Perceptions of Idaho CTE Teachers of Teaching During a Pandemic

A Dissertation

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Abstract

This case study examined the perceptions of Career and Technical Education (CTE) teachers regarding the COVID-19 pandemic. The research questions centered around teachers' perceptions and teachers' well-being while teaching during the global pandemic during the 2020-2021 school year. Seven CTE teachers (three post-secondary and four secondary) throughout Idaho were identified through a sample of convenience. Each participant was interviewed via Zoom. The interview data were then thematically coded and emergent themes were identified. The findings of this study contribute to an ever-growing wealth of information regarding the state of education during the pandemic. The major findings of this study showed that post-secondary teachers had an easier time with the switch to online learning when compared to the secondary teachers. The findings also showed that student motivation and academic achievement was higher for post-secondary than for secondary environments. Post-secondary teachers reported feeling more supported by administration than the secondary educators. The future implications of this study would be to interview more CTE teachers to get an even broader sense of their experiences during the pandemic. A deeper investigation into what specific policies, programs, or learning platforms made post-secondary educators feel more supported and then implementing those at the secondary level would be warranted.

Acknowledgements

I am so grateful for the assistance and guidance I have received from several people throughout the doctoral process. First and foremost, this research project would not have been possible without the help and guidance of my advisor, Dr. John Cannon. Thank you for working with me from the beginning of my CTE journey, through my Master's program, and throughout this doctoral process.

I would also like to acknowledge Dr. Mary Jo Self for assisting with the qualitative research design elements all the way from Oklahoma, Dr. Billing for helping me to learn the interview process, and Dr. Darragh for stepping up at the eleventh hour to support my defense process.

Dedication

To my husband Eric, thank you for supporting me in this endeavor, especially when I was struggling with imposter syndrome and feeling like I would never make it. Having you as a classmate as we went through this process together was invaluable. Thanks for being my study buddy and my shoulder to cry on. Thanks for taking the kids so that I could conduct my research.

To my son Amory, you inspire me every day. I am so proud of the man you are becoming, and I thank you for supporting me. You are kind, smart, and so brave.

To my son Everest, my mini-me, my shadow. I have been in graduate school for most of your life. It's all you know. I see you emulating your parents and already making lofty goals for your future. I will be with you every step of the way.

To both of my sons, you are the best part of me, and I am honored to be your mother.

To my parents, who constantly encouraged education during my upbringing and have supported me in all of life's twists and turns, I am forever grateful for your love, support, guidance, and encouragement. Dad, I'll never forget how you would say, "when you go to college," almost daily when I was a child.

To my sweet sister-in-life, Amelia, thank you for sharing in my triumphs and caring in my struggles. I appreciate you so much and love you for life.

This is dedicated to anyone who doesn't think they are good enough, smart enough, brave enough, or whatever enough. If I can do it, you can do it.

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Chapter I

Introduction

The COVID-19 pandemic completely upended the education system around the world (Patson et al., 2021). Since early spring of 2020, teachers everywhere were challenged to continue providing quality education, while changing curriculum and instruction from face to face to online or sometimes a combination of both. Parents took on the role of teacher as they assisted with online learning at home, many while trying to work from home themselves (Butnaru et al., 2021). This created many obstacles for both teachers and students.

Not only was this shift often abrupt, with teachers not having time to create online lessons that could be easily accessed by students, but teachers were required to continue communicating with parents, assessing learning, and for many, learning how to use new digital platforms. At the same time, teachers were in charge of their students' access to and understanding of the devices and technology being used on their end. If students had trouble with the internet or troubleshooting problems that kept them from joining a virtual classroom, teachers had to help resolve the situation from a separate location (Turchi et al., 2020). Teachers were required; in other words, to become tech customer service agents.

Simultaneously, many teachers worked from their homes, while fostering their own children’s educational needs with their various schools and teachers (U.S. Department of Education, 2021). Many schools asked teachers to create hybrid lessons, which meant they were responsible for in person and virtual classrooms simultaneously (McDonald, 2021). While all of these rapid changes were taking place, the whole world was responding to the global awareness that COVID-19 was a potentially deadly, highly transmissible disease. Businesses were forced to shut down, supermarkets reduced hours and added scheduled

shopping times to allow for cleaning and stocking shelves, and many companies sent their employees home to work from a distance (Morgan, 2020; Parker et al., 2020). The uncertainty of treatments, vaccinations, and precautions loomed, as many tried to continue in the new normal. With the shutting down of brick-and-mortar schools, it was made clear that there were many holes in our childcare systems and programs that offer care, nutrition, and mental health services which are often provided through the school system (Tyson, 2020). Many children receive their only meals through school, parents rely on schools for free childcare, often provided after school as well (Tyson, 2020). Teachers and school staff serve as nurses, caregivers, and supportive people to help children cope with hard situations, injuries, or even illness when their parents could not take time off work for fear of losing pay (Aguilera et al., 2021; Zingg, 2020).

As the world experienced the chaos and uncertainty that resulted from the pandemic, teachers and students were adjusting. Many schools continued as online or hybrid. Many started in person and then closed after a few weeks due to increased cases of COVID in their students and staff, many conducted classes in person, but with social distancing protocols in place (desks spaced six feet apart, mandatory masking, and increased sanitation practices) (CDC, 2021). This heightened response to a crisis that had so many unanswered questions has caused many educators to consider leaving the teaching field. According to a National Education Association analysis of a 2022 Bureau of Labor report (Jotkoff, 2022), 567,000 teachers have left the profession since the pandemic began. Many reported that this was the toughest year they had ever experienced as educators (Bartlett, 2021). The need for mental health services dramatically increased since the start of the pandemic, and teachers are no exception (Zingg, 2020).

This study aimed to add to the growing knowledge about the effects of teaching during a global pandemic. The focus was on Career and Technical Education (CTE) teachers in Idaho. CTE is a program that engages students in experiential learning activities. Students can choose from over 79 different pathways in 16 different categories depending on the offerings at their school (Association for Career & Technical Education, 2021). The pathways range from early childhood education, culinary, auto mechanics, agriculture, welding, woodworking, business, audio visual arts, and many more (Association for Career & Technical Education, 2021). Idaho currently has six pathways for students to enroll in: agriculture, food, and natural resources; business and marketing education; engineering and technology education; family and consumer sciences, and health and human services; health professions and public safety; and individualized occupational training (Idaho Division of Career and Technical Education, 2022).

These courses encourage not only the skills necessary for the job, but also "soft skills." The soft skills include communication, integrity, follow-through, and teamwork. These are all vital for success in the workplace (SkillsUSA, n.d.). CTE courses also provide the opportunity for students to earn college credit in high school through dual credit options with participating colleges and universities (Association for Career & Technical Education, 2021). Additionally, students enrolled in CTE programs during high school have the opportunity to participate in Leadership activities by joining Career and Technical Student Organizations (CTSO) associated with each pathway. These organizations are inter-curricular and engage students in various ways. Students can attend competitions to display their skills with peers from across the state and help with other school functions in leadership roles (Association for Career & Technical Education, 2019).

This study focused on CTE teachers in the state of Idaho. Very few mandates regarding COVID-19 precautions were instituted in Idaho during the pandemic. Idaho has a culture of local control. Several schools around the state opened for in-person learning on time in the fall of 2020 but then had to close temporarily due to the high number of students and staff who tested positive for COVID-19 (Savransky & Stevenson, 2021). Many schools around the state stayed open for full time in-person learning (Gottlieb, 2021). According to the Perkins Collaborative Resources Network (2022), 49,683 students were enrolled in CTE courses in Idaho in 2022.

Purpose of the Study

The purpose of this study was to ascertain the perceptions of Career and Technical educators during a time of global crisis. The immediate switch from in person to remote learning caused teachers of all subjects to completely change their teaching methods, quickly learn new computer programs (such as Zoom, Google Classroom, Google Meet, etc.,) and develop new skills to best meet the needs of their students. This was especially cumbersome for CTE teachers, who utilized hands-on experiences and real-world simulations frequently.

The results of this study added to the ever-growing existing knowledge of CTE teachers' experiences across the United States. The focus group of this study was Idaho CTE teachers. The experiences of each participant showed how the sudden changes listed above were handled by various Idaho school districts.

For many teachers at all levels, use of video conferencing and online programs was a new process. As this was new territory for the majority of educators, their experiences and perceptions of the policies, procedures, and programs that were implemented should be assessed in order to improve the systems and make them more efficient and user-friendly (Orhan & Beyhan, 2020).

Learning from the experiences of CTE teachers will enable future administrators, school boards, legislators, and other stakeholders to better prepare for similar circumstances. This study may offer insight into the practices of CTE teachers and how to provide resources to ensure their needs are met, both professionally and personally.

Theoretical Framework

Although there is no widespread agreement regarding the foundational theory behind Career and Technical Education (Schmidtke, 2017), the theoretical framework adopted for this particular study was *Experiential Learning Theory* (ELT), a constructivist theory defined by Kolb (1984). ELT argues that learners, (and in the context of education, this applies to both teachers and students,) create meaning and understanding out of unfamiliar situations by taking their experiences with these situations and adding them to their existing knowledge about the subject (Kolb, 1984). Unfamiliar conditions such as a pandemic and its consequent quarantine and distance-learning demands forced students and teachers to quickly adapt what they already knew about teaching and learning to wholly new situations. It is the meaning that they constructed from these experiences and reflections that this study sought to explore.

Assumptions

The following assumptions were made by the researcher when conducting this research:

1. Participants were honest while sharing their responses with the researcher.
2. Accurate information concerning teaching during a pandemic was given to the researcher.

Limitations

The following limitations were considered in this study:

1. Interviewees were limited to the CTE teachers who participated in the survey conducted by the University of Idaho in the summer of 2020.
2. Only individuals who were agreeable to participate in the follow-up interview participated in this study.
3. Only about a third of the individuals who responded to the survey agreed and followed through with participating in the interview. The researcher made several attempts to contact the individuals who had agreed to participate in a follow-up interview.
4. The limited number of participants means that this study is not generalizeable to CTE or to teaching in the state of Idaho or in the U.S.

Definitions

Coming from Industry- a phrase used to describe teachers who held a non- education related position prior to becoming educators. In many cases, the Bachelors degrees held by these individuals were more attuned to the industry they will be teaching about. For example, a diesel mechanic may become a CTE teacher, teaching others about diesel mechanics. In

order to work as a certified teacher, the individual may be asked to take courses in education and earn a teaching certificate in a limited number of years.

Career and Technical Education (CTE)- a program that offers a wide variety of college and career readiness options to secondary and post-secondary students across the United States (Association for Career & Technical Education, 2021).

Soft Skills- innate skills that enhance one's ability to perform a job or task. Some examples are good communication, teamwork, work ethic, etc (Kaplan, 2023).

Distance Learning- learning that takes place in a situation where the teacher and student are not physically in the same space together. It does not require an online component (but that could be part of it). A workbook or packet could be sent to the student by postal mail and returned to the instructor after completion in the same manner (Knott, 2023).

Online Learning- courses accessed through the internet, wherein the instructor and student do not share the same physical space together. Information is digitally exchanged through online learning platforms**,** blogs, social media, or email, also referred to as *eLearning* (Asad, 2023).

Hands-on Learning- learning that takes place primarily through action or doing, also referred to as experiential learning (collinsdictionary.com).

Adult Learning Theory-also known by Malcolm Knowles as andragogy, states that teaching methods for adults should be different from those of teaching children. Adults need less direct instruction and more opportunities for hands-on. Learning is more individualized depending on motivation and relevance of education to each adult learner. (Western Governors University, 2022).

Organization of the Study

Chapter I introduced the background of the study, with an overview of how COVID-19 affected schools all over the United States. It included an explanation of the many ways that teachers and students were impacted. Chapter I also described the theoretical framework adopted for this study. Assumptions by the researcher and limitations of this study are also included. Chapter I defined and clarified terms and acronyms mentioned during the participant interviews or throughout the study.

Chapter II will explore the state of the literature in regards to the effects of teaching during the pandemic. It will also explain the history and origins of CTE, along with the possible theoretical frameworks commonly used in CTE. Relevant literature will be examined regarding online vs in-person learning, effects of the Covid-19 pandemic, and our newly emerging body of knowledge surrounding the challenges faced by educators and students alike as a result of living through a global pandemic and quarantine.

