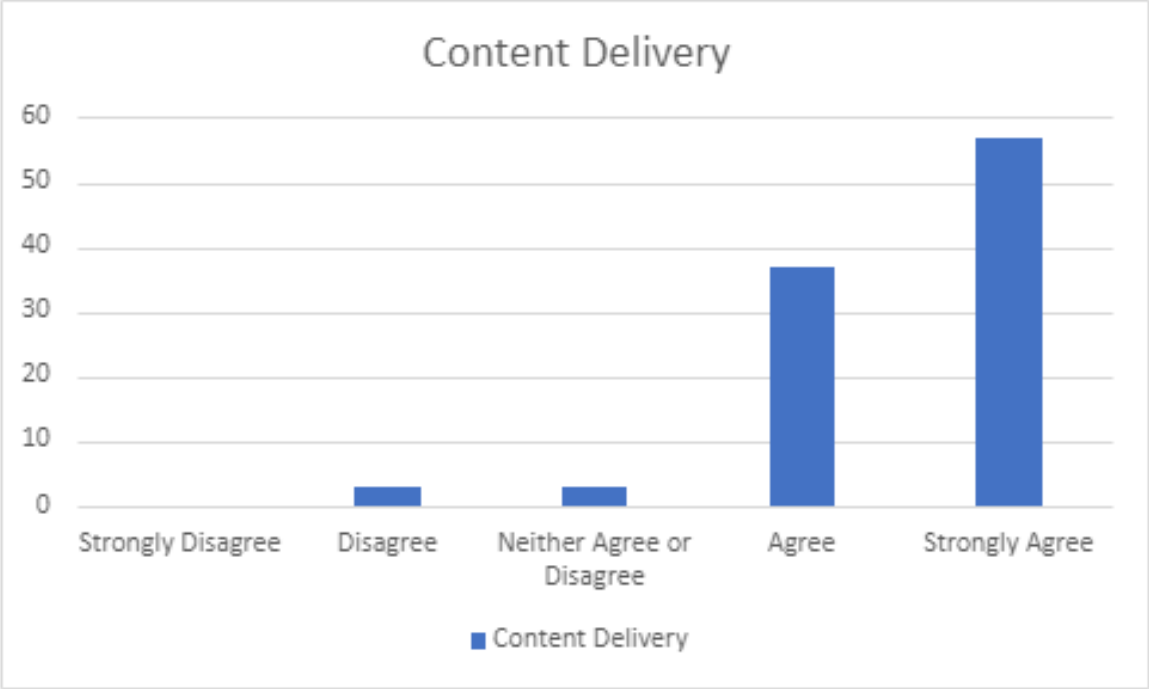
*N=100

Thirty-two percent of teachers agreed, while 27% of teachers disagreed. Most responses fell in the neither agree nor disagree category. There were 26 open-response comments about parents understanding the teacher's role. The inductive coding of these data created the following codes: parents saw and heard what we do (10), parents became a teammate (five), demanding or less understanding of the role (four), parents were more appreciative (two), parents were more engaged (two), parents did not understand the full role (two), and parents felt they could be the teacher (one). The responses of teachers who felt that parents understood the teacher's role better were due to those parents becoming a partner in their child's learning, and those parents were more appreciative and engaged during the virtual setting. These data showed that overall, teachers did not perceive those parents had a better or worse understanding of the teacher's role due to the COVID-19 pandemic, and teachers perceived that the parent understanding of the teacher role has not changed in the 2021-2022 school year compared to the 2019-2020 school year. This response was due to some teachers perceiving that parents understood what their child was doing but not the whole role of the teacher, which included planning, creating, and transforming lessons for the virtual setting.

Survey Question 7 measured whether teachers felt their content delivery had changed. Figure 9 shows the breakdown of responses regarding a change in content delivery.

Figure 9

Survey Question 7: Content Delivery



*N=100

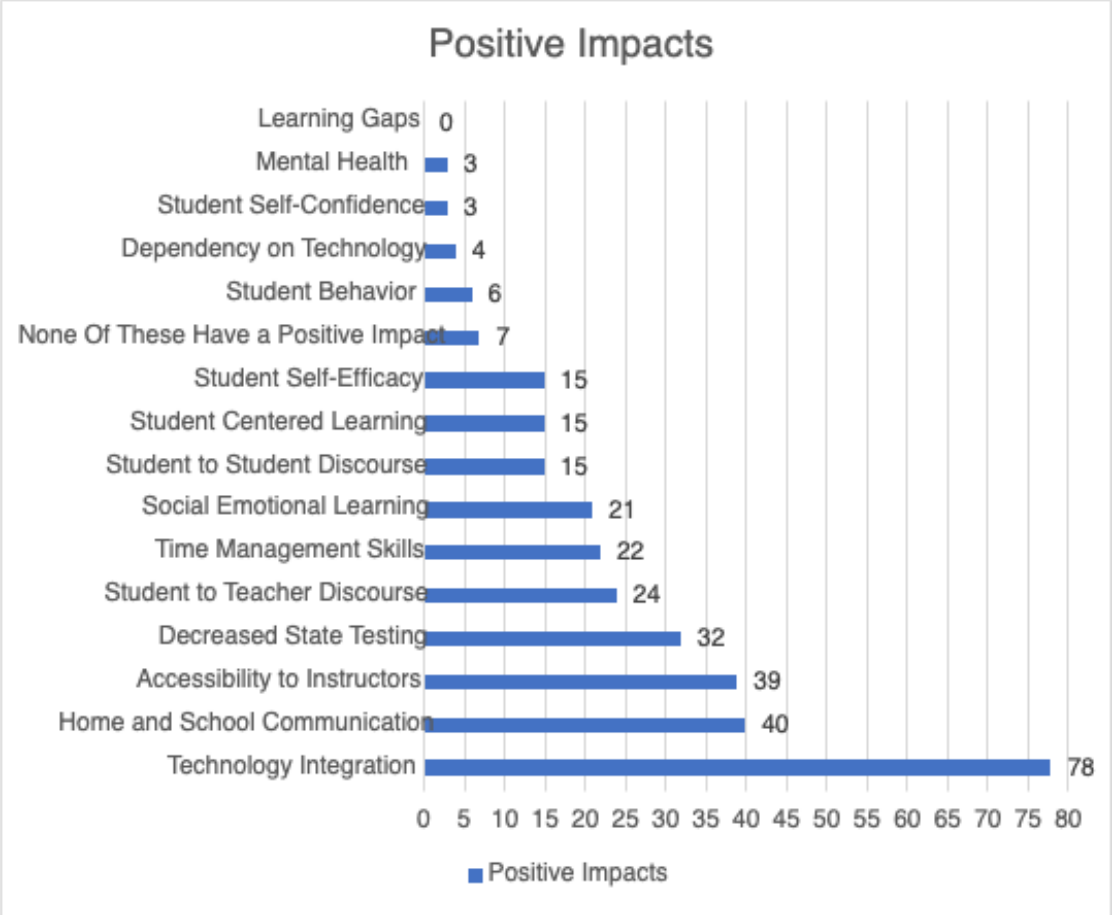
Ninety-four percent of teachers agreed that their content delivery changed, while 3% of teachers stated that their content delivery did not change. There were 32 open-response comments in which teachers responded about how their content delivery had changed from 2019-2022. The codes generated from this data set included incorporating technology into lessons (17), continuing to use learning management systems such as Google Classroom and Canvas (nine), and no change in content delivery (three). Other responses included decreasing the amount of content taught (one), a more observational gathering of data versus pencil and paper (one), and a focus on applying concepts over memorizing content (one). Overall, these data represented that technology and the use of learning management systems have changed how teachers deliver their content in the 2021-2022 school year compared to the 2019-2020 school year. These data were

important to show that the content delivery has changed from the 2019-2022 school years, and teachers did not just return to what they were doing during the 2019-2020 school year.

The next question was a “check all that apply” question in which teachers could choose all the positive impacts of the COVID-19 pandemic on student learning. Figure 10 represents the chosen positive impacts of the COVID-19 pandemic, and the impacts listed mirrored the literature review.

Figure 10

Survey Question 9: Check All Positive Impacts on Student Learning



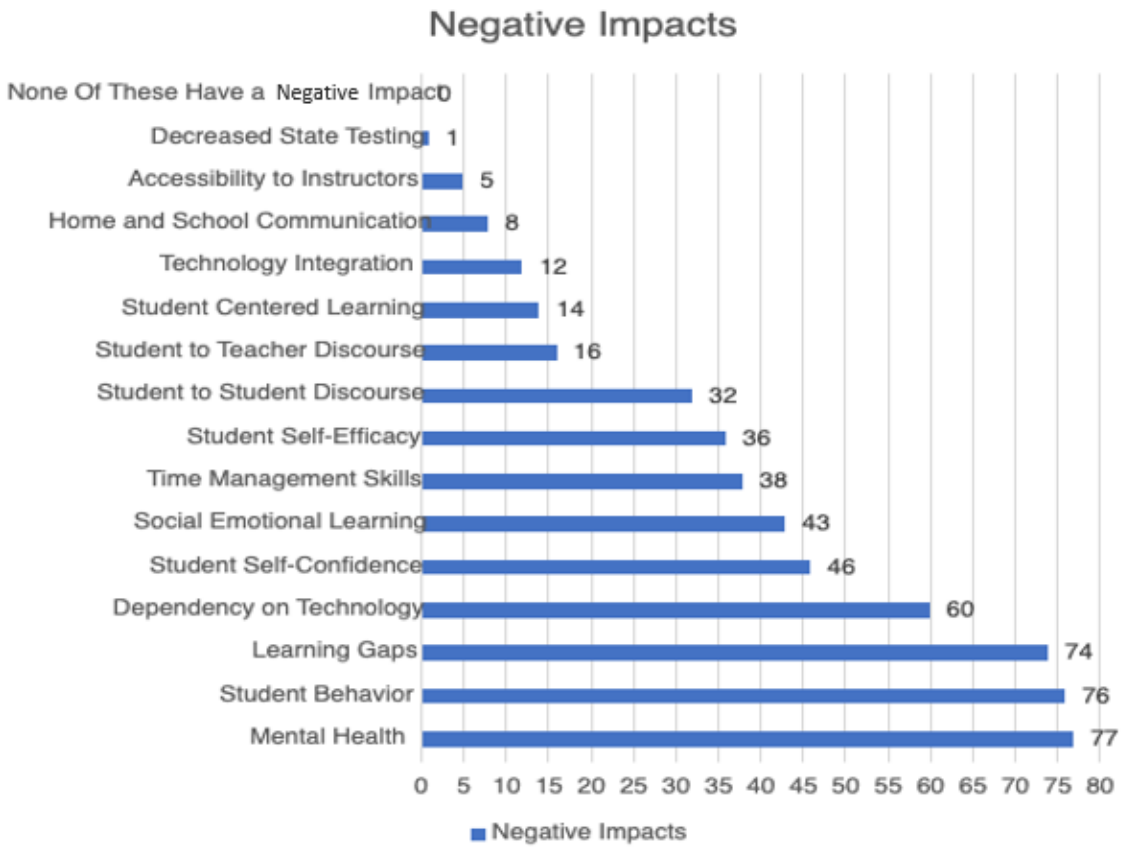
Teachers indicated the top positive impact on student learning was technology

integration (78 responses), followed by home and school communication (40 responses), and accessibility to instructors (39 responses). These data showed the positive impacts on student learning that assist teachers in managing students in the 2021-2022 classroom. The literature review also indicated that many teachers would continue to use technology implementation tools (Schaffhauser, 2021), and home and school communication (Osborne, 2021) were positive impacts of the COVID-19 pandemic on student learning.

Survey Question 11 was also a "check all that apply" question in which teachers could choose all the negative impacts of the COVID-19 pandemic on student learning. Figure 11 represents the chosen negative impacts of the COVID-19 pandemic.

Figure 11

Survey Question 11: Check All Negative Impacts on Student Learning



Overall, the top three negative impacts on student learning caused by the COVID-19 pandemic were mental health (77 responses), student behavior (76 responses), and learning gaps (74 responses). Other frequently checked selected negative impacts included dependency on technology (60 responses), student self-confidence (46 responses), and social-emotional learning (43 responses). These data were vital to understanding the current climate in the 2021-2022 classroom and the impacts that impede instructional time so programs and solutions can be put into place moving forward into the 2022-2023 school year.

Each of the impacts listed in Figure 10 and Figure 11 was broken down and analyzed using the chi-square independence test to determine if grade levels, elementary or secondary teachers, were independent of one another. If they are independent, that impact is specific to that educational level. In contrast, if they are not independent, that impact is general to education at every educational level. Table 5 shows the chi-square data and whether the difference between elementary and secondary had a significant difference. A significant difference, a chi-square value less than 0.05, would indicate an independence.

Table 5

Chi-Square Data

Topic	Chi-square value	Significance
Technology integration	0.366	Not significant
Student time management skills	0.113	Not significant
Student self-efficacy	0.125	Not significant
Home and school communication	0.458	Not significant
Student behavior	0.008	Significant
Student self-confidence	0.088	Not significant
Student-to-student discourse	0.593	Not significant
Student-to-teacher discourse	0.267	Not significant
Learning gaps	0.425	Not significant
Student dependency on technology	0.010	Significant
Student mental health	0.417	Not significant

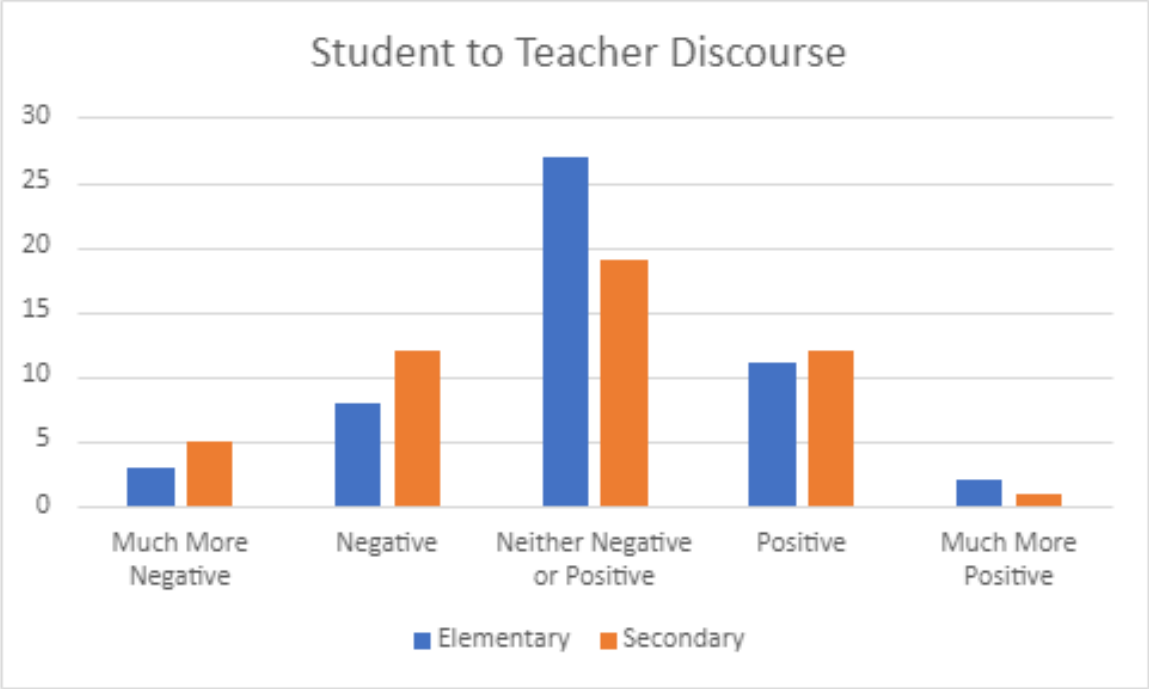
The chi-square test utilized two degrees of freedom and an alpha level of 0.05. Two rows (elementary and secondary) and three columns (negative, neutral, positive) were used to calculate the degrees of freedom utilizing the formula df=(r-1) (c-1). Therefore, df=(2-1) (3-1)=2. An alpha level of 0.05 means there is a 5% risk of concluding that there is an association between the variables when there is no actual association. If the *p* value is less than 0.05, the result is significant. The chi statistic number tells how much difference there is between elementary and secondary responses. The 11 items from the survey on the topics are in Table 5 with the specific research question they addressed (positive or negative impact). There was one exception for student-to-teacher discourse since responses showed neither a positive nor a negative impact. Student behavior and dependency on technology significantly differed between elementary and secondary responses. For each of these, the secondary teachers indicated that student behavior and student dependency on technology negatively impacted student learning when comparing students from 2019 to 2022. The elementary teacher responses

to student behavior and student dependency on technology had neither a negative nor positive impact on student learning, indicating that behavior and student dependency on technology are specific to secondary teachers.

Student-to-teacher discourse was the only impact that was neither positive nor negative. Figure 12 shows the breakdown between elementary and secondary teacher responses.

Figure 12

Survey Question 15b: Student to Teacher Discourse



*N=51 elementary teachers, 49 secondary teachers

Overall, 46% of teachers indicated that student-to-teacher discourse was neither positive nor negative, while 28% indicated a negative and 26% indicated a positive impact. The chi-square *p* value for this question was 0.26, which indicated no significant statistical difference between the responses. This statistic shows that the data collected for this question is an independent, normal response distribution between elementary and

secondary teachers in response to student-to-teacher discourse, which means it is not specific to either elementary or secondary. These data showed the COVID-19 pandemic has not impacted student-to-teacher discourse.

The survey data related to the first research question revealed that overall communication has occurred at least weekly. Many respondents indicated communication improved; collaboration between teachers continued weekly; overall, parents understood the role of the teacher better during the 2021-2022 school year; and technology was being incorporated more in the way teachers delivered their content during the 2021-2022 school year. The top three positive impacts affecting student learning in the 2021-2022 school year included technology integration, home and school communication, and accessibility to instructors. The top three negative impacts affecting student learning in the 2021-2022 school year included mental health, student behavior, and learning gaps. The focus group data present the qualitative data about the first research question and elaborate on the findings of the survey data.

Elementary Focus Group Inductive Coding. The focus group responses were analyzed using an inductive thematic process. Table 6 shows the codes, categories, and themes identified from the data set. The quotes in Table 6 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 6

Inductive Coding Thematic Analysis of Elementary Focus Group

Supporting quote examples (participant)	Words/phrases to create the code	Codes (frequency)	Category	Theme
“They all have anxiety because all of what was being held back last year to ease them back in, it’s hitting them like a ton of bricks and little third graders have all this anxiety. They're being diagnosed with anxiety.” (1) "On the social-emotional end, it's we don't know how to play together at recess its somebody says something, and you just scream in their face." (2)	Social-emotional /outbursts/stress/ anxiety/mental health/neg behavior Developmental delays/ lacking skills Remove activities/ slow learning pace/ Lack of parental involvement/ responsibility	Social-emotional/ mental health needs (5) Developmental delays (3) Slower learning pace (2) Lack of parental involvement (2)	Student changes Negative impacts	Stalling educational progress
"I have had to be a lot more hands-on. Working with young children, you're hands-on anyway, but I feel like even more individualized attention is needed" (2)	Smartboard/Google Classroom More hands-on/ individual attention	More technology integration (2) More individualized attention (2)	Teaching practices	New teaching practices
"I will say that virtual IEP meetings. That has been positive for parents" (1)	Virtual meetings Family engagement	Virtual meetings (1) Family engagement (1) Other (2)	Positive impacts	
"I did ask for an additional support person, and I was told that there wasn't enough funding, so if anybody wants to do anything, it's starting to give more money so that we can have a little bit more support in the classroom" (1)	Additional staff, support person, Money/funding Educators involved in state decisions Time to plan Flexibility Importance of education/self-motivation	Additional staff (4) Funding (2) Educators involved in state decisions (1) Time to plan (1) Flexibility (2) Teach the importance of education and self-motivation (2)	Political/ state solutions School-based solutions	Moving educational progress forward

N=2 participants

Table 6 shows the data obtained from the elementary focus group. Fifteen codes organized the data. These codes were generated from multiple data readings, taking notes, and identifying common words. Common words or phrases were pieces of data that were repeated multiple times; these common words or phrases were written down and tallied to indicate the number of times they appeared in the data set and helped to establish the initial codes. The common words and phrases created the codes utilized in the coding process. These codes were entered into the Quirkos program, data were highlighted by color according to their code to enable sorting, and each piece of data moved into the appropriate code. In Table 6, the common words are listed next to each code so you can see how I organized the pieces of data into each code.

Following the data movement into the codes, I analyzed the codes for similarities or connections, and I merged them into common categories that explained an overarching idea. Categories were organized to identify three major themes in the data, stalling educational progress, new teaching practices, and moving educational progress forward.

Stalling Educational Progress Theme. This theme encompasses teacher perceptions of the consequences of the COVID-19 pandemic that are stalling educational progress. I created the student changes category by combining the social-emotional needs/mental health, developmental delays, and slower learning pace codes because each of these topics was specific to the changes that occurred with students only and did not include teaching methods. Student changes represent teacher perceptions of student differences during the 2021-2022 school year compared to students prior to the COVID-19 pandemic. Lack of parental involvement was a standalone negative impact on the data.

The student changes category and the negative impacts categories were used to

create a theme of stalling educational progress. Student changes and negative impacts were getting in the way of the teachers' abilities to deliver content to all students, slowing down the progress of closing the learning gaps created by the COVID-19 pandemic.

Stalling educational progress is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *social-emotional learning, stress, anxiety, outbursts,* and *negative behaviors.* These words created the codes that were combined into the categories of student changes and negative impacts which both describe the theme of stalling educational progress. For example, one question that was asked during the focus group was, “What changes have you noticed about your students this year compared to the 2019-2020 school year?” P1 stated, “They’re all being diagnosed with anxiety” and “You can tell their emotional needs are much greater than in years past”; while P2 agreed and stated, “On the social-emotional end, it’s we don’t know how to play at recess” and “I’m dealing with some aggressive behaviors.” Other changes that were noted in the focus group included developmental delays. P2 stated, “They have developmental delays; they don’t have the skills you would expect them to have.” P1 responded, “Yes, I’m dealing with students who are developmentally preschoolers.” Another question that was asked that related to this theme was, “What is the most negative impact on student learning caused by the pandemic?” P1 stated, “lack of parent responsibility, parents are not engaging with their kids”; P2 stated, “I agree. For us kids who struggled academically anyway lack parental support, especially our ESL students who were not in the building and did not have someone speaking English with them all

the time has widened the gap." Both categories of student changes and negative impacts caused by the COVID-19 pandemic are affecting the ability of teachers to progress with students academically.

New Teaching Practices Theme. This theme encompasses teacher perceptions on teaching practices that began due to the COVID-19 pandemic and are continuing in the post-pandemic classroom. The second set of codes included more technology integration and individualized student attention, which combined into the teaching practices category since both codes changed how teachers delivered their content. I combined the virtual meetings and family engagement codes and labeled them positive impacts, as these codes are changes in education that positively impacted teaching practices in the 2021-2022 school year. These two categories, teaching practices and positive impacts, were combined to create the theme of new teaching practices. The new teaching practices theme explained how teachers managed the impacts of the COVID-19 pandemic and encompassed both categories of the changes that occurred with teaching practices and the positive impacts during the 2021-2022 school year.

New teaching practices is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *technology, Smartboard, Google Classroom, hands-on, family engagement, virtual meetings,* and *home-school connections.* One question I asked that related to the theme of new teaching practices was, "What do feel was the most positive impact on student learning caused by the COVID-19 pandemic?" P1 responded, "the family engagement that was going on" and "that home-school connection." P2

responded, “Right! Virtual IEP meetings have been a positive for parents.” P1 responded back, “I think that virtual meetings as a whole, have had a positive impact.” The other question that related to this theme was, “What in your teaching practice has changed this year compared to the 2019-2020 school year?” P2 stated, “I have to be a lot more hands-on,” and “I have to give even more individualized attention.” P2 responded, “I agree with being more hands-on. I use more technology and way less paper!” P1 responded, “Yes! That’s how we made it through teaching simultaneously in person and online. I still use my Smartboard for circle time and to keep me on track throughout the day.” Both categories of teaching practices and positive impacts explain some of the new teaching practices that have resulted due to the COVID-19 pandemic.

