

THE EFFECTS OF REMOTE LEARNING ON SLIFE STUDENTS FROM CENTRAL  
AMERICA DURING THE COVID-19 PANDEMIC

by

Sarah K. Richter

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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## ABSTRACT

The Covid pandemic caused changes in education of which we may never know or understand all its repercussions to the public education system. One group of vulnerable students, newcomers from Guatemala and Honduras with limited or interrupted formal education (SLIFE), were negatively affected. Due to the COVID-19 pandemic, one SLIFE program sent its students home in the spring of 2020 to quarantine and did not return to in-person learning again until a year later. The purpose of this quantitative, causal comparative study is to investigate the effects of remote learning during the Covid-19 pandemic on SLIFE students' education while attending an urban school's SLIFE program for adolescents in southwest Ohio. The research was a longitudinal design using dependent or paired-samples  $t$  tests, comparing SLIFE students' English and mathematics end of semester grades during face-to-face learning in the first semester of the 2019-2020 school year versus the same SLIFE students' English and mathematics end of semester grades during remote learning in the first semester of the 2020-2021 school year. A statistically significant difference was found between school years, confirming a decline in SLIFE student achievement while learning remotely during the COVID-19 pandemic. Conclusions and recommendations for future research and practices are included.

*Keywords:* SLIFE (or SIFE), pandemic, remote learning, coronavirus, newcomer

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### **Dedication**

I considered not writing a dedication because I am not sure that I can convey the depth of my thankfulness to the people who have meant so much to me in this journey. I decided to try anyway.

First, I would like to thank my endlessly patient husband, Bradley Richter. He has consistently told me how proud he is of me and shows it in his actions. Through the countless small and big things he does while I have done homework in the office after a full day of work, Brad has done everything he can to help me in this journey with love and a servant's attitude. I love you more than you know.

Second, I would like to thank my daughter, Samantha. She has grown into a woman that I am so proud of. She has become my best friend and unwavering champion. I cannot imagine what I would do without you and this momma loves you always. You are my heart.

Third, I would like to thank my parents, Kent and Debbie Jones, and my grandmother, Lillian Jones. They have always told me that they love me and never seem to doubt that I can do whatever I set my mind to. Mom and Dad, you put up with me at my worst and my best, and I cannot tell you how much I love you for it. Mom, even though you are in the third paragraph on this list does not mean you are third in my heart. You have made me who I am today. Grandma, you and Grandad have encouraged and inspired me to work hard, take risks, and live to 100. My only wish is that Grandad could see me graduate, too.

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### **List of Abbreviations**

American Civil Liberties Union - ACLU

Coronavirus Disease of 2019 – COVID-19

United States (U.S.) Customs and Border Patrol – CBP

Educational Management Information System – EMIS

English Language - EL

English Language Learners – ELL

English as a Second Language – ESL

Institutional Review Board - IRB

North Central Association of Colleges and Schools Higher Learning Commission – NCA-HLC

U.S. Department of Health and Human Services - HHS

U.S. Immigration and Customs Enforcement - ICE

Ohio Department of Education - ODE

Students with Limited or Interrupted Formal Education – SLIFE

Teaching English to Speakers of Other Languages - TESOL

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

The purpose of this quantitative, causal comparative study was to determine if there were differences in student achievement in the form of English and mathematics performance for students with limited or interrupted formal education (SLIFE) between an in-class learning environment before the COVID-19 pandemic and remote learning during the COVID-19 pandemic. Chapter One provides a background for the topics of the characteristics of SLIFE students specifically from the Central American countries of Guatemala and Honduras, educational best practices for the SLIFE population, and differences in instructional practices pre-pandemic and during the pandemic. Included in the background is an overview of the theoretical framework, problem statement, purpose statement, and significance for this study. Finally, the research questions are introduced, and definitions pertinent to this study are provided.

### **Background**

One of the most influential portions of everyday life that was interrupted and changed by the COVID-19 pandemic was the educational landscape. As politicians at both the national and state levels distributed recommendation after recommendation for schools during the pandemic, school staff were coping with almost daily changes to their teaching practices (Gil et al., 2020). Schools relentlessly navigated both student and staff needs while engaging in remote, socially-distanced, and hybrid learning, causing a tremendous effect on the health and well-being of everyone involved (Gil et al., 2020). However, though no singular group remained untouched by

COVID's effects, possibly none were more detrimentally affected in their education than the most high-risk populations, of which SLIFE students were included (Harmey, 2021).

Unlike most educational populations and topics, there was not a great deal of literature at the time of this study about Students with Limited or Interrupted Formal Education (SLIFE), especially those from the Central American countries (DeCapua, 2016), which was the focus of this study. However, best practices for this population can be inferred through the literature that did exist regarding their education and their often-traumatizing backgrounds. Additionally, since SLIFE is a subset of the English as a Second Language (ESL) population, literature about ESL and newcomer students was considered in determining best practices for the SLIFE population. With some basic tenants for educational best practices for SLIFE from Central America, the effects of remote learning on student achievement during the COVID-19 pandemic on this population was exposed and understood.

### **Historical Overview**

Immigrants from Central America often have left their former countries due to high poverty, gang violence, physical or sexual abuse, war, natural disasters, and witnessing or being a victim of a crime (Obinna & Field, 2019). Options for travel included relying on human smugglers, walking caravans, and as cargo on the train called *La Bestia*, with each mode having its own set of dangers (Torres et al., 2018). Once at the Mexican-United States border, there are the options for sneaking into the country illegally or seeking asylum legally, but both options come with uncertainties of detention centers and deportations. Most SLIFE adolescents traveled by these means as unaccompanied minors with no family members to guide their way and, consequently, entered the United States alone (Franco, 2018).

Immigrants from Central America, specifically Guatemala and Honduras, have multiplied ten-fold from 1980 to 2015, often settling in urban areas with access to manufacturing jobs (Obinna & Field, 2019). With a population of almost 4.6 million, a significant portion of this population are school-aged children. These children are usually identified as ESL newcomers once they are enrolled in a school, but most districts do not specifically identify SLIFE students and, therefore, are not prepared to meet their specific needs (Oikonomidoy et al., 2019). Adolescent SLIFE students from Guatemala and Honduras often had a maximum of a sixth-grade or ninth-grade education respectively, often having limited or no formal education, and were often pre-literate in their primary language, which is commonly a Spanish dialect (DeCapua, 2016). As a result, SLIFE students performed much more poorly in the classroom when compared to their non-SLIFE ESL peers, taking longer than the typical ESL student to become proficient in the English language (Sheng, et al., 2011).

### **Theoretical Overview**

Due to the traumas common to Central American adolescent emigrants, SLIFE students' educational needs were examined through the theories of Abraham Maslow's Hierarchy of Needs (Maslow, 1943) and Albert Bandura's Social Cognitive Theory (Bandura, 1986). Maslow's hierarchy of needs was the more common name for Abraham Maslow's motivational theory, which depicts human needs in a five-tiered pyramid (McLeod, 2018). As one's needs on the lowest rung were fulfilled, one can work up the pyramid, though Maslow's later works specified that these tiers can overlap depending on the individual. Maslow maintained that the human body cannot function optimally, and all other needs become secondary to meeting the physiological needs on the lower tiers (Maslow, 1943).



The bottom most tiers of the pyramid addressed physiological needs, such as air, food, shelter, sleep, and safety needs that include a sense of security, stability, and freedom from fear.

Maslow's Hierarchy of Needs facilitated comprehension of the complex needs of SLIFE students in meeting not only their most basic needs, but also in recognizing the extreme circumstances that many of these students have been subjected to that can affect their learning capabilities.

Bandura's social cognitive theory encouraged "a social context with a dynamic and reciprocal interaction of the person, environment, and behavior" (LaMorte, 2019, p. 1). Within the social construct of the classroom, teachers were encouraged to use differentiated materials that enhanced language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge (Cohan & Honigsfeld, 2017). Bandura's social cognitive theory assisted in demonstrating how best-practices for learning for SLIFE students' pre-pandemic compares to remote learning during a pandemic.

### **Society-at-large Overview**

Before the COVID-19 pandemic the Central American immigrant population had been growing in the United States and, consequently, newcomer and SLIFE programs were emerging in some urban locations (Hos, 2020). The goals of the programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Educators at SLIFE schools understood that students wanted to learn, but they were most concerned initially with their physiological and safety needs due to the experiences of their emigrations (Li, 2016). Issues of social isolation, communication, racial discrimination, and legal stressors were minimized

because everyone in the school has the same issues. Social and academic embarrassment (DeCapua, 2016) were made obsolete for the same reason.