Chapter III will outline the methodology of this study. The research questions used to guide this study, as well as the case study and survey and analysis designs that were implemented will be described. Chapter III will also introduce the participants of this study, giving a brief view of each of their stories.

Chapter IV will discuss the findings of this study. Chapter V will discuss the implications of these findings for teachers, for students, for policy-makers, and for future research.

Summary

Chapter I first contextualized the problem by briefly describing the sudden educational shift from in-person learning to online learning caused by the COVID-19

pandemic and consequent quarantine, beginning in most United States localities in the Spring of 2020. Teachers had to adapt immediately and abruptly to this unprecedented change in the demands of their jobs. Research continues to emerge about how this recent crisis situation impacted teachers and, in particular, CTE teachers, whose work involves teaching hands-on skills, largely in an in-person environment.

The purpose of the study was then introduced. This study sought to gather perceptions of Idaho CTE teachers of their experiences in this crisis in order to better inform future decisions by district and state policy-makers.

The research questions explored were

1. What were the perceptions of Idaho CTE teachers who taught during the global pandemic of 2020-2021?
2. How did teaching during the pandemic affect teachers' well-being?

The theoretical framework for this study, *experiential learning theory*, and the justification for this framework were briefly introduced. Assumptions and limitations of the study were discussed. Finally, definitions for the terms used in this study were given.

Chapter II

Review of Literature

This review of related literature will begin by defining Career and Technical Education (CTE) and describing the history and evolution of CTE in the United States. Though there is no universally-agreed-upon theoretical framework accepted as the background for CTE, this discipline of education has its roots in *behaviorism*, *constructivism*, and other educational theories, which will also be described in Chapter II.

This literature review will then describe the COVID-19 crisis that forced such rapid and systemic change upon the nation's education systems, the most obvious change being the shift from primarily in-person to nearly exclusively distance learning environments. In-person and online learning will then be described and compared in some detail. Studies find advantages and disadvantages in each paradigm.

Finally, Chapter II will narrow from these broad subjects to the sphere of this study; that is, how teachers in the United States learned from their experiences in this unprecedented crisis and what they learned from these experiences.

CTE Defined

CTE is a program that offers a wide variety of college and career readiness options to secondary and post-secondary students across the United States. There are 16 career clusters, or categories, with over 79 pathways, including business management; human services; marketing, sales, and service; manufacturing, and many more (Association for Career & Technical Education, 2021). The pathways that are offered vary from state to state. As mentioned in chapter I, Idaho has six available pathways. CTE blends academic skills with

hands-on experiences to give students a head start in career and college environments (Association for Career & Technical Education, 2021).

CTE programs can be found in secondary schools, career centers, and community colleges and universities. Numerous CTE programs offer dual credit options between high school and college (Association for Career & Technical Education, 2021). Many students have taken part in these programs that lead to professional certifications and degrees. There is also a leadership component to CTE programs, which encourages students to develop and build on interpersonal skills, networking, public speaking, and team building, all while engaging in on the job training (SkillsUSA, n.d.).

In the early 1900s, there was a nationwide movement to provide training opportunities for young people outside of the typical school curriculum. The Dean of Cornell University's college of Agriculture recognized that the typical child raised in a rural environment faced two very different worlds from school to home life (Moore, 2017). It was not uncommon, for example, for students in rural areas to drop out of school at the age of 14 in favor of working on the family farm. The idea that schools were not serving students was also being discussed in cities, as industry needs were changing. As a result, educators and business and industry leaders across the United States came together to consult on ways to improve secondary education opportunities and keep students motivated to complete high school (Moore, 2017). This group was called the National Society for the Promotion of Industrial Education (NSPIE). By 1908, there were over 900 members of NSPIE, which included more than 30 organizations, business, and industry leaders from across the nation. NSPIE educated the public on the value of industrial education with the use of flyers and informational meetings. They also lobbied for Congress to take notice of and support their

efforts (Moore, 2017). Vocational education was first funded on the federal level in 1917 when the Smith-Hughes National Vocational Education Act was passed by Congress and signed into law by President Woodrow Wilson (Association for Career & Technical Education, 2019). Although initially thought of as a program primarily to help young men develop workplace readiness skills, programs that included women were eventually added. Since then, the CTE program has continued to evolve and grow into a federally funded program for "persons of all ages in all communities" (Association for Career & Technical Education, 2019). Regardless of age, gender, or ability, all are invited to take part in CTE programs in both secondary and post-secondary learning (Association for Career & Technical Education, 2019).

History and Evolution of CTE

As the Industrial Revolution began in the late 1800s, the function and purpose of schools also changed (Moore, 2017). The needs of the workforce shifted from largely agricultural to more machine and technology endeavors (Gordon & Schultz, 2020). Booker T. Washington and W.E.B. Du Bois led the debate on how to best meet the new needs of the labor force. Both were strong advocates for the equality of African Americans. Both wanted the African American community to be able to meet the white community in terms of academic and vocational abilities. Both wanted the African American community to have a fighting chance for equality after the end of slavery and the oppression they had been subjected to in the decades to follow (Lewis, 2003). Both also embraced the notion of vocational learning and wanted to make it widely available. However, they differed in where and how CTE fit into general education (Lewis, 2003).

Washington embraced a more holistic view of education, suggesting that proper education should include a moral component. In his view, education should provide the opportunity to learn cognitive, academic, vocational, and social skills. He was also a proponent of the idea that the view of common labor should be raised. He argued that the majority of people were part of the common labor force around the world, and it should be greeted in a more dignified manner (Lazerson & Grubb, 1974). That sentiment is still seen in today's world (Gordon & Schultz, 2020).

Du Bois took a slightly different view, although he respected Washington's ideas. Du Bois saw education as an opportunity for African Americans to become scholars and philosophers, with the main goal of gaining civil rights. He thought the best way to uplift African Americans was for them to gain business skills that would lead them to upper management positions, rather than manual labor workers (Moore, 2003). These debates between Du Bois and Washington laid the foundation for what would become a continuous discussion among curriculum and policy makers even today (Moore, 2003).

The most prominent scholars to debate whether vocational learning should be part of the general education curriculum or completely separate are John Dewey, David Sneddon, and Charles Prosser. Prosser was a student of Sneddon's, and the two worked together to advocate for education reform that included a vocational component (Zehr, 1999). Sneddon and Prosser took the view that vocational learning should be specialized and geared toward students who were not as interested in academic studies. The idea being that students would choose one or the other and fulfill the needs of the labor force (Zehr, 1999). They felt strongly about how vocational education should be taught. They both advocated for it to be

offered separate from general high school courses and with specially trained facilitators (Lynch, 1997).

Like Washington, Dewey advocated for vocational learning to be part of the general education experience. He looked at the needs of individual students (Gordon & Schultz, 2020). Dewey advocated for a whole student approach with vocational learning. He argued that vocational subjects should include professional development skills and should be offered to all students as part of a well- rounded curriculum. He believed that the goal of education should be to prepare students to be functioning members of society, including balancing work, family, and community life (Steinke & Putnam, 2009).

The position of Prosser and Sneddon was adopted by policymakers with the enactment of the Smith Hughes Act just over 100 years ago. The law put in place federal funding for specific vocational training in home economics, agriculture, and trade and industry specialties (Hyslop-Margison, 2001). These trade-based courses were offered apart from general education courses, either in separate buildings or in their own section of existing high school buildings (Zehr, 1999).

Discussion about the best way to incorporate vocational learning continued after World War II. As the United States became more reliant on the labor force, with industry and technology on the rise, educational needs were also evolving (Stone, 2017). A program known as *Education for ALL American Youth* was implemented by the National Education Association (NEA) in 1944 (Stone, 2017). This new program called for a wider variety of vocational opportunities for high school students and added a supervised workplace experience (Stone, 2017). Vocational studies were also more integrated into the regular

school curriculum, and students were no longer expected to choose between traditional academics and job training (Stone, 2017).

Sparked by the Soviet Union's launch of Sputnik, the United States passed the National Defense Education Act (NDEA) (Powell, 2007). The race was on to deny Russia the upper hand in the space race, or in technology in general, and changes in education were employed throughout the country. These changes included increases in funding for math and science, hands-on laboratory experiences for students, funding for post-secondary students in science, technology, engineering, and math fields, and a shift to putting curriculum in the hands of scientists rather than educators (Powell, 2007). The Vocational Education Act (1963) soon followed, and was enacted by the 88th Congress and signed into law by President Kennedy. This legislation focused on preparing students to succeed in the workplace (Stone, 2017; Wolfe, 1978). Today, the legislation guiding CTE policies is based on the Carl D. Perkins Act of 1984 (Perkins Collaborative Resource Network, n.d.). The current version is the fifth reauthorization of Perkins. The emphasis appears to have shifted to a more holistic approach, much like that proposed by Dewey and Washington at the turn of the century.

CTE courses are integrated with academic curriculum and include hands-on laboratory experiences as well as onsite learning opportunities with area businesses. The Perkins Laws have also focused on college and career readiness, and include "soft skills" training (Stone, 2017). Soft skills are those skills that reflect a person's character traits. These are intrapersonal skills such as communication, dependability, effectiveness in a team environment, open-mindedness, and adaptability. These skills contribute to a positive work environment and help promote successful work relationships (Indeed Editorial Team, 2021).

Theoretical Framework

According to Schmidtke (2017) there was no widespread agreement about the foundational theory behind CTE learning. Although, with legislation that backed Prosser's ideas dominating the early days of CTE, many would say that CTE is rooted in *behaviorism* (Schmidtke, 2017).

Because CTE serves so many purposes, such as pairing academic learning with hands-on learning, while providing an avenue to learn "soft skills"; professionalism, integrity, advocacy, teamwork, and the like, scholars have a difficult time agreeing on a theoretical framework that would best suit CTE (Schmidtke, 2017). Schmidtke (2017) pointed out that educational practice based in a particular theory "...helps scholars and practitioners look at data from different angles, offer different interpretations of research findings, define and understand problems, propose and test solutions, set a research agenda for the discipline, and help solve problems" (p.193). Punch (2006) asserted that there were many advantages of including theory, particularly for new researchers. New researchers can see where the study fits with previous research, decide which type of research design to use, guide their research questions, and define where to focus their attention (Punch, 2006).

Dewey, Washington embraced a *constructivist* view of education. While in contrast, Prosser and Sneddon took a behaviorist view (Stone, 2017). Thompson (1973) along with Gray and Herr (1998) suggested that these disagreements about the purpose and proper implementation of CTE resulted in the current state of discord among scholars and theorists (Schmidtke, 2017).

In *constructivism*, teachers facilitate learning by encouraging student discovery and independent exploration, acting only as guides (Kerka, 1997). This is a contrast to *behaviorism,* which is teacher centered and relies more on regurgitation of presented material (Billett, 1996). *Constructivism* offers opportunities for contextualized learning in "natural settings" which, Kerka (1997) argued, should be found in places of learning, namely schools.

The behaviorist position (Prosser) still leads over the constructivist position (Dewey). However, there has been a push to emphasize constructivist learning as research emerges regarding general education courses (Kerka, 1997; Doolittle & Camp, 1999).

Constructivism

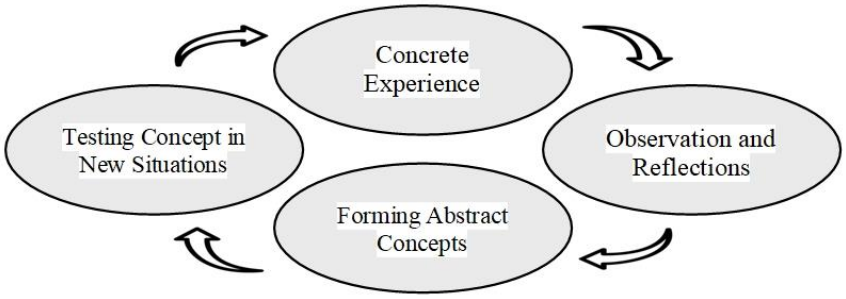
Constructivism rests on the idea that humans have an "innate human drive to make sense of the world" (Kerka, 1997, p.2). The concept behind *constructivism* is that learning takes place best when learners build new ideas into their existing knowledge about the subject. When new information and skills can be used with an existing understanding, learners can revise and interpret them and create a deeper understanding (Kerka, 1997). Piaget, regarded as the father of constructivism, proposed stages of human development that provide a way to observe and analyze individual development through constructing knowledge (Sjoberg, 2007). His stage theory described how, as humans grow, their ability to construct knowledge from their environment grows and changes. For example, people in the concrete operational stage have a more limited ability to make sense of their world than those in the formal operational stage (Sjoberg, 2007).