Moving Educational Progress Forward Theme. This theme encompasses teacher perceptions of how to improve educational progress in the post-pandemic classroom. The third set of codes included additional staff, funding, educators involved in state educational decision-making, time to plan, flexibility, and teaching students the importance and value of education to increase self-motivation. I combined these codes into either political or state-based solutions and school-based solutions. The state-based solutions were out of the control of the specific school site and County X since many of the solutions involved funds and additional personnel. The other category consisted of solutions capable of implementation at the school level. These two categories were combined, and I created the theme of moving educational progress forward. This theme encompassed all the perceptual data the elementary focus group participants provided to explain what was needed to address the impacts of the COVID-19 pandemic in the post-pandemic classroom.

Moving educational progress forward is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *additional staff, support person, money, funding, educators involved in state decisions, time to plan, flexibility, importance of education,* and *self-motivation.* For example, the one question I asked that related to this theme was, "What do you think are the most important aspects related to student learning to focus on moving forward and how would you address it?" P1 stated, "Students need to be self-motivated. I can't beg your kid to do the work I know they are capable of," and "it's important to show the value of an education and how students have career goals and why education is important to reach those goals." P2 stated, "I agree. Parents need to be active participants in their child's education so they can see the educational value." I asked a follow-up question in response to the first question that was, "Do you feel like you need more support?" P1 stated, "I did ask for an additional support person and was told there wasn't enough funding." P2 responded, "We need decision makers who are connected to the classroom," and

> If we are mental health, if we are the food bank, if we are the psychologist, if we are all these things, fund us like we are all of these things so we can do it well and we can take care of students like we need to.

P2 added,

> Along the lines of delegating money as a society, we need to be going back to funding things appropriately and that way we can be doing what we need to be doing, teaching children, and society needs to kind of take a step back and [not]

having so much input into what's happening in schools.

Solutions to move educational progress forward need to happen at both the school level and the state level.

The identification of the three themes helps to explain the answer to the first research question. Overall, the COVID-19 pandemic has created a post-pandemic classroom climate in which educational progress is stalled due to changes in the student and the negative impacts of the pandemic. Despite the challenges, teachers are incorporating new teaching practices into their lessons. In order to move educational progress forward into the post-pandemic classroom, the levels of school, county, and state need to intervene and ensure roadblocks are removed to support student success. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Elementary Focus Group Deductive Coding. The second level of data analysis of the elementary focus group responses used a deductive thematic process using a priori codes related to the change theory levels of use. The a priori codes used were based on the specific change theory levels of use, which are collaboration, consequence, management, and refocusing. Consequence, management, and refocusing codes are explained and paired with the research question they specifically addressed later in Chapter 4. Collaboration has an overall impact on student learning since it is not positive or negative and is therefore presented with Research Question 1 as an overall educational impact.

Collaboration. The collaboration code included any collaboration between staff and parents within the school. The keywords and phrases identified through the notes I

took on items of interest, questions, and possible connections were used to code data to the collaboration code. Words and phrases that were used to code collaboration included *engagement, worked together/with,* and *talked to*. The collaboration code included collaboration between teachers, collaboration between guidance counselors and administrators, and collaboration between teachers and parents. Both teachers agreed that at the beginning of the 2020-2021 school year, family engagement was happening more substantially than ever. COVID-19 remote learning was when teachers and families worked together to engage in their child's education. One teacher even went on home visits as the "book fairy" to deliver books to students each month. P2 stated, “It was a family experience and to me that was positive,” and “the family engagement that was going on was great.” Another form of collaboration noted in the focus group was a collaboration between the guidance counselor and principal to bring a program focused on social-emotional learning to the school. P1 stated, “Our guidance counselor found the program and worked with the principal to have our entire school use the program.” This program was used in every class to address social-emotional learning gaps caused by the COVID-19 pandemic during the 2021-2022 school year, but one teacher only indicated the usage of the program.

Secondary Focus Group Inductive Coding. The first data analysis of the secondary focus group responses utilized an inductive thematic process. Table 7 shows the supporting quotes of the themes found concerning the overall impact of the COVID-19 pandemic on student learning. The quotes in Table 7 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 7

Inductive Coding Thematic Analysis of the Secondary Focus Group

Supporting quote (participant)	Words/phrases to create the code	Codes (frequency)	Category	Theme
“They have not developed any of the skills that they need for organization, like even homework they rarely had that in elementary and in math that's not something I give a lot of, once a week, and still they had no concept of homework and practicing and getting into some sort of structure to” (1)	Behavior/mental health/needy/ Student burnout Lacking skills Cell phones/earbuds Apathy/ Cheating	Behavior (6) Student burnout (1) Lacking skills (3) Technology dependency (3) Apathy (2)	Student changes	Stalling educational progress
"One thing that I thought is having an impact is the absence of teachers with as many openings that are across the county with teachers covering other teachers, and as he said with teachers leaving" (3)	Challenged/ upset/burnout/ absence of teachers/	Teacher burnout (6) Loss of instructional time (2) Absence of teachers (2)	Negative changes to teaching	
"I think everything is digital, like I said earlier. More of the google classroom platform to put all my notes and videos if they miss a lesson. All assignments, labs, we have virtual labs now, and I take advantage of those" (3)	Technology/ digital resources/ virtual/ accessibility/ Google Meets	Digital resources (2) Edtech (3) Virtual meetings (2) Accessibility to resources (3) Accessibility to instructors (2)	Teaching practices Accessibility	New teaching practices
I hope that we have more structure and rules, maybe we could have a group that uses restorative justice to have the students meet and try not to suspend”	Structure/rule Social-emotional learning Programs/tutorials/ after school	Structure and behavior rules (2) Social-emotional focus (1) Tutorials/after school programs (1)	School-based solutions	Moving educational progress forward

(continued)

Supporting quote (participant)	Words/phrases to create the code	Codes (frequency)	Category	Theme
"I do think that funding things and having availability for some of these kids to get the support they need would be a big piece of it" (1)	Funding/funds/ Money Old habits Reform	Funding for staff (3) Funding for programs (2) Content reform (1)	Political/ state-based solutions	

N=3

Table 7 shows a sample of the data collected from the secondary focus group. Nineteen codes organized the data. These codes were generated from multiple data readings, taking notes, and identifying common words. Common words listed in the data created codes found in Table 7. The codes were entered into the Quirkos program, and each piece moved into the appropriate code. Following the data movement into the codes, codes merged into common categories.

Stalling Educational Progress Theme. This theme encompasses the teacher perception of the consequences of the COVID-19 pandemic that are stalling educational progress. Theme 1 included the following: the behavior, student burnout, lacking skills, technological dependency, and apathy codes combined into the student changes category. Student changes represent teacher perceptions of student differences during the 2021-2022 school year compared to students prior to the COVID-19 pandemic. Teacher burnout, loss of instructional time, and absence of teacher codes combined negative changes to the teaching category. The student changes category and the negative changes to teaching categories were used to create a theme of stalling educational progress. Student changes and negative changes to teaching are getting in the way of the teachers' abilities to deliver content to all students, slowing down the progress of closing the learning gaps created by the COVID-19 pandemic.

Stalling educational progress is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *behavior, mental health, student burnout, needy, skills, cell phones, earbuds, apathy, cheating, technology dependency, teacher burnout, challenged, upset,* and *absence of teachers.* For example, one question that was asked during the focus group was, "What changes have you noticed about your students this year compared to the 2019-2020 school year?" P3 stated, "We're still working on behavior right now, they want to drift to the computers, they want to be on the computers or their phone." P1 stated, "I agree they want to be on their phones or if they are on the computer they want to go to games." P1 also stated, "They have not developed the skills they need for organization," and "they are a lot more needy this year." P2 agreed with P1 that they were needy and added, "Their social well-being was affected, and another negative is the whole cheating aspect too." Another question I asked was, "What is the most negative impact on student learning caused by the pandemic and how are you addressing it?" P1 stated, "Behavior is worse probably all around the country." P3 stated, "I agree. They get really upset by social media...they are unkind to each other, and they don't know how to talk and react with other kids." P2 agreed with the other participants and stated, "Behavior was worse when they came back for a variety of reasons; administration says their hands are tied and it's taking away from instructional time." Another discussion that arose from this question was about negative changes that occurred to the teaching practice which included teacher burnout and the absence of teachers. P1 stated, "There is a lack of teachers now and I just feel like in our school we

have a lot of hats to wear, and I'm overwhelmed with work, it's not that I don't know how to do it, it's just so much more involved." P3 agreed and stated, "One thing that I thought is having an impact is the absence of teachers with as many openings that are across the county," and "I'm not just a teacher anymore I'm a counselor, intervention specialist, an aunt to some of these students and I just don't know I'm so overwhelmed with it all." Impacts caused by the COVID-19 pandemic are a roadblock that hinders teacher and student success in the post-pandemic classroom.

New Teaching Practices Theme. This theme encompasses teacher perceptions on teaching practices that began due to the COVID-19 pandemic and are continuing in the post-pandemic classroom. Theme 2 included the following: digital resources, EdTech, and virtual meeting codes combined into the category of teaching practices since all of these codes changed how teachers delivered their content. Accessibility to resources and accessibility to instructor codes were combined and labeled accessibility, as these codes are changes in education that improved accessibility of instructors and materials to students and parents in the 2021-2022 school year. These two categories, teaching practices and accessibility, were combined to create the theme of new teaching practices. The new teaching practices theme explains how teachers manage the impacts of the COVID-19 pandemic and encompasses both categories of the changes that occurred with teaching practices and the positive impacts during the 2021-2022 school year.

New teaching practices is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *technology, digital resources, virtual, accessibility,* and

Google Meets. For example, one question I asked that related to the theme of new teaching practices was, “What do you feel was the most positive impact on student learning caused by the COVID-19 pandemic?” P3 stated, “Google Meets have allowed me to meet with students this year that were home sick with Covid, so they have accessibility to me even when they are not in school.” P2 responded, “You said accessibility to you, and I would say accessibility of materials. I have all of the materials online, but I don’t feel like they take advantage of it they will email me and ask instead of looking online.” P1 responded, “Yes, meetings in general, like IEP meetings is better for parents to do the virtual meeting versus having to physically come in.” P2 stated, “I think everything is digital, more of the Google Classroom platform to put all of my notes and videos if they miss a lesson. All assignments, labs, we have virtual labs now and I take advantage of those.” Another question I asked was, “What in your teaching practice has changed this year compared to the 2019-2020 school year?” P2 stated,

> We transformed all our documents into digital, new lesson plans, we used a lot of Pear Deck and Nearpod, and then a lot of virtual labs we have never done before, and now teaching in person after that experience, we do a lot of a mix of everything.

P1 responded, “I agree, I’ve kind of taken a little bit of the virtual instructional methods so I do a little bit of the virtual along with the curriculum that we have been given.” P3 stated,

> I have a little bit more digital resources now because I have explored Delta Math and I’ve explored Pear Deck and Desmos. I just have a lot more things that I go to know that I’ve never used before, so I have more accessibility to all those things.

This theme represents the changes that occurred with teaching practices that have been positive in the post-pandemic classroom. The use of virtual platforms allows for accessibility to both materials and instructors, while utilizing EdTech tools has increased the tools teachers are using in the classroom.

Moving Educational Progress Forward Theme. This theme encompasses teacher perceptions of how to improve education progress in the post-pandemic classroom. Theme 3 included the following: structure and behavior rules, social-emotional focus, and tutorials/after-school program codes, which were combined to create the school-based solutions category. Funding for staff, funding for programs, and content reform codes combined into the category of political or state-based solutions. These two categories were combined to create the theme of moving educational progress forward. This theme encompasses all the perceptual data the secondary focus group participants provided to explain what was needed to address the impacts of the COVID-19 pandemic in the post-pandemic classroom.

Moving educational progress forward is a theme that emerged from the focus group data. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. I coded words and phrases that related to this theme such as *structure, rules, social-emotional, programs, after-school tutorials, funding, funds, money, old habits,* and *reform.* For example, the one question I asked that related to this theme was, “What do you think are the most important aspects related to student learning to focus on moving forward, and how would you address it?” P3 responded, “I hope we have more rules and structure.” P2 responded, “I remember when we came back, they said they were going to make sure

social-emotional was a priority, but we have done nothing." P1 stated, "I think none of this will change unless we are funded better." P2 responded, "I do think funding things and having availability for some of these kids to get the support they need would be a big piece of it." P3 agreed and stated, "I just feel that there should be some programs or something in which counselors reach out to these specific students, maybe have a mentoring group or something." P1 stated,

> We need to focus on getting money. If we had money, we could do so much just getting extra teachers in the classroom to support kids, to support the social-emotional, because I will tell you there is so much going on with these kids, there is so much underlying, they just need help with intervention classes.

P2 added,

> They need to reform it all. These millions of math notebooks are not what my students need. They need to reform education. They need to give us guidance but give flexibility to teach our kids and not a box of kids.

Reinstating structures and rules along with access to funding to support programs and hire teachers for interventions will help teachers to support students moving forward into the 2022-2023 school year.

The identification of the three themes for the secondary mini focus group helps to explain the answer to the first research question. Overall, the COVID-19 pandemic has created a post-pandemic classroom climate in which educational progress is stalled due to changes in students and negative impacts of the pandemic. Despite the challenges, teachers are incorporating new teaching practices into their lessons and have increased the accessibility of materials to students and access to the instructor outside of the normal

in-person class. In order to move educational progress forward into the post-pandemic classroom, the levels of school, county, and state need to provide structure to address behavioral issues and provide funding to support programs and staff which will allow for student support and success in the post-pandemic classroom. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Secondary Focus Group Deductive Coding. The second data analysis of the secondary focus group responses utilized a deductive coding process using a priori codes related to the change theory levels of use. The consequence, management, and rethinking a priori codes will be discussed later in Chapter 4 when the research question they specifically support is addressed. The collaboration a priori code is an overall impact caused by the COVID-19 pandemic and therefore is explained here, attached to Research Question 1.

Collaboration. The collaboration code included any collaboration that occurred within the school between staff. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used for the collaboration code. The keywords and phrases that were used for this code were *relationships, worked together, discussed,* and *shared responsibilities.* Participants discussed having better relationships with their colleagues and feeling more part of a team. One participant stated,

> I feel like I have better relationships with the teachers; during the pandemic, we formed a "we are in this together we are on this ship that is sinking together," and so we formed these bonds, and now in-person teaching I feel like I have that accessibility with teachers and feel like I'm part of the team and it's pretty

awesome.

Another participant discussed much collaboration during virtual learning, and P2 stated, "As a team, we worked together more because we had to be on the same page." When the team returned to in-person learning, they still collaborated, keeping the foundation the same in every class, but they were within a few days of each other lesson-wise.

Overall, collaboration occurred during the virtual teaching period of the COVID-19 pandemic, and teachers continue to collaborate with one another in the post-pandemic classroom. Collaboration during the change caused by the COVID-19 pandemic is part of the theoretical framework where those undergoing the change share ideas about the change and discuss possible solutions. Teachers collaborated with one another to ensure they were on the same page and deepened their relationships with each other.

Triangulation. The initial coding of the data between the elementary and secondary focus group data revealed very different initial codes, except the solutions teachers perceived were needed to move forward into the 2022-2023 post-pandemic classroom. While the initial codes were different due to the different challenges faced by the different levels of students, the categories created were very similar. Elementary teachers perceived a lack of social-emotional learning as a negative impact, while secondary teachers focused on behavior. Teachers from all levels discussed student changes and negative teaching practices impeding educational progress. In addition, teaching practices and positive impacts/accessibility were measures teachers adopted to manage within the 2021-2022 classroom. Utilization of the same themes occurred for the elementary and secondary focus groups.

Triangulation of qualitative data from the survey and focus groups combined

qualitative and quantitative data. Overall, teachers agreed that communication occurred at least weekly regarding educational practices between administration and staff. This was supported through the qualitative responses on the survey indicating there was a need for communication due the changes caused by the COVID-19 pandemic.

Collaboration also occurred weekly according to the survey results, and teachers supported the need for collaboration due to the change from in-person learning to virtual, and then back into the classroom. The participants in the secondary focus group supported the survey data and also indicated that their team collaborated more and was teaching the same content on the same day.

Ninety-four percent of teachers agreed or strongly agreed that their content delivery practices changed from 2019-2022. This was supported by the open-response items on the survey and by participants in both focus groups. Responses from the survey and the focus group cited incorporating technology into their lessons more and utilizing EdTech tools and digital platforms they had used during virtual learning.

Teacher perceptions of parents understanding the role of the teacher better had a range with most teachers choosing that they neither agreed nor disagreed that parents had a better understanding of the teacher role. The elementary focus group also noted that parent engagement during the 2020-2021 school year positively impacted the COVID-19 pandemic but that the parent engagement has not continued during the 2021-2022 school year. Both positive and negative components affect student learning, and those results are discussed in Research Questions 2 and 3.

Research Question 1 Answer. Overall, communication continues to occur weekly between administrators and staff, and teachers continue to collaborate within their

professional learning communities at least weekly. Content delivery has changed in the 2021-2022 school year. Teachers perceived the top three negative impacts on student learning as mental health, behavior, and learning gaps. Teachers indicated the top positive impacts on student learning were technology integration, home and school communication, and accessibility to instructors.

These data supported that the 2021-2022 classroom students have changed compared to the 2020-2021 students. Elementary teachers see learning gaps in social-emotional behavior, while secondary teachers see an increase in negative student behaviors. Teachers at all levels have changed their teaching practices and have increased their technological integration. To support students in the post-pandemic classroom, teachers need assistance from both local and state levels to ensure funding for programs to support students and hire more staff to address the needs of the students.

Research Question 2: What Are Teacher Perceptions of the Positive Changes Caused by the COVID-19 Pandemic That Have Impacted Student Learning?

The second research question focused on components in the post-pandemic classroom that positively impact student learning. Both the survey and the focus group data answered this research question. The following data relate to the positive impacts in the post-pandemic classroom.

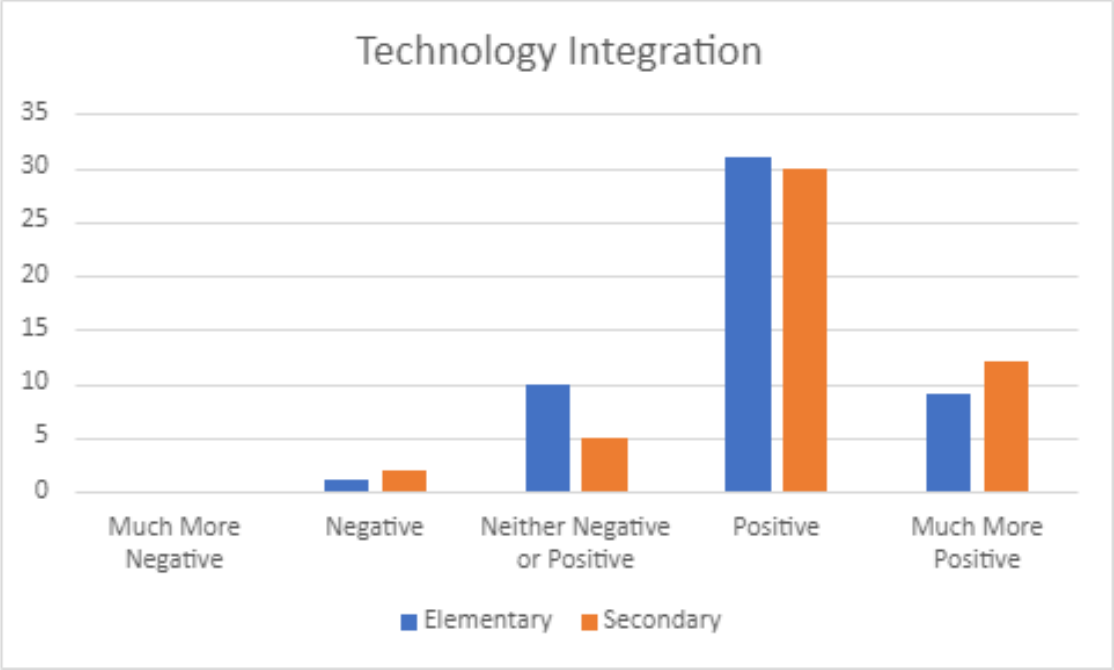
Survey. Teachers rated the change that occurred in their classroom from 2019-2022 on the impacts listed in the "check all that apply" items found in Figure 11 and Figure 12 with Research Question 1. The Likert scale answers ranged from much more negative to much more positive. A chi-square test was performed on each question to determine if there was a significant correlation between the grade levels. The breakdown

of the impact of each change on elementary and secondary teachers and the chi-square independence test for each question showed the positive impacts on learning. Statistical significance compared the critical and statistical values and determined whether the responses were independent or dependent (Creswell & Creswell, 2018). Since there was mostly an even split in responses from elementary and secondary teachers, it did not matter how many responses there were for each level if the independent expected value for each category (strongly agree, agree, neutral, disagree, strongly disagree) was more than five for at least 80% of the categories and all categories being more than one (McHugh, 2013). Since the expected value was not achieved, the responses in the categories of strongly agree and agree were combined. The categories of strongly disagree and disagree were combined since some levels contained no responses for some items. Combining the categories allowed all categories to have at least one response and more than five responses for at least 80% of the categories. Ensuring these minimum number of responses are met allows for the chi-square test to be run and ensures that there were enough responses for each group.

One impact teachers indicated was a positive impact on student learning was technology integration. Figure 13 shows the breakdown between elementary and secondary teachers regarding technology integration.

Figure 13

Survey Question 13a: Technology Integration



*N=51 elementary teachers, 49 secondary teachers

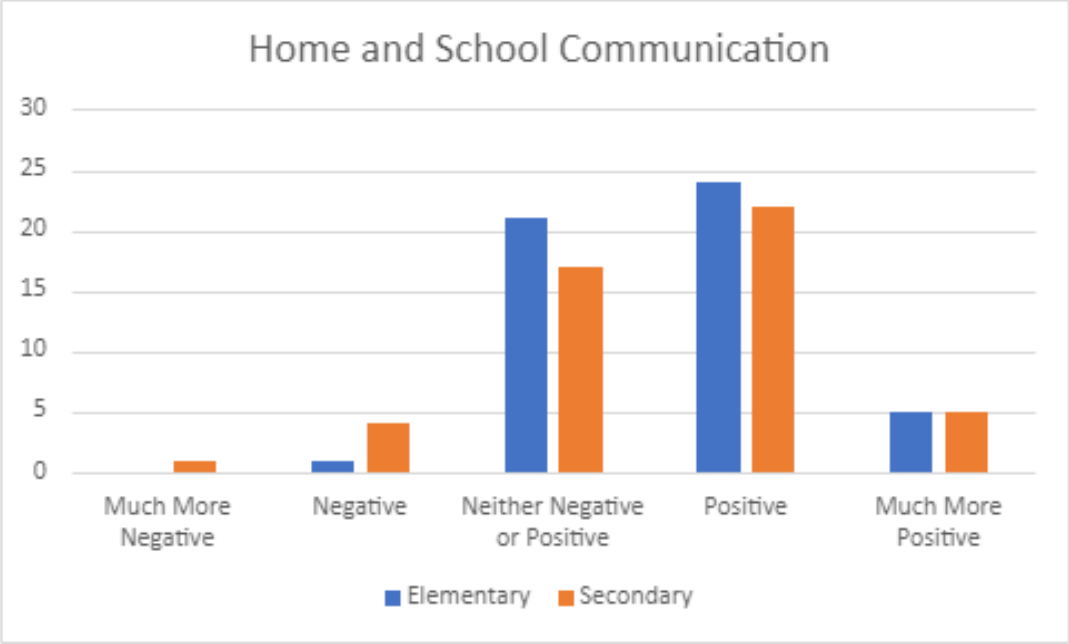
Both elementary and secondary teachers indicated that technology integration from 2019-2022 has impacted student learning much more positively. Seventy-eight percent of elementary teachers and 86% of secondary teachers indicated that the impact of technology integration has been positive or much more positive.