When schools closed in March of 2020, SLIFE students not only lost their modes of education, but they also lost their most accessible support systems (Sayer & Braun, 2020), including teachers, bilingual support staff, trauma counselors, and psychologists. Additionally, many students did not have access to a computer or the internet to continue their work remotely and were left feeling inadequate, wondering what would happen with their already limited schooling. This potentially could cause higher truancy and decreased academic achievement within schools that SLIFE students were enrolled in during the pandemic due to the sudden changes in the modes of learning taking place.

### **Problem Statement**

In the spring of March 2020, students were sent home, and schools were shut down indefinitely due to the emergence of the Covid-19 pandemic. Since then, many SLIFE students have been in remote learning classrooms for varying periods of time dependent upon the district decision-making as the pandemic continued. With SLIFE students from Central America in remote learning classrooms, educators and students faced issues with accessing and using technology, building relationships, lacking health supports, and teachers attempting to give intense instruction through unfamiliar means (Sayer & Braun, 2020). While some research existed regarding ESL learners and the impact that the COVID-19 pandemic had on the general ESL population (Sayer & Braun, 2020), the ESL subpopulation of students with limited or interrupted formal education was unknown.

Previous research showed that SLIFE learners have a greater need for instruction that meets them at their current skill levels, which may include only knowing a dialect of Spanish, extremely limited or no literacy skills, and interrupted formal education for high school aged students (DeCapua, 2016; Hos, 2020; Sayer & Braun, 2020). Intensive methods of instruction were a necessity for increasing English proficiency, literacy, basic math skills, and basic technology skills (Hos, 2020). Unfortunately, when the COVID-19 pandemic shut down schools and students were forced into remote learning situations, educators struggled to meet the physiological and social needs of the SLIFE population. As a result, this study addressed the gap in educational research of how remote learning due to the Covid-19 pandemic affected SLIFE students' academic achievement in comparison to when they had direct instruction specific to their unique needs.

### **Purpose Statement**

The purpose of this quantitative, causal comparative study was to investigate the effects of remote learning during the Covid-19 pandemic on SLIFE students' academic achievement while attending an urban school's SLIFE program for high school-aged adolescents in southwest Ohio. The researcher used a quantitative, causal-comparative design to determine if there was a statistically significant difference in the academic achievement through English and mathematics end of semester subject grades of students who were enrolled in this SLIFE program. This research was a longitudinal design comparing SLIFE students' English and mathematics end of semester subject grades during face-to-face learning in the first semester of the 2019-2020 school year versus the same SLIFE students' English and mathematics end of semester subject grades during remote learning in the first semester of the 2020-2021 school year. For the purpose of this study, only first semester data was used, as both spring semesters had a mixture of face-to-face

and remote learning. Data was collected from SLIFE students who emigrated from Guatemala and Honduras, attending a program specifically designed to meet the diverse needs of SLIFE students aged 14 to 21 in a district in southwest Ohio. Due to the COVID-19 pandemic causing changes to instructional methods at the SLIFE program midway through the spring of 2020 as students were sent home to quarantine and again in the spring of 2021 as students returned to face-to-face instruction, the spring semesters could not give valid data.

For this study, the dependent variables showed student achievement through English end-of-semester numerical grades and mathematics end-of-semester numerical grades. Student achievement was defined as a student's growth measures obtained through standardized test scores, subject area grades, and other areas of student measurement over time (Ferreira & Gignoux, 2013). The independent variable was time, as data from a single group of SLIFE students was collected longitudinally, once in the fall of 2019 and again in the fall of 2020.

### **Significance of the Study**

The COVID-19 pandemic had global ramifications on education, both on methodology and on the individuals learning and teaching during the pandemic. The United States had seen both spikes and declines in new cases and deaths since the pandemic took hold, with more than half a million people having died from the novel virus more than a year since its identification in the country (Coronavirus in the U.S., 2021). One of the most debated subjects was the closing of schools in the spring of 2020, affecting at least 55.1 million students and their families in the United States (Map: Coronavirus, 2020). Educational leaders agreed that the effects of schools shutting down would have long-term impacts within education, including learning gaps between advantaged and vulnerable students (Sawchuck, 2020).

Theoretically, a SLIFE school should be designed to educate newcomer immigrants and refugees, often being located on sites separate from the main schools in which the students attend anywhere from 6 months to 2 years (Hos, 2020). The goals of SLIFE programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Best practice recommendations for educating SLIFE students included support from counselors, social workers, psychologists, and nurses, in addition to the teachers and administration, and classes to support English learning before being enrolled in classes with standardized testing (Cohan & Honigsfeld, 2017). Additionally, teachers were encouraged to use differentiated materials that enhanced language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge. In this way, learning occurred, according to Bandura's social cognitive theory, in which there was "a social context with a dynamic and reciprocal interaction of the person, environment, and behavior" (LaMorte, 2019, p. 1).

As the COVID-19 pandemic and online learning continued, teachers adjusted their methodology, and counselors and psychologists began to meet with students through video or teleconferencing (Gil et al., 2020). Empirical evidence showed that, while SLIFE students' technology skills improved (Shin, 2020), the main problem remained and was exacerbated the longer remote learning continued, of keeping SLIFE students attending school (Ahmed et al., 2020). The student-centeredness, engagement, and interactivity that was present in the classroom was harder to replicate in a remote classroom (Hos, 2020). As such, the significance of this study will be to determine if there was a negative impact on student achievement through English and mathematics numerical subject grades for SLIFE students educated through remote learning for a

semester during a pandemic when compared to a previous semester of face-to-face learning within the same program.

Realistically, this study will be significant to researchers' body of knowledge concerning best practices for teaching and learning with SLIFE students. Many best practices for SLIFE students were carried out during face-to-face learning in the southwest Ohio SLIFE program but modified or eradicated during remote instruction. This study has the potential of guiding educators to teaching methodologies that are tailored to the varied needs of SLIFE students within multiple learning platforms as this vulnerable population grows within the United States educational system. Meeting the changing needs of the SLIFE population became even more important as the pandemic continued and as the overall population grew in the United States.

SLIFE students were at risk for additional traumas during the pandemic that may have contributed to their attendance, or lack thereof. Already distanced from peers, the Hispanic community experienced a disproportionate death rate from COVID-19 when compared to others, with 33% of the community becoming infected (Falicov et al., 2020). Compounding the problem, the Hispanic community in the United States had the lowest rates of medical health coverage when compared to all other ethnic groups (Gil et al., 2020). Due to the high poverty rates that many SLIFE students experienced at home, family members and students continued working in essential services, their living conditions were cramped, and language and insurance barriers prevented testing and treatment for the virus when needed. All these factors had the potential to affect SLIFE students' and their families' perceptions on the importance of attending school, thus contributing to the need for educators to develop best practices for SLIFE students' varying needs among multiple learning platforms to reach academic success.

### Research Questions

**RQ1:** Is there a difference in English end of semester numerical averages for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

**RQ2:** Is there a difference in mathematics end of semester numerical averages for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

### Definitions

1. *Attendance* – students attend teacher-led classes or participate in collaborative learning either in-person or remotely (Sloan et al., 2020).
2. *COVID-19 pandemic* – The coronavirus, a severe respiratory syndrome, caused millions of deaths worldwide, forced school closures, business closures, and other measures of protection, including mask wearing, quarantines, and social distancing (Silva et al., 2020).
3. *Coyote* – human smuggler paid to transport people across international borders for a fee (Franco, 2018).
4. *La Bestia* – freight trains used by poor migrants to hitchhike to the United States in lieu of paying a coyote. Riders risk falling from the train, amputation, and death (Franco, 2018).
5. *Newcomer* – immigrants and refugees that have recently relocated to a new country (Oikonomidoy et al., 2018).
6. *Remote learning* – also called distance learning, students learn and attend classes without entering a physical classroom (Silva et al., 2020).

7. *Student achievement* – student growth measures obtained through standardized test scores, subject area grades, and other areas of student measurement over time (Ferreira & Gignoux, 2013)
8. *Unaccompanied minor* – a person under the age of 18 that makes a migratory journey and enters another country without an adult companion (Perez, 2014).



## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

The purpose of this literature review was to present the critical elements that the effects of remote learning during the COVID-19 pandemic had on the academic achievement of students with limited or interrupted formal education (SLIFE), who have immigrated from the Central American countries of Guatemala or Honduras, specifically their English and mathematics end-of-semester numerical grades during in-person learning in the fall 2019 semester and then while learning remotely during the fall 2020 semester. The literature review describes the factors unique to the educational needs of SLIFE students from Guatemala and Honduras, as well as reviews the changes that the COVID-19 pandemic had taken on SLIFE education. The chapter opens with a framework of two relevant theories. The study was grounded first in Maslow's Hierarchy of Needs (1943) by recognizing how the basic physiological and biological needs of traumatized students affect their needs in education, and then Bandura's social cognitive theory (1986) lays a foundation for best practices when educating the SLIFE population. A thorough review pertinent to the characteristics, culture, and educational needs common to SLIFE students from Central America was included. A review of current knowledge regarding the COVID-19 pandemic and the effects that the COVID-19 pandemic had on SLIFE education will round out the chapter, followed by a brief summary.