Another key element within the constructivist view is that working with others to build new skills makes for even richer understandings of the topic (Johnson &Thomas, 1994). Vygotsky, like Piaget, posited that people construct knowledge from their

environment. However, he looked at it through a social lens, and thought that human knowledge was mainly constructed through social interaction with others (Sjoberg, 2007). According to Kerka (1997), the aim of constructivist learning is to help learners be able to work with others and also be intrinsically motivated to integrate new information with their existing knowledge.

Figure 1

Constructivism

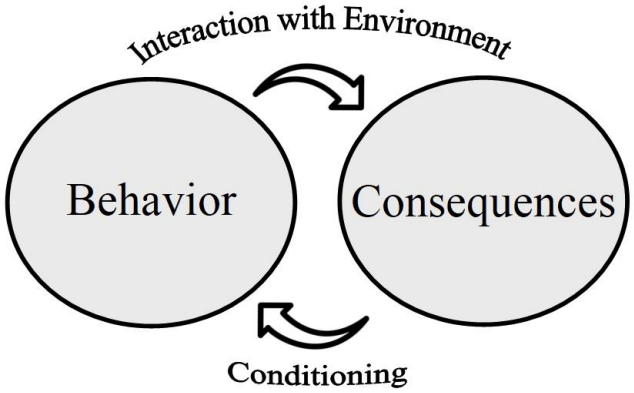


Behaviorism

John Watson and B.F. Skinner were the founders of *behaviorism*, which views behavior in terms of conditioning, rather than unobservable thoughts or feelings. They wanted to be able to observe stimulus response events in order to approach psychology from a more scientific and objective perspective (Watson, 1913). *Behaviorism* holds that the behavior of individuals is conditioned by their interactions with their environments. Prosser and Sneddon took a behaviorist approach in their vocational education views (Kerka, 1997; Doolittle & Camp, 1999).

Figure 2

Behaviorism



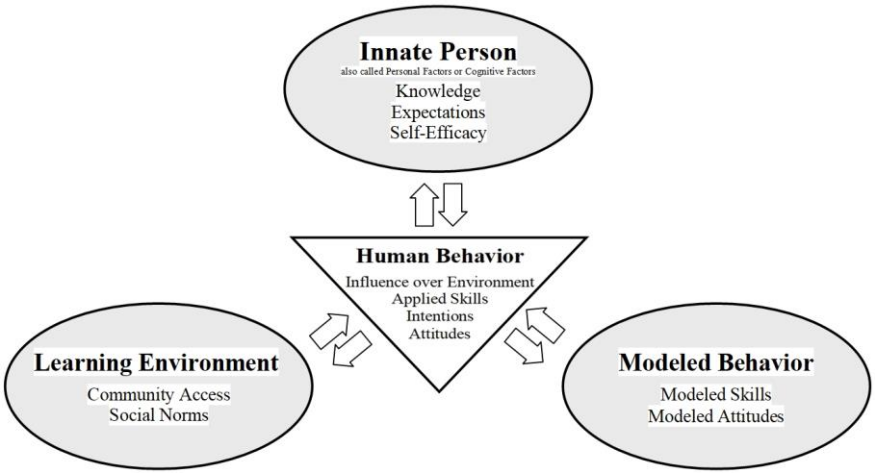
***Social (Cognitive) Learning Theory* (SLT)**

Developed by Albert Bandura, *Social Learning Theory* is rooted in the idea that we learn through our interactions with others in social conditions (Bandura 1977). In addition, learning happens through observation of others. When rewards or positive outcomes are given as a result of mimicking behaviors, it is more likely that the learned behaviors will continue (Nabavi, 2012). SLT connects behaviorist learning theories with cognitive learning theories because it includes attention, recollection, and intention or motivation (Muro & Jeffrey, 2008).

As it applies to career readiness, SLT emphasizes that the options made available through the social and cultural environments of the learner are the key factors in the career choices made by the learner (Locke & Latham, 1990).

Figure 3

Social (Cognitive) Learning Theory (SLT)

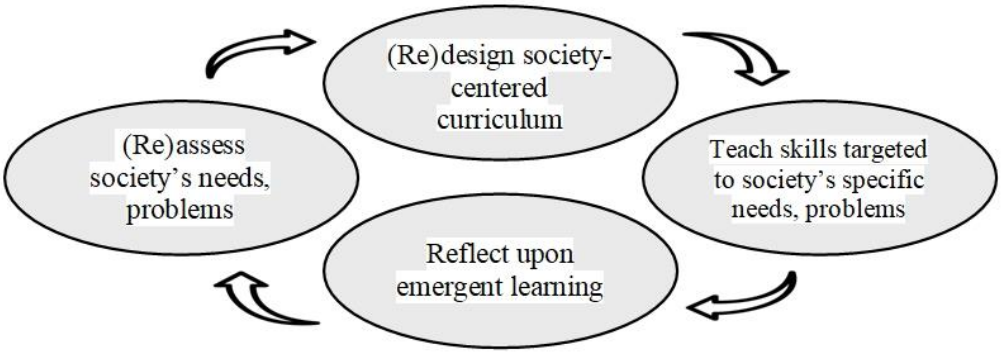


Social Efficiency Theory

Social efficiency goes hand in hand with *behaviorism* and has been at the center of vocational education since the time of Prosser (Gordon, 2008). The idea behind *Social Efficiency Theory* is that education is driven by a society-centered / problem-centered design, teaching knowledge and vocational skills that target society's specific needs. The result is an efficient work force that can solve society's problems, meet society's needs, and eliminate social inequities.

Figure 4

Social Efficiency Theory

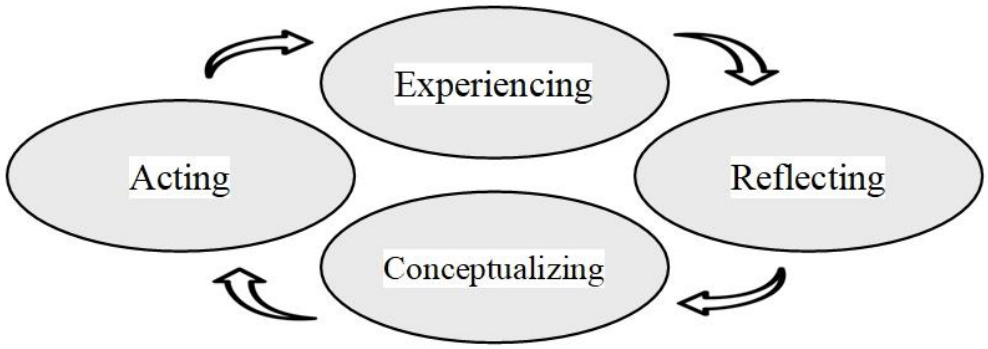


Experiential Learning Theory (ELT)

In experiential learning, the student is engaged in the activity, which aids in learning to problem solve in the moment, a skill which is required by many workplace environments. This strategy differs from the traditional model of teacher led instruction (Clark et al., 2010). Kolb's theory of experiential learning was inspired by Dewey's work that stressed the importance of having real life experiences as part of learning (Rudowski,1996) The foundation for the model created by Kolb is one's personal experience (Ausburn & Brown, 2006). He further explained that applying new information to existing knowledge was at the core of experiential learning theory. Teachers are guides for experiential learning. They can aid in the gathering and interpreting of new information by offering ways for students to reflect and predict, using journaling or visual organization tools for example (Ausburn & Brown, 2006).

Figure 5

Experiential Learning Theory



COVID-19 Pandemic and Response

The response to COVID-19 in the United States and around the world had a profound impact on education (Basilaia & Kvavadze, 2020; OECD, 2020). United States schools were shut down abruptly in March of 2020 amid news of the dangers of COVID-19. At that time,

the nature of contagion and the prognosis for the foreseeable future was unknown (U.S. Department of Education, n.d.). Though each country and locality had its own response to the crisis; for example, nations like China and Mongolia instituted quarantine / lock-down measures as early as January of 2020, with most of the world shutting schools by April 2020 (Mathieu et al., 2020). Belarus was the one country that appeared not to take any measures. Some countries, like Finland, Sweden, and Norway reduced measures for a short time, but then went back to stricter requirements (Mathieu et al., 2020). Similarly U.S. States initiated restrictions ranging from late March to early April (Mathieu et al., 2020). This particular study focused on the experiences of teachers in the state of Idaho.

Teachers and administrators scrambled to continue offering learning opportunities the best they could to finish the school year. Most schools in the United States did not reopen until fall of 2020 (Teach For America, 2021). When fall came, many schools across the nation were forced to offer online or virtual courses only, while others offered a hybrid model. The hybrid model had several different variations. Some schools reduced the number of students in the building by having cohorts who would come to school physically two days per week, and learn virtually three days a week (Lieberman, 2020). Others offered simultaneous online and in-person learning, meaning that teachers were instructing students in person and virtually at the same time. In many schools there were strict protocols designed to reduce the spread of COVID, such as social distancing, mandatory mask wearing, strict guidelines on hosting guest speakers or going out into the community, quarantine policies and seating chart procedures for contact tracing, staggered lunch times, and hand sanitizing stations located throughout the building. In addition, no supply sharing or physical interaction was allowed for art or other project- based learning (Centers for Disease Control

and Prevention, 2021). For CTE this was especially restrictive, as most of the instruction involves teamwork, community outreach, and sharing of physical materials (Advance CTE, n.d.). School districts were tasked with ensuring that each student had accessibility to internet, and many gave each student a laptop to take home for virtual class time (Lieberman, 2020).

For many teachers, the decision to shift to online or hybrid learning was made only days prior to the start of the 2020-2021 school year (Herold, 2020). Teachers jumped into action to completely rearrange their curriculum, learn new technology, and concoct inventive ways for students to have interactive experiences to help keep them motivated, while still offering quality instruction to meet the challenge of state standards and test preparation (McDonald, 2021).

Comparison of Online vs. In-Person Learning

Advantages of Online Learning

Although online (virtual) learning has been utilized in K-12 since the mid-1990s, there were still only about two percent of K-12 students engaged in online learning in the United States at the start of the pandemic (Black et al., 2020). Utilizing this technology as an emergency response to the pandemic shone a dramatic spotlight on the nation's unreadiness for such sudden and rapid expansion of virtual learning (Lynch, 2020). Research on the efficacy of online learning programs in K-12 remains limited (Martin, 2021).

Online learning has been much more widely utilized and its efficacy studied in post-secondary education settings. Virtual learning or e-learning hasnbecome an increasingly popular way for prospective students to participate in higher education over the past 15 years (Hart et al., 2019). As technology improved, opportunities for distance learning have become

more accessible to those who may not have otherwise been able to enroll in post secondary or higher education. Technological advances have greatly increased the versatility of online learning, which also means the user needs to be technologically savvy (Vasquez-Colina et al., 2017). Utilizing technology for coursework can enhance a student's understanding of programs, applications, and systems used in the workforce, thus strengthening their skillset (Mahlangu, 2018). Soft skills such as self-discipline, prioritizing, planning, showing initiative, and self-advocacy are also by products of online learning (Markova et al., 2016). Distance learning, through online courses, offers flexibility for students (Mahlangu, 2018). Students can work at their own pace in many of the programs, which enables them to work full time jobs while raising children and participating in family life (Mahlangu, 2018). It also allows students to re-watch lectures or instructional videos and supplemental material to gain a deeper understanding (Berge & Clark, 2005; Tallent-Runnels et al. 2006). Students who study part time while working in their chosen field can increase their knowledge while applying it to their job in real time (Corlett & Martindale, 2017). Instructors can help students master the workplace context of the learning, learn specific workplace strategies for implementing what they study in the online classroom, and navigate the culture and policies of the specific job site (Corlett & Martindale, 2017).