The chi-square *p* value for this question was 0.36, indicating no significant statistical difference between the responses. These data showed that secondary teachers agreed that technology integration positively impacted student learning.

Home and school communication was another positive impact on student learning caused by the COVID-19 pandemic. Figure 14 shows the breakdown between elementary and secondary teachers regarding home and school communication.

Figure 14

Survey Question 14a: Home and School Communication



*N=51 elementary teachers, 49 secondary teachers

The chi-square test on the impact of home and school communication utilized two degrees of freedom and an alpha level of 0.05. The chi statistic number tells how much of a difference between elementary and secondary responses. If the *p* value is less than 0.05, the result is significant, indicating that the response distribution depends on the impact of home and school communication. The chi-square *p* value for this question was 0.45, indicating no significant statistical difference between the responses. These data showed that both elementary and secondary teachers agreed that home and school communication positively impacted student learning.

Elementary Focus Group Inductive Coding. The first data analysis of the focus group responses utilized an inductive coding process. The positive impact codes utilized came from multiple focus group questions, including questions about the positive

impacts, changes to instruction, and refocusing. Table 8 presents supporting positive quotes from elementary teachers. The quotes in Table 8 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 8

Elementary Supporting Quotes for Positive Impacts on Student Learning

Supporting quote	Code	Focus group participant
"I can say that the one thing we can never get back is the family engagement that was going on."	Family engagement	1
"Virtual IEP meetings. For parents, it has been a positive. I just had one that went on for 2 and a half hours, and it really shouldn't have, but the dad was able to work that entire time."	Virtual meetings	2

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. The positive impacts code used the following words and phrases: *family engagement, positive, virtual meetings,* and *home-school connection.* For example, I asked participants, “What do you feel was the most positive impact on student learning caused by the pandemic?” P1 stated, “Families saw the importance of being with their child’s teacher so that was a positive that was amazing.” P2 stated, “Virtual meetings as a whole have been positive, both IEP meetings and staff meetings.” P1 responded, “Yes, the flexibility of virtual meetings and my principal has been great about letting us telework on workdays we don’t need to be in our room.”

The positive impacts discussed included a shift to virtual IEP (individualized education plans for special education students) meetings and family engagement during virtual learning, which has not continued into the 2021-2022 school year. Virtual IEP

meetings offered parents flexibility and teachers the ability to hold meetings during the school day rather than always having them after school. Family engagement during the virtual period created a solid home-school connection, but when students returned to school during the 2021-2022 school year, this same support from parents did not continue. The next section utilized a priori codes to connect the data to the change theory theoretical framework

Elementary Focus Group Deductive Coding. The second data analysis of the elementary focus group responses utilized a deductive coding process using a priori codes related to the change theory levels of use. The consequence code identified consequences caused by the COVID-19 pandemic educational disruption.

Consequences. The consequence code includes data in which teachers perceived the COVID-19 effects on student learning and teaching. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the consequence code. For the consequences code, the words or phrases that showed a change were put into this category since this shows the consequence caused by the COVID-19 pandemic compared to the 2019-2020 school year. Some of those words are *more, less, compared to,* and *improve.* For example, P1 stated, "I got Google Certified, and I did a bunch of extra things to improve." P2 stated, "I definitely use more technology; I use Google slides to keep me in check throughout the day and go through our schedule and share the slides with the kids, so they know what is coming up," and "I was comfortable with technology before, but I definitely use it more for the kids than I did before."

The consequences a priori code for this research question focused on the positive

consequences that arose from the change in education caused by the COVID-19 pandemic. Two positive consequences discussed were an increase in teaching skills, such as becoming Google certified and more comfortable with educational technology, and the ability to hold virtual meetings with parents.

Secondary Focus Group Inductive Coding. The first data analysis of the focus group responses used an inductive coding process. The positive impact codes utilized were from multiple focus group questions, including questions about the positive impacts, changes to instruction, and refocusing. Table 9 presents the secondary positive quotes from teachers on student learning impacts. The quotes in Table 9 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 9

Secondary Supporting Quotes for Positive Impacts on Student Learning

Supporting quote	Words/phrases used to create the code	Code	Focus group participant
"I've taken some of the virtual instructional methods and incorporated them into the curriculum."	Google classroom/ canvas/online labs	EdTech	1
"We do a mix of traditional teaching with a lot of the materials we created digitally, we keep in the virtual labs for students who are absent and in-person labs, but we used Google Classroom, and everything is turned in digitally."	Digital resources/	Digital resources	3
"Accessibility of teachers to students, I think, is something that personally I feel like I'm more accessible for my students than I was before with Google Meets, I can be there for them, and accessibility of the materials and everything they need if they are out, they can catch up and be on time with everything. Pre-pandemic, if you were out, you would be super behind, but now students have that advantage of the materials being available."	Material and instructor accessibility	Accessibility	3

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. For the positive changes code, the following words were used to identify data for this research question: *positive, more, less, transformed, virtual, changed, digital,* and *accessibility.* For example, I asked participants, “What is the most positive impact on student learning caused by the COVID-19 pandemic?” A positive change to teaching practices discussed

by participants was accessibility, accessibility of both the teacher to the students and also material accessibility to students. P2 stated, “I have only one, accessibility of teachers to students. I feel like I’m more accessible for my students than I was before with Google meets and I can be there for them.” P1 responded, “You said accessibility to you, and I would say accessibility of materials.” Another positive change discussed was those better relationships formed with other teachers during the COVID-19 pandemic. Teams had to work together to be on the same page because students were constantly moving from in-person to online, so all materials were shared, and the foundation was the same in each class. P3 stated, “We are sharing everything.” P1 stated, “We formed these bonds and now in-person teaching, I feel like I have that accessibility with other teachers.” The other discussion about positive student changes was increased technological skills. Students can navigate Google Classroom, turn in assignments, and use digital tools much better than before the COVID-19 pandemic. P3 stated, “I’ve noticed how their use of technology has increased as well and submitting stuff through Google Classroom, and just being able to do a lot of research on their own has been a positive.”

Teachers identified accessibility, co-worker bonds, and technology integration as positive impacts caused by the COVID-19 pandemic. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Secondary Focus Group Deductive Coding. The second data analysis of the secondary focus group responses used a deductive coding process using a priori codes related to the change theory levels of use. The second a priori code was consequence. This code identified consequences caused by the COVID-19 pandemic educational disruption.

Consequences. The consequence code includes data in which teachers perceived the COVID-19 effects on student learning and teaching. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the consequence code. For the consequences code, the words or phrases that showed a change were put into this category; some of those words are *more/increased, less/ decreased, compared to,* and *improve.* Consequences included both positive and negative impacts on student learning; however, this research question focuses on the positive consequences. Positive student consequences of the COVID-19 pandemic included an increase in student technology skills and an increase in their social willingness to become part of clubs and participate in groups. P3 stated, "I've noticed that students are more willing to get in clubs and participate in group activities," and "their use of technology has increased."

For teachers, the positive consequences included accessibility of teachers to students using Google Meets and accessibility of materials for students using Canvas or Google Classroom.

Triangulation. Triangulation of qualitative data from the survey and focus groups combined with the quantitative data collected. The positive impacts of the COVID-19 pandemic included communication, technology integration, home and school communication improvement, and accessibility to teachers and materials.

The most positive impact on student learning from 2019-2022 was technology integration, indicated by 82% of teachers who agreed that it was a positive or a much more positive impact on student learning. The elementary and secondary focus groups both supported the survey results and indicated that technology integration had a positive

impact on student learning and that student skills with using technology had improved. Technology integration was a big piece of the theme of new teaching practices. In the focus groups, a conversation about how technology provided accessibility to instructors and materials was noted as a positive impact.

Another positive impact noted by teachers was improved home and school communication. The survey results showed that overall, both elementary teachers perceived home and school communication as either being neither positive nor negative or positive. Many teachers in the survey agreed that communication between school and home had a positive or much more positive impact on student learning. In the elementary focus group, a discussion about the relationships that were formed during the virtual teaching period supported the positive change in home and school communication.

The survey revealed that other positive aspects of the change caused by the COVID-19 pandemic were decreased state testing and improved student-to-teacher discourse. These two topics were not discussed in either focus group.

Research Question 2 Answer. Teachers perceived that during the 2021-2022 school year, technology integration, home and school communication, and accessibility positively impacted student learning in the post-COVID-19 pandemic classroom. Teachers credited technology integration to changes in their teaching practices and cited using more EdTech tools, a continuation of learning management platforms, and the creation of digital materials. During the 2019-2021 school year, communication between home and school was vital as parents navigated virtual and hybrid educational environments. Home and school communication improved, and teachers perceived this to impact student learning positively. Lastly, teachers perceived accessibility as having a

positive impact on student learning. Teachers discussed accessibility to teachers through the use of virtual meetings, accessibility to materials through the use of learning management systems, and accessibility to technology.

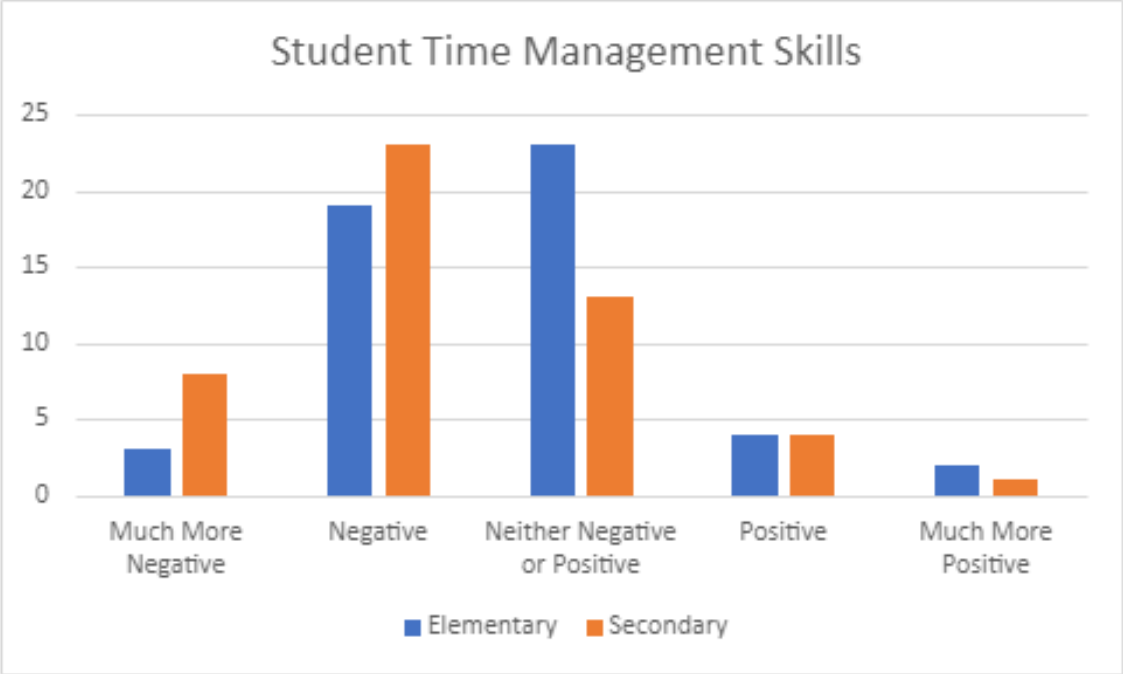
Research Question 3: What Are Teacher Perceptions of the Negative Changes Caused by the COVID-19 Pandemic That Have Impacted Student Learning?

Teachers rated the change that occurred in their classroom from 2019-2022 on the impacts listed in the "check all that apply" items found in Figure 11 and Figure 12 with Research Question 1. The Likert scale answers ranged from much more negative to much more positive. A chi-square test was performed on each question to determine if there was a significant correlation between the grade levels. The data tables show the breakdown of the impact of each of the changes by elementary and secondary teachers and the chi-square independence test for each question concerning the negative impacts on learning. Statistical significance compared the critical and statistical values and determined whether the responses were independent or dependent (Creswell & Creswell, 2018). There was a mostly even split in responses between elementary and secondary teachers on the survey; however, the combination of responses went from five categories into three (negative, neutral, and positive). Combining the categories allowed all categories to have at least one response and more than five responses for at least 80% of the categories to ensure enough participation from each group.

Teachers perceived student time management skills as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 15 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student time management skills from 2019-2022 caused by the COVID-19 pandemic.

Figure 15

Survey Question 13b: Student Time Management Skills



*N=51 elementary teachers, 49 secondary teachers

Forty-one percent of elementary teachers and 63% of secondary teachers perceived student time management skills as having a negative or much more negative impact on student learning.

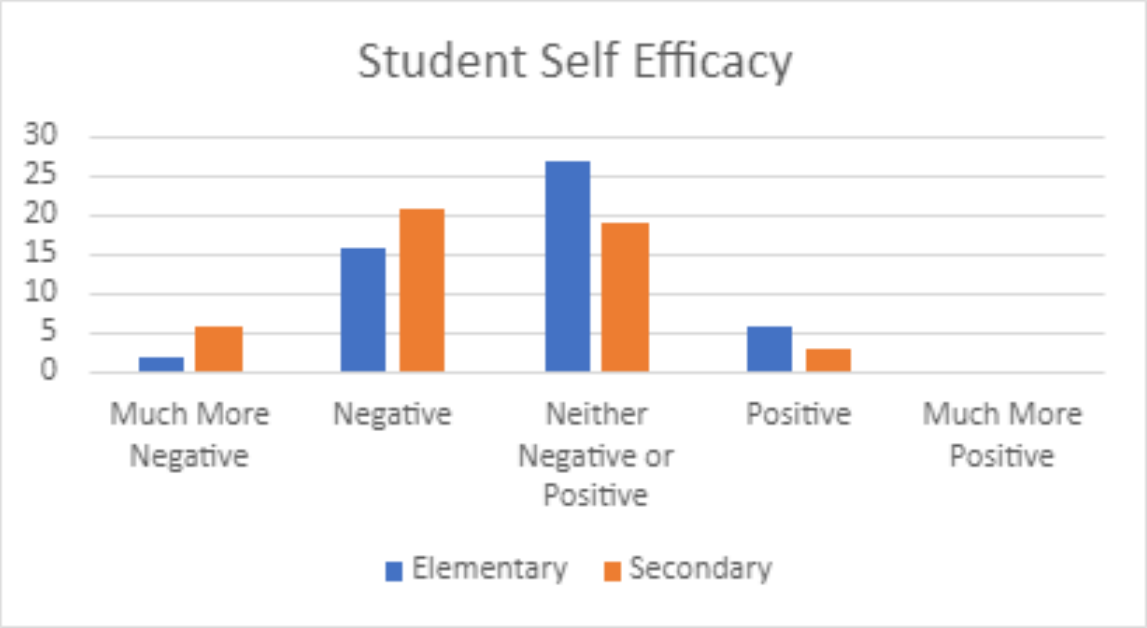
Using the chi-square test on the student's time management skills responses resulted in the chi-square *p* value for this question being 0.11, indicating no significant statistical difference between the responses. Both elementary and secondary teachers agreed that student time management skills had a negative impact on student learning. These data were important to understand the teacher perceptions of some student changes that occurred from 2019-2022. Student time management is a change that both elementary and secondary teachers perceive as negatively impacting student learning.

Teachers perceived student self-efficacy as having a negative impact on student

learning caused by the COVID-19 pandemic. Figure 16 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student self-efficacy from 2019-2022 caused by the COVID-19 pandemic.

Figure 16

Survey Question 13c: Student Self-Efficacy Likert



*N=51 elementary teachers, 49 secondary teachers

Thirty-five percent of elementary teachers and 55% of secondary teachers perceived student efficacy as having a negative impact on student learning.

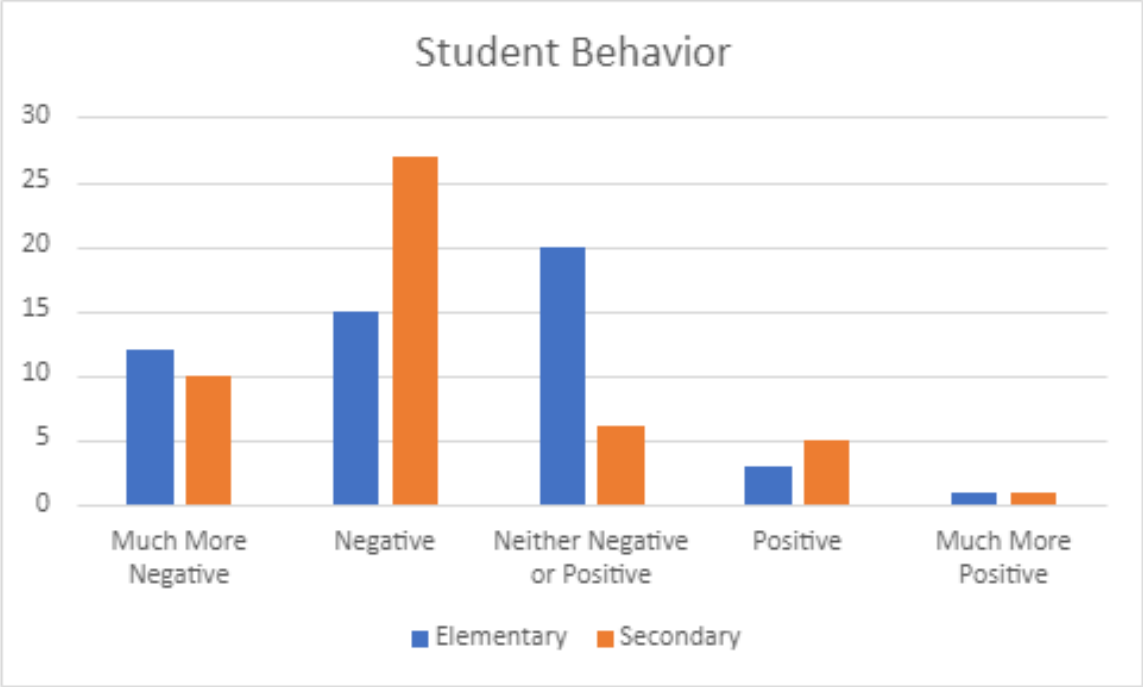
The chi-square test utilized two degrees of freedom and an alpha level of 0.05. The chi-square *p* value for this question was 0.125, which indicated there was not a significant statistical difference between the responses, which shows that the data collected for this question are an independent, normal response distribution between elementary and secondary teachers in response to student self-efficacy. The change in student self-efficacy is another negative impact that teachers perceived as a student

change affecting learning in the 2021-2022 classroom. Students are less likely to speak up for themselves when they do not understand or have questions.

Teachers perceived student behavior as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 17 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student behavior from 2019-2022 caused by the COVID-19 pandemic.

Figure 17

Survey Question 14b: Student Behavior



*N=51 elementary teachers, 49 secondary teachers

Fifty-three percent of elementary teachers and 76% of secondary teachers perceived student behavior as negatively impacting student learning caused by the COVID-19 pandemic.

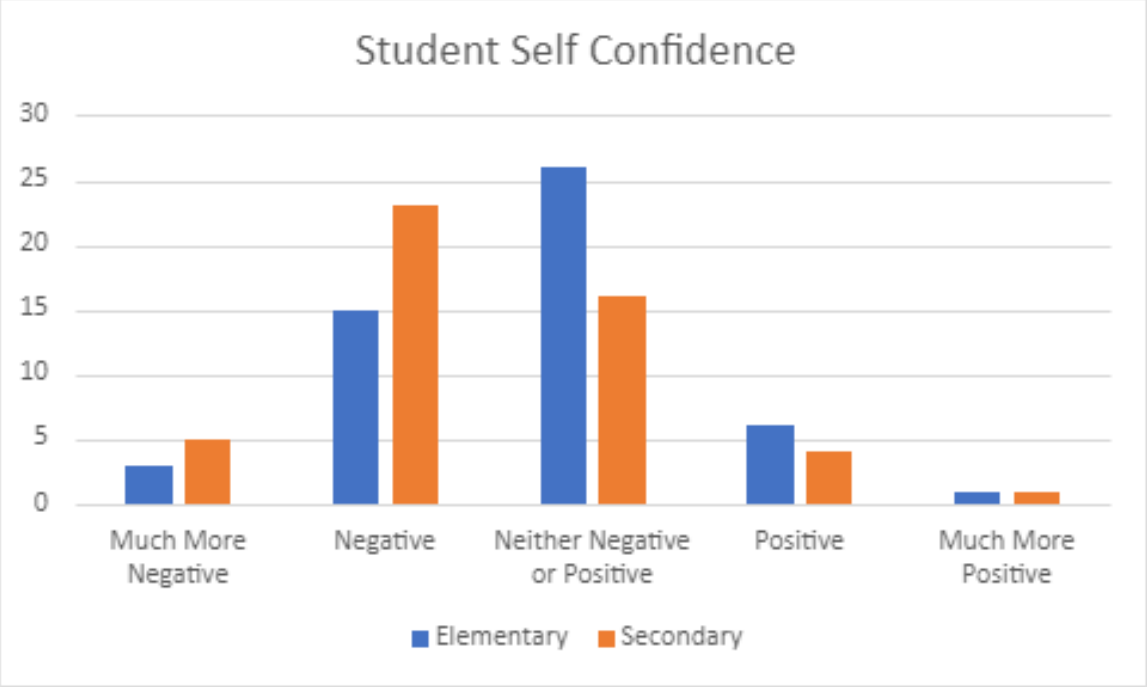
Using the chi-square test on the responses for the technology integration impact with two degrees of freedom and an alpha level of 0.05 resulted in the chi-square *p* value

for this question being 0.008, which indicated a significant statistical difference between both the elementary and secondary teacher responses. Secondary teachers saw a more negative behavior response than elementary teachers, who mainly indicated that behaviors were neither positive nor negative. These data explained that teachers perceive student behaviors to majorly impact student learning during the 2021-2022 school year. Negative student behaviors are impacting the educational environment in secondary schools more than in elementary schools.

Teachers perceived student self-confidence as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 18 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student self-confidence from 2019-2022 caused by the COVID-19 pandemic.