### **Theoretical Frameworks**

To understand the needs of SLIFE students, and how the pandemic and remote learning affected these students, a review of the theories proposed by Arthur Bandura and Abraham Maslow is necessary. Maslow's Hierarchy of Needs (1943) facilitated comprehension of the

complex needs of SLIFE students in meeting not only their most basic requirements, but also in recognizing the extreme circumstances that many of these students had been subjected to that can affect their learning capabilities. Bandura's social cognitive theory then assisted in demonstrating best practices for SLIFE learning pre-pandemic compared to remote learning during a pandemic, as many elements of social cognitive theory had to be abandoned.

### **Maslow's Hierarchy of Needs**

Maslow's hierarchy of needs is the more common name for Abraham Maslow's Theory of Human Motivation, which depicts human needs in a five-stage hierarchy (Maslow, 1943), commonly applied to the fields of education (Schunk, 2016) and organizational culture (Upadhyaya, 2014). Maslow originally published his theory in 1943 but continued to make changes through the late 80's, until eventually the pyramid developed into eight tiers (McLeod, 2018). Maslow's (1943) theory posited that, as one's needs on the lowest rung of the hierarchy are fulfilled one can work up the pyramid, though Maslow later specified that these tiers could overlap depending on the individual (Maslow, 1987). For this literature review, the more popular 5-tier model was utilized.

The five stages of the Hierarchy of Needs were divided into two categories: growth and deficiency (McLeod, 2018). The first four tiers of the hierarchy were considered to be deficiency needs, since these arose due to deprivation and motivated one to fulfill this deprivation until it was met. The longer the deprivation, the greater the motivation to fulfill it. As the research showed, many SLIFE students began their education with varying levels of deficiencies within the hierarchy. The first two tiers of the hierarchy of needs consist of basic needs that Maslow labels as physiological and safety needs (Maslow, 1943). In the lowest level, physiological needs, one's biological requirements for human survival exist, such as air, food, shelter, sleep,

and so on. Without these, Maslow maintained that the human body cannot function optimally, and all other needs become secondary to meeting those physiological needs. In the second level, safety needs, one is required to have freedom from fear, seeking shelter, security, and stability in life (McLeod, 2018). Moving up the hierarchy, the next two stages were categorized as psychological needs: love and esteem. In the third tier resided the needs for love, affection, and belongingness (Maslow, 1943). Maslow divided the final tier consisting of the esteem needs into two classifications: self-esteem and the esteem of others. Self-esteem was based in feelings of achievement, confidence, and independence, while having the esteem of others was based on a desire for prestige, recognition, and importance. Lastly, and the only tier of the hierarchy that was identified as a growth need was the need for self-actualization (McLeod, 2018). Maslow (1987) stated that self-actualization was the desire to “become everything one is capable of becoming” (p. 67) and was considered the only growth need because it was not based on the lack of something or on a deficiency.

Considering the trauma many new immigrants from Guatemala and Honduras may face, both in their travels and once they have found a permanent location in the United States, these lowest deficiency tiers of the Hierarchy of Needs became very pertinent to learning and education of SLIFE adolescents. Aspirations to grow as an individual are lost when the most basic tasks are difficult to attain (Wurtz, 2020). Once the physiological needs on the lowest rung are met, a student can move up the hierarchy to the next rung of safety needs, including a sense of security, law and order, stability, and freedom from fear (Maslow, 1943). Since the stages of the hierarchy are not linear, students can fulfill deficiencies in any stage where the student perceives their highest need at any given point in time (McLeod, 2018). However, Schunk (2016) stated that “it is unrealistic to expect students to show interest in classroom activities if

they have physiological or safety deficiencies” (p. 348). If a student’s most basic needs are not met, it is unlikely that the student will be most concerned with academics. This study therefore demonstrated the changes in student achievement when these needs were not being met in an academic setting compared to when the needs within the hierarchy were being met, further expanding Maslow’s Theory of Human Motivation within education to also encompass students with interrupted or limited formal education.

### **Bandura’s Social Cognitive Theory**

Albert Bandura began his career as a behaviorist who was unsatisfied with the existing theories’ attempts to explain the process of learning (Bandura, 2005). Bandura first introduced his social cognitive theory in 1986, in which he theorized that social environment affects the human functions of motivation, learning, and self-regulation (Schunk & DeBenedetto, 2020). The theory allowed for an “agentic perspective toward human development, adaptation, and change” (Bandura, 2006, p. 1). Since its introduction, social cognitive theory has not only been applied to psychology, but also education, business, and health (Schunk & DiBenedetto, 2020).

Bandura is considered to be one of the most influential figures within the field of cognition and is the most cited psychologist still living (Allan, 2017). Central to his work was the belief that human learning is fundamentally social in nature. This can be seen in his works leading up to his social cognitive theory, including Bandura’s 1973 study *Aggression: A Social Learning Analysis* and 1977’s *Social Learning Theory*, which in turn can be traced back to his Bobo doll experiment from 1961 (Allan, 2017; McLeod, 2016). It was in the Bobo doll experiment that Bandura concluded that children imitate the behavior of the people around them and will likely continue the behavior if rewarded (McLeod, 2016). Social learning theory later emphasized imitating behaviors, attitudes, and reactions through the consideration of both

environmental and cognitive factors. It was here that he first introduced the idea that, through the process of observational learning within one's environment, behavior is learned. This would further evolve into Bandura's social cognitive theory published in 1986 which, again, theorized that social environment effects the human functions of motivation, learning, and self-regulation (Schunk & DeBenedetto, 2020).

Bandura believed that most learning occurs within a social context that includes a dynamic and reciprocal interaction with the person, their environment, and their behaviors (LaMorte, 2019). Consequently, people observe others, and, in this process, acquire knowledge, rules, beliefs, and attitudes (Schunk, 2016). Bandura wrote that there are four properties of human agency that allows one to adapt and change through social cognitive theory: intentionality, forethought, self-reactiveness, and self-reflectiveness (Bandura, 2006). According to Bandura, once environmental influences weaken, personal dynamics become much more dominant (Schunk, 2016). Combined with change in perceived self-efficacy, a student may then change how they choose tasks, show persistence, expend effort, and acquire skills.

When the COVID-19 pandemic forced students into quarantine and, consequently, remote learning, SLIFE students' environmental influences that were present for face-to-face learning were weakened or made non-existent. SLIFE students were already struggling with technology skills, so attending classes through online means became an instantaneous problem (Ahmed et al., 2020). As attendance diminished, students were unable to learn within their normal social context and lost out on important interactions with educators and peers, thereby limiting the process of acquiring knowledge, rules, beliefs, and attitudes that are central to Bandura's social cognitive theory (Schunk, 2016). This study demonstrated the impact on student achievement of SLIFE students by comparing data from a time in which students had the

ability to learn through social cognition in a face-to-face instructional environment versus a time period in which remote learning took place and social cognition elements were replaced with isolation.

### **Related Literature**

SLIFE students, or Students with Limited or Interrupted Formal Education, were a growing subpopulation of the English Language Learners (ELL) population with abnormally high drop-out rates, though exact numbers were not known due to the lack of research among this group (DeCapua & Marshal, 2015). SLIFE, sometimes called SIFE, were students from Central America, as in the case of this research study, that often also fit into the categories of newcomers, unaccompanied minors, and undocumented immigrants (DeCapua, 2016; Franco, 2018).

### **SLIFE Definition and Characteristics**

SLIFE, or students with limited or interrupted formal education, can be defined as immigrant students who come from a home in which a language other than English is spoken, enrolling in a school in the U.S. with limited or no formal education, and, consequently, have low literacy skills and large academic gaps in knowledge (DeCapua, 2016). Specifically, SLIFE students entered a U.S. school after second grade and functioned at least two years below grade level in reading and mathematics (Hos, 2020). For the purpose of this study, only SLIFE students from the Central American countries of Guatemala and Honduras were the focus of research, as these were the only countries from which the convenience sample originated.

SLIFE students were frequently at a larger disadvantage than ELL - also called EL and ESL - students (Sheng et al., 2011). ELL students often performed poorly when compared to their peers, and SLIFE students often took even longer than typical ELL students to become

proficient in the English language. Most SLIFE students from Central America also had additional traumas from their former countries and their travels to their new locations in the United States (Hos, 2020). Since many school programs provide ELL services, but these do not include specific programs for SLIFE students, most made very little progress and eventually dropped out of school, with even higher probabilities of dropping out as the incoming age of the student increases (DeCapua & Marshall, 2015).