E-learning also benefits learning institutions. It allows flexibility with the use of technology and teaching and learning modalities (Mahlangu, 2018). Instructors can add supplemental materials for students to use in between classes to enhance the learning (Hart et al., 2019). It is also more cost effective for the institution, as more students can be reached from a distance at the same time. More enrollments lead to higher revenue streams for post-secondary and higher education institutions (Wong & Sixl-Daniell, 2017).

Disadvantages of Online Learning

Although more and more students are taking advantage of e-learning opportunities, there are still areas in need of improvement (Mahlangu, 2018). Unlike traditional learning, e-learning is lacking clear guidelines to assess the quality and consistency of the programs (Mahlangu, 2018). There have not been as many supports available for impaired students who may need extra assistance. Instructions may not be as clear as they would be in person, and instructors may be more difficult to contact if students have questions (Mahlangu, 2018).

Another obstacle is that e-learning narrows the field in terms of the types of students who can participate successfully. E-learning may be more suited to students who are self-motivated and organized, as there are fewer opportunities to meet with the professor and students can work at their own pace (Brown & Liedholm, 2002; Coates, et al. 2004; Rovai, et al. 2007; Xu & Jaggars, 2011; Xu & Jaggars, 2013). Studies of teens and college age students determined that Caucasian girls, who had exhibited high academic performance in other environments, tended to be more capable of self-management (Xu & Jaggars, 2016). Students who do not have access to technology or internet services may be unable to participate in online courses. Similarly, even if a student has access to the required materials, he or she needs to have some familiarity with how to use them effectively (Berge & Clark, 2005). As technology advances, students' ability to keep up with the changes is a key component to their success (Rajesh, 2003).

Advantages of In-Person Learning

In person learning offers several advantages over distance learning. Traditional learning institutions implement structured measurement tools to ensure the quality of education being provided (Mahlangu, 2018). Students who need extra support or instruction

can take part in special education programs designed for individual needs (Moreira, et al., 2017). Traditional in-person learning allows students to have direct contact with their teacher, enabling them to ask questions and get help in real time (Brown & Liedholm, 2002; Coates et al., 2004; Rovai, et al. 2007; Xu & Jaggars, 2011; Xu & Jaggars, 2013). For in-person learning, one does not typically need advanced technology skills to be able to access class materials. Nor does he/she need to have access to the latest technology devices (Berge & Clark, 2005).

Online vs. In-Person Academic Performance

When looking at academic performance, there appears to be no clear advantage between online and face to face learning (Arias et al., 2018; Paul & Jefferson, 2019; Tucker, 2001). Bernard et al. (2003) conducted a meta-analysis of online learning outcomes compared to face to face learning outcomes and found that academic scores were slightly higher for online learners when certain procedures were in place. Synchronous activities, combined with interactive technology appeared to be factors in the academic success of online learners, as well as a contributing factor in students' preference for online education (Arias et al., 2018; Paul & Jefferson, 2019). These results may also reflect the significant dropout rates for online students (Arias et al., 2018; Paul & Jefferson, 2019).

Stansfeild et al. (2004) found that students enrolled in two online master's degree programs through The University of Paisley in Scotland were more successful academically than their face-to-face counterparts. However, they acknowledged several possible factors that could play a role in this difference. The experience, age, and ability of the students to be self-sufficient, the quality of the online program, the level of training teachers had in facilitating online education, and the emphasis placed on community building even from a

distance all play an important role in the level of success achieved by online students (Stansfeild et al., 2004).

Arias et al. (2018) studied two courses with students who were randomly assigned in either the online option or the face-to-face classroom. Their results were mixed. The exam scores tended to be higher for the students attending in person, with statistically greater improvement on the post test. While overall post test scores were not significantly different (Arias et al., 2018). These mixed results could be due to the students in both groups interacting outside of class time, or possibly behaving differently knowing they were part of a study (Arias et al., 2018).

As previously stated, many factors such as age, gender, experience, self-motivation, or access to and familiarity with technology may contribute to a student's success in an online learning environment (Arias et al., 2018; Paul & Jefferson, 2019; Xu & Jaggars, 2011; Xu & Jaggars, 2013). Other factors may point back to the instructor's experience facilitating an online course, as well as his or her comfort level navigating the technological demands of such a task. These factors may make it difficult to accurately study the quality of an online program (Xu & Jaggars, 2013).

Many studies have compared in-person with online learning (Arias et al., 2018; Paul & Jefferson, 2019; Smith et al., 2001) . Many factors affected the outcome of these studies. The type of courses, the demographic make-up of students, and the capabilities of the instructor all contribute to what the results show. Because of so many variables, researchers can report that either online or in person is preferable, or that both or neither are good options (Arias et al., 2018; Paul & Jefferson, 2019; Stern, 2004).

Teaching and Learning During a Global Pandemic

The COVID-19 pandemic required many schools and businesses to quickly adapt to online services in many areas worldwide. This lead to schools switching from in-person learning to online learning in a matter of days (Basilaia & Kvavadze, 2020; OECD, 2020). In March of 2020, teachers across the United States were instructed to adjust their lessons from in person to virtual almost overnight. This shift was difficult for both teachers and students (Kundu & Bej, 2021). At the beginning of the pandemic, students had to adjust to the many changes that came from learning from home. This social isolation increased feelings of anxiety and depression, according to students (Butnaru et al., 2021).

Patston et al. (2021) studied the attitudes secondary students had towards creativity in the classroom during the COVID-19 pandemic. These students, ages 15 to 18, were from two Australian schools in which face-to-face learning had previously been utilized far more often than online learning. To the surprise of the study's researchers, students showed positive attitudes toward the learning process, and even reported high levels of enjoyment, subject relevance, and self-efficacy (Patston et al., 2021). The sudden changes in learning environment presented challenges for both teachers and students. Rogers and Sabarwal (2020) found that switching to technology-based distance learning "overnight" created difficulty for even the most technology savvy teachers.

Orhan and Beyhan (2020) studied the solutions that educational institutions worldwide implemented to gain perspective about the effects of moving rapidly from in-person to online learning. They conducted semi-structured interviews with 15 teachers to assess teacher perceptions of moving rapidly to online learning. Their results showed that the teachers struggled to embrace online learning as an educational modality. They were greatly

affected by student motivation and performance, and most of the participants reported that they were not in favor of online learning (Orhan & Beyhan, 2020).

While online education offers opportunities such as increased flexibility, access to online learning communities, and a wider range of experts to interact with, there are also barriers to quality education (Butnaru et al., 2021). Barriers such as unsupervised internet surfing, lack of technology devices or services, and lack of technological know-how keep some students from getting the most out of distance learning, and also make it more difficult for teachers to be effective (Arkorful, 2014; Healy et al., 2014).

Conclusion

This study aimed to add to the current understanding of how COVID-19 affected education, specifically regarding CTE teachers. The global pandemic had and continues to have a profound effect on teachers and students. As researchers seek to build the knowledge base and determine the long- and short-term effects of the pandemic upon teachers and students, this study aimed to add an Idaho contribution to the growing body of research.

Chapter III

Methodology

This bounded case study utilized an explanatory case study design and focused primarily on participant interview responses in order to answer the guiding research questions.

Questions Guiding Research

Two research questions guided this study. The first question focused on identifying what the experiences of Idaho CTE teachers were during the pandemic. The second question centered more around the overall health, both physical and mental, reported by CTE teachers as a result of teaching during the pandemic.

1. What were the perceptions of Idaho CTE teachers who taught during the global pandemic of 2020-2021?
2. How did teaching during the pandemic affect teachers' well-being?

Rationale for a Case Study Design

According to Merriam (2002) case study design would be most suitable for gathering information about circumstances that we know little about. Yin (2014) mirrors this sentiment and suggests that case study design is a valuable way to add to existing knowledge and widen the sphere of understanding of a given topic. Merriam (2002) further notes that case study design is a good way to gather the perspectives of individuals. A case study recognizes the importance of context and looking for evidence within the context of the participants' experiences (Gillham, 2000). In terms of this study, a case study design is the most obvious choice, because this study asked participants to share their experiences in a situation beyond their control and in the context of teaching CTE.

Creswell (2002) recommends a case study methodology for “developing an in-depth understanding of a 'case' or bounded system" (p. 496) and if the purpose is to understand “an event, activity, process, or one or more individuals” (p. 496). The boundaries of this study were CTE teachers in the state of Idaho during the 2020-21 COVID-19 pandemic and quarantine, and the individual units of analysis were the teachers themselves; more specifically, the perceptions and experiences of these teachers as described in interviews.

The participants were all part of the Idaho CTE experience, either in secondary or post-secondary education. It is possible through this case study that there is potential for change. Knowing how CTE teachers were affected by decisions made by administrators and lawmakers may encourage discussions about better ways to handle similar situations in the future or improve the learning resources available to teachers in a crisis. Gillham (2000) states that a well thought out case study can have a huge impact on inspiring change.

Characteristics of a Case Study Design

According to Gilham (2000,) a case study is a component taken in context of the reality or situation where it happened. It takes a few personal accounts of a shared experience and seeks to make meaning from detailed interviews or personal documents to inform with a deeper understanding (Yin, 2009). The case study design is useful in understanding an event or phenomenon in a deeper way, allowing the researcher to form more meaningful and relevant hypotheses, relationships, and theories pertaining to the event and the people involved (Vissak, 2010). Case studies address the how, why, what, and who factors in a given environment to give the researcher a more in-depth picture of what is really going on or how people were affected (Yazan, 2015). One case study design may differ somewhat from another in method and purpose of gathering data, of examining data, in epistemological

and other concerns. This study's design perhaps aligns most closely with the design championed by Robert Yin in that it is explanatory in nature; that is, the purpose is to explain a phenomenon (Yazan, 2015).

Survey Procedures and Analysis

This study followed a survey conducted through the University of Idaho in the summer of 2020. The survey was electronically distributed to Career and Technical educators across the nation. At the end of the preliminary survey, respondents were asked to indicate if they would be willing to participate in follow-up interviews. The original researchers identified 17 survey respondents in Idaho who had indicated their willingness to participate in a follow-up interview; thus, this was a sample of convenience. This researcher personally invited all 17 via email and phone call, using the contact information provided by the researchers who conducted the original survey, with the goal of interviewing 5-10 participants. Nine of these potential interviewees initially accepted the invitation, and finally seven of the nine participated in interviews.

Interviews were conducted via Zoom, using the transcription application Colibri. Conducting the interviews via Zoom allowed the researcher to have a face-to-face experience with the participants while meeting in the most convenient location for the participant. The ability to record the interview while the Colibri app transcribed what both the interviewer and the interviewee said in real time made transcription and review easier and more efficient for the researcher. The recordings allowed the researcher to re-watch the interviews to ensure accuracy in the transcription text.

The researcher first reached out to the respondents via email to inquire if they were still interested in being interviewed, as some time had passed since the survey had been sent.

When a participant responded ‘yes’, this researcher sent a participant consent form (Appendix A) via email to be electronically signed and returned prior to conducting the interview. The consent form was taken from the University of Idaho participant consent template and altered accordingly with the relevant information and dates for this study. Participants were assigned pseudonyms by the researcher and their documents were saved using those pseudonyms to help protect their identities and avoid bias. All information gathered during the interviews for this study was treated as confidential. All of the participants signed an informed consent form (Appendix A) showing that they were aware of the study, its aims, the researcher, and how the data was to be used. Data was used to complete this study and was then destroyed by the deletion of electronic files. Findings are presented here in summary form. The participants are described and quoted by pseudonym. Each interview was conducted one on one. Participants had the option to give as much detail as they wanted to their answers or decline to answer any questions if they preferred.

The interview transcripts were examined and coded for frequently used words or phrases and repeated themes from the interview responses. This was done by assigning color schemes to each category identified by the researcher based on repetition of themes, phrases, or words used repeatedly across the interview responses. Thematic coding is a form of qualitative analysis, calling for pinpointing sections of text that are connected by themes or ideas which allows the text to be divided into groups (Gibbs, 2007).