Figure 18

Survey Question 14c: Student Self Confidence



*N=51 elementary teachers, 49 secondary teachers

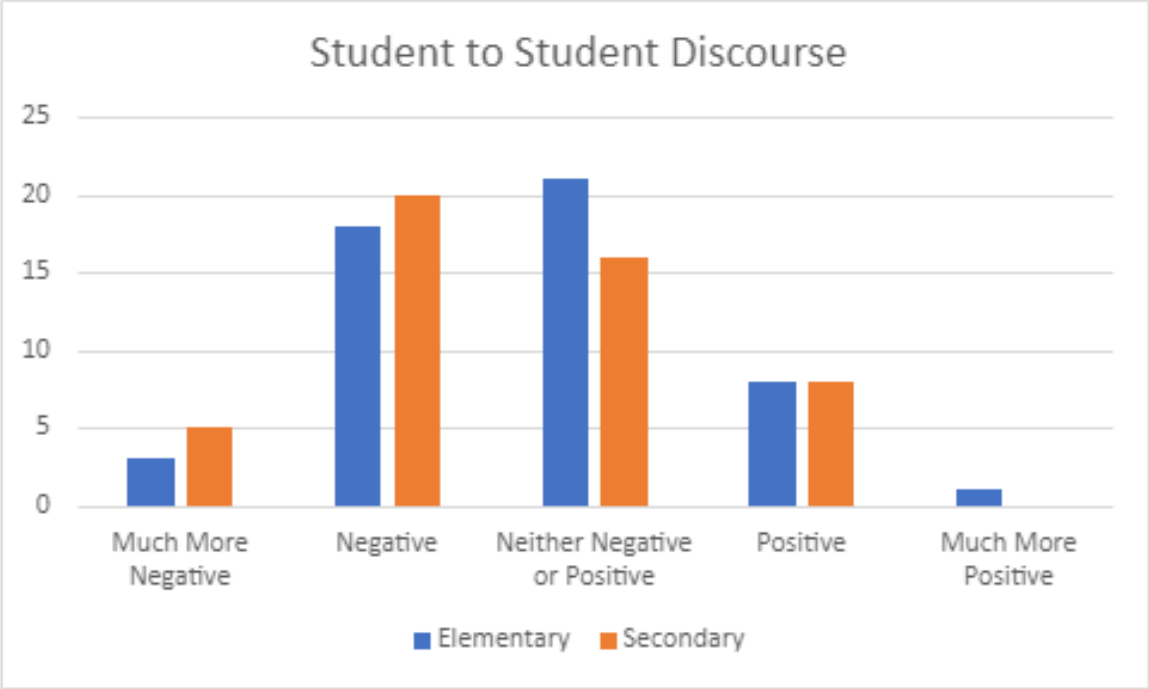
Thirty-five percent of elementary teachers and 55% of secondary teachers perceived student self-confidence as having a negative or much more negative impact on student learning caused by the COVID-19 pandemic.

Using the chi-square test on the responses for the student self-confidence impact with two degrees of freedom and an alpha level of 0.05 resulted in the chi-square *p* value for this question being 0.08, which indicated no significant statistical difference between the responses, and both elementary and secondary teachers agreed that student self-confidence had a negative impact on student learning. Based on the data, both elementary and secondary teachers see that student self-confidence negatively impacts student learning. Student self-confidence and self-efficacy could be related since both have a negative impact. If students lack self-confidence, this will also affect student efficacy and the ability of a student to ask for help.

Teachers perceived the student-to-student discourse as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 19 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student-to-student discourse from 2019-2022 caused by the COVID-19 pandemic.

Figure 19

Survey Question 15a: Student to Student Discourse



*N=51 elementary teachers, 49 secondary teachers

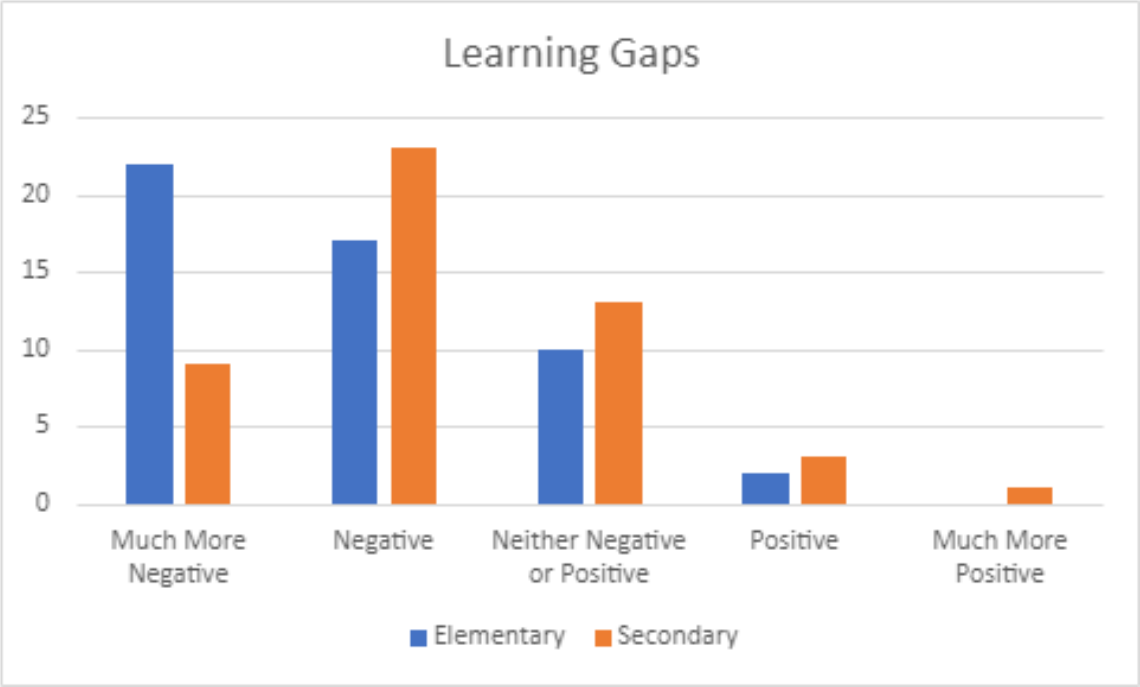
Forty-seven percent of elementary teachers and 51% of secondary teachers perceived the impact of student-to-student discourse as having a negative or much more negative impact on student learning caused by the COVID-19 pandemic.

Using the chi-square test on responses for the student-to-student discourse impact with two degrees of freedom and an alpha level of 0.05, resulted in the chi-square *p* value for this question being 0.59, which indicated no significant statistical difference between the responses, and both elementary and secondary teachers agreed that student-to-student discourse had a negative impact on student learning. Students lost many opportunities for collaboration due to working in isolation during the virtual learning period in 2020-2021 and social distancing requirements during hybrid learning at the beginning of the 2021-2022 school year.

Teachers perceived learning gaps as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 20 shows the breakdown of responses between elementary and secondary teachers regarding the impact on learning gaps from 2019-2022 caused by the COVID-19 pandemic.

Figure 20

Survey Question 15c: Learning Gaps



*N=51 elementary teachers, 49 secondary teachers

Seventy-six percent of elementary teachers and 65% of secondary teachers perceived that learning gaps had a negative or much more negative impact on student learning due to the COVID-19 pandemic.

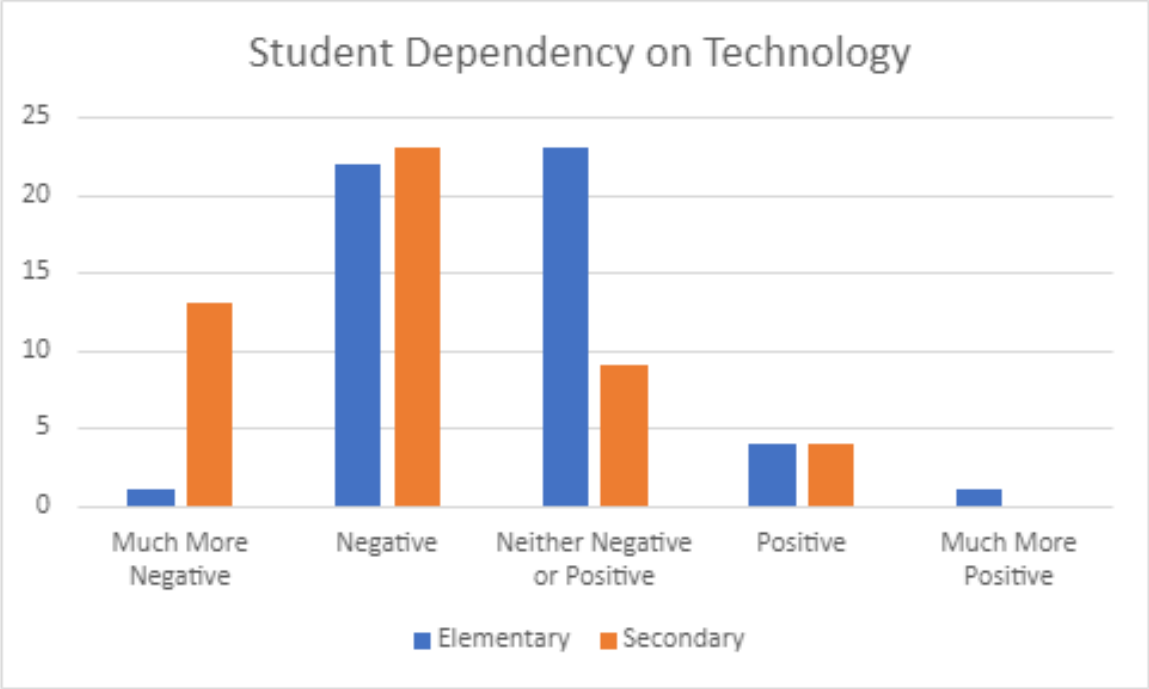
Using the chi-square test on responses for the learning gaps impact with two degrees of freedom and an alpha level of 0.05 resulted in the chi-square *p* value for this question being 0.42, which indicated no significant statistical difference between the responses, and both elementary and secondary teachers agreed that learning gaps had a

negative impact on student learning. Teachers perceive learning gaps as one of the top negative impacts on student learning. Elementary schools perceive learning gaps as much more negative, while secondary teachers mostly perceive them as negative. Learning gaps may exist for many reasons, including lack of parental support at home, language barriers for English as a Second Language (ESL) students, accessibility issues with technology, and student attendance.

Teachers perceived student dependency on technology as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 21 shows the breakdown of responses between elementary and secondary teachers regarding the impact of student dependency on technology from 2019-2022 caused by the COVID-19 pandemic.

Figure 21

Survey Question 16a: Student Dependency on Technology



*N=51 elementary teachers, 49 secondary teachers

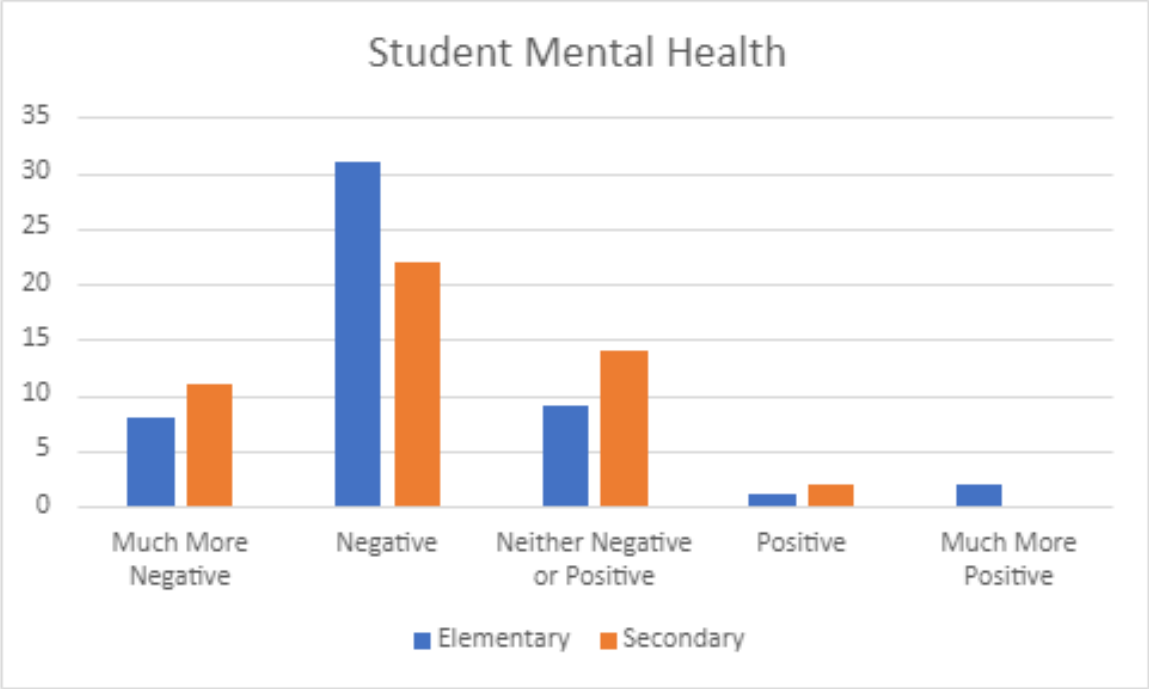
Forty-five percent of elementary teachers and 73% of secondary teachers perceived student dependency on technology as a negative impact caused by the COVID-19 pandemic.

The chi-square test utilized two degrees of freedom and an alpha level of 0.05. The chi-square *p* value for this question was 0.01, indicating a significant statistical difference between the responses. Secondary teachers saw a more negative response to dependency on technology than elementary teachers, who mainly indicated that behaviors were neither positive nor negative. Virtual learning during the 2020-2021 school year allowed students to use their technological devices, including computers, cell phones, and gaming systems, without supervision. Technology was readily available to students to help them with their work or entertainment.

Teachers perceived student mental health as having a negative impact on student learning caused by the COVID-19 pandemic. Figure 22 shows the breakdown of responses between elementary and secondary teachers regarding the impact on student mental health from 2019-2022 caused by the COVID-19 pandemic.

Figure 22

Survey Question 16b: Student Mental Health



*N=51 elementary teachers, 49 secondary teachers

Seventy-six percent of elementary teachers and 67% of secondary teachers perceived student mental health as either a negative or much more negative impact on student learning caused by the COVID-19 pandemic.

Using the chi-square test on student mental health impact responses with two degrees of freedom and an alpha level of 0.05 resulted in the chi-square *p* value for this question being 0.42, which indicated no significant statistical difference between the responses. Elementary and secondary teachers perceived that student mental health negatively impacted student learning. During virtual learning, students had limited access to guidance counselors; they may have experienced stress or anxiety due to illnesses connected with the COVID-19 pandemic, loss of family members or friends, or loss of a parent's job. In addition, required social distancing, mandatory mask mandates, and the

inability to interact with peers impacted student learning in the post-COVID-19 pandemic classroom during the 2021-2022 school year.

Elementary Focus Group Inductive Coding. The first data analysis of the focus group responses utilized an inductive coding process. The negative impact codes used were from multiple focus group questions, including questions about the negative impacts, changes to instruction, and refocusing. Table 10 presents the elementary quotes from teachers on negative student learning impacts. The quotes in Table 10 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 10

Elementary Supporting Quotes for Negative Impacts on Student Learning

Supporting quote	Code	Focus group participant
"I feel like parents have, for one, become complacent with not necessarily engaging with their kids."	Lack of parental involvement	2
"Our biggest thing is our ESL students. The kids who academically would have struggled anyway had they been in the building, not being in the building and not having someone speaking English with them all that time; it's like they were already our subsection that was our gap, and now it's even wider."	Developmental delays	1

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. The keywords or phrases that were used to identify data included *negative, less/ decrease, delays/slower, more/increase, complacent*, and *struggled.* For example, I asked participants, “What has been the most negative impact on student learning caused by the pandemic?” P1

responded, “Their emotional needs are much greater than in years past.” P2 agreed and stated, “On the social-emotional end, it’s we don’t know how to play together at recess,” and “the number of needs is so different.” P1 responded back and stated, “The skills you would expect them to have, they do not have them,” and “they have developmental delays.” P2 stated, “Our biggest thing is our ESL students. The kids who academically would have struggled anyway had they been in the building…that was our gap and now it’s even wider.” A discussion surrounding the ESL students led to a clarifying question regarding the curriculum. I asked the elementary focus group if there had been any changes to the pace or the actual curriculum they taught. Both teachers responded with the same answer; there were not many changes to the pace or curriculum, and the teachers moved forward with the curriculum the same as they did during the 2019-2020 school year.

Overall, the focus group findings supported the survey results. Triangulation of the data confirmed negative student behavior and learning gaps had a negative effect on student learning and will be discussed in detail later in this section. The next section utilized a priori codes to connect the data to the change theory theoretical framework

Elementary Focus Group Deductive Coding. The second data analysis of the elementary focus group responses utilized a deductive coding process using a priori codes related to the change theory levels of use. The second a priori code used was consequence, which identified consequences caused by the COVID-19 pandemic educational disruption. This research question focuses on the negative consequences caused by the COVID-19 pandemic.

Consequence. The consequence code includes data in which teachers perceived

the COVID-19 effects on student learning and teaching. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the consequence code. For the consequences code, the words or phrases that showed a change were put into this category; some of those words are *more/increased, less/ decreased, compared to,* and *improve.* The negative consequences brought up in the focus group included developmental delays, greater emotional needs, social-emotional skill gaps, lack of parental involvement since returning to school, large gaps with ESL students, students taking longer to learn a skill compared to past years, and pushing through the content to "get it done" without students mastering the skills. P2 stated, “You have to expose them to the curriculum. That’s the expectation; you can’t wait for mastery.” P1 responded, “Yea, it’s just like throw content at these kids who have no clue what you’re saying, and you can say you taught them.” The consequences a priori code for this research question focused on the negative consequences that arose from the change in education caused by the COVID-19 pandemic.

Secondary Focus Group Inductive Coding. The first data analysis of the focus group responses used an inductive coding process. The negative impact category used was from multiple focus group questions, including questions about the negative impacts, changes to instruction, and refocusing. Table 11 presents the secondary supporting quotes from teachers on negative student learning impacts. The quotes in Table 11 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 11

Secondary Supporting Quotes for Negative Impacts on Student Learning

Supporting quote	Code	Focus group participant
"The kid who was involved in the fight in the hallway is cursing me up and down, and then I have those words in my head, and I have to teach."	Teacher burnout	3
“We are expected to teach our exact same content to a group of students who are not ready to receive it.”	Lacking skills	1
"We have a lot of different things to take into consideration now; it's not just school, but they are going through a lot of mental health situations, and I have to deal more with what group I'm going to put them in because it may cause more anxiety."	Behavior	2
"I'm not just a teacher anymore. I'm a counselor and intervention specialist and feel like an aunt to some of these students, and I just don't know. I'm so overwhelmed with it all."	Teacher burnout	2

The negative student changes category contained the codes lacking student skills, technology dependency, behavior, and student burnout. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. The keywords and phrases that were used were *behavior, mental health, student burnout, needy, skills, cell phones, earbuds, apathy, learning gaps, cheating, technology dependency, teacher burnout, challenged, upset,* and *absence of teachers.* I asked participants, “What was the most negative impact caused by COVID-19 and how did you deal with it?” An in-depth discussion surrounding behavior occurred with all focus group participants, and they indicated that behaviors were worse during the 2021-2022 school year. For example, P1 stated, “I have a kid that I redirect, and he just starts yelling at me.” P2 responded, “They get so upset by social

media, which is a whole issue in itself, but when they get upset and things are happening, they don't know how to talk and deescalate anything," and "unfortunately, I think there's a loss of teaching because of these behaviors." P3 responded, "I agree. I feel like since they were out of school for 2 years, they had a huge behavior issue that I have never seen before."

Another code contained data about teacher burnout. For example, P3 stated, "In one class, you might be able to be a professor, but in the next class, you have to be a disciplinarian; it's an ever-evolving challenge." P1 responded, "I feel like in our school, we have a lot of hats to wear, and I'm overwhelmed with work, and it's not that I don't know how to do it, it's just so much more involved." The absence of teachers due to sickness and a shortage of substitutes or unfilled vacancies also contributed to teacher burnout. For example, P1 stated, "P2 said one thing that I thought was having an impact which is the absence of teachers with as many openings that are across the county and teachers having to cover other teachers and teachers are leaving." Teachers had to teach other classes during their planning periods. Teachers leaving the classroom and not having funding to hire support staff are also negatively impacted.

Participants discussed that negative student behaviors are affecting instructional time. One high school teacher participant stated that students are very immature and do not know how to deal with being in a high school setting. Participants discussed students' lack of skills, including a good work ethic, organizational skills, and homework completion. For example, P2 stated, "I can say my 2019 chemistry versus the ones I have now are very different, not that I'm saying I don't have smart kids; it's just a different level." P1 responded, "They have not developed any of the skills that they need for

organization," and "they have no concept of homework and practicing and getting into some sort of structure." P1 responded back, "Their apathy toward school and their work ethic is another big thing because they don't care as much as they used to."

Learning gaps were also discussed. For example, P1 stated, "The kids have so many gaps, they have no clue on so many things." P2 responded, "I agree with P1 [about] the gaps in their learning. What they should know for chemistry coming into it, they don't know, and so I find myself having to reteach in that class."

Lastly, participants discussed negative technology aspects which included personal cell phones, earbuds, playing games instead of doing work, and the student's ability to look up answers during virtual learning. For example, P1 stated, "I've just noticed that they can't disconnect from their phones." P2 responded,

> I agree. We have to go over rules periodically; your phones can't be out, you can't use those words in the classroom or in school, don't talk when the teacher is talking. I mean it has to be said almost every day.

P3 stated, "Another negative is the whole cheating aspect. They had everything accessible to them and the teacher wasn't in front of them so now in person they have to get used to taking them in person."

Overall, the secondary focus group findings supported the survey results. Triangulation of the data will show the connection between the qualitative and quantitative data collected. The next section utilized a priori codes to connect the data to the change theory theoretical framework

Secondary Focus Group Deductive Coding. The second data analysis of the secondary focus group responses utilized a deductive coding process using a priori codes

related to the change theory levels of use. The second a priori code used was consequence. The negative consequences included lost instructional time due to behaviors, teacher burnout, pressure due to state testing, and having to eliminate pieces of their units and still cover all the standards.

Consequence. The consequence code includes data in which teachers perceived the COVID-19 effects on student learning and teaching. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the consequence code. For the consequences code, the words or phrases that showed a change were put into this category; some of those words and phrases are *more/increased, less/decreased, compared to,* and *improve.* For example, teachers noted the following items: P1 stated, “They have huge behavior issues,” and “their social well-being was affected.” P2 stated, “They don’t know how to be a middle school kid. They haven’t developed the skills,” and “unfortunately, I think there’s been a loss of teaching because of these behaviors.” Finally, P3 stated, “I get challenged or upset with behavior,” and “the biggest negative impact is gaps,” and “in 2019, I could teach the content normally but now I find myself cutting things out because they are not on that level so that is a struggle.” The consequences a priori code for this research question focused on the negative consequences that arose from the change in education caused by the COVID-19 pandemic.

Triangulation. Negative components in the post-pandemic classroom with the most impact on student learning were student behavior, learning gaps, dependency on technology, student mental health, student time management skills, student self-efficacy and self-confidence, and student-to-student discourse.

Student behavior had a negative or much more negative impact on student learning, as indicated by 76% of secondary school teachers and 53% of elementary teachers. These statistics were supported by the qualitative responses collected on the survey. One teacher stated, "The biggest barrier to student learning that I have experienced is the disruptive behavior of students who make it difficult for other students to learn." Another teacher stated, "At this point, constant redirection and write-ups." The elementary focus group primarily focused on the discussion of a lack of social-emotional learning, but the secondary focus group spent a lot of time discussing student behaviors. This supported the survey data in which the secondary teachers saw behavior as a negative impact.

Secondly, 73% of teachers indicated that learning gaps had a negative or much more negative impact on student learning. This statistic was supported in both of the focus groups. In the elementary focus group, one teacher noted the widening gap specifically with ESL students since they had missed being exposed to English when they were not in school during the 2020-2021 school year. In the secondary focus group, teachers also discussed that learning gaps were a negative impact of the COVID-19 pandemic.

One significant difference between secondary and elementary teachers was that 73% of secondary teachers and 45% of elementary teachers indicated that student dependency on technology had a negative or much more negative impact on student learning. This was not discussed in the elementary focus group; however, student dependency on technology was discussed as a negative impact in the secondary focus group, which supported the survey data. In the secondary focus group, a discussion about

using technology to look up answers during the 2021-2022 school year left gaps in skills students should have learned and were now struggling with because of the ability to "Google every answer" during the COVID-19 pandemic.