In educating SLIFE students from Central America, educators understood that, while students wanted to learn, SLIFE were primarily concerned with their physiological and safety needs within Maslow's Hierarchy of Needs. Immigrants from Central America were often leaving their former countries due to high poverty, gang violence, physical or sexual abuse, war, natural disasters, and witnessing or being a victim of a crime (Torres et al., 2018). In a study by Miao Li (2016), it was found that more than half of the immigrants from Central America experienced trauma in their home country before emigrating.

### ***Trauma***

**Pre-migration Trauma.** Some of the most personal forms of pre-migration trauma stem from gang violence, war, abuse, witnessing a crime, and attack on sexual orientation (Castaneda et al., 2021). Additionally, since many children were separated from their parents, either as the parent migrates to the U.S. to establish a home or as children are sent to the U.S. to live with a family member, many youths have residual feelings of abandonment and resentment toward their parents. Of course, pre-migration trauma can stem from less violent yet no less devastating circumstances of natural disasters and extreme poverty. The type of trauma can give an indication of status between immigrant and refugee. In the case of refugees, they left their country due to fear of persecution or death, whereas immigrants left voluntarily (Hos, 2020).

When applied to Maslow's hierarchy, refugees could find themselves focused within the safety needs, whereas immigrants may be more focused on physiological needs, though these can be intermingled, and change based upon the person's most current needs.

The countries of Guatemala, Honduras, and El Salvador, considered the Northern Triangle of Central America, had histories of violence that have contributed to the current exodus from the region (Franco, 2018). It was estimated that out of the thirty-million citizens of the Northern Triangle, almost 10% relocated to the United States (Crandall, 2019). Guatemala's civil war, lasting 36 years and finally ending in 1996, had consequences resulting in organized crime, violence, and intimidation (Franco, 2018). Gang violence had a profound effect in many communities, as many people would not leave their homes after dark (Wurtz, 2020). There was a constant threat of danger in the form of the sounds of gunshots, dead bodies near homes and parks, and community members forced to act for or join the gang under threat of personal death or death to family members. While gang members were sometimes sent to prison, the prisons also operated as a central hub for organized crime (Sawyer & Marquez, 2017). Women and girls were often raped and targeted for abduction to send to the prisoners to be raped under the supervision of corrupt prison officials. Similarly, a military coup in 2009 in Honduras resulted in police corruption and unchecked crime (Franco, 2018). People of the lesbian, gay, bisexual, and transgender (LGBTQ) community, journalists, and the impoverished particularly were victimized with no repercussions for the criminals. International gang violence was a problem as well, and plagued Honduran citizens with well-armed gangs that murdered, kidnaped, executed for hire, extorted, trafficked narcotics, and robbed homes (Sawyer & Marquez, 2017). In Honduras, gang violence on the streets was rarely prosecuted.



While immigrants and refugees had various reasons for leaving their countries of origin, many SLIFE based their reasons around themes of gang violence, poverty, and the lack of economic opportunities (Tello et al., 2017). However, in another study, pre-migration reasons were broken into categories of constant stress, anxiety, and sadness (Casteneda, 2021). In the category of constant stress, unaccompanied minors cited that they wanted to reunite with a parent, were living alone in their home country, or were in the presence of gangs. Similarly, anxiety was caused by gang violence, violence affecting friends, payments needed to be paid to gangs or a coyote, or they could not afford school supplies. Lastly, sadness was caused by an inability to leave the home due to gang activity, death of family members, disappearance of friends or family members, leaving friends and family, and missing a parent. In almost all instances, the reasons for leaving their countries of origin were direct or indirect results of poverty and gang violence.

**Migration Trauma.** Once the decision was made to travel to the United States, some immigrants relied on coyotes, or human smugglers, to move them to the Mexican-American border (Torres et al., 2018). Reports of extortion for money, which may have resulted in murder for nonpayment, are common, and up to 60% of Latinas smuggled by coyotes reported sexual assault and kidnapping. Others may have chosen *La Bestia*, a well-known cargo train, to travel through Mexico, in which assaults, robberies, falls, and mutilations frequently occur. The option of travelling with a walking caravan may have been the safest mode of transportation, though immigrants must walk the entire way, were subject to nature's elements, and may still face death due to lack of food or water (Fabregat et al., 2020).

In the case of travelling with a coyote, migrants must choose someone they can trust with their life, as well as someone they can afford (Slack & Martinez, 2018). It was common to hear

stories of phone calls to family members once the migrant began their travel, claiming their kidnapping or safe crossing into the destination country. In most cases, a coyote was chosen among those guides that have friends and family in common with the community of origin. These coyotes are often referred through word of mouth, so maintaining a good reputation is of great importance. However, there was more recently a shift toward utilizing the skills of coyotes that operate in a more clandestine manner and very rarely know the client they are smuggling. Not only is there less importance placed on maintaining a good reputation in these cases, but there was also an increase in tolls in particular areas of travel, suggesting a monopoly on human smuggling, as well as illicit drug smuggling to maintain surreptitious spaces.

In some cases, coyotes arranged means of transportation for the final stage of the journey, though the poorest often migrated using a freight train called *La Bestia*, or The Beast that transported various products to the U.S. (Franco, 2018). In this case, dangers included train conductors who sometimes smuggled, extorted, and demanded bribes from vulnerable migrants, as well as beatings and robberies during various stopping points in which migrants were forced from the train in search of food and water (Tello et al., 2017). Multiple migrants utilizing *La Bestia* reported witnessing shootings and murder, raping in the presence of other family members, and seeing body parts along the railroad tracks. When attempting to board *La Bestia*, travelers often must jump onto or ride on top of the railcars (Slack & Martinez, 2018), so death and dismemberment from falling from the train was a perpetual danger (Tello et al., 2017). However, once the train stops, migrants must still spend days walking through the desert to the U.S.-Mexico border. Those who are unprepared often deal with terrible pain, either from the extreme weather or the damage to their feet while walking for days in the desert.

While travelling in numbers helped to avoid some hazards, travelling with a migrant caravan from Central America to the United States still had its share of danger. Migrants from Central America risked being exploited in criminal and sexual markets along the migratory route through Mexico, but travelling with a caravan of families, single mothers, children, unaccompanied minors, elderly, LGTBQ, and those with disabilities allowed for a safer and more economical way to travel for all migrants (Montes, 2019). As policies for migration control and refugee management from Mexico and the United States became more draconian in the early 2000's, caravans became increasingly more popular modes of travel by drawing on their strength in numbers, the help of transnational organizations, and the international press' watchful eye (Wurtz, 2020). As a direct result of the largeness and frequency of these migrant caravans, human rights agencies, such as Amnesty International, Human Rights Watch, and the Washington Office on Latin America, were instrumental in exposing Mexico's judicial shortcomings and institutional corruption (Hernandez, 2017).

**Post-Migration Trauma.** Once a SLIFE student reached the U.S.-Mexico border, they may have entered the United States in one of two ways: legally as a minor seeking asylum, in which they will be detained by U.S. officials, or as an 'undocumented immigrant,' avoiding detainment, questioning, and deportment by the U.S. government (Galli, 2020). Since immigrants were immediately classified as criminals if they enter the country without authorization (Hernandez, 2017), youth attempting to enter the U.S. illegally may have been placed in shelters or detention centers and deported if apprehended (Perez, 2014). In many cases, minors were directed before reaching the country to ask for asylum, so they were not automatically labeled as criminals (Galli, 2020). This stems from the 2008 Trafficking Victims Protection Act that allowed unaccompanied minors the right to be admitted to the U.S. if it was

their first admittance. However, this did not necessarily provide absolute protection from Customs and Border Patrol (CBP). In 2014, the American Civil Liberties Union (ACLU) filed a complaint for 116 instances in which CBP violated minors' rights or participated in misconduct. Many unaccompanied minors reported CPB agents hurling accusations of lying regarding the minor's age, which can in effect deny certain protections and rights , consequently adding to the trauma of the journey.

For those youth travelling with one or more adult family members, if apprehended at the border, any adult undocumented immigrant would be prosecuted as a felon while they were placed in detention center jails, and the children were kept in a separate shelter or sent with relatives (Smuskiewicz, 2021). It was not until June 2018 that the practice of separating families at the border was blocked in federal court and many families were reunited. Unfortunately, even with the help of DNA testing, it was still too late for the parents of 545 children that could not be found and reunited with their lost children.

While many SLIFE did travel with an adult and were separated from their family members, many also traveled unaccompanied. In these cases, the unaccompanied minor was turned over to the Department of Health and Human Services (HHS) and placed in a detention center or shelter within 72 hours of apprehension where they must wait at least 21 days for their first hearing with an immigration judge (Franco, 2018). Unfortunately, many of these centers were cold, overcrowded, and had limited access to basic living conditions, such as restrooms, medical care, and food or water. Reports of sexual and physical abuse by shelter staff also ran rampant, including complaints of police, ICE employees, and guards committing abuses. On the other hand, in many immigrant shelters, the staff taught youth about U.S. laws and what they believe were desirable behaviors (Galli, 2020). Strict rules and schedules were maintained to

encourage compliance with authority. Regrettably, in the attempt to teach Central American youth how to be ‘good’ immigrants, these youth were also often taught the stigmatization that many other immigrants hurt innocent people.