Study Design

Survey Instrument

In fall of 2020 a survey was conducted by the University of Idaho to assess the initial experiences of Career and Technical educators across the United States during the COVID-

19 pandemic, which began in early spring of 2020. This study was an attempt to provide a more personal understanding of teacher experiences as the pandemic progressed. The participants from the initial University of Idaho survey who agreed to participate in follow up interviews were divided by region. This study followed up with those individuals who taught secondary or post-secondary career and technical education in Idaho.

Interview Instrument

The interview protocol for this qualitative study was based on the case study by Orhan and Beyhan (2020). Their research question was "What are the teachers' perceptions and teaching experiences on distance education through video conferencing?" (Orhan & Beyhan, 2020, p.15). Their study was specifically focused on teachers' perceptions of distance learning during the COVID-19 pandemic. It utilized a sample of convenience and aimed to gain insight into the perceptions and opinions of educators during the height of the pandemic (Orhan & Beyhan, 2020).

Table 1 shows how the interview questions align with the overall research questions.

Table 1

Alignment of Interview Questions to Research Questions

Alignment of Interview Questions to Research Questions	
Research Questions	**Interview Questions**
Background Questions	● Tell me about what and where you teach.
Probing Questions	● Is there anything else you feel is relevant to share about the 2020-2021 school year? ● Would you like to receive a copy of the results of this study?
1. What were the perceptions of Idaho CTE teachers who taught during the global pandemic of 2020-2021?	● What was your reaction to going virtual "overnight"? ● How would you describe your experiences teaching CTE (content specific) during the pandemic? Is this different from a typical year? If so, in what ways? ● What type of training did you receive prior to teaching during the pandemic? ● How did you prepare during the summer months in between spring and fall of 2020? ● What kind of supports did your school put in place for teachers during the pandemic? ● If you had known in the spring of 2020 what teaching would look like in the fall of 2020, would you have done anything differently? ● What differences did you see in student achievement during the pandemic? (i.e.- motivation, academic outcomes, attendance, etc.) ● Has the experience of teaching during a pandemic in Idaho changed the way you see your future as a teacher?
2. How did teaching during the pandemic affect teachers' well-being?	● Did you contract COVID-19? ● Were there any changes in your home during the pandemic? (i.e.- less income, family members ill, managing virtual learning with your own children, etc.) ● Describe your stress level this year compared with a typical school year. Has your school provided supports for your mental health? Tell me more about that.

Positionality, Potential Bias, and Potential Conflict of Interests

In the interest of full transparency, this researcher identifies as a Caucasian, cis female, age 46, and a full-time secondary teacher of Family and Consumer Science in Idaho for over nine years. This researcher was also affected as a teacher during the pandemic. Working alongside Career and Technical educators, as well as general education educators has given the researcher a glimpse into many different aspects of teaching. Being an educator during a global pandemic has also affected the researcher in many ways. Sharing in the crises and victories of this unprecedented time has increased the researcher's awareness of just how complex the career and study of providing quality education is. These experiences, at least in part, prompted interest in this topic. This study involved no monetary or other personal gain which might compromise or appear to compromise the researcher's professional judgment in conducting or reporting research. There is no potential conflict of interest in conducting this study.

Summary

Chapter III introduced this study's research questions, explained the characteristics of a case study design, and described the rationale for that design in this study. The chapter then described how the population of the study was gathered from among survey respondents in a previous study. Seven participants agreed to be interviewed. Finally, this chapter introduced the interview instrument, a survey comprised of questions adapted from a similar survey.

Chapter IV

Findings

The purpose of this study was to ascertain the perceptions of Idaho CTE teachers of their experiences teaching during the COVID-19 pandemic. Chapter III described the study design, sampling procedure, rationale for qualitative design, and the data collection and analysis procedures. Chapter IV will report the findings of the data collection interviews and describe the qualitative interview procedure and provide data analysis. The findings of both research questions are presented, in addition to the interview protocol questions, and probing questions that were used to expand the participants' responses. The color-coding procedure and categorization of responses will be presented here as well. A summary of each of the interviews will also be included to share the personal stories of each participant.

The following research questions guided this study:

(1) What were the perceptions of Idaho CTE teachers who taught during the global pandemic of 2020-2021?

(2) How did teaching during the pandemic affect teachers' well-being?

Participants

The sampling method described in Chapter III resulted in seven completed interview transcripts appropriate for coding and analysis in this study. All seven were CTE teachers who taught in secondary or post-secondary institutions throughout Idaho during the 2020-2021 school years. All seven participants had completed the preliminary survey distributed by the University of Idaho prior to consenting to participate in this research study. Although all the participants were CTE teachers, their subject areas varied. Three self-identified as female, and four self-identified as male. All were white, non-Hispanic.

The seven participants ranged in age from 45-69 years. The mean age was 57. 71 years. The number of years taught ranged from 11 to 42. The mean of years taught was 23.71 years. All but one had bachelor's degrees or higher. Three taught post-secondary, either at community colleges or state universities. Four taught secondary at the high school level. One of the secondary teachers taught in a specialized environment with at risk students.

The content areas taught by each participant varied, but all were CTE courses. The courses represented were

- computer science/ engineering
- heavy-duty diesel program and heavy-duty trucks / diesel technicians
- curriculum and instruction
- medical testing/ laboratory
- personal finance, business, yearbook
- technical education
- graphic design, desktop publishing, photoshop, and video editing

The secondary teachers often taught multiples of the above list.

The education levels of the participants varied from some college courses and industry-specific certifications to doctorate degrees. Their education and certification met the requirements of their numerous institutions. No two participants taught at the same institution or in the same school district.

Table 2

Overview of Participant Demographics

Name (Pseudonym)	Age	Gender	Institution	Years teaching	Subject Area	Level of Education
Harrison Morsch	55-64	M	Eastern Idaho Secondary	42	Computer Science/ Engineering	BS+
Clark Roberts	65+	M	Western Idaho Post-Secondary	11	heavy-duty diesel program and heavy duty trucks diesel technicians	High school plus 12 credits/certs in diesel mechanics
Beatrice Cherry	45-54	F	Western Idaho Post Secondary	11	Curriculum and Instruction	Ph.D
Kathy Simpson	55-64	F	Northern Idaho Post Secondary	Over 20	Medical testing/ Laboratory	BS+
Lacey Martin	45-54	F	Wester Idaho Secondary	28	Personal Finance, Business, Yearbook,	BS
Sam Melvin	45-54	M	Central Idaho Secondary	30	Tech Ed	BS + 52 Credits
William Roosevelt	55-64	M	Northern Idaho Secondary	24	graphic design. desktop publishing, photoshop, video editing	BS

Meet the Participants

Kathy

This interview was conducted over Zoom. She is the Medical Lab Technology Program director at a college in northern Idaho. During the interview she was in her office at the college. Her program was funded by a workforce training grant and is a hybrid mixture of online, in person and internship experiences. As the world was shutting down, Kathy

(pseudonym) reported that she could see the signs that the United States would shut down as well. With increased need for COVID testing, her students were active throughout the pandemic. Kathy shared, "My graduates and my students are the testers. So with the pandemic when you hear about Covid testing, it's the lab professionals that are doing that testing."

When her college went into lockdown, Kathy worked with her administrators to be able to offer the safest environment for students who were willing to continue in person. She was able to access online programs and simulators for those who preferred to work from home. Realizing that this was a scary situation, students were given the choice. Kathy was impressed with the quality of the online programs and in awe that many were offered for free.

> So I lined up, working with my colleagues and vendors in our profession, to bring up in online resources and there were some excellent resources and a lot of the vendors offered things like key simulators. Actually, for a short period of time for free even, it was like wow, and it gave us actually an opportunity. It benefited some of them definitely because we got to utilize some of these online professional resources either for free or at a significantly reduced price, and I still use some of those activities.

Kathy was able to find alternate options for students who were unable to complete their clinical rotations. She stated that she likes to provide students with options. And this was especially necessary during the uncertainty of the pandemic. She tried doing full days online but found that to be taxing for both her and her students. So they made a few adjustments and were able to get everybody through the program successfully. Kathy

recognized that some of the material was lacking, as reported by graduates as they moved into jobs. She was thankful that her program was already designed for technology and that the technology was beneficial to her students. Although colleagues were resistant to the increased use of technology, Kathy was relieved to have more options for her students. Kathy continued to take safety precautions at school and at home, as her husband is immunocompromised. She just felt like it was the kind thing to do for her fellow community members. Her knowledge and experience helped her to remain calm, but she said that this experience made her very tired. She stated that she was tired to the point where the holidays and vacations weren't enough to recuperate. Kathy reported that she would be retiring later in the semester and was looking forward to spending more time with her husband, who had retired the year before.

Beatrice

This interview was conducted over Zoom. Beatrice (pseudonym) met for the interview from her home. She teaches all online/ distance courses through a university in western Idaho. She explained that she came out of the business industry and that she teaches adults doing the same thing. Most are coming from industry and looking for a career change. She reported that her program helps students learn the art of teaching, as they usually are comfortable with their trade already.

Beatrice shared that she was already accustomed to online programs, as that is mainly how she teaches. She noticed during the pandemic that people became more comfortable with online technology, so they were less hesitant about speaking up or using the technology in general. She says it helped her be more efficient because she could meet with everyone online, and most were comfortable with it.

Beatrice said that her home life changed quite a bit during the pandemic. She has four children, and although they were already participating in online school, she had tutors who would come into her house and assist with their learning. Once the pandemic hit, the tutors were not able to come anymore, which put more of the responsibility of her children's schooling on her and her husband. By fall of 2020, her children were back to in person school, but with many canceled events. She speculated that her husband may have contracted COVID, as he got "really sick in February." However, there were no tests or testing sites at that time to verify.

Beatrice reported that in the spring of 2020 her stress level was much higher than normal, but she feels that was based in the uncertainty of it all. Her university increased their overall support for students and staff, both with technology and emotional resources. Her overall takeaway from the pandemic experience was that online learning options were improved and utilized by so many more people. She reflected that learning modalities can be offered in various ways and environments, and don't have to be limited to one or the other. She was interested to know more about how many people changed their perceptions of online or hybrid learning modalities and their effectiveness. As Beatrice was already using online programs, she shared that she wasn't sure how many of the interview questions applied to her situation, but that she was happy to contribute to the project.

Harrison

Harrison (pseudonym) and this researcher met for the interview over Zoom. He was seated outside on his front porch, wearing sunglasses. It was a sunny, pleasant day. Harrison teaches computer science and engineering courses at the high school level in eastern Idaho. He has over 42 years of teaching experience and many years working in the engineering field

outside of the classroom as well. Harrison reported that when his school switched from in person to remote learning in the spring of 2020, it was a “hard switch to flip.” Students were given the option to come to class or learn remotely, so that meant putting cameras in the classroom and teaching to the in- person crowd and remote crowd simultaneously. Harrison was concerned about how relevant the lessons were going to be. He stated that going from hands-on activities to remote computer activities made it challenging to keep the assignments meaningful and beneficial to the students. While his school district did provide one to one Chromebooks for each student, Harrison stated that they weren’t capable of doing all of the tasks necessary for his classes. At one point, Harrison saw a need to help the medical community by having his students learn about how to design respirators. They had to research what was required and sketch it out, but due to the lack of access to the necessary equipment, they were not able to actually complete the project. He used that as one example of the limitations of remote learning with a basic device, such as a Chromebook.

In the fall of 2020, Harrison’s school was back in person with COVID protocols in place (masking, extra cleaning, social distancing, etc.) However, by Thanksgiving break, the school went back to hybrid, with half the students attending every other day and the other half on the opposite days. While in person, masking was required, and some students were resistant. However, when Harrison pointed out that they could keep coming in person if they wore masks properly, they consistently stated they preferred that over going back to online or remote learning.

When asked about changes in his home during the pandemic, Harrison stated that he possibly contracted COVID, however, that would have been prior to our understanding of COVID in the United States. He shared that many of his co-workers (including himself)

contracted what they described as “the worst case of the flu they had ever experienced.” He suspects that was COVID related. The other changes in his home came when his daughter moved into his home with her two children. They had been visiting from another state for Spring Break when everything shut down. He explained what that looked like,

> And so her kids actually stayed here with my wife and I the rest of that school year and did online classes through there. So we had three laptops sitting on the counter. I would have mine talking to my students, and the fourth grader would have hers, and the first grader would have his.