In addition, 72% of teachers indicated that student mental health had a negative or much more negative impact on student learning. Both the elementary and secondary focus group data supported the idea that mental health was a negative component caused by the COVID-19 pandemic. In the elementary focus group, one participant noted the increase in anxiety in her students and stated that several of them were diagnosed with anxiety since returning to school during the 2021-2022 school year.

The survey indicated that social-emotional learning was one of the top negative impacts on student learning. Teachers in both focus groups echoed these data and discussed putting a focus on social-emotional learning during the 2022-2023 school year. In the elementary focus group, the participants both discussed that students were behind in their social-emotional learning, and they incorporated daily social-emotional learning lessons to help teach students how to read body language, facial expressions, and appropriate behavior. Participants in the secondary focus group also indicated that students were much less mature than in previous years. However, their schools had not incorporated any social-emotional learning programs or support.

Additionally, 63% of secondary school teachers and 43% of elementary school teachers indicated that student time management skills were negative or much more negative. The secondary focus group supported these data, and participants discussed the skills that students lacked which included time management, organization, and structure.

Approximately half of the teachers surveyed thought student self-efficacy had a

negative impact on student learning, while the other half believed it was neither positive nor negative. Secondary school teachers indicated that student self-confidence had an overall negative impact on student learning, while most elementary teachers indicated that it neither had a positive nor negative impact. Student-to-student discourse has also had a negative impact on student learning, with 46% of teachers indicating it was a negative or much more negative impact. These survey items were not discussed during the focus groups.

Answer to Research Question 3. Overall, teachers perceived mental health, behavior, and learning gaps as the top three negative impacts on student learning. Other negative impacts on student learning may be affecting one another. Teachers perceived student self-confidence and self-efficacy as negative impacts, which could also be affected by mental health or feelings of being behind due to learning gaps. Dependency on technology, lack of skills in time management, and student discourse were also perceived as negative impacts caused by the COVID-19 pandemic.

Research Question 4: What Strategies or Approaches Are Teachers Using to Address the Changes for the Post-Pandemic Classroom?

Research Question 4 examined the management piece of change theory. The management level focuses on the processes and tasks of the change. This research question explored how teachers adapted to the change forced upon educators due to the COVID-19 pandemic. Both the survey and focus groups asked teachers what they were doing in 2021-2022 in-person teaching to address the changes.

Survey. Teachers responded about the strategies they were currently using to address the changes in the post-pandemic classroom. Table 12 shows the codes identified

using inductive coding and the number of teachers who referenced each of those themes on the survey.

Table 12

Survey Question 17: Codes Identified Regarding Current Strategies to Address Changes in the Post-Pandemic Classroom

Code	Number of teachers
SEL focus/incorporating social skills	28
Addressing learning gaps through small group lessons/ mini review lessons/ recorded videos/ decreased content/ tutoring	18
More flexibility/leniency	12
Limiting technology use/no cell phone policies/appropriate technology usage	11
Teaching discourse skills	9
Increased parent communication	8
Not assuming they have the skills	3
Other: extrinsic motivators (1)/more technology integration (1)/organization and time management skills (2)/more teacher-directed activities (2), data-informed teaching (1)	7

*N=96 responses

Thirty percent of teachers who left a response indicated that they focused more on social-emotional learning and incorporating social skills lessons. Just under 20% of teachers indicated they were addressing the changes caused by the COVID-19 pandemic by addressing learning gaps through small groups, mini lessons, and recorded videos for students to access; providing tutoring during lunch or after school; and decreasing the amount of content taught. Just over 10% of teachers indicated that monitoring technology

through a no cell phone policy in class, teaching appropriate technology use, and limiting technology usage was one strategy they were using during the 2021-2022 school year. Other responses with multiple responses included teaching student discourse skills, increased parent communication, and not assuming students have the skills from previous years.

Elementary Focus Group Inductive Coding. The first data analysis of the focus group responses used an inductive coding process. The data for this research question were from multiple questions, including how they address change and the initial question. Table 13 presents the elementary quotes from teachers on strategies they used during the 2021-2022 school year. The quotes in Table 13 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 13

Elementary Supporting Quotes for Strategies Used During the 2021-2022 School Year

Supporting quote	Code	Focus group participant
"I have had to be a lot more hands-on. Working with young children, you're hands-on anyway, but I feel like even more individualized attention is needed."	Slower learning pace	2
"My whole thing is being self-motivated because I feel like my kids are very bright, and I've sent a lot of messages about how I can't beg your kid to do the work that I know they're capable of. I've talked a lot to the kids about like you have to decide what you want to be doing."	Teach value of education/self-motivation	1
"We have to figure out and meet the kids where they are like to still go in and say these are the standards, and this is what they have to know."	Slower learning pace	2
"I use Google slides to keep me in check throughout the day and go through our schedule and share the slides with the kids so then they know, 'oh yeah, this is what's coming up next,' so definitely having more technology use in the room."	More technology integration	1

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. The keywords and phrases used to identify changes in teaching practices were *technology integration, hands-on, individualized, virtual meetings, tutorials, digital,* and *accessibility.* For example, I asked participants, "What in your teaching practice has changed this year compared to the 2019-2020 school year?" P2 stated, "We started the Second Step program, so we have been talking a lot about body cues and reading people's facial expressions and understanding body language and have really focused on the social-

emotional learning part." P1 responded, "We are not doing anything like that in our school." P1 stated, "I have had to be a lot more hands-on and give even more individualized attention." P2 responded, "I think for me, I use a lot less paper than I did before and things I would typically run off copies for, it's like oh I can put that on Seesaw," and "I definitely use more technology." P1 responded, "I agree. That's how we made it through teaching simultaneously teaching in person and online too. I learned to project on my Smartboard the circle time routine."

The use of technology integration and a social-emotional teaching program is how elementary teachers changed their teaching practices in the 2021-2022 school year following the 2019-2020 virtual teaching period. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Elementary Focus Group Deductive Coding. The second data analysis of the elementary focus group responses utilized a deductive coding process using a priori codes related to the change theory levels of use.

Management. The management code was used to identify the techniques teachers were utilizing to address the changes in the classroom caused by the COVID-19 pandemic. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used for the management code. The keywords and phrases used for this code included *hands-on, routines, technology,* and *individualized.* For example, P1 stated, "We were still learning basic routines for a really long time and we're starting to get to a point that we can work through things working together…it just took so much longer for us." P1 also stated, "I have to be a lot more hands-on." To manage the change in education caused by the COVID-19 pandemic,

focus group participants had to provide more individualized attention and hands-on learning compared to previous years. Another management technique used was the use of technology in the classroom. P2 stated, “I definitely use more technology.” The use of a Google slide deck to keep the schedule for each day and keep everyone on track, the use of the smartboard, and focused social-emotional learning time each day were all strategies used to manage the change in the 2021-2022 classroom. One focus group participant discussed using a program in which students learned about body cues, facial expressions, and understanding body language and focused on social-emotional learning because the behaviors exhibited by students were not typical of that age group.

Secondary Focus Group Inductive Coding. The first data analysis of the focus group responses used an inductive coding process. The data for this research question were from multiple questions, including introductory questions and changes in their teaching practice. Table 14 presents the secondary quotes from teachers on strategies they used during the 2021-2022 school year. The quotes in Table 14 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 14

Secondary Supporting Quotes for Strategies Used During the 2021-2022 School Year

Supporting quote	Code	Focus group participant
"With math, everything is paper and pencil, so that's what it used to be, and I still do that a lot now. I want to keep that, but I have also changed because I have a little bit more resources to use because I have explored delta math, I've explored Pear Deck and Desmos. I have a lot more things that I go to now that I've never used to before, so I have more accessibility to all those things. Google Classroom too, so now I post many more things for when kids are sick."	Digital resources	1
"It's hands-on, or we do written work, but I'm a little more patient, and I had to make everything online."	Digital resources	3
"With me, I think everything is digital, like I said earlier. More of the google classroom platform to put all my notes and videos if they miss a lesson. All assignments, labs, we have virtual labs now, and I take advantage of those"	Digital resources	2
"Another thing that I've liked in teaching is the use of google meets because I have a lot of students this year who were absent for medical or other reasons, and they really didn't want to be behind, and even though they watch the videos they didn't get it so now we can do a virtual meet, and it's nice to be able to help them out."	Virtual meetings	2

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. The keywords and phrases used to identify changes in teaching practices were *technology integration, Google Meets, hands-on, individualized, virtual meetings, tutorials, digital,* and *accessibility.* For example, I asked participants, “What in your teaching practice has changed this year compared to the 2019-2020 school year?” P1 stated, “I do have a little bit more resources,” and “I just have a lot more things that I go to know that I’ve never

used before." P3 responded, "I agree. Recently, they had a quiz on vocabulary on and those are on Google Classroom, which is pretty cool, and it's graded like that." P2 stated, "I agree with both of you. With me, I think everything is digital…all assignments, labs, we have virtual labs now and I take advantage of those."

Participants also discussed what they are doing to support students. P1 stated, "The kids have so many gaps. I work with them individually during our flex time which runs into class," and "Within the class, I try to get with them individually. I have help and study sessions in the morning before school even starts." P2 responded, "I agree with P1, I find myself having to reteach in class and that leads to more time so I have to cut things out of the lesson," and "I'm helping them reach that mark and having tutorials as well."

The use of technology and offering more support to students outside of the traditional class time is how secondary teachers changed their teaching practices in the 2021-2022 school year following the 2019-2020 virtual teaching period. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Secondary Focus Group Deductive Coding. The second data analysis of the secondary focus group responses used a deductive coding process that used a priori codes related to the change theory levels of use. The management code included all the strategies teachers were using to manage the change in education caused by the COVID-19 pandemic.

Management. The management code was used to identify the techniques teachers were utilizing to address the changes in the classroom caused by the COVID-19 pandemic. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used for the management code. The

keywords and phrases used for this code included *hands-on, routines, technology,* and *individualized.* For example, P1 stated, “We had to put everything online, change what we were doing, so my instruction became a lot more teacher-directed,” and “I’ve taken a little bit of all of those instructional methods, so I do a little bit of the virtual and made things linked to the goals.” P2 agreed and stated, “Now teaching in person after that experience, we do a lot of a mix of everything…we use Google Classroom, everything is digital. I always have a digital copy of everything for them now because of the pandemic.” P1 responded back, “I do have a little bit more resources that I use…I just have a lot more things that I go to now that I’ve never used before.” P2 agreed and responded, “I also feel like as a teacher, all my lessons and assignments are all online, so students don’t have an excuse if they miss anything, so that’s good.”

Triangulation. One teacher from the survey stated, "It has been hard. The students are mean, think they can say whatever they want, and challenge classroom expectations daily." A teacher from the elementary focus group stated that students do not know how to play together, and their reactions to what someone says are inappropriate for their age. Participants from the secondary focus group also echoed this same behavior. They discussed that students did not have the skills to deescalate situations and inappropriate responses to adult instructions and redirections. Social media posts made by other students easily upset them. Many teachers indicated that they had incorporated more social skills lessons and social-emotional learning during the 2021-2022 school year to address student behavior and mental health.

To address learning gaps, many teachers have slowed the pace of teaching, and some have removed some of the content they teach each year. Teachers are providing

mini lessons for lacking skills, utilizing small group lessons within the classroom, and providing students with support resources such as recorded videos and one-on-one tutoring. Elementary teachers from the focus group indicated that they were not allowed to reduce the amount of content they taught. The administration told them to keep moving forward even if students were not mastering the content. In the secondary focus group, a discussion of the same information occurred; all standards were taught but at the expense of removing other parts of lessons to account for the increase in the time it took to teach the material compared to pre-COVID-19 pandemic classes. In the elementary focus group, participants indicated that they were utilizing more hands-on learning and structured learning activities because students could not work independently as they had in previous years. Teachers continue to offer flexibility and leniency to students. One teacher stated that she was using "extensive small group lessons, one-on-one tutoring sessions, and strategic partnering of students to challenge/aid each other."

Other strategies teachers were using included incorporating a no cell phone policy, limiting access to technology, and spending time teaching students about appropriate technology usage.

Answer to Research Question 4. Teachers are using many strategies to address the changes in the post-COVID-19 pandemic classroom during the 2021-2022 school year. To address behaviors, many elementary teachers focus on social-emotional learning. Teachers are also using smaller groups; more individualized attention, structure, and rules surrounding technology use; and more structure to address behaviors. Learning gaps are being addressed through tutorials before or after school, during lunch, and online recorded videos. Teachers also gave students access to practice materials on the learning

management systems and utilized hands-on learning to address learning gaps. Other strategies included utilizing a slower learning pace and removing activities to allow for more time. Teachers also incorporated technology into their lessons more than in the 2019-2020 school year.

Research Question 5: What Do Teachers Believe Are the Next Best Steps to Address Student Learning Needs in the Post-Pandemic Classroom?

The last research question focused on the refocusing part of change theory. Teachers provided ideas for the next steps to address the negative impact of the COVID-19 pandemic.

Survey. Teachers indicated what they believed the next best steps were to address the changes in the post-pandemic classroom. Table 15 represents the codes identified using inductive coding.

Table 15

Survey Question 18: Codes Identified Regarding Current Strategies to Address Changes in the Post-Pandemic Classroom

Codes	Number of teachers
Consistent behavior policies/consequences	18
Social-emotional learning focus	14
More time/slower learning pace	13
More intervention staff	11
More counseling staff	7
Revamp the curriculum	6
Smaller class sizes	5
More teacher planning time for collaboration	4
Less testing	4
Other: incentives for grades (1), tutoring (2), hands-on learning (1), project-based learning (1), basic skills – time management, study skills, organization (2), limited technology (1)	8

*N=90 responses

The keywords and phrases identified through the notes I took on items of interest,

questions, and possible connections were used to generate the codes. The keywords and phrases used were *behavior, social-emotional, slower-learning pace, intervention, staff, curriculum, class sizes, more time,* and *testing.* A category for "other" was created for data that were only mentioned one or two times. Moving forward, teachers indicated that one of the biggest negative factors affecting student learning was negative student behavior. Twenty percent of teachers agreed that there need to be consistent behavior policies and consequences enforced, followed by 16% of respondents calling for a focus on social-emotional learning, and 14% of teachers indicated slowing down the learning pace to allow for more time or revamping the curriculum to address the needs in the post-pandemic classroom. Twelve percent of teachers indicated adding more intervention staff, and 8% of respondents indicated adding more counseling staff would help to address the negative impacts in the post-pandemic classroom.

Elementary Focus Group Inductive Coding. The first data analysis of the focus group responses uses an inductive coding process. The data for this research question was from multiple questions, including changes in their teaching practice and what was needed moving forward. Table 16 presents elementary supporting quotes for what teachers thought the next steps should be to address student learning needs. The quotes in Table 16 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 16

Elementary Next Steps to Address Student Learning Needs

Supporting quotes	Code	Focus group participant
"I would love to have asynchronous Wednesdays, and if every Wednesday you had to visit someone's house, then I would. I know I must do home visits."	Flexibility	2
"The flexibility, I feel like, is gone. I the thing, 'they're trying to be flexible to a fault with parents, but with teachers, it's like that flexibility is gone and that's even like teacher workdays, we have to come in. If I'm having IEP meetings all day, is it really necessary for me to go to the school to have these meetings?"	Flexibility	2
"My whole thing is being self-motivated because I feel like my kids are very bright, and I've sent a lot of messages about how I can't beg your kid to do the work that I know they're capable of. I am trying to show the value of an education, and if you have these goals and this is the career you want, you do have to do these things to be able to do that."	Value of education/self-motivation	1
"If we are the food bank, if we are the psychologist, if we are all these things, fund us like we are all these things. If the children are so dependent on us for food and mental health support and all the transportation and all of these things, then fund us like we are all of these things so that we can do it and we can do it well, and we can take care of them like we need to."	Funding	1

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. Keywords and phrases that were used to identify pieces of data for this code were *asynchronous, flexibility, self-motivation, fund/funding, staff, intervention, tutorial,* and *programs.* For example, I asked participants, “What do you think are the most important aspects related

to student learning to focus on moving forward and how would you address it?" P2 stated, "My whole thing is being self-motivated because I feel like my kids are very bright and I've sent a lot of messages about how I can't beg your kid to do the work I know they're capable of," and "I am trying to show the value of an education and if you do have these goals and this is the career you want, you do have to do these things in order to be able to do that." P1 stated, "I agree. I think that for me I'm trying to build empowerment for parents at home. This isn't just send them to school and they are going to get like this. You have to be an active participant in your child's education." P2 also stated, "It took us 2 years to get in the hole, and it's going to take us 2 years to get out." P1 agreed and added, "I did ask for an additional support person, and I was told there wasn't enough funding so if anybody wants to do anything, it's start giving more money so that we can have a little bit more support in the classroom." P2 replied, "More money and more support would be beneficial," and "we have to figure out and meet the kids where they are; we really have to focus on equity and making it balanced." P2 also added, "We need decision makers who are connected to the classroom…we are putting funding into stuff that's not going to get us where we need to be in the future." P1 responded, "If we are mental health, if we are the food bank, if we are the psychologist, if we are all these things, fund us like we are all of these things."

The next steps focus group participants discussed to address the changes in student learning caused by the COVID-19 impact included funding programs to address learning gaps and social-emotional learning gaps. These steps included after-school funding programs, summer school programs, parent-focused programs to empower parents to be involved in their child's education, additional staff to reduce class sizes and

provide interventions, social-emotional programs to support mental health and behavior, and more counselors and psychologists to support mental health. Other steps included a return to flexibility, more time for teachers to plan interventions to address learning gaps, and teaching students the value of education and goal setting. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Elementary Focus Group Deductive Coding. The second data analysis of the elementary focus group responses utilized a deductive coding process using a priori codes related to the change theory levels of use. The last a priori code used was refocusing, which related directly to this research question since this research question addresses the next steps teachers believed were needed to address student learning needs.

Refocusing. The refocusing code identifies the teacher perceptions of the changes needed moving forward into the post-pandemic classroom. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used connect to the refocusing code. The keywords and phrases used to identify data for this code were *asynchronous, flexibility, self-motivation, fund/funding, staff, intervention, tutorials,* and *programs.* The words and data for the deductive coding were the same as the inductive coding since refocusing is the same as what teachers believed were the next steps needed to address some of the changes due to the COVID-19 pandemic affecting student learning. The first topic discussed was time for teachers. Having an asynchronous day each week would allow the time needed to prepare more individualized lessons to decrease the gap that exists both academically and socially-emotionally. The second topic discussed was the need to reinstate flexibility. Flexibility to work from home on teacher workdays should continue during the 2022-2023 school

year. One teacher mentioned that grace and flexibility extended to students and parents did not translate to teachers upon returning to in-person instruction during the 2021-2022 school year. The third topic was motivating students by teaching them the value of education and creating goals. Teachers discussed students' lack of intrinsic motivation and empathy toward school and classwork or homework. Lastly, a discussion about staff and funding occurred. Participants believed more staff were needed to provide interventions, smaller class sizes, and social-emotional support.

Secondary Focus Group Inductive Coding. The first data analysis of the focus group responses used an inductive coding process. The data for this research question were from multiple focus group questions, including the questions about how they are addressing changes and changes needed moving forward. Table 17 presents secondary teacher supporting quotes for what teachers thought the next steps should be to address student learning needs. The quotes in Table 17 are examples pulled from focus group conversations and are not inclusive of all statements made by participants.

Table 17

Secondary Next Steps to Address Student Learning Needs

Supporting quotes	Code	Focus group participant
"If we had money, we could do so much just getting extra teachers in the classroom, to support kids, to support the social-emotional, because I will tell you there is so much going on with these kids, there is so much underlying. They just need help with intervention classes; that's another teacher in another position they could use."	Funding	3
"They need to reform education. They need to give us guidance [on what to teach] but give the flexibility to teach to OUR kids and not a ‘box’ of kids," and "the testing data is important, but there needs to be a grace period for a few years until programs are put in place." The testing grace period was about not using the grades on state tests to evaluate a school or teacher's performance.	Content reform	1

The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used to generate the codes. Keywords and phrases that were used to identify pieces of data for this code were *support, fund/funding/money, staff, intervention, tutorial, reform,* and *programs.* For example, I asked participants, "What do you think are the most important aspects related to student learning to focus on moving forward and how would you address it?" P1 stated, "We need to focus on getting money. If we had money, we could do so much extra like getting teachers in the classroom to support kids, the social-emotional…they just need help with intervention classes." P2 responded, "I agree with P1 about the lack of teachers now and I feel like if we had more programs especially for students who are falling behind…then they could be successful, but they don't." P3 added, "One thing they need is an after-school program or tutorial. Summer school needed to be focused on the kids that needed it and not just anyone can come," and "money is a factor that is going to help but teachers are already pushed to the limit with time."

Every participant discussed the need for funding to address gaps in learning with interventionists, after-school programs, summer school, and digital learning tools. Funding to support mental health and social-emotional learning was also discussed, with the need for more counseling staff and student intervention programs. Other discussed ideas included more rules and structures, student behavior consequences, and getting back into some of the older habits of education like notetaking. Lastly, a discussion surrounding the need to reform education occurred. The next section utilized a priori codes to connect the data to the change theory theoretical framework.

Secondary Focus Group Deductive Coding. The second data analysis of the

secondary focus group responses used a deductive coding process using a priori codes related to the change theory levels of use. The last a priori code used was refocusing. This code included what teachers believed were the next steps needed to address the changes that occurred due to the COVID-19 pandemic affecting student learning.

Refocusing. The refocusing code identifies the teacher perceptions of the changes needed moving forward into the post-pandemic classroom. The keywords and phrases identified through the notes I took on items of interest, questions, and possible connections were used connect to the refocusing code. Keywords and phrases that were used to identify pieces of data for this code were *support, fund/funding/money, staff, intervention, tutorial, reform,* and *programs.* The words and data for the deductive coding were the same as the inductive coding since refocusing is the same as what teachers believed were the next steps needed to address some of the changes due to the COVID-19 pandemic affecting student learning. The most extensive discussion among participants on this topic was the need for funding: funding more teaching and support staff positions, intervention programs for both academic and social-emotional support, and educational technology tools. To address student behavior, funding programs such as restorative justice, county support of administrators to have appropriate consequences for behaviors, and more structure and support surrounding student behavior were needed.

Triangulation. The most common answer to moving forward into the 2022-2023 school year between answers on the survey and the two focus groups was more staff and funding. Teachers on the survey and both focus groups stated that this would be a priority moving forward into the 2022-2023 school year. Teachers stated that addressing these two issues would decrease class sizes, allow more staff to provide interventions to close

learning gaps, allow more school psychologists and counselors to offer interventions in social-emotional learning, fund programs to support parents, and address student needs through summer school and after-school programs.

The secondary teacher focus group indicated a need for consistent behavior programs. This was also supported by teacher responses to the survey. One teacher from the survey stated, "It will take time just to learn how to ‘do’ school again. Students need consistent policies to help them learn appropriate in-person behavior, and they need grace, but they also need structure."

Other next step ideas included revamping the curriculum to allow for more time and moving at a slower pace, less testing, more teacher time allocated for planning and collaboration, and continuing to include lessons on social-emotional learning. These were all ideas that were supported on the survey and in both the elementary and secondary focus groups. The secondary focus group also discussed the idea of revamping the curriculum. This was supported by the responses to the survey. On the survey, one teacher stated, "There needs to be a strong focus on social-emotional learning. I feel like we returned to school more concerned about student achievement and increasing scores." The focus group discussions supported the findings from the survey.

Answer to Research Question 5. The theme identified in the elementary and secondary focus group of moving education forward consisted of two categories. The categories were divided into what each school can do or what the state or politicians can do to address the impacts of the COVID-19 pandemic on student learning. Teachers recommended that individual schools focus on teaching social-emotional learning and create more structure surrounding student behavior. Teachers also discussed the need to

provide student support through extra staff, including intervention teachers, school counselors, psychiatrists, and teacher assistants. Teachers also discussed the need for programs to support students with learning gaps and mental health problems. Providing staff and programs requires local or state government funding to support students in the post-COVID-19 pandemic classroom.