From the immigration shelters and detention centers, most unaccompanied minors were released to parents and family, though some may have been placed in long-term foster care, where they would then go through the many steps for remaining legally in the U.S. (Galli, 2020). Once a minor was united with family or a sponsor in the United States, their difficulties were not ended. Since so many of their family members were considered illegal or undocumented immigrants themselves, SLIFE students were often exposed to the constant fear of deportation of their adult sponsor, as well as harassment and bullying due to a political climate that was hostile to many immigrants (Oikonomidou et al., 2019).

Before the Covid-19 pandemic began, both the mental and physical health of many Central American immigrants, including SLIFE students, had declined due to the high priority the Trump administration had placed on mass deportations, more restrictive paths to citizenship, ICE raids on places of work, and an end to birthright citizenship (Nichols et al., 2018). Reports of increased Border Patrol and ICE presence at sensitive locations, such as hospitals, schools, and churches, which were supposed to be protected and against ICE official policy, ran rampant and stoked fears of deportation, whether the migrant was in the United States legally or illegally (Blackburn & Sierra, 2021). This was further perpetuated by instances of staff at protected locations calling ICE for undocumented immigrants seeking medical care, or ICE following mobile care units to predominantly Hispanic neighborhoods. This directly led to a decrease in immigrants seeking health care for themselves, even if documented, in fear that they could unintentionally expose undocumented family members and friends to authorities. Children of

migrants were also negatively affected by a decrease in enrollment in Children's Health Insurance Program (CHIP) and the Supplemental Nutrition Assistance Program (SNAP). After creating such a hostile environment for Latinos in the U.S., 82% of Latinos reported that their success was hampered by discrimination, and 31% reported personal experiences of discrimination (Torres, 2018). Additionally, President Trump also made changes to the public charge rule in February 2020 (Blackburn & Sierra, 2021). The public charge rule had been in existence for decades and was a test determining dependence on the government for those petitioning to live in the United States, effectively banning most immigrants from the poverty-stricken Northern Triangle countries from entering the U.S. The change by the Trump administration allowed for rulings against any immigrant using public assistance, even if it was for their children, as well as heavily weighing a person's current income before granting citizenship, thus making entering the U.S. legally much more difficult.

### ***Education***

The Central American countries of Guatemala and Honduras were among the poorest and least educated in all Latin America (Posner et al., 2017; Murphy-Graham et al., 2021). In Guatemala, free primary education was provided through 6<sup>th</sup> grade but was often unavailable in rural regions (Posner et al., 2017). Honduras' education system was slightly superior to Guatemala's, with free education provided through 9<sup>th</sup> grade, but again with significantly less access to education in its rural regions (Murphy-Graham et al., 2021). In both cases, to send a child to school often required significant strain on already impoverished families in rural regions of both countries in the form of transportation and finances, resulting in low participation in formal education (Posner et al., 2017; Murphy-Graham et al., 2021).

Guatemala had many factors that contributed to the fact that it had one of the lowest average accumulations of educational years compared to other countries in Latin America, with almost a quarter of the population of 18- to 49-year-old people having no formal education and considered to be illiterate (Bastos et al., 2017). Since 1985, education through 6<sup>th</sup> grade was compulsory and free, though parents did have to pay a small fee for operational costs. Guatemala also educated children ages 4 to 6 free of charge and under compulsion, but it was not enforced. Additionally, as previously described, the threat of gang violence often kept students from leaving their homes to attend school (Wurtz, 2020). In other cases, extreme poverty prevented paying the small school fees, and students instead dropped out to work, though they did sometimes return once they could pay again (Foster et al., 2017). In rural areas, high rates of malnutrition, along with low levels in parental education, contributed to a greater probability of a student dropping out or repeating a grade (Bastos et al., 2017).

School in Honduras was similarly compulsory through 6<sup>th</sup> grade, though this did not seem to make a difference to the 50 percent of students living in rural areas not attending school (Hendrick & Marteleto, 2017). Of those attending primary school through sixth grade, approximately 9 percent dropped out, though after the primary grades dropout rates increased substantially (Adelman et al., 2018). Transitional periods from primary to lower secondary and lower secondary to upper secondary saw the highest dropout rates throughout Honduras, resulting in only 34 percent of students staying in school through tenth grade (Adelman et al., 2018). Honduras faced much of the same problems in retaining students in their school systems due to violence and extreme poverty. Since so many families lived in extreme poverty and in rural areas, many students stopped attending in lieu of working to help pay bills, care for family members, or harvest seasonal crops, such as coffee (Hendrick & Marteleto, 2017). With many

secondary schools not in close proximity to students' homes, compounded by high teen pregnancy rates, it was not surprising that Honduras had one of the highest percentages in all of Latin America of secondary-aged children not attending school.

### **SLIFE Education in the United States**

When SLIFE students enrolled in public school in the United States, they had already had to face leaving family and friends, social isolation, difficulty in communicating in a new country, legal stressors, and racial or language-based discrimination (Li, 2016). SLIFE students often experienced what is called 'cultural dissonance' or the feeling of confusion, alienation, and bewilderment caused by the sudden shift to formalized education (DeCapua, 2016). Already grappling with their physiological and safety needs, SLIFE students may have faced social and academic embarrassment due to having little or no formal education, including literacy skills, in their previous countries, which resulted in their inability to reach the stage of belongingness on Maslow's hierarchy of needs. Compounding the issue, SLIFE students were often miscategorized upon enrollment, and their needs commonly went unmet in the public education system. Even if properly identified, educators were unlikely to have the training necessary to meet and understand the needs of this special category of ELL students (Hos, 2020). The consequence was that many SLIFE students, especially those who entered the secondary grades, dropped out of school.

In most cases, SLIFE students of high school age were often enrolled in a traditional high school that may or may not have had an EL program, EL teachers, or TESOL endorsed educators. In Ohio, where this study takes place, districts were required to give students a *Language Usage Survey* within 30 days of enrollment to determine the language used by the student and their family, and then the *Ohio English Language Proficiency Screener* was used to



place a level of language learning for the student (Ohio Department of Education, 2021c). There was a gap in serving the needs of SLIFE students, in that materials, recommendations, and practices presented to public school educators in Ohio were specific to EL students, but not SLIFE students (Ohio Department of Education, 2021b) and this continued on the national spectrum as well (Marrero Colon, 2018).

For those educators with EL certification or TESOL endorsement, there were specific standards called the TESOL Pre-K-12 English Language Proficiency Standards (2006) that used the four language domains of listening, speaking, reading, and writing, and included five levels of language proficiency. According to the English Language Proficiency Standards (2006), “Grade levels 9-12 reflect the traditional high school organization. The academic demands at the secondary level make reaching parity with grade-level peers increasingly difficult for English language learners” (p. 2). However, for SLIFE students to reach the same standard as their grade-level peers when they enrolled in high school already multiple grades behind was not feasible, nor was it setting the SLIFE student up for success. Furthermore, regular education teachers were often at a disadvantage in meeting the challenges of an English Language Learner and even more so if a student was classified as SLIFE (Balconi & Spitzman, 2020). On their own, these educators had difficulty in identifying, creating, and teaching appropriate language objectives within their own content for EL students. More commonly, students of cultural and linguistic diversity, such as EL and SLIFE students, were seen as discipline problems due to educators’ lack of diversity education and implicit biases based on stereotypes and, while educators are concerned about these students, these students were also the most harshly disciplined (Suarez Valarino, 2021).

With increased numbers of SLIFE in schools across the country, many EL and TESOL educators had been forced to adapt their methodology and pedagogy to fit the needs of their SLIFE students, and, in some instances, a more culturally responsive approach had formed (DeCapua, 2016). Since people of different backgrounds and cultures can have different reactions to the same situation, educators must understand the culture and background of their SLIFE students to educate this unique group more effectively (Suarez Valarino, 2021). In the SLIFE program in Cincinnati, Ohio, teachers purposefully adapted their methods. Instruction was culturally responsive and built specifically for SLIFE students by developing a cultural understanding of adolescents from Guatemala and Honduras, was not typical to all EL students, and that in turn led to curriculum and practices that would introduce students with limited education to a more formal setting (DeCapua, 2016).