Harrison reported that he observed how difficult all of these changes were for his students. Many dropped out due to varied circumstances. He said it did come close to 50% at one point. When asked about his stress level he reported that he gained 30 pounds. His school did offer supports for students and teachers and gave them information to access counseling if they felt they needed it. Harrison’s response was

> You know, they sent out the email saying, ‘Hey, if you got problems here's a counselor's number and such.’ It's like, okay, why would I want to put anything else on my plate? It's like, yeah, it's like I want to talk to somebody. But when? Well, they're going to tell me ‘Hang in there?’ Well, they've already said, hang in there. Did they say, ‘you are doing a great job?’ Yeah. They said, you're doing a great job.

Clark

Clark’s (pseudonym) interview was conducted over Zoom. He was seated in his office at a college in western Idaho. He teaches CTE courses in a secondary program for heavy duty diesel mechanics. Many of his students have jobs outside of the diesel mechanics program, so much of his work involves observing them in their places of employment. For

the students who are earlier in their coursework, Clark immediately purchased N99 masks for each of them. He took them outside, shared doughnuts with them and had a heart-to-heart talk with them. He reported,

> We went outside to sit down and talk about what the school year was going look like and the bigger issue was, if you get me sick, you don't have a program. With that you know that process with what we teach we can do a few days, but we can’t go without. And really for the most part, they did pretty well. Ya know, I'd rag on them a little bit but, overall they kept their masks on and we didn't have any problems, um, knock on wood.

He felt that with small groups and the large space they had to work in that they could be in person and still follow COVID safety protocols. He said that being 69 years old and having a wife at home who had a history of respiratory problems, he wanted to ensure his safety and reduce the possibility of him bringing it home to her.

When asked if his home life changed during the pandemic, Clark said he and his wife just stayed inside and kind of watched from afar. They have been married for 47 years and do not have anyone else to look after. He did share that they stocked up on a few supplies so they wouldn’t have to go out as much. He echoed the comments of several of the interviewees when talking about whether or not he contracted COVID.

> I didn't. Well, that's a question. I never got tested. Back in January of that year (2020), the heavy equipment instructor and I carpool, and he got, he's a triathlete and I'm a mountain biker and we lead pretty healthy lifestyles and I ride the 20 miles home from work and that kind of thing, and he got sick. I don't think either one of us have ever missed a day in 10 years and he missed a week. He was really ill, but it

> wasn’t the flu, but that was January, right. And I got a little sick, but never got tested. So I don't know. We think so now, recently he has had it, so he has antibodies. So I assume riding every day in a car for an hour and half a day. I probably got it too. But yeah, I got vaccinated as soon as I could get vaccinated, and I have not had anything. No, I have not had it that I know of. Well, we didn't really have any testing then, you know.

Clark was already comfortable using online platforms and offered assistance to colleagues who weren’t as comfortable. So as far as the technology aspect was concerned, that wasn’t an obstacle for his program. He stated that he observed students in other programs struggling to be successful due to the fact that some of the instructors were not as tech savvy and had a harder time switching their curriculum. When he talked about his stress level, he did report that it went up in comparison to what it had been prior to the pandemic. He was stressed about a few students who were struggling with the requirements from the state. He said he had to have a few serious conversations with them about their success in the program. He was also stressed about the possibility of bringing home COVID to his wife. His college did offer lots of support for his classroom and allowed him to divide up the students and enforce COVID safety protocols as he deemed fit. He felt supported by his administrators, and although he did not take advantage of it, there were also mental health supports in place for students and staff.

Sam

Sam (pseudonym) conducted this interview via Zoom from his home. He has taught construction and engineering technology in a small western Idaho high school for over 30 years. He owns a construction company as well, and in the summer, he will stay busy taking

on construction jobs. Once he found out that the school was not going back in session for the remainder of spring 2020, he took on some construction jobs to stay busy. Sam shared that although his school had technology in place and many teachers were already implementing online platforms, the sudden shutdown of schools and switch to remote learning was very chaotic. He shared, “I don't know that people really worried about curriculum that was being taught. They tried to get something that kids could actually access and do and if you hit a couple standards, awesome.” For his advanced classes, Sam was able to give them a self-directed task. They had the classroom experience to justify this and were able to come up with a construction project on their own. They had to supply the materials, however. His introductory classes had to go without any hands-on components, however. It was all online initially. He realized how frustrating is must have been for the students because they have 29 teachers at the school, and each teacher was using his or her own requirements for the online components of remote learning. Each teacher did it a different way. So he was able to see the situation through the lens of the students and it helped him have some empathy for them if they were struggling.

During the pandemic, Sam’s adult son lost his job and moved back in with Sam and his wife. They also cared for their two small grandchildren often, as daycare was not available for their daughter. Everyone in Sam’s household contracted COVID. He was asymptomatic, so at the time, he did not think he had it. However, he has since tested positive for antibodies, so he concluded that it was highly likely he had COVID when his family did.

He said the stress of the first few months was very overwhelming. He shared with me that he did take advantage of the district Employee Assistance Program. He would often be concerned when several students neglected to return emails or turn in online assignments. He

was concerned for their well-being and safety. This took a toll on his mental health. He reported, “And I was about torched. I was listless. It was terrible. The stress level was incredible.” Prior to this experience, Sam had been a coach for 30 years and was a former athlete. He thought he thrived in stressful situations. He said the students were under huge amounts of stress as well. Many became displaced from their homes as a result of parents losing jobs or getting sick. The students were focusing on basic needs, like where they were going to sleep that night, so school took a backseat for many of them. Sam reported even his most successful students struggled.

When asked if he would have done anything differently in the fall of 2020 if he had known it would be a continuation of the spring, he said he would have quit teaching and built houses full time. Sam reflected on the way that the CTE community rallied during this time where there were so many unknowns. He marveled at how we all adjusted and changed our curriculum to fit the needs of our students and our schools.

Lacey

Lacey (pseudonym) called into Zoom for this meeting. So while this researcher was available via video, Lacey did not use a camera. She called in from her school. Lacey teaches business, personal finance, and yearbook development at a rural western Idaho high school. She has been teaching for over 24 years. She knew from the start of the pandemic that she was not prepared for online teaching. So much of her coursework is hands-on and it was difficult to wrap her head around the idea that students had access to their own one to one devices that they could use to access classes remotely. She had been used to offering her preferred programs from the desk top computers located in her classroom. Lacey reported that the remote learning that took place in the spring of 2020 did not go well for her at all.

The school told the teachers that they were not going to give grades for the last quarter. As a result, she was not motivated to put forth the effort required to switch everything over to remote learning. “And so I quit making an effort, right or wrong, you know, I shouldn’t have, but it was easy to say, well then, forget it. This is stressful. I'm not gonna do it.” She was overwhelmed by all that she was being asked to do in such a short time.

By the fall of 2020, her school was back to in person. They briefly tried a hybrid schedule, but soon realized that was so much more work. They ultimately gave students an option to either attend in person full time or enroll in online schooling, but not both. They couldn’t choose to come in person some of the time but opt for remote learning whenever they felt like it. As for COVID protocols, Lacey shared with me that they split the lunch period into 2 sections, but other than that, masks were optional, and there were no other real safety procedures in place. The training for the staff consisted of general informational items, such as contact tracing. Lacey referred to it as “precautionary measures.”

Her household didn’t change too much. She has two children who were learning remotely while she and her husband were teaching remotely. She shared with me that her children were finished with their daily assignments quite quickly and left feeling kind of bored. Everyone wished they could go more places. She stated that it would have been easier if she had been able to go into the school to work more often. It would have given her more of a feeling of separation between work and home.

When this researcher asked Lacey about her observations of student success, she reported seeing more lack of motivation. She saw that they became more dependent on the online platforms and would often use that as an excuse to not complete work during class. She shared a couple of typical interactions with this researcher. Students would ask, “well

isn't it on TEAMS?" she reported some of it was, but some of it wasn't. They would also say "well, I can just do it in TEAMS if I'm home sick," But some of her assignments were not online at that point. She stated,

> So I think that, and I don't know if you'd call that lazy or just a shift in expectations of what they could and could not do. They just got dependent on 'well I can do this online if I have to.'

She also suspected more academic dishonesty and copying from one another.

When asked about her stress level as a result of the pandemic, Lacey shared a meaningful reflection.

> Uh, stress was higher, but I think it was an adjustment of everything. You know, you had nine weeks of nothing, of that 2020, and then, ya had it all. We, I don't think we had it near as bad, because there was so many schools that did part on, part off. That would have sucked bigger than life cause it's twice the work. I felt like it was hard to get grounded. I always felt like I was behind because I, there was a kid that was missing this assignment, there was something I hadn't graded, there was this I had to adapt for that. So, my stress level was higher. I've taught many years, and I left last May and said, I have to do things for me. And that's the first time I've ever just said, I'm done. I will not do anything until the first of August.

When asked if she had known in the spring of 2020 what would be expected of her in the fall of 2020, she clearly stated that she would have refused to teach online.

William

William (pseudonym) is a graphic design teacher at an alternative high school in northern Idaho. He attended the interview via Zoom from his home. He has been teaching for over 24 years and will be retiring sometime in the next two to three years.During the first quarter of the nationwide shut down, or late spring 2020, William saw a huge drop in student motivation and achievement. The at-risk population he serves already experiences some of that in a typical school year, but he reports giving passing grades to five out of fifty students that year. He said he reached out to parents through phone calls, emails, and even mailed messages with candy, as incentive for the families to stay in touch.

In the fall of 2020, the students and staff were asked to wear masks and the school day was altered to provide more prep time for teachers each day. However, this meant that students were required to complete daily homework assignments. William shared that no homework was completed. He also shared that in his experience with the at-risk population, this is not uncommon. William reported that the maintenance department ordered plexiglass dividers to try and aid with social distancing protocols. Unfortunately, they were the wrong size and kept falling over. William stated that he and the students spent most of their time just trying to stand them back up. Aside from those few attempts to reduce the spread of COVID, there weren't any other requirements in place. William did purchase individual sets of supplies for his students so they wouldn't have to share, in an attempt to reduce the spread of germs.

William is single and has no children. He reported that although several students contracted COVID, only a few staff did, and he was not one of them. In that sense, COVID did not negatively affect his home life. William really focused on the relationship aspect of

teaching. He was not so concerned about student's academic achievement as he was about them showing up and having a personal connection. He shared, "I think the relationship aspect and the person we're building after high school is more important than whatever we're doing that day at school."

Other than homework completion, William said he did not see a lot of difference in student performance. It was his observation that the students preferred in-person learning over remote learning and were just "happy to be there." One of the areas he did see a difference in however, was attendance. Students would overuse the excuse of being exposed to COVID and having to quarantine. So, lack of attendance then led to lower academic success. Overall, William did not see many huge changes in himself or students as a result of the pandemic. He stated he would not have done anything differently for the fall of 2020, other than possibly doing away with the homework requirement. He is focused on building relationships so that his students feel confident to become successful adults. He is still in contact with former students who reach out to him from time to time and he stated that was an important aspect of teaching for him.

Data Collection

Interview protocol questions (Appendix B) were used to allow participants to describe in detail their experiences and perceptions of teaching during a global pandemic. Participants were asked to describe the changes to their school routines and how those changes were implemented. Participants were also asked to share their perceptions of student performance, including academic, motivation, and attendance. The interviewer also asked participants to describe the response from their administrators in terms of support, both material and psychological, that were offered to teachers, staff, and students during the

pandemic. The questions also explored how the mental and physical health of participants was affected and how the pandemic affected their households.

Each of the interviews was conducted via Zoom. This made scheduling easier, as many of the participants live and work more than 100 miles from the researcher. Zoom technology allowed the participants to have a one-on-one interview, face to face, from the location of their choice. Three participants met from their school classrooms or offices, three met from their home offices, and one even met from his front porch.