Summary

This chapter provided teacher perceptual data based on the impacts on student learning caused by the educational disruption of the COVID-19 pandemic. A survey instrument and two focus groups provided the data for this study. The qualitative and quantitative data results were analyzed to answer each research question regarding the impact on student learning.

The quantitative and qualitative data gathered teacher perceptual data about how the changes caused by the COVID-19 pandemic have impacted student learning and teaching practices and gathered data on what teachers believed were the next steps to take to address these changes moving forward into the post-pandemic classroom. These data triangulations allowed the researcher to add validity to the survey instrument and gain a more solid understanding of the quantitative data collected and deciphered between elementary and secondary teachers. This chapter summarizes the findings related to student learning impacts and teacher recommendations for the future. Chapter 5 discusses the findings of the study and recommendations for future research.

Chapter 5: Discussion

Introduction

The COVID-19 pandemic created a forced educational change event in which the shift from the pre-pandemic classroom to the post-pandemic classroom resulted in a system that was unprepared to meet the needs of students and staff who returned to in-person learning. It created a ripple effect that may continue to have substantial consequences in the post-pandemic classroom (United Nations, 2020). The full impact of the COVID-19 pandemic on student learning was unknown as students reentered the classroom during the 2021-2022 school year; however, shifts back and forth between face-to-face and virtual learning, changing mental health needs for staff and students, and increasing gaps in both social-emotional and academic learning due to the pandemic created massive educational changes. The purpose of this study was to examine teacher perceptions of those changes through the following research questions:

1. What are teacher perceptions regarding the impact of the pandemic on students and education as a whole?
2. What are teacher perceptions of the positive changes caused by the COVID-19 pandemic that have impacted student learning?
3. What are teacher perceptions of the negative changes caused by the COVID-19 pandemic that have impacted student learning?
4. What strategies or approaches are teachers using to address the changes for the post-pandemic classroom?
5. What do teachers believe are the next best steps to address student learning needs in the post-pandemic classroom?

Summary of Results

Several changes occurred in education from the 2019-2020 school year to the 2021-2022 school year in County X. The first change occurred in March 2020 when schools in County X closed. The county expectation shared by all focus group members was that teachers met with students once a week and posted asynchronous lessons for students to work on from home. Not all students attended weekly or completed the work that was assigned. The second change came during the 2020-2021 school year. County X started the school year completely virtual, where students met with their teachers synchronously every day. Then a slow integration of a hybrid model of different cohorts was able to come to school for in-person instruction. The last change was the return to in-person instruction for all students during the 2021-2022 school year. Students being back in the classroom revealed the consequences of the changes caused by the pandemic, with both positive and negative changes noticed.

Results indicated that teachers perceived the most common negative changes impacting student learning as an increase in student mental health issues and negative student behaviors, followed by academic and social-emotional learning gaps. Engzell et al. (2021) and Horace Mann Educators Corporation (2021) indicated there would be a loss in both academic and social-emotional learning; however, the decline in social-emotional learning affected behavior much more negatively than research anticipated. Students lacked this social-emotional learning during the virtual learning period from 2020-2021, were in isolation, and were forced to practice social distancing even when returning to in-person learning at the beginning of the 2021-2022 school year. Findings from this study indicated that some schools in County X implemented programs to

address social-emotional learning, but it was not a countywide integration. Hamilton and Gross (2021) stated that identifying innovations to improve social-emotional learning and meeting mental health needs should be prioritized in the post-pandemic classroom. Social-emotional learning increases behaviors such as kindness, sharing, and empathy; improves student attitudes toward school; and reduces depression and stress among students (Durlak et al., 2011).

Conversely, teachers perceived technology, including access to technology and integration into teaching practices, as the most positive change impacting student learning. Eighty-two of the 100 teachers surveyed in this study indicated that technology positively impacted student learning in the classroom since the beginning of the COVID-19 pandemic. Schaffhauser (2021) stated that access to technology is at the forefront of importance and that many teachers will continue to integrate EdTech tools they utilize during remote learning. The other positive impacts included increased communication between home and school and student accessibility to instructors.

Theoretical Framework

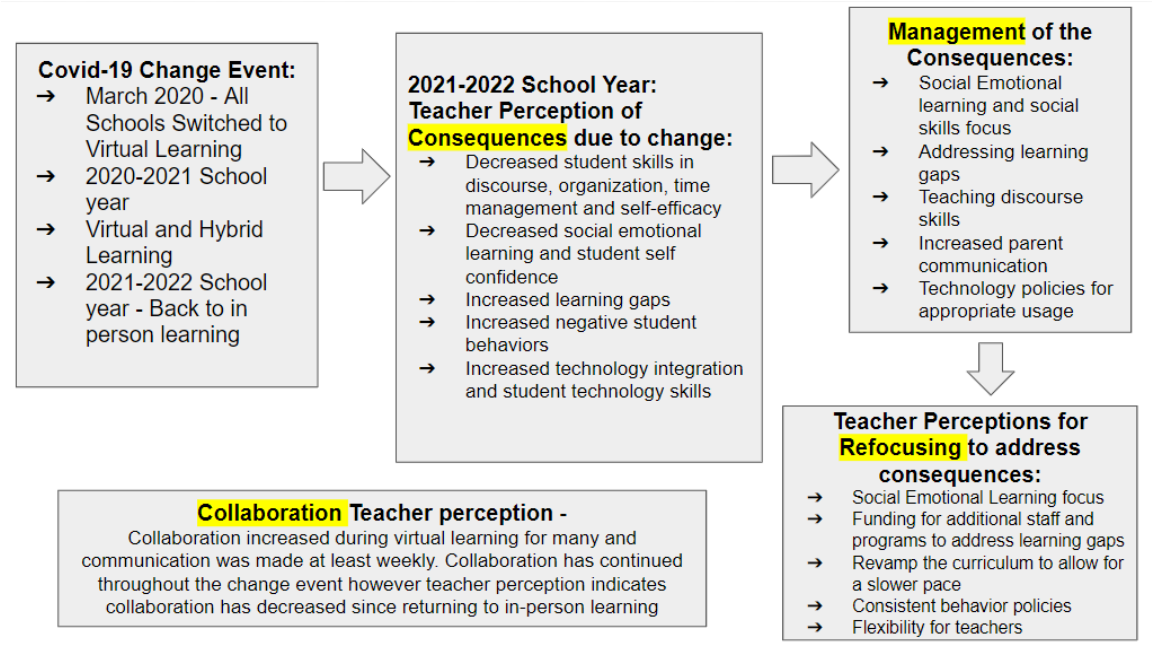
Hall and Hord's (2020) change theory described how change occurs and explained the steps occurring throughout a change process. For this study, the change theory's stages of concern (collaboration, management, consequences, and refocusing) were used to examine the effects of COVID-19 on teaching practices and student learning.

Bem's (1972) self-perception theory is the formation of attitudes and opinions of one's behavior and how those attitudes and opinions are applied to any situation to uncover one's reality. The teacher perceptions gathered in this study create the reality of what occurred in the public schools in County X during the 2021-2022 school year.

Figure 23 illustrates how self-perception theory and the stages of concern of change theory related to the COVID-19 pandemic.

Figure 23

Combining Hall and Hord's (2020) Change Theory With Bem's (1972) Self-Perception Theory to Explain the Effects of the COVID-19 Pandemic on Education



In Hall and Hord's (2020) change theory, there are six stages of concern: informational concern, personal concern, management, consequence, collaboration, and then refocusing. Hall and Hord stated that the management level implements the change, while the consequence level is how the change affects teachers or students. The collaboration stage is when those who implement the change share ideas with others about the implementation.

In this study, the stages of concern order changed: Collaboration happened along every stage of concern, and consequences came before the management. The consequences of the change are driving the management and the need for refocusing to

address the consequences. Teachers are managing the consequences of the COVID-19 educational disruption.

The consequences revealed by this study included an increase in negative student behaviors that impeded instructional time. Teachers perceived learning gaps in academic and social-emotional learning were harder to address because of negative student behaviors. A decrease in student skills, including discourse, organization, time management, and self-efficacy, also negatively impacted student learning, impacting the readiness of the student to receive and interact with the content presented. Lastly, an increase in technology integration and student technology skills also resulted from the COVID-19 change event. Teachers in the 2021-2022 school year were dealing with the consequences the COVID-19 pandemic created, and during the 2021-2022 school year, teachers started into the management phase of the change caused by the COVID-19 pandemic.

To manage the changes caused by the pandemic in 2021-2022, classroom teachers implemented various tactics, including focusing on social-emotional skills and incorporating social skills into daily lessons. Small group lessons, accessibility to recorded videos, tutoring, teacher's allowance of flexibility and leniency regarding student work, and stricter technology policies helped address learning gaps.

The last stage of concern is refocusing. Hall and Hord (2020) stated that refocusing allows for tweaking original implementations. Teachers stated that to refocus and make improvements to the change caused by the COVID-19 pandemic, an increase in staff (all positions filled, extra positions for intervention specialists, reduced class sizes, and more school counselors and psychologists to address mental health) and an increase

in funding to offer programs to address learning gaps both in academics and social-emotional learning and county support of the administration to address appropriate school behavior would address student learning needs in the post-pandemic classroom.

Teachers indicated that collaboration increased during the 2020-2021 school year when students were taught virtually but decreased once students were back to face-to-face instruction during the 2021-2022 school year. In the diagram, collaboration is depicted as a stand-alone component of the COVID-19 change event because collaboration did not drive the refocusing of the problem. The consequences drove both the management and the need for refocusing.

This study's results revealed struggles teachers faced during the 2021-2022 school year and the need for planning and action during the 2022-2023 school year and moving forward. This study demonstrated a connection between change theory's stages of concern, self-perception theory, and the positive and negative components impacting student learning caused by the COVID-19 pandemic. In the next section, the specific answers to the research questions are discussed.

Research Question 1: What Are Teacher Perceptions Regarding the Impact of the Pandemic on Students and Education as a Whole?

The first research question sought to examine the overall impact of the COVID-19 pandemic on students. The following section includes the interpretation of the data, implications, and connection to the theoretical framework.

Discussion of Findings

The COVID-19 pandemic changed teaching practices compared to the 2019 school year. Results revealed an increase in negative student behavior, a decline in social-

emotional learning, and a continued increase in learning gaps due to the virtual learning period of the COVID-19 pandemic. The most encompassing statement regarding the impact of the COVID-19 pandemic was made by a teacher in a focus group. This participant stated that the same content delivered during the 2019-2020 school year was delivered in the 2021-2022 school year to a group of students who were unprepared to receive that content. Panchal et al. (2021) explained that over half of the students who returned to the classroom in the U.S. had symptoms of anxiety or depression. State educational leaders did not change the standards or expectations for any grade level or subject; the administration of state tests determined school performance ratings during the 2021-2022 school year. Professionals in individual schools were responsible for implementing programs to support social-emotional learning and learning gaps in County X.

There were more negative impacts affecting student learning than positive impacts. Hamilton and Gross (2021) and Rosanbalm (2021) indicated that school leaders needed to focus on social-emotional learning when students returned to in-person learning; however, these programs were not implemented across all schools in County X. Due to the lack of addressing social-emotional needs, behavioral problems in every grade level occurred. Negative student behaviors impeded the ability of teachers to address learning gaps that arose from the virtual learning period.

Theoretical Framework

Teacher perceptions of the changes between 2020-2022 were collected to reveal what factors impacted teacher instruction and student learning during the 2021-2022 school year. Teacher perceptions revealed the need for teachers to collaborate throughout

the change. Several teachers on the survey stated that they met more often during the virtual teaching period to divide and conquer by creating digital lesson plans, decompress and share strategies and struggles, and build community. Upon returning to in-person learning, teacher collaboration decreased compared to the 2020-2021 school year. A majority of teachers on the survey indicated that they continued to collaborate at least weekly about addressing the needs of students, merging pre-pandemic teaching practices with new teaching practices learned during remote teaching and ideas for refocusing as they enter the 2022-2023 school year. Collaboration opportunities have decreased due to the need for teachers to cover other classes during their planning periods due to unfilled vacancies or teacher absences. Teachers were in survival mode during the 2021-2022 school year. In Hall and Hord's (2020) change theory's stages of concern, the collaboration stage is supposed to be used to share ideas and make revisions in the refocusing stage; however, due to the change caused by the COVID-19 pandemic, utilization of the collaboration stage did not occur because teachers simply did not have time to collaborate. Teacher time focused on addressing student learning gaps, covering classes, and addressing students' negative behaviors.

Implications

These data indicate that the post-pandemic classroom needs support in the areas of social-emotional learning, student mental health, and student behaviors. Teachers were unprepared and unqualified to meet students' mental health and social-emotional needs when they returned from virtual learning. The lack of student interaction during the COVID-19 pandemic caused a gap in social-emotional learning that has caused a domino effect in the 2021-2022 classroom. According to this study's teacher participants,

students lacked social-emotional maturity, which caused an increase in negative student behaviors and apathy toward school because they were missing key skills, including appropriate student-to-student discourse, the ability to interpret body language, self-confidence, and self-efficacy. This study revealed that teachers believed school districts need to implement social-emotional learning programs at all levels, offer intervention programs that support mental health, reinstate structures to address behaviors and student attendance, and provide the appropriate professional staff to guide these programs moving forward into the 2022-2023 school year. The root cause of these issues was not addressed in the 2021-2022 classroom and will continue to affect student learning.

Research Question 2: What Are Teacher Perceptions of the Positive Changes Caused by the COVID-19 Pandemic That Have Impacted Student Learning?

Discussion of Findings

Teachers perceived technology integration as the most positive component of the COVID-19 pandemic. Access to technology is at the forefront of importance. Many teachers will continue using the tools they used in virtual learning during the pandemic when returning to the physical classroom (Schaffhauser, 2021). Not only are teachers integrating more technology into their lessons compared to 2019, but teacher perceptual data from this study indicated that the ability of students to navigate and use technology and EdTech tools such as Google Classroom and Canvas has dramatically improved. Technology integration was easier to implement during the 2021-2022 school year because the student-to-device ratio in County X became 1:1. With an increase in the availability of technology, teachers implemented technology into their lessons and kept some of the digital resources and tools they used during the virtual and hybrid learning

during the 2020-2021 school year.

Another positive component perceived by teachers was better communication between home and school and the accessibility of teachers using Google Meets and learning management platforms such as Google Classroom and Canvas. The teacher responses from this study supported previous research by Osborne (2021), which stated that other positive outcomes from the COVID-19 pandemic included increased communication between home and school and a better understanding of the role of the teacher by parents. Meetings between staff and parents offered more flexibility for both staff and parents. Virtual meetings were not available before the 2020-2021 school year, and the COVID-19 pandemic forced the need for an alternative method of communication. Students with IEPs still needed to receive special education services, and stakeholders needed to meet to discuss progress toward goals and interventions. The ability of school staff to meet virtually with parents and stakeholders continued in County X during the 2021-2022 school year.

Theoretical Framework

This study found that the teacher perceptions of positive changes caused by the COVID-19 pandemic on student learning included access and integration of technology and improvement in home-school communication. This research question was directly related to the consequences and management level of concern component of change theory. Hall and Hord (2020) stated that the consequence level of concern described how implementation impacted others, while management focuses on the processes and tasks. While teachers were concerned about the delivery of their content through virtual and hybrid learning, the positive consequence that impacted student learning was increased

technology integration and accessibility and the accessibility of instructors and online materials to students and parents. Teacher concerns about their content delivery resulted in a positive management of this consequence by continued implementation of EdTech tools into the content and the use of learning management systems to post lesson materials and additional resources for students to access from anywhere. Teachers continued using virtual meeting tools in County X, which also allowed for more student and parent access to teachers and staff. An improvement in home and school communication was also a positive consequence of the COVID-19 pandemic. There was an improvement in home and school communication due to the close relationship families formed with teachers during the virtual and hybrid teaching during the 2020-2021 school year. Teachers managed this consequence through more frequent communications using tools adopted by County X such as Talking Points and Seesaw in the 2021-2022 school year.

While a majority of teachers perceived both technology and home-school communication as positive, there were teachers on the survey who perceived these impacts as neutral or negative based, which connects to Bem's (1972) self-perception theory in which perception of a situation indicates reality for that person. Teacher perceptual data identified the positive impacts on student learning caused by the COVID-19 pandemic change event.

Implications

The positive impacts on student learning will have many implications going forward. Technology integration allows students to learn at their own pace and individualizes their educational experience. The implications of having access to

technology allow students to work when they are out of school due to weather, illness, or travel plans. Access to technology also allows parents or tutors to be more involved in assisting students in areas with difficulties and can increase parent engagement. Implications regarding technology integration in the classroom help enhance learning and teach skills students will need as they advance in their education and into the workforce. Costley (2014) stated that we are an evolving technological society dependent on the use of technology, and many jobs that did not require the use of technology in the past now require it.

Research Question 3: What Are Teacher Perceptions of the Negative Changes Caused by the COVID-19 Pandemic That Have Impacted Student Learning?

Discussion of Findings

Teachers perceived negative behaviors as the most negative impact affecting student learning. Teacher perceptions revealed that negative student behaviors were taking up instructional time and causing disruption to other students and impeded the teachers' abilities to fully address learning gaps in the classroom. Teachers perceived that the lack of being in the physical classroom, a decrease in student interactions, and learning "alone" during virtual learning created a situation where students did not understand acceptable behaviors for their age. The lack of social-emotional learning led to less mature behaviors in every grade level. Teacher perceptions of the learning gaps in academic and social-emotional skills negatively affected student learning. Teachers forged ahead with their content regardless of student proficiency, per administrative mandates. The learning gaps present before the pandemic exacerbated the gap for economically disadvantaged students, students of color, and ESL learners due to their

lack of exposure to the English language while not in school. West and Lake (2021) stated that intensive early literacy and math support is essential and critical for economically disadvantaged students and students of color who were at risk before the pandemic. Students are behind in their social-emotional learning, which is causing some behavioral issues. Compared to the pre-pandemic classroom, teachers perceived students' social-emotional learning to be behind. Teachers stated that students were needier, needed more structure, were more socially awkward, and were less mature.

Although the perception of technology integration was positive, another negative component affecting student learning was student dependency on technology, especially at the secondary level. Appropriate technology usage for educational purposes, not student entertainment, had to be monitored in the classroom. Teachers had to implement specific rules and policies to regulate non-educational-based technology usage, such as cell phones, within their classes.

Students also lacked time management and discourse skills with their peers. Student mental health is also a factor that has negatively affected student learning. The Children's Hospital Association (2021) stated,

> The American Academy of Pediatrics (AAP), the American Academy of Child and Adolescent Psychiatry (AACAP), and the Children's Hospital Association (CHA), together representing more than 77,000 physician members and more than 200 children's hospitals, declared a national state of emergency in child and adolescent mental health and are calling on policymakers to join them. (para. 1)

Theoretical Framework

This study found that the teacher perceptions of the negative impacts of the

COVID-19 pandemic that impacted student learning included negative behaviors, learning gaps, dependency on technology, mental health, and a decline in student skills such as discourse and time management. This research question was directly related to the change theory's consequences level of concern. Hall and Hord (2020) stated that the consequence level of concern described how implementation impacted others, whether other teachers or students. Teachers were concerned about the consequences that arose from the COVID-19 pandemic. The main concern identified from the teacher perceptual data from this study was negative student behaviors that disrupted instructional time. A second consequence of the COVID-19 change event that teachers were concerned about was learning gaps in both academic and social-emotional skills resulting in a group of students who were not ready to receive the level of academic content due to a lack of maturity required for their grade level. Lastly, teacher concerns about other consequences caused by the COVID-19 pandemic change event included decreased student skills in discourse, organization, time management, and self-efficacy, which increased student apathy toward school and academic performance.

While a majority of teachers perceived student behaviors, learning gaps, mental health, dependency on technology, a decline in student discourse, and time management skills as negative, there were teachers on the survey who perceived these impacts as neutral or even positive which connects to Bem's (1972) self-perception theory in which perception of a situation indicates reality for that person. Bem's self-perception theory reveals teacher perceptions on which impacts caused by the COVID-19 pandemic teachers perceived as negative factors affecting student learning.

Implications

Negative impacts may continue to affect student learning in the post-pandemic classroom. The implication of negative student behavior causes decreased instructional time, which inhibits the progress of reducing learning gaps for students. If the negative impacts are not addressed, schools may increase their suspension rates and security, the graduation rate may decrease, and the dropout rate is likely to increase. According to a study conducted by the University of Georgia (2018), two student behaviors that affect the graduation rate are student behavior and a gap in academic skills. In addition, the implications of children with untreated mental health concerns increase the risk for alcohol or drug abuse, self-harm, and/or suicide (Healthypeople.gov, 2020). Untreated mental health can also be linked to chronic illnesses including diabetes, heart disease and cancer (Healthypeople.gov, 2020).

Research Question 4: What Strategies or Approaches Are Teachers Using to Address the Changes for the Post-Pandemic Classroom?

Discussion of Findings

To address negative classroom behaviors, teachers implemented more guided learning, redirection, and policies regarding cell phone and technology use in the classroom to help decrease the number of off-task behaviors and increase student learning. Some schools and teachers implemented social-emotional learning programs or lessons to help bridge the gap due to virtual learning and taught students how to interact with one another to decrease negative behaviors appropriately. Additionally, teachers spent time teaching students appropriate methods of communication so students could engage in student-to-student discourse, which helped to increase collaboration and

content understanding.

To address academic learning gaps, teachers gave more of their time. Extra time was needed to address learning gaps and the slower pace of content delivery that many students needed to master the content. Many teachers offered review or tutoring sessions before or after school, created mini lessons to address gaps that existed from previous years, and created videos or found supporting content for students to use to practice or review skills they were lacking. In the classroom, teachers broke students into small groups to provide targeted instruction, paired students up to teach and help each other, and altered their content to ensure standards were covered while allowing for more time for each skill to reach mastery. The continued use of Google Classroom or Canvas allowed access to materials readily available to students and parents at home. Lastly, teachers integrated more technology into lessons and educational technology tools into their curriculum to engage students in the content. Teachers continued to offer flexibility to students during the 2021-2022 school year due to it being the first school year students were back in the physical classroom after the virtual learning caused by the COVID-19 pandemic.

To address the social-emotional learning gap, teachers used instructional time to teach students how to speak to one another and how to play appropriately. Some elementary teachers noted that their schools within County X adopted a social-emotional learning program, but no middle or high school teacher indicated these programs occurred. Teachers indicated that these social-emotional learning programs helped bridge the gap in social-emotional learning due to the virtual learning environment created during the 2020-2021 year.

Theoretical Framework

This research question directly relates to the levels of concern management stage. Hall and Hord (2020) described the management level as focusing on the processes and tasks. Teachers were concerned about the consequence of learning gaps. To manage learning gaps, teachers increased their time with students and offered before, during, lunchtime, and after-school opportunities for tutorials. Teachers also managed the presence of learning gaps through increasing their parent communication to keep parents informed of what was happening in the classroom, so parents could continue to assist their children at home. Teachers also managed the consequence of learning gaps through implementing lessons on social-emotional and discourse skills to manage negative behaviors. Teachers taught appropriate discourse and reading body language skills to manage the social-emotional learning gap that was created and help students exhibit appropriate behaviors for their age. Lastly, teachers managed technology, including cell phones, headphones, and computer usage, to ensure students remained on task, engaged, and focused on the content.

Bem's (1972) self-perception theory revealed the teacher perceptual data that identified areas where change had occurred and what teachers were doing within their classrooms to address the changes caused by the COVID-19 pandemic. Teachers managed their classrooms and students based on their own perceptions of the negative impacts that were caused by the COVID-19 pandemic. Some teachers indicated that nothing had changed in the 2021-2022 classroom compared to the 2019-2020 classroom, which supports Bem’s self-perception theory that perception of a situation creates reality for that individual.