Much of the pedagogy in teaching SLIFE students was tied to Bandura's social cognitive theory. Bandura believed that most learning occurs within "a social context with a dynamic and reciprocal interaction of the person, environment, and behavior" (LaMorte, 2019, p. 1). People observe others and, in this process, acquire knowledge, rules, beliefs, and attitudes (Schunk, 2016). This became particularly important for SLIFE students entering the atmosphere of formal education with language and learning deficits. For these students, Bandura's social cognitive theory became imperative to meeting their unique language acquisition skills, as well as their learning processes for other subject areas. For this reason, newcomer programs were beginning to emerge in several urban schools to meet the needs and challenges presented by educating SLIFE students versus educating EL students (Hos, 2020).

Newcomer schools were specifically designed to educate immigrants and refugees and were preferably located on sites separate from the main schools (Hos, 2020). These programs

lasted anywhere from 6 months to 2 years, depending on the needs of the students and the districts' policies. This created an ideal atmosphere for SLIFE students to have the social context they require, according to Bandura's theory, to acquire new knowledge while having the opportunity to join the mainstream students at a later date. The goals of the programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Consequently, SLIFE students could simultaneously address their needs, according to Maslow's hierarchy and Bandura's social cognitive theory. Unfortunately, since these schools were not commonplace, many SLIFE students outside these programs were at the mercy of schools that continued to have increasing achievement gaps between SLIFE and their peers, with ever-increasing dropout numbers (Marrero Colon, 2018).

Research shows that SLIFE students needed more than support in their acquisition of the English language (DeCapua, 2016; Hos, 2020; Sayer & Braun, 2020). When placed in a traditional setting, SLIFE "students...felt isolated in school, embarrassed about being so far behind their peers, self-conscious about their lack of progress, and...struggle to adjust to school settings and activities" (Advocates for Children of New York, 2010, p. 26). This could have been due to having limited proficiency in their first language and a lack of understanding for cultural expectations within a formal school setting in a new country (Rao & Torres, 2017). Instead, recommendations for educating SLIFE students included location at a central hub, teacher collaboration and planning, and staff support from counselors, social workers, psychologists, and nurses. This is all in addition to the teachers, administration, and paraprofessionals, as well as classes to support English learning before being enrolled in classes with standardized testing (Cohan & Honigsfeld, 2017). Within the classroom, teachers were encouraged to use

differentiated materials that enhanced language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge. In this way, learning occurred according to Bandura's social cognitive theory in which there was "a social context with a dynamic and reciprocal interaction of the person, environment, and behavior" (LaMorte, 2019, p. 1).

### **The COVID-19 Pandemic**

The COVID-19 virus went by several names: novel coronavirus, severe acute respiratory syndrome coronavirus, or SARS-CoV-2 (Lakhani et al., 2020). For consistency, this paper has used COVID-19. While COVID-19 was not the first coronavirus of its kind, it was the first to be declared a worldwide pandemic by the World Health Organization (WHO). COVID-19 first came to attention as an epidemic in Wuhan, China but quickly spread to hundreds of locations worldwide (Shannon, 2020). It was the crossing of international boundaries that changed the deadly disease to fit the definition of a pandemic, according to the WHO. Similar to other coronaviruses, COVID-19 infected lung alveolar epithelial cells (Velavan & Meyer, 2020), hence its lengthier name of severe acute respiratory syndrome. Symptoms could include fever, cough, congestion, and fatigue, though some were asymptomatic. However, symptoms could advance to severe pneumonia which caused a decrease in oxygen saturation and blood gas deviations that could have led to death.

COVID-19 was a virus with a rapidly growing emergence of cases as it spread throughout the world (Lakhani et al., 2020). The director-general of the WHO stated, on March 11<sup>th</sup>, 2020, that the "WHO has been assessing this outbreak...and we are deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction" (Shannon, 2020, p. 1). This quickly led to entire cities and countries employing mass quarantine and social

distancing measures (Lakhani et al., 2020). While such measures were deemed necessary at the time for health purposes, the risk was not completely known. By March 2021, more than 574,000 people had died from the novel coronavirus (Coronavirus in the U.S., 2021). As quarantine measures expanded indefinitely, mental health problems and post-traumatic stress syndrome (PTSD) increased, especially with young people no longer allowed in their school buildings (Cowie & Myers, 2021). Hispanic and Black communities were infected at much higher rates than their white counterparts, while also being the most likely to be negatively affected by disparities in healthcare (Falicov et al., 2020). Socioeconomic factors, age, obesity, and urban versus rural living became major factors for placing an individual at higher risk of transmission, infection, and severe complications from the virus (Lakhani et al., 2020). In Ohio, 67% of Latinos reported a decrease in income, 75% a reduction in work hours, and 24% a permanent job loss, only adding to the list of disparities (Ohio Latino Affairs Commission, 2020). For SLIFE students, this had the potential to cause a decline for individual students in Maslow's physiological and safety needs tiers of the hierarchy.

Due to the rapid work of Operation Warp Speed, with a race between 4 different pharmaceutical companies (Coustasse et al., 2020), two vaccines were made available to adults in the United States within a week of each other in December 2020 (Gee et al., 2021) with a third becoming available in February 2021 (Shay et al., 2021). Vaccinations became available to teens aged 12 to 17 in July of 2021 (Hause et al., 2021). Unfortunately, there was a great deal of hesitancy to get the COVID-19 vaccine due to speculation that political motives relating to the November 2020 presidential election rushed distribution of the vaccine (Coustasse et al., 2020). Creating even lower vaccination rates in minority populations was the distrust of the medical community due to a history of discrimination against minorities and medical experimentation.

The disproportionate health impacts of the pandemic were consistent with the “unequal presentation of chronic medical conditions among communities of color that result from a historical legacy of structural inequities” (Rogers et al., 2020, p. 312).

Additionally, those of Hispanic ethnicity were three times as likely to not have had health care insurance, which resulted in a lesser chance of receiving medical care (Rogers et al., 2020), including getting the COVID-19 vaccine. This has caused a lower-than-expected number of vaccinations, and, as of late November 2021, the United States had only 69.3 percent of the population having at least one dose of a COVID-19 vaccine (Ritchie et al., 2021). Cumulatively, the U.S. had seen over 780,000 confirmed deaths from COVID-19, though the fatality rate had fallen to 1.61 percent since its height of 6.21 percent on May 16<sup>th</sup>, 2020. By the time of the publishing of this study, deaths and fatality rates have continued to see changes, including multiple variations of the disease.

### ***Effect on Education***

The COVID-19 pandemic, and its subsequent quarantine and social distancing measures, had global ramifications on education, both on methodology and on the individuals teaching and learning during the pandemic. The U. S. saw a decline in new cases and deaths, but more than 800,000 people had died from the novel virus more than a year since its identification in the country (Iati, 2021). One of the most vigorously debated subjects was the closing of schools in the spring of 2020, effecting students and their families nationwide. Educational leaders agreed that the effects of schools shutting down would have long-term impacts within education, including learning gaps between advantaged and vulnerable students, school funding, standardized testing, state graduation requirements, and a shift to social-service coordination, such as food distribution and mental wellness (Sawchuck, 2020). For SLIFE students, this meant

that both their social cognitive needs and their deficit needs in Maslow's hierarchy of physiology, safety, or belongingness may not have been met until leaders could fill those gaps.

By April 6, 2020, mandates for school closures had been enacted for all public schools in every state and remained for the rest of the academic school year, with a few exceptions (Jameson et al., 2020). For many schools, if access to technology was a barrier to students for extended time periods, educators provided services over the phone, distributed hard copies with pick-up and drop-off locations, and traveled within the community for occasional home instruction. Unfortunately, federal guidance for students receiving special services was misconstrued when it was announced in March 2020 by the U.S. Department of Education that all special services must still be met. Due to confusion in regard to remote instruction, some interpreted this to mean that schools should not provide any services due to their perceived inability to provide special services to those students in need, so they did not provide any instruction while schools were closed. After the Office of Civil Rights, the Office of Special Education and Rehabilitative Services, and the U.S. Department of Education got involved, the misunderstanding was corrected, and all public schools had clear direction to provide instruction to all students, even if remote learning was the only option for instructional delivery. Even after this period, many schools still reported that plans for supporting students in need of accommodations with special populations were not provided (Kuhfeld et al., 2020).

Shifting to fully remote learning was not just a technical issue, but also a "pedagogical and instructional challenge" (Ali, 2020, p. 22), especially for SLIFE students who had recently migrated to the United States without basic technology skills. At the most basic levels, students did not have access to computers and internet in their homes, or multiple students were using the same equipment in the same household, which raised multiple concerns in equity (Ali, 2020).

According to one educational poll, home access to devices for remote learning was insufficient for 42 percent in families of color and almost 50 percent of low-income families (Kuhfeld et al., 2020). Additionally, many teachers needed training for structuring curriculum and instruction to an online system that was simultaneously motivating and engaging (Ali, 2020).