The interviews ranged from ten minutes in length to one hour. The average length of the interviews was 30 minutes. The length of time of each interview was determined by how much the questions applied to each situation, and how lengthy of a response was given for each question. Participants were given the option of opting out of any of the questions, however, no one took that opportunity.

Thematic Coding Process

The interview transcripts went through five rounds of thematic coding. As common themes emerged across the text, they were assigned codes using various shades of colors. The six color coded categories were as follows:

Blues

School/Administrative support- this included technical support such as new technology purchased specifically for remote learning and training for staff on how to use the technology. It also included mental health supports such as extra planning time, more sick days in case of needing to be quarantined, easier access to counseling, the district's employee assistance program, and verbally encouraging self-care in general.

Oranges

School COVID Safety Protocols- this category consisted of all the ways school districts might have implemented recommended safety protocols, such as requiring masking, remote or hybrid learning modalities, block attendance to reduce the number of students in classes, extra sanitation, or other attempts at social distancing (i.e.- splitting from one lunch to two.)

Reds

Teacher Preparation- this category described how much extra teacher preparation was necessary in order to meet the immediate need to switch to online, remote, or hybrid learning modalities. Participants spoke about spending time planning over summer, working extra hours outside of their contract days, or altering curriculum to get through it faster in case of another shutdown.

Yellows

Changes in Students- This category reflects the changes that the participants observed in their students during the pandemic. It includes student motivation, attendance, academic performance, and stress level.

Greens

Personal Changes- The green category described any changes that the participants experienced in their personal lives. These changes included someone in their immediate family contracting COVID, their own children switching to remote learning, an immediate family member losing employment, signs and effects of stress, and having a close family member who was immunocompromised.

Pinks

Specific to Kathy's situation- As the common themes emerged, it was clear that Kathy's situation differed from others in many ways. She was the medical lab technician trainer for a college in Northern Idaho. This meant that she and her students were in the center of the pandemic. They were assisting with COVID testing on the public, while also learning the other concepts for their courses. Kathy's experience were somewhat different than what was reported by the other participants. The categories that emerged for her, in addition to the general categories, were direct involvement and exposure to COVID-19, predicted National lockdown, administrative support to make changes specific to her program, she was the trainer (as opposed to needing training for technology use,) she observed that the pandemic assisted us to see the value of online learning platforms, and she talked about being exhausted due to knowing what was going on, as opposed to other participants who reported that the uncertainty contributed to their stress and exhaustion.

Figure 6

Sample of Qualitative Thematic Coding

Interviewer	Interviewee		
You can get a lot more done with CTE projects, if you have some more time. I've experienced that too. Interviewer: So describe your stress level this year in comparison with a typical school year. And then did your school provide support for, like, the mental care of teachers?	My mental aspect, probably one of the biggest things as far as my mental. I put on 30 pounds. Okay. Was it stress or probably some being tied in front of a computer versus being able to walk around?	Signs/Effects of Stress	Personal Changes
right	Okay. So Yeah, it uh the number of hours that put in. Like I say, trying to keep that many kids and solve that many problems and such, the number of hours were horrendous	hours outside of contract	Teacher Preparation
Yes, I agree.	So the limited physical activity, the stress of. Okay, this kid doesn't have the right equipment. Probably part of it is like blended families, the kid that would live with mom one week and dad the next week and the equipment would never be. And so. Yeah, just the challenges that the students had to face. The you know, how do you anticipate? we had people since, you know, like I say, this is a rural area. People had come in from, you know, back East and they were here and everything shut down. So then we got to do everything online and all of a sudden, we had students that we didn't have before. Like I say, with my family, three extra children that not used to and trying to to get them set up.	Describing personal stressors, intertwined with student stressors.	Personal Changes Changes in Students
Yeah. So did your school help with any of that aspect of teacher stress?	You know, they sent out the email saying, Hey, if you got problems here's, a counselor's number and such. It's like, okay, why would I want to put anything else on my plate?	Mental health supports available, but not practical	Personal changes

Emergent Themes

Contracting COVID-19

As the data was analyzed, there were several common themes that emerged. One was when asked, “did you contract COVID?” One participant shared that all of his family members contracted COVID except him. However, he discovered later that he tested positive for antibodies. So the answer is yes, but he was asymptomatic. Another participant stated that neither she nor anyone in her immediate household tested positive. There were several responses however, that can be summarized as “we got really sick around February. Like sick with what we thought was the worst flu ever. But we didn’t know about COVID yet” or “we all got really sick, especially my spouse, who never gets sick. And it was worse than

anything we can remember. But we can't be sure if it was COVID because testing wasn't available yet."

This is noteworthy as it highlights the uncertainty of when COVID cases actually started showing up in Idaho. It's possible there were positive cases prior to the date at which testing was available.

Quickly Transitioning from Hands-On to Online

Another theme that emerged was that the post-secondary teachers did not have as much difficulty with the switch to online learning as the secondary teachers did. Beatrice reported that she had already been teaching completely online, so the quality and improvement of the technology only made it easier for her to conduct classes, coordinate and attend meetings, and communicate with students. The two other post-secondary teachers stated that had they not already been utilizing online programs for their classes, they would have struggled. Kathy and Clark both mentioned that they knew colleagues who did struggle with the switch to more online options, but that they were already comfortable using technology with students.

The secondary teachers, on the other hand, reported that the abrupt switch to online learning was overwhelming and stressful for both them and their students. They each described various programs that their districts had put in place, and how chaotic it was to implement. As described by the participants of this study, school districts across the state of Idaho did not have a uniform approach to going online. Each district employed different online learning platforms and modalities such as hybrid, synchronous, A/B schedules, etc. Each school district also operated on different time frames. For example, although Lacey's school switched to remote learning in the spring of 2020, they were back to full time face to

face learning by that fall. William's school was similar, they went to remote learning in the spring of 2020, but by fall all students attended for half of the school day. Other schools across the state remained at least partially remote in the fall of 2020, with hybrid methods of learning.

Harrison stated,

> teaching CTE and everything that we do is basically hands-on. So flipping that switch was a hard switch to flip. Um it was difficult to say the least. Primarily, um, what type of activities to have the students do that would be beneficial for them? So my philosophy is that if it's not going to benefit students, why do it?

And Lacey shared,

> It was hard. I think mentally I knew I wasn't trained to teach online… It was the fact, just, how do I, how do I do it online? When not only am I not trained, but I'm not, CTE doesn't lend itself to online learning.

Making the switch to online learning practically overnight was easier for the post-secondary instructors because they had more experience working with online platforms than the secondary teachers. In post-secondary, it is also expected that the students already have access to the internet and are somewhat comfortable using the necessary online resources. Highschool teachers were not familiar with regular use of online platforms, particularly given the hands-on nature of their subject areas. Prior to the pandemic, it was not required for high school students to have access to a home computer or internet. One of the obstacles that school districts faced was providing one to one devices and securing hot spots for all of the students.

No Consistency in COVID Safety Protocols

What is noteworthy about this theme is that no two teachers experienced the same safety protocol procedures or requirements. Beatrice taught fully online, so no safety protocols were needed. Kathy was exposed to COVID on a daily basis, so she determined what would be safe for her and her students. In her program, masking and face shields were required. She implemented online programs as often as possible to help mitigate exposure. Clark assessed his needs based on the size and ventilation of the workshop, as well as the number of students who would be there at one time. He was given the authority to determine what was needed for his program as well. He determined that due to his age and the fact that his spouse was immunocompromised, he should require medical grade masks indoors. Secondary teachers were given instruction from their administrators. The only consistent protocol happened in the spring of 2020 when everything was shut down. All of the schools implemented remote learning platforms such as Google Classroom, Zoom, Google Meets, Teams, etc. In the fall of 2020 however, each school district implemented their own protocols, some of which varied widely. Lacey reported that her school was back to face to face without any additional protocols by the fall of 2020. They did split from one lunch to two and offer an online option for students who preferred that. Harrison's school required masking and changed to an A/B schedule where students had fewer classes each day. He said this helped them stay on track, particularly with the online assignments. William's school required mask wearing and shortened the school day to allow teachers to have extra planning time, but they required homework, which proved to be a futile endeavor. He said that he was provided with plexiglass dividers, except they were the wrong size and kept falling over. He provided individual sets of art supplies for each student to reduce the spread of germs.

William also reported that his school provided sanitizer and encouraged disinfecting breaks throughout the day. Sam's school had virtual Fridays and hybrid learning options. They did not require masks, however. When this interview was conducted, Sam's school was closed for two weeks following too many students and teachers absent due to positive COVID tests.

In regard to safety protocols, post-secondary teachers had more autonomy than secondary teachers. Secondary school protocols were decided by administrators and the students and teachers were required to follow them. The protocols were similar but the specifics varied across the school districts represented.

Higher Stress Levels

Another common theme was the level of stress described by all of the participants, but the secondary teachers in particular. The stressors that were identified by secondary teachers were slightly different from those identified by the post-secondary teachers. Clark reported that his stress came from making sure safety protocols were followed so that he would not "bring it [COVID] home" to his immunocompromised wife. Beatrice shared that much of her stress was due to the uncertainty of the situation and losing the supports she had for her own children's learning. Kathy explained that her stress came from the requirements of her and her students to keep going with such a huge influx of COVID testing. She was also concerned for an immunocompromised spouse and took extra precautions with safety protocols.

The secondary teachers described a more intense level of stress that had to do with the higher workload and learning curve caused by implementing online platforms and rearranging curriculum. Planning for in class time and remote learning simultaneously was described as having multiple jobs. When asked if his stress level was higher than a typical

year, Harrison said yes, and that he gained 30 pounds over the course of the pandemic. All of the secondary districts represented did offer extra mental health supports, however, it wasn't practical for most to access them, or they felt that it would not benefit them anyway. Harrison commented, "you know, they sent out the email saying, 'Hey, if you got problems here's a counselor's number' and such. It's like, okay, why would I want to put anything else on my plate?" Sam shared that his stress level was much higher than what he was used to. He explained that he had been a hard worker, an athlete, and a coach all his life and had been accustomed to stressful situations.

> And I was about torched. I was listless. It was terrible. Worst part for us is you have twenty-nine kids in your class and you have eight of them that won't even hit you back on an email. So you know they're alive. I mean, I'm not kidding. I mean you don't even know if they're breathing. It's just horrible.

Part of the stress he described was that he was concerned for the well-being of his students. In his community, he learned of several families who were displaced due to loss of employment and there were a high number of positive COVID cases. So when he didn't hear from them, it was concerning to say the least. Lacey said the stress level in the spring of 2020 was overwhelming. When she learned that students weren't being graded that quarter, she said she gave up trying to lesson plan or post assignments on the digital platform.

While all of the participants reported higher stress levels during the spring of 2020 and into the following school year, the stressors were not the same. The secondary teachers were stressed over the higher workloads, the learning curve of adding technology, the well-being of their students, and the uncertainty of what would happen next. The post-secondary

teachers, already comfortable with online learning platforms, were more concerned with the impact it could have on their immediate families if they contracted COVID.

Student Motivation

Another common theme discussed by several of the participants was student motivation. Again, the post-secondary teachers were not as affected by this. Beatrice, Kathy, and Clark all stated that their students are adults who are paying for their programs, so the motivation to attend and get through it is relatively high. Beatrice said she did not see any change in enrollment or academic achievement. Kathy said that although there were a handful of students who preferred to work remotely when possible, all of her students were motivated to complete the program and all of them did. Clark shared that all of his students completed his program as well and were hired in the field as a result.

Secondary teachers told a different story, however. William explained that working with at risk students at an alternative high school, it was difficult for them to work outside of school. He said he was supposed to assign homework, but no students ever completed it. He shared,

> and so of the probably 50 kids that would have had fourth quarter, I gave a passing grade I think to five students. And you know that was over 250 phone calls to parents, to students, mailing them candy, mailing them free taco certificates, uh you know, hundreds of emails, everything to try and engage them. And it was not a high bar that we were asking, it's just not who my students are.

Sam, who teaches at a rural high school also saw extreme changes in motivation. He shared some of his perspectives about it during the interview.