Implications

Teachers identified what they were doing to manage the consequences of changes. Identifying what teachers were doing allowed for an opportunity to identify areas where innovation occurred. Implications of new teaching methods or technology integration will help students be more successful and engage with the material differently. Schindler et al. (2017) stated that educational digital games promote the achievement of learning outcomes in a fun and engaging manner through role-play, real-world applications, problem-solving, and drill and repeat activities that influence behavioral, emotional, and cognitive student engagement. Costley (2014) agreed with Schindler et al. regarding student engagement and added that technology provides meaningful learning experiences that include hands-on learning experiences in all subjects, opportunities to collaborate with peers, and a positive impact on student learning and motivation.

The data also revealed that teachers were working extra hours to support their students before and after school and during lunch and meeting with them via Google Meet when students were out sick for extended periods. The implication of these extra work hours may lead to teacher burnout and resignations. Walker (2021) stated that as staff shortages and teacher workload increase, more teachers feel burned out and demoralized. Walker (2021) also indicated that schools tend to be unaware of the full impact of the extra work on educators and student learning, and the lack of support is likely to cause educators to leave the classroom.

Faculty who have begun implementing social-emotional programs may experience a decline in negative student behaviors, increased student self-confidence, increased student achievement, increased student-to-student discourse skills, and an

overall improvement in mental health in their students. Social-emotional learning is linked to the increase in positive behaviors such as kindness, sharing, and empathy; improves student apathy toward school; and helps reduce depression and stress among students (Durlak et al., 2011).

Research Question 5: What Do Teachers Believe Are the Next Best Steps to Address Student Learning Needs in the Post-Pandemic Classroom?

Discussion of Findings

Several teachers mentioned wearing many hats and the need for more student support, including more intervention teachers, counselors, school psychologists, and funding for programs that would address the gaps in social-emotional learning and academics. Teachers indicated that funding additional teachers and support staff was the most crucial aspect of moving forward in the post-pandemic classroom. Additional teachers are needed to reduce class sizes and provide interventions for students. More counselors and school psychologists are needed to address the increase in mental health concerns among students. Providing more staff decreases the student-teacher ratio and utilizes more intensive support for students who experience a large learning gap. More counselors and school psychologists provide more professionals to address the increase in mental health issues due to the COVID-19 pandemic.

Teachers also cited a need to get back to a more structured behavior system in which County X supported school administration and their ability to deliver consequences for negative behavior, excessive absences, and tardies. Having a more structured behavior system with consequences creates a common expectation communicated to students and parents. The Oregon Department of Education (n.d.)

conducted research on students that indicated that students who were chronically absent had a lower on-time graduation rate than their peers and students who had higher attendance rates were more likely to meet academic standards. Addressing truancy can ensure fewer students are missing school and that learning gaps do not continue to increase with those students. In turn, the dropout rate will not increase, and the graduation rate will not decrease.

Theoretical Framework

This research question directly relates to the refocusing stage of the levels of concern. Hall and Hord (2020) described the refocusing stage as tweaking original implementations to improve the change. Teachers were concerned about the consequences of the COVID-19 pandemic change event which included negative student behaviors, learning gaps, mental health, and a decline in student skills. To address the concerns about the consequences caused by the COVID-19 pandemic, teachers discussed refocusing components. For the 2022-2023 school year, teachers discussed refocusing on the need for more social-emotional learning to address the gap caused by the COVID-19 pandemic. Teachers indicated refocusing on funding would provide additional staff and programs to address learning gaps. Teachers indicated refocusing on consistent behavior policies to address negative student behaviors. Lastly, teachers indicated refocusing on the flexibility allowed to teachers during the virtual learning period should be continued, including the option to work from home on teacher workdays to allow for childcare, time for appointments, and a flexible schedule for virtual meetings with parents and professional learning teams.

Bem's (1972) self-perception theory revealed teacher perceptual data that

indicated what teachers believed would be the next best steps in addressing the impacts of the COVID-19 pandemic on student learning. Not every teacher had the same recommendation for moving forward into the 2022-2023 school year, indicating that teacher perceptions of the most important steps to move forward were based on each individual's perception of the situation.

Implications

Utilizing the results of this study should occur when creating budgets and allocating money to schools. School- and county-level administrators need to discuss the countywide implementation of social-emotional learning programs. In addition, a discussion of where funding can come from to support the increase in intervention specialists and when deciding school schedules and time allocation needs to occur to support the post-pandemic student learning needs. These results may also help explain a decrease in performance on testing data compared to the 2018-2019 school year.

While previous research focused on learning gaps and mental health, these results demonstrated that student behavior impeded student learning. Elementary teachers discussed social-emotional learning gaps, while secondary teachers discussed negative behaviors. Depending on the teachers' definitions of social emotional behaviors and the definition of negative behaviors, social emotional behaviors and negative behaviors may be referencing the same behaviors exhibited by all levels of students. Addressing behavior first is a priority so learning gaps can be closed. Teachers were spending more time and energy than ever before helping students. This increased amount of work is leading to teacher anxiety and burnout. Dunne (2020) stated that chemicals released during anxiety could affect many decision-making processes; patience; empathy; and

control of thoughts, emotions, and actions. This increased anxiety could also lead to more teachers leaving the profession altogether.

Overall Impact of the Study

This research study revealed teacher perceptions of the impact on student learning and challenges faced by educators during the 2021-2022 school year following the virtual and hybrid learning that occurred from March 2020 to the end of the 2021 school year. Self-perception theory states that perceptions based on an event become a reality for the individual. Since there were no initiatives in County X to address social-emotional learning, most schools did not implement this learning school-wide. This social-emotional learning was left to individual teachers to decide to teach in addition to the regular curriculum. There were some exceptions as some schools within County X did implement a school-wide social-emotional program. In addition, teachers perceived that mental health was having a negative impact on students, but the number of counselors and school psychologists did not increase to meet the needs of students. Teachers perceived that learning gaps also had a negative impact on student learning, specifically with students who had gaps prior to the COVID-19 pandemic. The pacing of the curriculum has not changed. As a result, teachers perceived that ESL students who lacked exposure to the English language and students who lacked access to technology during the virtual learning or lacked parent support at home experienced a larger learning gap. Lastly, the increase in negative student behavior had a negative impact on student learning. Managing negative classroom behavior impacts every student within the classroom and decreases instructional time. The IRIS Center (n.d.) stated that unaddressed negative student behaviors can result in a loss of up to 50% of instructional

time, lowered academic achievement for all students in the class, decreased student engagement and motivation, increased teacher stress and frustration, and increased teacher turnover.

There is a silver lining to the COVID-19 pandemic in terms of education. Technology has had a positive impact on education in multiple ways. County X issued a school Chromebook to each student, increasing technology access. Integration of technology tools and online programs increased during virtual learning, and many teachers continued using these tools when returning to the classroom. Lastly, teachers perceived that both teachers and students increased their technological skills and could easily navigate many different types of technology. These technologies included learning management programs such as Google Classroom and Canvas, the use of student email, and Google-based applications such as Google Documents and Google Slides.

The information gained from this study can provide guidance for administration should an unexpected change event occur. By keeping in mind the lessons we learned from the COVID-19 pandemic, the principles of change theory stages of concern, and common educational practices, we can connect these three components to provide a roadmap to better deal with the change event. Change theory does not separate the difference between voluntary change and forced change. The COVID-19 pandemic was a forced change, and this study demonstrates the need to be proactive in providing support for teachers and students rather than being reactive in future forced change situations.

This study reveals that the lack of emphasis on social-emotional learning following virtual learning in 2020-2021 caused a domino effect of issues that impeded educational progress. The consequences stage of concern tells us how the implementation

of the change will affect others. The consequences of the COVID-19 pandemic caused students to lack the appropriate levels of maturity needed for their grade level and that impacted student skills, motivation, collaboration skills, and behaviors, which all affected student learning. Common educational practices focus on building relationships within the classroom and on social-emotional learning. Ensuring social-emotional learning is a priority in the future will eliminate the domino effect of negative student components that affect learning.

This study also reveals that a lack of funding for additional positions and programs to provide needed student interventions has put a lot of pressure on teachers to manage the consequences of the COVID-19 pandemic. The change theory management stage of concern focuses on the tasks and processes of the change. Teachers shouldered the management of learning gaps in both academics and social-emotional learning. Teachers gave more of their time to tutor students before and after school, implemented more directed learning and small groups, created mini-lessons, and provided virtual content on learning management platforms to help students bridge the gaps. They revised their curriculum to eliminate some of the activities to ensure students had enough time to grasp concepts, but even this was not sufficient for all students to reach mastery of the standards which remained unchanged throughout the COVID-19 pandemic. Common educational practices included in the teacher leader standards include opportunities for teachers to improve school culture, organization, curriculum, instruction, and assessment. The huge task of managing the consequences and common educational practices suffered and caused teacher burnout due to a lack of support and funding. This lack of funding caused a continuation of large class sizes, a lack of intervention staff to meet the needs of

students, and a lack of professionals needed to deal with staff and student mental health concerns. Ensuring there are the appropriate numbers of staff in the future will alleviate teacher burnout and ensure there is support for students academically, social-emotionally, and for their mental health needs.

Third, this study reveals teacher recommendations for refocusing on the COVID-19 post-pandemic classroom. The change theory refocusing stage of concern is the tweaking of original implementations to improve on the change. Common educational practices included in the teacher leader model standards indicate that teachers should be focused on equitable achievement for students of all backgrounds and circumstances, and they should be facilitating the analysis of student data to improve teaching and learning. For teachers to ensure an equitable education for all students they need support to address the consequences of the COVID-19 pandemic. Support through additional staff and funding to offer programs that address social-emotional learning, mental health, and academics are needed to move educational progress forward. In the future, providing funding to staff and programs will provide a better starting place for students to move forward academically. The next section will focus on recommendations administrators can use moving forward in the post-pandemic classroom. Lastly, while funding and hiring of additional support are out of the control of the individual schools, collaboration of staff to address student needs will be necessary. Collaboration is the sharing of ideas about implementation. School staff will need time to collaborate and come up with solutions when funding is not an option to support student needs and create the best course of action for implementation.

Recommendations for Practice

The category of school-based solutions identified during the elementary and secondary thematic analysis resulted in site-based solutions leading into the 2022-2023 post-pandemic classroom. These solutions included adopting a social-emotional program, increased flexibility, structures for behavior and attendance, and after-school programs and tutorials to support students.

Teachers must have available resources and structured instructional time to teach social-emotional learning at all levels. A specific learning time for social-emotional learning should be reserved during the school day to teach social-emotional skills and allow students to practice and reflect on what they have learned. Niemi (2020) stated that social-emotional learning is effective when the integration of evidence-based programs occurs throughout all classrooms with a school-wide approach where students can learn and practice SEL through specific instruction, supportive environments, and multiple opportunities for students to utilize their voice and share perspectives.

Flexibility regarding meetings, including staff meetings, special education meetings, and parent conferences, should continue to be offered virtually. In addition, teachers should be able to work remotely on teacher workdays rather than being tied to the school site. Virtual meetings and remote working increase the work-health balance of teachers and will relieve the stress of finding daycare for their children on days when school is not in session. Gragnano et al. (2020) stated that a work-health balance with a low level of work-to-family conflict generates job satisfaction because the work role does not interfere with the family unit.

Structures for behavior and attendance also need to be addressed. The COVID-19

pandemic allowed for much flexibility and grace regarding student absences. Discarded policies including truancy, senior exemptions from the teacher-made exams tied to student attendance, and lack of schools addressing or enforcing a tardy policy resulted in higher attendance issues across County X. The attendance and tardies policies that were in use prior to County X's 2020-2021 school year need to be re-implemented in all schools now that students have returned to in-person learning. Additionally, expectations for student behavior need to be addressed at each educational level to encourage high expectations for protecting instructional time for all students through appropriate behaviors. School-wide behavior programs already in use in County X, such as positive behavioral interventions and supports, need to be revitalized and put at the forefront of importance as students enter the 2022-2023 school year.

A countywide call for community support is needed for after-school programs to support mental health and academic needs at all educational levels. The National Conference of State Legislatures (2022) stated that no funding provided by the state of County X for after-school programs would occur. Therefore, schools in County X will need to be creative and team up with community partners to provide students with academic and mental health support. The expectation for after-school programs should not rely on school personnel. The National Conference of State Legislatures stated that quality after-school programs improve educational outcomes, attendance, and social-emotional learning and can decrease dropout rates and close achievement gaps. Practical solutions within the schools include students in honor societies at the high school level being utilized at the elementary and middle school levels to provide academic support and tutoring for identified students. Community support can come from creating

relationships with local colleges to provide students in teacher preparation programs or subject-specific majors to support high school students for academic support programs. Honor society students can engage more in peer tutoring to fulfill their volunteer hour requirements. County X can team up with the Boys and Girls Club and utilize other community businesses and members to help support clubs and activities that support mental health. School counselors can reach out to parents of students who would benefit from involvement in academic and mental health after-school support programs.

Recommendations for Future Research

Since 2021-2022 was the first year students returned to full in-person learning following the COVID-19 pandemic, the data collected will provide a baseline for teacher perceptual data. They can help measure the success of future programs, specifically social-emotional or intervention programs.

The first recommendation is to repeat this same study with educators who are not teachers. It would be interesting to run the same research through school counselors and administrators to compare their perceptual data to teacher perceptual data. Often, these staff members see the "big picture" of the school compared to the students in an individual classroom. If the perceptual data of these educators line up with teacher perceptual data, that is more evidence that supports the need for change.

An additional recommendation for future research is the connection between social-emotional learning and mental health or social-emotional learning and student achievement; specifically, an examination of the impact of the increase in social-emotional learning in school following the COVID-19 pandemic on student mental health or student achievement. Teaching social-emotional learning in the classroom beginning

in the 2021-2022 school year will require an allocated time allotment.

A third recommendation for future research is regarding learning gaps in elementary students, specifically ESL students, who may be experiencing a larger gap due to limited exposure to English during remote learning. A study on the effects of the COVID-19 pandemic on third-grade reading levels with specific attention placed on economically disadvantaged students and students of color will be necessary to determine the real impact of the learning gap. Weyer and Casares (2019) stated that third-grade reading levels are critical because it is the final year that children are focused on learning how to read. Subsequent grade levels shift the focus to reading to learn by the end of third grade; much of the curriculum will be incomprehensible to students who are not proficient readers. Students promoted to fourth grade who are still learning to read without the ability to comprehend fully what they are reading may continue to have increases in the learning gap as they move through the educational system.

The last recommendation for future research is to study the impact of the COVID-19 pandemic and its effect on teacher retention. The data from this research indicated that teachers "wore many hats" and increased the time they spent with students before or after school. These extra "hats" and time teachers give their students could lead to teacher burnout and cause teachers to leave the profession.

Limitations of the Study

The results of this study were limited to teachers in County X. Each state and county implemented different courses of action following the COVID-19 pandemic, and teachers from those locations may have a different perception following the COVID-19 pandemic change event due to what happened in their specific area.

An unanticipated obstacle during the research process was the number of focus group participants. When five participants for each focus group were obtained and confirmed, I continued to recruit one or two more teachers for each focus group so there would be enough participants should someone drop out. One elementary teacher who taught in another county during the 2019-2020 school year and another secondary person who was a teacher assistant and not a licensed teacher volunteered to participate. These two individuals did not meet the requirements for participation and therefore were not added to the focus groups. Five participants for each of the elementary and secondary groups were scheduled to participate in each focus group; however, only two elementary teachers and three secondary teachers actually attended the focus group meetings. Two elementary teachers emailed me 2 days before the meeting time to inform me they had a scheduling conflict arise. At the same time, the third told me just an hour before that they could not make it virtually but that they would try to call into the meeting and still participate. I continued to ask for additional teachers to participate in the focus group on the social media sites. I was hoping I could replace the two who dropped out on a Friday for a Sunday focus group meeting. Despite my best efforts, no other qualified teachers came forward.

For this reason, I continued with two teachers for the elementary group to honor their time and effort to meet with me on the weekend to accommodate my focus group. I also felt confident going forward with a smaller group since I did also ask open-response items on the survey to address all research questions. The secondary focus group occurred with three teachers due to unforeseen last-minute conflicts. One teacher emailed me the night before about a scheduling conflict. I tried to recruit one more secondary

teacher from the social media sites to fill in, but I did not have anyone qualified come forward to participate. The fourth member was caught in a meeting the day of the focus group and communicated with me later in the day about what had happened. Since this absence occurred during the meeting, canceling, and rescheduling was not possible, and I wanted to honor the time commitment of the three individuals already present at the meeting. With focus groups, the sample size was smaller than expected, so the generalizability of experiences across the county was limited. The mini focus groups could still produce a rich amount of data to answer each question. Qualitative data were collected in both focus groups and on the survey instrument to limit the effect of this limitation. The survey data produced the number of respondents needed to obtain a 10% margin of error at a 90% confidence level (Graglia, n.d.).

Conclusion

This chapter discussed the findings concerning the research questions that guided this study, the limitations that arose during the study, the implications of this study, recommendations for practice, and recommendations for further research. While the increase in technology positively impacted student learning, the COVID-19 pandemic will have lasting adverse effects on student learning. Addressing these negative effects requires county and state support to recover from the negative impacts on student learning moving forward in the post-pandemic classroom.

References

Ackerman Anderson, L. (2018). *Neuroscience impacts organizational change efforts.* https://blog.beingfirst.com/5-reasons-why-organizational-change-fails

ACT. (2021). *ACT scores for higher education professionals.* https://www.act.org/content/act/en/products-and-services/the-act-postsecondary-professionals/scores.html

America's Promise Alliance. (2021). *High school graduation rate at all-time high but COVID-19 could jeopardize gains, Grad Nation report says.* https://www.americaspromise.org/press-release/high-school-graduation-rate-all-time-high-COVID-19-could-jeopardize-gains-grad-nation

American Institutes for Research. (2010). Stages of concern: Concerns-based adoption model. https://www.air.org/resource/stages-concern-concerns-based-adoption-model

American Institutes for Research. (2015). CBAM: Concerns-based adoption model. https://www.air.org/resource/cbam-concerns-based-adoption-model

American Institutes for Research. (2021). *Innovation configuration.* https://sedl.org/cbam/innovation_configurations.html

An, Y., Kaplan-Rakowski, R., Yang, J., Conan, J., Kindard, Q., & Daughrity, L. (2021). *Examining K-12 teachers' feeling, experiences, and perspectives regarding online teaching during the early stages of the COVID-19 pandemic.* https://link.springer.com/article/10.1007/s11423-021-10008-5#:~:text=The%20COVID%2D19%20pandemic%20spurred,grow%20(Barbour%2C%202019)

Baptie, G., Januario, E., & Norman, A. (2020). *Birth trauma from the perspective of perinatal counsellors. A mini focus group study.* https://pearl.plymouth.ac.uk/bitstream/handle/10026.1/16523/BTFG_Manuscript_AN.pdf?sequence=2

Bem, D. (1972). Self-perception theory. *Advance in Experimental Social Psychology, 1972*(6), 1-62. https://www2.psych.ubc.ca/~schaller/Psyc590Readings/Bem1972.pdf

Brooks, S., Webster, R., Smith, L., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. (2020). *The psychological impact of quarantine and how to reduce it: Rapid review of the evidence.* https://pubmed.ncbi.nlm.nih.gov/32112714/

Burnside, O. (2018). *Success in action series: Surviving the implementation dip.* https://www.naspa.org/blog/success-in-action-series-surviving-the-implementation-dip

Carter, N., Bryant-Lokosius, D., DiCenso, A., Blythe, J., & Nevile, A. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum, 41*(5), 545-547. https://pubmed.ncbi.nlm.nih.gov/25158659/

CB Insights. (2020). *Covid & post-pandemic education: 6 ways tech could transform how we teach & learn*. CB Insights Research. https://www.cbinsights.com/research/back-to-school-tech-transforming-education-learning-post-COVID-19/

The Center for Treatment of Anxiety and Mood Disorders. (2021). *How stress affects child development*. https://centerforanxietydisorders.com/stress-affects-child-development/

Central Rivers Area Education Agency. (n.d.). *Important components of CBAM.* https://www.centralriversaea.org/curriculum/assessment/concerns-based-adoption-model-cbam/important-components-cbam/

Chakraborty, P., Mittal, P., Gupta, M. S., Yadav, S., & Arora, A. (2020). Opinion of students on online education during the COVID-19 pandemic. *Human Behavior and Emerging Technologies, 3*(3), 357-365. https://onlinelibrary.wiley.com/doi/10.1002/hbe2.240

Chaturvedi, K., Vishwakarma, D. K., & Singh, N. (2021). *COVID-19 and its impact on education, social life and mental health of students: A survey.* https://doi.org/10.1016/j.childyouth.2020.105866

Children's Hospital Association. (2021). *Children's hospitals declare national emergency in children's mental health.* https://www.childrenshospitals.org/news/newsroom/2021/10/childrens-hospitals-declare-national-emergency-in-childrens-mental-health

Clinical Nursing. (2016). Collaboration amongst clinical nursing leadership teams: A mixed-methods sequential explanatory study. *International Journal of Nursing Terminologies and Classifications, 14*(4), 1-11. https://www.academia.edu/17320215/Collaboration_amongst_clinical_nursing_leadership_teams_a_mixedmethods_sequential_explanatory_study

Connelly, L. (2008). *Pilot studies.* https://go.gale.com/ps/i.do?p=AONE&u=googlescholar&id=GALE|A192589717&v=2.1&it=r&sid=AONE&asid=87470d30

Costley, K. (2014). *The positive effects of technology on teaching and student learning.* https://files.eric.ed.gov/fulltext/ED554557.pdf

Creswell, J., & Creswell, J. (2018). *Research design qualitative, quantitative, and mixed methods* (5th ed.). Sage.