Both students and teachers needed instruction for the use of the multiple available technologies that were suddenly added into the online learning environment. Even though nearly 83 percent of parents in April 2020 indicated that their children were in an online learning program through their school (Kuhfeld et al., 2020), this did not always translate to quality instruction and pedagogy (Fullan, 2020). While conducting remote learning during the pandemic, there were many concerning indicators that education was not working out as well as hoped. Several polls and studies conducted regarding remote education during the late spring of 2020 showed that only 39% of teachers interacted with their students once or more a day and most interactions occurred through email (Kuhfeld et al., 2020). In another survey, only one in five districts met their expectations for rigorous remote learning, and elsewhere educators estimated that students were spending less than half of the time previously spent during in-person learning on studying. Additionally, chronic absenteeism that already existed at higher rates during a normal school year, and were even higher for low-income and minority students, suddenly skyrocketed during the time of remote distance learning.

Data from the Ohio Department of Education (ODE) suggested the same findings as seen nationwide. During the 2020-2021 school year, federal funds were used by districts in the form of grant money from the Elementary and Secondary School Emergency Relief (ESSER) fund in the effort to address learning and recovery needs (Ohio Department of Education, 2021a). Like the rest of the nation, Ohio found themselves trying to avert an educational crisis. Enrollment in



public education decreased by 53,000 students, three percent compared to previous years of 0.03 to 0.4 percent decreases. This may have had much to do with how individual districts provided in-person versus remote learning, as this issue was very volatile due to political partisanship, race, and income (Horowitz, 2020). As a result, enrollment in community e-schools grew by over 50 percent, or 13,000 students, and chronic absenteeism was pervasive (Ohio Department of Education, 2021a). However, that still left 40,000 students unaccounted for.

Of those students who stayed enrolled in Ohio's public schools, ODE acknowledged that the most vulnerable students had been most affected (Ohio Department of Education, 2021a). Throughout the school year, a majority of districts wavered between more in-person learning through November of the fall 2020 school year, with a change back to remote or hybrid learning in December, returning returned to five-day in-person learning by April 2021. State testing data from this time period showed that most students did take the required tests, though a great deal of the most vulnerable students did not, and, of those who did take the tests, scores were much lower, "especially for Black, Hispanic, and economically disadvantaged students" (Ohio Department of Education, 2021a, p. 1).

### ***Implications for SLIFE***

As students were quarantined and isolated for longer periods of time, a concern developed for the mental and physical health of students due to inflating levels of stress and a plummet in emotional well-being (Cowie & Myers, 2020). High rates of PTSD had been reported (Cowie & Myers, 2020). Feelings of anxiety and uncertainty increased, along with online bullying. Vulnerable students were trapped in abusive, neglectful, and exploitative homes. Additionally, children from low-income families saw an increase in unhappiness, worry, and clinginess due to escalating emotional difficulties. Traumas came in the forms of lost social

supports at school, sick family members, job loss, and facing the potential for homelessness (Kuhfeld et al., 2020). Considering that a “suitable study and work environment is crucial for improved academic...performance” (Silva et al., 2020, p. 8), it is unsurprising that so many students felt a reduced quality of life while utilizing remote learning during this time of forced isolation. As a result, educational leaders’ and teachers’ roles in the mental health of students has been intensified to recognize remotely symptoms of anxiety, trauma, suicide, panic attacks, and other psychosis (Salari et al., 2020).

Students with limited or interrupted formal education were experiencing the effects of trauma before the pandemic shut down schools; however, there were support systems in place in the school setting (Hos, 2020). When schools closed in March of 2020 (Gil et al., 2020), SLIFE students not only lost their modes of education, but they also lost their most accessible support systems, including teachers, bilingual support staff, trauma counselors, and psychologists (Falicov et al., 2020). Additionally, many students did not have access to a computer or the internet to continue work remotely and were left feeling inadequate and wondering what would happen with their already limited schooling (Morgan, 2020). Some schools sent home packets of work but due to the transient nature of SLIFE students, the packets may not have reached the students. In other cases, students did the work but had no transportation to return it due to a lack of public transportation or the adults in the household using the only vehicle. In yet other circumstances, students simply could not do the work because they were not adept enough in the literacy or the content (Hartshorn & McMurry, 2020). Problems abounded and students wondered how their education would continue.

As the pandemic raged, SLIFE students were at higher probabilities for additional traumas (Harmey, 2021). Already distanced from peers, the Hispanic community experienced a

disproportionate death rate from COVID-19, when compared to others, with 33% of the community becoming infected (Falicov et al., 2020). Compounding the problem, the Hispanic community in the United States had the lowest rates of medical health coverage when compared to all other ethnic groups (Gil et al., 2020). Due to the high poverty rates that many SLIFE students experienced at home, family members continued working in essential services, living conditions were cramped, and language and insurance barriers prevented testing and treatment for the virus when it was needed. Additionally, systems put in place by educational institutions to address SLIFE students' physiological and safety needs were no longer available to homebound students (Harmey, 2021).

By the beginning of the 2020-21 school year, most school districts across the nation had found ways to provide computers and internet access to their most vulnerable students (Morgan, 2020). Mobile food trucks distributed food to students throughout urban areas in an attempt to meet students' physiological needs due to food poverty (Gil et al., 2020). However, SLIFE students had the further complication of finding a way to get the technology from the school and then learning how to use the technology provided (Shin, 2020). Those students who had previously attended school had some knowledge of the technology, but students new to the country and school often had no understanding of the technology at all, and this became a challenge for teachers and students alike. Unfortunately, due to the isolation of students and teachers, in some cases this contributed to a "false expectation...that students should take responsibility for their own learning" (Ahmed et al., 2020, p. 2).

## **Recommendations**

While remote learning would not be the optimum mode of education for SLIFE students, educators could make the most of the situation during the COVID-19 pandemic by addressing

the physiological and safety needs while in isolation as much as possible. Incorporating Bandura's social cognitive learning through online group discussions and interactions not only increased cognition, but also addressed the belongingness needs of Maslow's hierarchy that can be so important to SLIFE students. Teachers could address students' anxiety and fears by validating feelings, sending messages, checking in daily, and keeping comments positive (Morgan, 2020). It was also important to understand that SLIFE students often had difficulties with technology, chaotic home environments that were not conducive to studying, and had multiple external factors that may have exacerbated pre-existing traumas (Harmey, 2021), but they still wanted and needed social interactions for learning. Additionally, teachers could make online learning more effective by increasing interaction and collaboration, designing instruction to be more than just a distribution of information from teacher to students, and helping improve students' familiarity with the necessary technology (Milheim, 2012).

During in-person learning, a focus on Maslow's hierarchy of needs and Bandura's social cognitive theory would be necessary, and hopefully, easier to implement. This would create an ideal atmosphere for SLIFE students to have the social context they required, according to Bandura's theory, to acquire new knowledge while having the opportunity to join the mainstream students at a later date. Goals would include providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education, while catching up with peers of their own age (Hos, 2020). Recommendations for educating SLIFE students included location at a central hub, teacher collaboration and planning, staff support from counselors, social workers, psychologists, and nurses (Cohan & Honigsfeld, 2017). This was all in addition to the teachers, administration, and paraprofessionals, as well as classes, to support English learning before being enrolled in classes with standardized testing. Within the classroom,

teachers should have used differentiated materials that enhanced language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge.

Outside of the classroom, it is important that SLIFE students had a sense of security and importance within society. Immigrants from Guatemala and Honduras, as well as other areas, faced continual anxiety and fear based on political anti-immigrant rhetoric and policies towards unauthorized and undocumented migrants and refugees (Blackburn & Sierra, 2021). Sanctuary cities could be an example in welcoming Central American migrants through welcoming faith communities and a range of voices that advocated for immigrants (Housel et al., 2018). One plan implemented in southern Ohio not only changed their own city's perceptions around immigrants but gained national attention, as their plans for integration of immigrants into the local community spread to nearby neighborhoods. While there is no one process toward integration, it was imperative to "acknowledge both the injustices inflicted on immigrants as well as the inherent potential within the immigrant community and the receiving community" (Housel et al., 2018, p. 386). Though common nationalist views of immigration spouted the opposite (Simonsen, 2019), studies showed that immigration increased the earning potential of the host country without reducing the income of those already in the country (Yakushko, 2018). New trade routes and connections increased the flow of capital, and newcomers' presence decreased crime.

Making connections with organizations that advocate for immigrants was imperative to schools serving SLIFE students (Housel et al., 2018). This can include resettlement agencies, social services, English for Speakers of Other Languages (ESOL) services, public forums to promote ethnic and cultural diversity conversations, and shelters for those in need. Even systems

placed to use identification from a native country as a valid form of identification to apply for bank accounts, enroll in school, or to provide identification at a traffic stop was extremely helpful to any newcomer immigrant. However, this shift was built upon a focus on helping immigrants, regardless of status.