> School was pretty low down on the totem pole for most of these kids, ya know. Look at the hierarchy of needs and school wasn't up there in the top five for a lot of kids, and honestly justifiably. [Many wondered] where their next meal was going to happen. Student achievement was, motivation was, you know… My good kids, I have TSA (Technology Student Association,) even my officers for TSA. I had to smack in the hind end (figuratively), and I mean, really, these are self-motivated people. That's the reason they ran for this office and even those kids, man. It was, it was a struggle for that. Motivation was way down; achievement was pretty awful.

Lacey and Harrison shared similar experiences. When Lacey's school went to remote learning in the spring of 2020, the administrators determined that students' grades couldn't go down. This was supposed to be a secret to the students, but they soon found out. She said that had a huge impact on student motivation as well as her own motivation. She shared,

> I think the biggest hit that we took is our administration came back and said, 'we're not gonna give a grade for this quarter.' They said to keep it under wraps, but small community, small anything and so, you lost those kids. And so I quit making an effort, right or wrong, you know, I shouldn't have, but it was easy to say, 'well then, forget it. This is stressful. I'm not gonna do it.'

Harrison described how the lack of motivation affected his classes overall. He shared that they had as many as fifty percent of students drop out in spring of 2020. So because they were all now missing their core classes required for graduation, the administration would pull them out of elective courses. This was in an effort to give the students some chance of passing the core classes, but it left Harrison's CTE courses empty, even for the coming year as those students had fallen behind.

Lack of motivation was attributed to many things. The participants empathized with what the students were experiencing. All of the teachers wanted what was best for the students and were willing to go the extra mile to ensure their success. As stated above, keeping the students motivated was difficult for all.

Conclusion

There were many common emergent themes identified throughout the interview transcripts of the seven educators who participated in this study. The most apparent being that there was a clear split between the shared experiences of post-secondary educators and those of secondary educators. It was evident that the post-secondary educators in this study were already familiar with and utilizing online learning platforms, which alleviated a lot of the workload. It should also be noted that the secondary educators were often responsible for planning and preparation of several courses, as described by Lacey, who shared, “I’m the entire department, so I teach Business Applications, Business Communications, Leadership, Graphic design, Business Administration, and Business Math. The graphic Design and the Business Administration, that’s who also does the yearbook.” whereas the post-secondary educators were able to focus on their main programs.

Although all educators showed concern for the well-being of their students, the secondary educators, who worked with minors and, in some cases, the at-risk population, were keenly aware of the abilities and needs of their students. They were not only concerned about how to motivate students with remote learning, but also for their well-being in general.

Chapter V

Discussion and Implications

Teaching During a Pandemic

This study aimed to investigate the perceptions of CTE educators in Idaho during the COVID-19 pandemic, particularly the school years spanning from Spring of 2020 through spring of 2021. This study attempted to answer the research questions:

(1) What were the perceptions of Idaho CTE teachers who taught during the global pandemic of 2020-2021?

(2) How did teaching during the pandemic affect teachers' well-being?

As well as contribute to the growing body of knowledge regarding how education was affected by the global COVID-19 pandemic. This study took place in Idaho, USA, and offered a glimpse into the experiences of seven teachers: three post-secondary and four secondary teachers. All of whom taught Career and Technical education courses.

Teachers' Perceptions

Research question (1) included interview questions asking the participants to describe their overall experiences and observations regarding administrative support, technical training, preparation time, student achievement, and how this experience affected their overall view of teaching. The interview questions pertaining to research question (1) are listed below.

- What was your reaction to going virtual "overnight"?
- What type of training did you receive prior to teaching during the pandemic?
- How did you prepare during the summer months in between spring and fall of 2020?
- What kind of supports did your school put in place for teachers during the pandemic?

- If you had known in the spring of 2020 what teaching would look like in the fall of 2020, would you have done anything differently?
- What differences did you see in student achievement during the pandemic? (i.e.- motivation, academic outcomes, attendance, etc.)
- Has the experience of teaching during a pandemic in Idaho changed the way you see your future as a teacher?

The main findings from this study regarding teacher's perceptions were that post-secondary teachers were in a better position to switch to online learning platforms, as they had already been incorporating them to some degree. The secondary teachers' perceptions were that switching to online was difficult. The process was sometimes chaotic, and they reported it felt overwhelming. The secondary teachers' perceptions of student ease of transition were that it was difficult for them as well. School districts scrambled to provide all students with one-on-one devices and Wi-Fi hot spots. Little to no training was offered to students, who had not previously been required to use online platforms for schooling.

Secondary teachers reported having little to no training on how to implement online learning platforms or teach using synchronous or hybrid methods. Sam reported that his school had 29 teachers and he discovered that each had their own understanding of how to use the online resources, and therefore had their own individual requirements for students. He perceived that this made it difficult for students to understand the expectations and contributed to the lack of motivation and academic success he observed.

Teachers' Well-Being

The second research question this study explored reflected teachers' personal well-being during the pandemic, including mental and physical health. This question also included the supports provided to the educators by their school or administration. The interview questions related to this topic were:

- Did you contract COVID-19?
- Were there any changes in your home during the pandemic? (i.e.- less income, family members ill, managing virtual learning with your own children, etc.)
- Describe your stress level this year compared with a typical school year. Has your school provided supports for your mental health? Tell me more about that.

Findings for this research question showed that several of the teachers in both secondary and post-secondary speculated that they contracted COVID-19 before cases were officially identified in the United States and Idaho in particular. Idaho was one of the last states to report positive COVID cases (Cohen, 2020).

Additional findings for this research question were again that there was a definite split between the experiences of post-secondary educators and secondary educators. Two of the post-secondary educators reported being concerned for their immunocompromised spouses, and that contributed to higher stress than normal. However, overall, the experiences of post-secondary teachers seemed to be less related to their teaching environment than those of secondary teachers.

Secondary teachers described higher stress levels associated with physical symptoms such as weight gain, feeling listless, loss of motivation, etc. There were also more changes in the homes of secondary teachers, possibly because a higher percentage of them have children

and grandchildren of their own when compared to the post-secondary teachers. Adult children moving back in with parents due to job loss and national shutdown, remote schooling of grandchildren who would not have otherwise lived in the teacher's home, and providing childcare for grandchildren due to daycare shutdowns were a few examples.

Implications for Theory

The theoretical framework adopted for this study was Kolb's Experiential Learning Theory. ELT states that people, in this case, teachers, start with a basic understanding of a given topic or situation, and then new information is given to them and they must take that new piece of information and make meaning out of it given their previous frame of reference. The participants' understanding evolves to reflect the new information (Ausburn & Brown, 2006).

The results of this study indicate that ELT was the most suitable theoretical framework for this situation. The participants were abruptly forced by the circumstances of the pandemic to rearrange their thinking about how to implement quality education within their varied content areas. Their base of understanding had to evolve in order for them to learn how to implement online learning platforms and make meaningful experiences for their students.

Implications for Future Research

Research about education during the COVID-19 pandemic is rapidly increasing. As data emerges about the experiences, observations, and perceptions of educators around the globe, we can better understand how this event effected both teachers and students. This study contributes to the data about teachers' experiences during the pandemic, and specifically features career and technical educators. CTE courses are known for their hands-on learning opportunities, and would have been greatly affected by a sudden, unexpected

switch to online learning. This is particularly true in schools where one-on-one devices, strong internet connections, and technology savvy teachers were not available.

The findings of this research study indicate that post-secondary educators were better equipped to handle the changes necessary to provide quality programs during a major event such as the pandemic. Future research into how the policies, practices, technological resources, and programs that made teaching in post-secondary education successful could be applied at the secondary level. Further research should also include ways to offer secondary teachers more support both in the classroom and with their mental health needs.

Another area that could be explored in future research is the difference between using technology as students do versus implementing technology through planning and developing instructional materials the way teachers do. Research could be conducted to gather information regarding the different ways we use technology and how teachers needed to adopt new ways of using technology in order to create online coursework. Many teachers have been students, and have used online platforms in that way, but still had difficulty implementing technology from an instructional perspective.

Future research topics should include more interviews with CTE teachers, both secondary and post-secondary to provide a wider range of perspectives. A final probing question was asked of the participants of this study regarding what other topics they would like to see researched.

Beatrice reported that she would like to see a study that asked about perspectives regarding online learning post pandemic. She explained that this would be of interest to her now that the online learning platforms have improved and been incorporated into more schools.

Sam's response to the same question was that he would like to see a study showcasing the high adaptability of CTE programs and teachers. He observed that the pandemic proved that the career training offered through these programs were the careers that were called upon to keep running throughout the pandemic. Building, mechanics, welding, and especially computer and technology trades were highly relied upon during this time.

Implications for Stakeholders and Policy Makers

The global pandemic was an unprecedented event. This study aimed to ascertain the affects it had on public education in Idaho, specifically emphasizing career and technical education. The findings from the secondary teachers regarding their experiences with technology, online learning programs, tech training, and device availability were varied. Most teachers in this study reported feeling overwhelmed by the technology and lack of training provided. It is recommended that policy makers work with school boards statewide to streamline emergency planning, distribution, and implementation of technology devices, programs, and platforms. They could use the findings from research such as this to prepare for future statewide emergencies. This would help teachers be more prepared and as a result, help students be more successful.

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Appendix A

Participant Consent Form

Perceptions of Idaho secondary CTE Teachers of Teaching During a Pandemic
Informed Consent for Follow-Up Interviews

Bonny DuPuis, from the Department of Curriculum and Instructions Graduate Studies is conducting a research study. The purpose of the research is to gather data regarding the perceptions of teaching CTE courses in Idaho during the COVID-19 pandemic. You are being asked to participate in this study because you agreed to participate in a follow -up interview after completing a survey in the fall of 2020.

Your participation will involve answering questions about your experiences as a teacher during a global pandemic, specifically during the school years of 2019/2020 and 2020/2021. The interview should take about 30 minutes to complete. The interview includes questions such as "How has teaching your subject area changed since the pandemic began?" Or "What kind of supports did your school put in place for teachers during the pandemic?" Your involvement in the study is voluntary, and you may choose not to participate. You can refuse to answer any of the questions at any time. There are no names or identifying information associated with your responses. There are no known risks in this study, but some individuals may experience discomfort or loss of privacy when answering questions. Data will be used for reporting purposes to the University of Idaho, and then be destroyed, either by deletion of electronic files, or shredding of paper materials.

The findings from this project will provide information on the effects of teaching during a global pandemic. If published, results will be presented in summary form only, if quotes are used, they will be attributed to a pseudonym or reported as "anonymous."

If you have any questions about this research project, please feel free to call John Cannon at (208) 364-4031. If you have questions regarding your rights as a research subject, or about what you should do in case of any harm to you, or if you want to obtain information or offer input you may call the Office of Research Assurances at (208) 885-6340 or irb@uidaho.edu.

By electronically signing and returning this consent form, you certify that you are at least 18 years of age and agree to participate in the above- described research study.

_____	_____	_____
Name of Adult Participant	Signature of Adult Participant	Date
Bonny DuPuis	Bonny DuPuis	_____
Name of Research Team Member	Signature of Research Team Member	Date

Appendix B

Interview Protocol

The interview protocol that was implemented for each participant is as follows:

(1) Tell me about what and where you teach.

(2) What was your reaction to going virtual “overnight”?

(3) How would you describe your experiences teaching CTE (content specific) during the pandemic? Is this different from a typical year? If so, in what ways?

(4) Did you contract COVID-19?

(5) Were there any changes in your home during the pandemic? (i.e.- less income, family members ill, managing virtual learning with your own children, etc.)

(6) What type of training did you receive prior to teaching during the pandemic?

(7) How did you prepare during the summer months in between spring and fall of 2020?

(8) What kind of supports did your school put in place for teachers during the pandemic?

(9) If you had known in the spring of 2020 what teaching would look like in the fall of 2020, would you have done anything differently?

(10) What differences did you see in student achievement during the pandemic? (i.e.- motivation, academic outcomes, attendance, etc.)

(11) Has the experience of teaching during a pandemic in Idaho changed the way you see your future as a teacher?

(12) Describe your stress level this year compared with a typical school year. Has your school provided supports for your mental health? Tell me more about that.

(13) Is there anything else you feel is relevant to share about the 2020-2021 school year?

(14) Would you like to receive a copy of the results of this study?