Cullen, W., Gulati, G., & Kelly, B. D. (2020). *Mental health in the COVID-19 pandemic.* https://academic.oup.com/qjmed/article/113/5/311/5813733?login=false

Czulada, L., Kover, K., Gracias, G., Kumar, K., Desai, S., Stawicki, S., Costello, K., & Erickson-Parsons, L. (2021). Toxic stress affecting families and children during the COVID-19 pandemic: A global mental health crisis and an emerging international health security threat. *Contemporary Developments and Perspectives in International Health Security, 3*. https://www.intechopen.com/online-first/82006

DeFranzo, S. (n.d.). *4 Main benefits of survey research.* https://www.snapsurveys.com/blog/4-main-benefits-survey-research/

Dilshad, R., & Latif, M. (2013). *Focus group interview as a tool for qualitative research: An analysis.* http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.704.3482&rep=rep1&type=pdf

DJS Research. (n.d.). *Mini groups.* https://www.djsresearch.co.uk/glossary/item/Mini-Groups

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2021). *COVID-19 and education: The lingering effects of unfinished learning*. McKinsey & Company. https://www.mckinsey.com/industries/public-and-social-sector/our-insights/COVID-19-and-education-the-lingering-effects-of-unfinished-learning

Douglas, T. (2017). *Flexible learning spaces focus on helping students be productive, comfortable.* https://www.iste.org/explore/entrsekt/Flexible-learning-spaces-focus-on-helping-students-be-productive%2C-comfortable

Duke Institute for Brain Sciences. (2021). COVID 19: A neuroscience perspective, How do anxiety and stress related to COVID-19 affect cognitive functions? https://dibs.duke.edu/COVID-19/labar

Dunne, S. (2020). *Yale neuroscientist discusses how coronavirus pandemic stress alters brain chemistry*. https://www.courant.com/coronavirus/hc-news-coronavirus-stress-brain-yale-new-haven-20200810-vmhjxdqoifhkzlyk7sibuhjjty-story.html

Durlak, J., Dymnicki, A. Taylor, R., Weissberg, R., & Schellinger, K. (2011). The impact of enhancing students' social-emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405-432. https://library.bsl.org.au/jspui/bitstream/1/3563/1/Impact%20of%20enhancing%20students'%20social%20and%20emotional%20learning.pdf

Edmonds, A., & Kennedy, T. (2017). *Chapter 17 explanatory-sequential approach.* https://methods.sagepub.com/book/an-applied-guide-to-research-designs-2e/i1245.xml

Engzell, P., Frey, A., Verhagen, M. (2021). *Learning loss due to school closures during the COVID-19 pandemic.* https://www.pnas.org/content/118/17/e2022376118

Fazlul, I., Koedel, C., Parsons, E., & Qian, C. (2021). *Bridging the COVID divide: How states can measure student achievement growth in the absence of 2020 test scores.* Thomas B. Fordham Institute. https://fordhaminstitute.org/national/research/bridging-covid-divide-how-states-can-measure-student-achievement-growth-absence

Frederick, E. (2017). *Organizational change management: The key to executing your plans.* https://criteriaforsuccess.com/organizational-change-management-the-key-to-executing-your-plans/

Garrison, B. (n.d.). *Concerns-based adoption model (CBAM).* https://ascnhighered.org/ASCN/change_theories/collection/cbam.html

Gleeson, B. (2017). *1 Reason why most change management efforts fail.* https://www.forbes.com/sites/brentgleeson/2017/07/25/1-reason-why-most-change-management-efforts-fail/?sh=6a80b67546b7

Graglia, D. (n.d.). *How many survey responses do I need to be statistically valid? Find your sample size.* https://www.surveymonkey.com/curiosity/how-many-people-do-i-need-to-take-my-survey/

Gragnano, A., Simbula, S., & Miglioretti, M. (2020). *Work-life balance: Weighing the importance of work-family and work-health balance.* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7037206/

Guest, G., Namey, E., & McKenna, K. (2016). How many focus groups are enough? Building an evidence base for nonprobability sample sizes. *Field Methods, 29*(1), 3-22. https://journals.sagepub.com/doi/10.1177/1525822X16639015

Hall, G. E., & Hord, S. M. (2020). *Implementing change: Patterns, principles, and potholes*. Pearson Education, Inc.

Hamilton, L., & Gross, B. (2021). *How has the pandemic affected students' social-emotional well-being? A review of the evidence to date*. Center on Reinventing Public Education. https://www.crpe.org/publications/how-has-pandemic-affected-students-social-emotional-well-being-review-evidence-date

Harriman, P. (2021). *The K-12 post-pandemic classroom*. University of California. https://www.universityofcalifornia.edu/news/k-12-post-pandemic-classroom

Hays, R., & Brown, J. (2005). Field testing: What it is and how we do it. *CAHPS Connection*, *2*(1), 4-5. https://www.rand.org/pubs/external_publications/EP20050622.html

Healthypeople.gov. (2020). *Mental health.* U.S. Department of Health and Human Services. https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Mental-Health

Herold, B. (2021). *Why school districts are unprepared FOR COVID-19 disruptions, again*. Education Week. https://www.edweek.org/technology/why-school-districts-are-unprepared-for-COVID-19-disruptions-again/2021/09

Horace Mann Educators Corporation. (2021). *Educators identify learning gaps due to COVID-19 in Horace Mann study*. Business Wire. https://www.businesswire.com/news/home/20210330005322/en/Educators-Identify-Learning-Gaps-due-to-COVID-19-in-Horace-Mann-Study

Hui, K. (2021). *Majority of NC students are back to virtual classes due to COVID-19 spike*. The News & Observer. https://www.newsobserver.com/news/local/education/article248532490.html

Imran, N., Zeshan, M., & Pervaiz, Z. (2020). Mental health considerations for children & adolescents in COVID-19 pandemic. *Pakistan Journal of Medical Sciences, May 2020; 36(COVID19-S4),* S67-S72. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7306970/

Institute for Work and Health. (2011). *What researchers mean by qualitative research*. https://www.iwh.on.ca/what-researchers-mean-by/qualitative-research

IRIS Center. (n.d.). *What should teachers understand about effective classroom behavior management?* https://iris.peabody.vanderbilt.edu/module/beh1/cresource/q1/p01/

Jaschik, S. (2020). *ACT and SAT scores drop.* https://www.insidehighered.com/admissions/article/2020/10/19/act-and-sat-scores-drop-2020

John Hopkins Medicine. (2022) *What is Coronavirus?* https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus

Kamberelis, G., & Dimitriadis G. (2005). Focus groups: Strategic articulations of pedagogy, politics, and inquiry. *Sage Publications, 2005*(3), 887-907. https://www.researchgate.net/publication/234021625_Focus_Groups_Strategic_Articulations_of_Pedagogy_Politics_and_Inquiry

Kiger, M., & Varpio, L. (2020). Thematic analysis of qualitative data*: AMEE Guide No. 131*, 1-9. https://www.plymouth.ac.uk/uploads/production/document/path/18/18247/Kiger_and_Varpio__2020__Thematic_analysis_of_qualitative_data_AMEE_Guide_No_131.pdf

Koohang, A., & Harman, K. (2005). Open source: A metaphor for e-learning. *Informing Science Journal, 2005*(6), 75-86. https://www.researchgate.net/publication/200051088_Open_Source_A_Metaphor_for_E-Learning

Krueger, R. A., & Casey, M. A. (2014). *Focus groups: A practical guide for applied research* (5th ed.). SAGE.

Kummerer, S. (2020). *North Carolina public schools see a drop in students amid COVID-19 pandemic.* ABC 11. https://abc11.com/nc-schools-school-attendance-enrollment-durham-county/8204335/

Lazaro, H. (2021). *What is EdTech and why should it matter to you?* https://generalassemb.ly/blog/what-is-edtech/

Li, C., & Lalani, F. (2020). *The COVID-19 pandemic has changed education forever. This is how*. The World Class Education Challenge. https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning

Long, C. (2021). *How the pandemic will change the future of schools*. NEA. https://www.nea.org/advocating-for-change/new-from-nea/how-pandemic-will-change-future-schools

Loucks-Horsley, S. (1996). *The concerns-based adoption model (CBAM): A model for change in individuals.* https://s3.wp.wsu.edu/uploads/sites/731/2015/07/CBAM-explanation.pdf

Magomedov, A., Khaliev, M. U., & Khubolov, S. (2020). The negative and positive impact of the pandemic on education. *Journal of Physics: Conference Series, 1691*(2020), 1-4. https://doi.org/https://doi.org/10.1088/1742-6596/1691/1/012134

Mayo Clinic Staff. (2021). *COVID-19 and your mental health.* https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/mental-health- COVID-19/art-20482731

McHugh, M. (2013). *The chi-square test of independence.* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900058/

My Future NC. (2020). *High school graduation rate.* https://dashboard.myfuturenc.org/college-and-career-access/high-school-graduation-rate/

National Conference of State Legislatures. (2022). *Supporting student success through after school programs.* https://www.ncsl.org/research/education/expanding-learning-opportunities-through-afterschool-programs.aspx#research

Nelson, C., & Carver, L. (1998). The effects of stress and trauma on brain and memory: A view from developmental cognitive neuroscience. *Development and Psychopathology, 10*(4), 793-809. https://dash.harvard.edu/bitstream/handle/1/12997517/S0954579498001874a.pdf?sequence=1&isAllowed=y

Niemi, K. (2020). *Niemi: CASEL is updating the most widely recognized definition of social-emotional learning. Here's why.* https://www.the74million.org/article/niemi-casel-is-updating-the-most-widely-recognized-definition-of-social-emotional-learning-heres-why/#:~:text=SEL%20is%20the%20process%20through,and%20make%20responsible%20and%20caring

Noam, G. G. (2020). *Ten big bets: Transforming education during the pandemic and beyond*. PEAR and Clover Press.

Nyumba, T., Wilson, K., Derrick, C., & Mukherjee, N. (2017). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution, 2018*(9), 20-32. https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1111/2041-210X.12860

Ohio Leadership Advisory Council. (2020). *Theories of change.* https://ohioleadership.org/theories-of-change

Oregon Department of Education. (n.d.). *School attendance, absenteeism, and student success.* https://www.ode.state.or.us/wma/researchschool-attendance--final-version.pdf

Osborne, M. (2021). *Lessons learned from a pandemic school year.* EdNC. https://www.ednc.org/lessons-learned-from-a-pandemic-school-year/

Owens, A., Zimmer, J., & Burns, M. (2020). *Absences, failing grades up since county students have been learning online*. WRAL.com. https://www.wral.com/absences-failing-grades-up-since-wake-students-have-been-learning-online/19391305/

Panchal, N., Kamal, R., Cox, C., & Garfield, R. (2021). *The implications of COVID-19 for mental health and substance use*. KFF. https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-COVID-19-for-mental-health-and-substance-use/

Penttila, N. (2020). *Pandemic brain: Parsing the mental health toll*. Dana Foundation. https://dana.org/article/pandemic-brain-parsing-the-mental-health-toll/

Rosanbalm, K. (2021). *Social-emotional learning during COVID-19 and beyond: Why it matters and how to support it*. The Hunt Institute. https://hunt-institute.org/wp-content/uploads/2021/02/HI-Duke-Brief-SEL-Learning-During-COVID-19-Rosanbalm.pdf

Schaffhauser, D. (2021). Forever changed: Education predictions for 2021. *THE Journal.* https://thejournal.com/Articles/2021/01/12/Forever-Changed-Education-Predictions-for-2021.aspx?Page=10

Schindler, L., Burkholder, G., Morad, O., & March, C. (2017). Computer-based technology and student engagement: a critical review of the literature. *International Journal of Educational Technology in Higher Education*, *14*(25). https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-017-0063-0#Sec3

Sincero, S. (2012). *Piolet survey.* https://explorable.com/pilot-survey

Smith System. (2021). *The post-pandemic classroom: Will technology still drive design?* https://smithsystem.com/smithfiles/technology-in-post-pandemic-classroom/

Southern Utah University. (n.d.). *Definition of fact-to-face, online, and hybrid courses.* https://www.suu.edu/registrar/onlinehybrid.html

St. George, D., Strauss, V., Meckler, L., Heim, J., & Natanson, H. (2021). *How the pandemic is reshaping education.* https://www.washingtonpost.com/education/2021/03/15/pandemic-school-year-changes/

Thudium, T. (2022). *Self-perception theory.* https://practicalpie.com/self-perception-theory/

Tsang, S., Avery, A., Seto, E., & Duncan, G. (2021). *Is COVID-19 keeping us up at night? Stress, anxiety, and sleep among adult twins.* https://www.frontiersin.org/articles/10.3389/fnins.2021.665777/full

Ujifusa, A. (2021). *A plan for standardized test scores during the pandemic has gotten states' attention*. Education Week. https://www.edweek.org/teaching-learning/a-plan-for-standardized-test-scores-during-the-pandemic-has-gotten-states-attention/2021/03#:~:text=Assessment-,A%20Plan%20for%20Standardized%20Test%20Scores,Pandemic%20Has%20Gotten%20States'%20Attention&text=States%20are%20going%20to%20give,and%20isn't%20fundamentally%20misleading%3F

UNICEF. (2020). *Education and COVID-19*. UNICEF Data. https://data.unicef.org/topic/education/COVID-19/

United Nations. (2020). *Policy brief: Education during COVID-19 and beyond.* https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_COVID-19_and_education_august_2020.pdf

United States Department of Education. (2021a). *U.S. Department of Education releases guidance to states on assessing student learning during the pandemic.* https://www.ed.gov/news/press-releases/us-department-education-releases-guidance-states-assessing-student-learning-during-pandemic

United States Department of Education. (2021b). *U.S. Department of Education releases "return to school roadmap" to support students, schools, educators, and communities in preparing for the 2021-2022 school year*. https://www.ed.gov/news/press-releases/us-department-education-releases-%E2%80%9Creturn-school-roadmap%E2%80%9D-support-students-schools-educators-and-communities-preparing-2021-2022-school-year

University of Georgia. (2018). *Two behaviors linked to high school dropout rates.* https://www.sciencedaily.com/releases/2018/03/180312150515.htm#:~:text=Students%20classified%20in%20the%20high,of%20less%20than%202%20percent

University of Virginia. (n.d.). *Retention of research records and destruction of data.* https://research.virginia.edu/irb-sbs/retention-research-records-and-destruction-data

Waits, T. (2016). *Three strategies to minimize the implementation dip in DevOps.* https://insights.sei.cmu.edu/blog/three-strategies-to-minimize-the-implementation-dip-in-devops/

Walkenhorst, E. (2021). *Less than half of NC students passed most state tests last spring*. WRAL.com. https://www.wral.com/coronavirus/less-than-half-of-nc-students-passed-most-state-tests-last-spring/19853457/.

Walker, T. (2020). *Social-emotional learning should be priority during COVID-19 crisis*. NEA. https://www.nea.org/advocating-for-change/new-from-nea/social-emotional-learning-should-be-priority-during-COVID-19

Walker, T. (2021). *Getting serious about teacher burnout.* NEA. https://www.nea.org/advocating-for-change/new-from-nea/getting-serious-about-teacher-burnout

Welcome, A. (2021). *Learning gaps: Types, examples, and tips to solve them.* https://sphero.com/blogs/news/learning-gaps#:~:text=What%20is%20a%20Learning%20Gap,specific%20point%20in%20their%20education.

West, M., & Lake, R. (2021). *How much have students missed academically because of the pandemic? A review of the evidence to date*. https://www.mathematica.org/publications/how-much-have-students-missed-academically-because-of-the-pandemic-a-review-of-the-evidence-to-date

Weyer, M., & Casares, J. (2019). *Pre-kindergarten through third grade literacy.* https://www.ncsl.org/research/education/pre-kindergarten-third-grade-literacy.aspx#:~:text=Third%20grade%s%20been%20identified,be%20taught%20will%20be%20incomprehensible

Wolff, B., Knodel, J., & Sittitrai, W. (1991). *Focus groups and surveys as complementary research methods: Examples from a study of the consequences of family size in Thailand.* https://www.psc.isr.umich.edu/pubs/abs/857

Wong, W. (2021). *Reimagining post-pandemic classrooms for today's learners*. Technology Solutions That Drive Education. https://edtechmagazine.com/k12/article/2021/06/reimagining-post-pandemic-classroomstodays-learners

Xie, X., Siau, K., Fui-Hoon Nah, F. (2020). COVID-19 pandemic-online education in the new normal and the next normal. *Journal of Information Technology Case and Application Research, 22*(3), 175-197. https://www.tandfonline.com/doi/full/10.1080/15228053.2020.1824884

Yard, E., Radhakrishnan, L., Ballesteros, M. F., Sheppard, M., Gates, A., Stein, Z., Hartnett, K., Kite-Powell, A., Rodgers, L., Adjemian, J., Ehlman, D., Holland, K., Ikaikkadar, N., Ivey0Stephenson, A., Martinez, P., Law, R., & Stone, D. I. (2021). Emergency department visits for suspected suicide attempts among persons aged 12–25 years before and during the COVID-19 pandemic. *Morbidity and Mortality Weekly Report*, *70*(24), 888-894. https://www.cdc.gov/mmwr/volumes/70/wr/mm7024e1.htm

Zanna, M., Olson, J., & Russell, F. (1981). Self-perception and attitude-behavior consistency. *Society for Personality and Social Psychology, 7*(2), 252-256. https://journals.sagepub.com/doi/10.1177/014616728172011

Zhao, Y., & Watterston, J. (2021). The changes we need: Education post COVID-19. *Journal of Educational Change, 22*(1), 3–12. https://doi.org/10.1007/s10833-021-09417-3

Appendix A

CBAM Image Approval

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Appendix B

Survey Checklist – Creswell and Creswell (2018)

Survey Checklist

_____ State Purpose

_____ Identify the design AND explain reasons for choosing the design

_____ Identify the nature of the study

_____ Determine the population size

_____ Determine the sample size, and explain the reason this sample size was chosen

_____ Explain the procedure for choosing the sample size

_____ Describe the survey instrument – if using a pre-existing instrument include who developed it, how many items, its reliability and validity, and the scale anchors.

_____ Explain pilot or field-testing procedures

_____ Explain the survey timeline

_____ Explain how the measures will be scored and converted into variables

_____ Explain how the variable will be used to test the research questions

_____ Explain the steps in your data analysis to:

_____ analyze returns

_____ check for response bias

_____ conduct descriptive analysis

_____ combine items into scales

_____ check for reliability

_____ run inferential statistics to answer research questions or discuss implications of the results

_____ Explain how the results will be interpreted

Appendix C

Teacher Perception Survey

Survey

Part 1: Demographics

1. Were you a licensed teacher working in Wake County during the 2019-2020 school year in a physical classroom?

_____yes

_____ no (a no response here will end the survey)

2. During the 2020-2021 school year check all of the following that apply:

_____ I worked for WCPSS as a licensed teacher

_____ I taught students virtually
_____ I taught students in class physically

3. During the 2021-2022 school year, check all of the following that apply:

_____ I worked for WCPSS as a licensed teacher

_____ I taught students virtually

_____ I taught students in class physically

4. From 2019 to 2022 please check the following that apply

_____ I am an Elementary teacher

_____ I am a Secondary teacher (middle/high school)

Part II: Changes due to COVID-19

Answer the question using the following scale: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

1. From 2019-2022 weekly updates and communication were shared between administration and staff concerning educational practices.

1 2 3 4 5

2. If communication change at your site due to COVID-19 please explain the change.. (Open Ended)

Answer the question using the following scale: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

3. From 2019-2022 academic collaboration with other teachers (PLC (Professional Learning Community) – professional learning communities, Special Ed, Specialists, etc.) occurred at least weekly.

1 2 3 4 5

4. If academic collaboration changed at your site due to COVID-19, please explain the change. (Open Ended)

Answer the question using the following scale: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

5. Parents better understand the role of the teacher due to COVID-19.

   1 2 3 4 5

6. If you answered agree or strongly agree, please explain how you think parents understand the role of the teacher better due to Covid-19

Answer the question using the following scale: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

7. From 2019-2022 my general content delivery practice changed

   1 2 3 4 5

8. If there was a change, in which ways did Covid-19 affect the way you deliver content to your students?

9. Which of the following components is having a positive impact on student learning in a post-pandemic classroom? (check all that apply)

   __ technology integration

   __ time management skills

   __ self-efficacy

   __ home and school communication

   __ student behavior

___ self confidence

___ accessibility to instructors

___ decreased state testing

___ social-emotional learning during COVID-19

___ student-centered learning

___ student to student discourse

___ student to teacher discourse

___ learning gaps

___ dependency on technology

___ mental health

___ other

10. If you chose "other" please elaborate on what other positive impacts COVID-19 has had on student learning.

11. Which of the following components are having a negative impact on student learning in the post-pandemic classroom?

___ technology integration

___ time management skills

___ self-efficacy

___ home and school communication

___ student behavior

___ student self-confidence

___ accessibility to instructors

___ decreased state testing

___ social-emotional learning during COVID-19

___ student-centered learning

__ student to student discourse

__ student to teacher discourse

__ learning gaps

__ dependency on technology

__ mental health

__ other

12. If you chose "other" please elaborate on what other negative impacts COVID-19 has had on student learning.

13. Describe any changes that have occurred with your in-person classroom management from 2019-2022. (Open Ended)

In items 14-17 ***Rate the degree to which the following components have changed from 2019-2022 using the following scale: (1) Much more Negative; (2) Negative; (3) Neither positive nor negative; (4) Positive (5) Much more Positive***

14a. Technology Integration in my classroom from 2019-2022

1 2 3 4 5

14b.Student time Management Skills from 2019-2022

1 2 3 4 5

14c. Student self-efficacy from 2019-2022

1 2 3 4 5

15a.Home and School communication from 2019-2022

1 2 3 4 5

15b. Student behavior (in person teaching) from 2019-2022

1 2 3 4 5

15c. Student self-confidence from 2019-2022

1 2 3 4 5

16a. Student to student discourse from 2019-2022

1 2 3 4 5

16b. Student to teacher discourse from 2019-2022

1 2 3 4 5

16c. Learning gaps comparing where they are supposed to be to where they are) from 2019-2022

1 2 3 4 5

17a.Student dependency on technology from 2019-2022

1 2 3 4 5

17b. Student mental health from 2019-2022

1 2 3 4 5

Part III: Moving forward from COVID-19

1. 1. What strategies or approaches are you currently using to address the changes for the post-pandemic classroom?

2. What do you believe are the next best steps to address student learning needs for the post-pandemic classroom?

Appendix D

Focus Group Protocol – Creswell and Creswell (2018)

Focus Group Protocol

Step 1: Basic Information

a. Time and date
b. Location
c. Interviewer's name
d. Participant names

Step 2: Introduction

a. Introduction of the interviewer
b. Include the purpose of the study
c. Prompt to collect a signed copy of the informed consent
d. General structure of the focus group (number of questions, approximate time to complete)
e. Ask for final questions
f. Define any important terms that may be used during the interview

Step 3: Opening Question

a. Ice-breaker question – participants talk about themselves to establish comfort
    - No personal questions are asked

Step 4: Content Questions

a. Research sub-questions asked in a friendly conversational manner
b. Sub-questions are aimed to answer the central research question(s)

Step 5: Use Probes

a. Dive deeper into responses
    - Ask for more information about a topic
    - Ask for an explanation of ideas
b. Ask if there is any further information, they would like to share

Step 6 Closing Instructions

a. Thank participants for their time

b. Respond to any other questions
c. Assure participants of the focus group confidentiality
d. Ask if researchers can follow up if clarity is needed
e. Inform participants of how they can learn about the results of the study

Appendix E

Focus Group Outline

Focus Group Outline

Basic Information

Time and date

Location

Focus Group Level (Elementary/Middle/High)

Names of the interviewer and interviewees

Introduction

The purpose of this focus group is to gather educator perceptions regarding the positive and negative impacts on student learning during COVID-19 pandemic. This information will only be used to gather insight on the post-pandemic classroom and expand upon information gathered from the teacher survey.

Statement/Expectations:

1. This meeting will be recorded for audio transcription purposes only.
2. Participation is voluntary and you are welcome to leave at any time.
3. No identifying information or personal information about you will be shared with anyone
4. All information collected will be destroyed after 3 years.
5. You are not required to answer every question.
6. It is acceptable to abstain from discussing specific topics if you are not comfortable.
7. All responses are valid, there are no right or wrong answers.
8. Try to stay on topic, I may need to interrupt in order to cover all material.
9. If you choose to have your responses removed from the study, you may contact me and request that I do not use your responses in the study up to one month after the interview is completed.

Opening Question

1. Can you describe your teaching position from the 2019-2022 school year, including the mode of instructional delivery during this time?

Content Question (using probes when necessary to obtain more information or an explanation)

2. What changes have you noticed about your students this year compared to the 2019-2020 school year?
3. What in your teaching practice has changed this year compared to the 2019-2020 school year?
4. What is the most negative impact on student learning caused by the pandemic and how are you addressing it?
5. What is the most positive impact on student learning caused by the pandemic?
6. What do you think are the most important aspects related to student learning are most important to focus on moving forward?
    a. How would you address this?

Closing:

1. Does anyone have any final closing thoughts they would like to share about the impact of COVID-19 on student learning?
2. Would anyone object to a follow up interview if I need to clarify certain points?
3. Your identifying information will not be shared with anyone, and your participation in this focus group is voluntary. You may ask to withdraw your responses within one month of this interview if you no longer wish for your responses to be used in my research. All data collected will be destroyed three years after the publication date.
4. If you would like to read the final outcome of the research, I would be happy to send you an abstract of the final study.