### **Summary**

SLIFE students, or Students with Limited or Interrupted Formal Education, were a growing subpopulation of the English Language Learners (ELL) population with very high drop-out rates, though exact numbers were not known due to the lack of research among this group (DeCapua, 2016). They have settled in the United States with traumas enacted in their own countries, on their migration here, and as a product of anti-immigration policies and wide-spread rhetoric. Schools had the potential to be a safe haven for them, however, in March 2020 stay-at-home orders were implemented across the country, and many SLIFE students were left learning remotely for extended periods of time and without the necessary social aides once provided. As a result of the COVID-19 pandemic, SLIFE students with little language development, education backgrounds that were multiple years below grade level, and very few technology skills, were learning remotely for almost a year. However, though SLIFE students struggle with online remote learning, by understanding their needs according to Maslow's hierarchy of needs and by making efforts to increase social interactions to improve their quality of learning through Bandura's social cognitive theory, SLIFE students continued learning and engaging in their education. Regardless of the mode of instructional delivery, this should always have been at the forefront in planning to meet the needs of SLIFE students.

Unfortunately, in the case of the SLIFE program in Cincinnati, Ohio, not all of the needs of students were met, as demonstrated in instances all over the nation. This study showed the

effects that the Covid-19 pandemic had on the students' academic achievement in their Math and English courses within the SLIFE program. The program was shut down, and the students were sent home to quarantine and isolation in March 2020, like so many others. Due to a lack of access to technology at the time, students were mailed packets of schoolwork for the remaining weeks of the semester, without direct instruction or contact with others unless specifically requested. As some schools began to open in the fall of 2020 for the new school year, the SLIFE program remained closed, though it did offer online courses with direct teacher instruction and optional additional teacher help at scheduled times. This was due to an effort by the district to increase internet access and loan out computers to all students, with a focus particularly on high poverty, high need locations. It was not until spring of 2021 that the SLIFE program partially reopened, and students began to come into the building for instruction again. This study followed the journey of a group of SLIFE students that were in the SLIFE program during both the fall 2019 semester before the pandemic began and the fall 2020 semester as the pandemic was underway and the SLIFE program was completely online. While not due to a lack of efforts of the staff, the scale to which the needs of SLIFE students, both within Maslow's hierarchy of needs and Bandura's social cognitive theory, were accomplished were very different when educators saw students every day in the SLIFE program compared to when the students were taught remotely. While this study highlighted the deficits caused in the education of SLIFE students at a particular school during the Covid-19 pandemic, its purpose was to increase the understanding of how important it was to educate SLIFE students in accordance with their deficit needs and using a social cognitive construct for acquiring information and learning.

## **CHAPTER THREE: METHODS**

### **Overview**

The purpose of this causal-comparative study was to determine if there was a statistically significant difference on the English and Mathematics end-of-semester numerical averages of SLIFE students who participated in remote learning due to the COVID-19 pandemic when compared to participation in face-to-face, direct instruction. Chapter three has an introduction to the design of the study with variables presented and defined. This was then followed by the research questions and hypotheses for the study. Afterward, participants and setting, instrumentation, procedures, and data analysis were provided.

### **Design**

The study was a longitudinal, quantitative, causal-comparative design. The purpose of the causal-comparative design was to study a cause-and-effect relationship that may explain an event in education (Gall et al., 2007). The causal-comparative design was non-experimental research and, instead, relied on a naturally occurring variation in a group of individuals in which the variable was present or absent, as long as the groups were categorized. However, a causal-comparative design was limited in its interpretation of data and, consequently, results were only evidence of a conclusion but was not definitive for a cause-and-effect relationship.

For causal-comparative research design, once a research problem has been identified, preferably considering alternative hypotheses, the researcher identified the comparison groups for sampling, collected data, and performed the data analysis (Gall et al., 2007). Comparison groups were established prior to the study and, therefore, cannot be manipulated by the researcher (Creswell & Guetterman, 2019). The group was a preexisting cohort and so



participants were not assigned randomly (Gall et al., 2007). Since the study was a longitudinal design, the independent variable was time with the same group of students being compared during the fall 2019 semester and fall 2020 semester. With this type of design, most measuring instruments can be used to collect data which can then be categorized and coded (Gall et al., 2007). Data analysis has included the group mean, standard deviation, and test of statistical significance, though the significance tests can vary depending on underlying assumptions being satisfied and how the comparison groups were being compared.

The characteristics of this research study most closely align with those of a causal comparative study. Experimentation was not necessary, as data was collected longitudinally from a single group of students (Gall et al., 2007). For this study, a cohort of SLIFE students who have participated in face-to-face learning during the first semester of 2019 and who participated in remote learning during the first semester of 2020 were followed. The independent variable in the longitudinal study was time. The dependent variable for the study was student achievement in the form of English and mathematics grades. Student achievement was defined as student growth measures obtained through standardized test scores, subject area grades, and other areas of student measurement over time (Ferreira & Gignoux, 2013). This study utilized both mathematics and English subject grades' students during the first semesters of the 2019 and 2020 years to determine if there was a statistical difference in student achievement before and during the COVID-19 pandemic.

The researcher attempted to identify a cause-and-effect relationship of student achievement and attendance caused by remote learning during the COVID-19 pandemic when compared to the face-to-face learning of the previous year (Gall et al., 2007). As the independent variable of time was categorized by remote learning during the COVID-19 pandemic or no

remote learning before the pandemic, a causal comparative design was utilized. Additionally, the researcher determined if there was a statistical significance between the dependent variables during the fall 2019 semester and the fall 2020 semester, not the measure of the degree of association, so a correlational design has not been applied (Creswell & Creswell, 2018).

### **Research Questions**

**RQ1:** Is there a difference in English end of semester numerical averages for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

**RQ2:** Is there a difference in mathematics end of semester numerical averages for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

### **Hypotheses**

The null hypotheses for this study are:

**H<sub>01</sub>:** There is no statistically significant difference between the *English end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year, as shown by class grades for the first semester of each year.

**H<sub>02</sub>:** There is no statistically significant difference between the *mathematics end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year, as shown by class grades for the first semester of each year.

### **Participants and Setting**

#### **Population**

The participants for the study were drawn from a convenience sample of 7-12<sup>th</sup> grade

students located in a southwestern Ohio school during the 2019-20 and 2020-21 school years. The school district was an urban district in Cincinnati, Ohio with an enrollment of 5,936 students in the 2020-2021 school year. This district included a highly diverse student population that was 31% Hispanic, 34% Black, 23% White, and 12% being other or multiple ethnicities. The district was comprised of 10 schools: 8 elementary schools, one middle school, one high school, and a blended-learning school that included a SLIFE program. The district was chosen as a convenience sample using archival data, as the researcher was employed at the school, and the school sampled was specifically designed with a program for SLIFE students. Although a convenience sample was used for this study, the researcher's goal was to acquire a sample that was representative of all SLIFE schools affected by the COVID-19 pandemic.

### **Participants**

The SLIFE program, while located offsite from the main campus, enrolled students from 7<sup>th</sup> to 12<sup>th</sup> grades. In recent years, the high school had been rated in the top five percent of all schools for the most diversity. It enrolled 1,609 ninth through twelfth grade students with 21% Hispanic, 46% Black, 23% White, and the remaining 10% of the population being of other or multiple ethnicities. The middle school enrolled 1,390 sixth through eighth grade students with 21% Hispanic, 44% Black, 25% White, and the remaining 10% of the population being of other or multiple ethnicities. SLIFE students were identified on enrollment to the district as EL, though this does require further testing, an immigrant, and as a student lacking current educational records, meaning that they had limited or no formal education for the previous two years or more (Hos, 2020). Those students ages 14 and up identified as fitting this SLIFE criteria were assigned to the SLIFE program. In the 2019-2020 school year, there were 69 students from Guatemala or Honduras actively enrolled in the SLIFE program. Of the student population, 75% were male and

25% were female. Of these 69 students, 35 were enrolled in both the fall of 2019 and fall of 2020, during both in-person and remote learning. Of the 35 students that are included in this study, 12 were female and 23 were male, 17% and 83% respectively; all were Hispanic and from either Guatemala or Honduras.

The researcher used archival school records from 2019-2021, including transcripts of grades in core subject areas of English and mathematics, as well as daily attendance data. A paired  $t$  test was required for both research questions. A paired  $t$  test was used to compare the difference in means made through repeated measurements on the same group of participants' numerical end of semester subject grades (Warner, 2013). For these research questions, participants in the 2019-2020 school year cohort and 2020-2021 school year cohort were the same individuals, and there were 35 students in this sample that were enrolled in both the fall semesters of the 2019-2020 and 2020-2021 school years; 34 from Guatemala and one from Honduras, with 100% identified as SLIFE. A sample of 35 SLIFE students met the requirement of a minimum sample size of 34 needed for a dependent samples, also called paired-samples,  $t$  test assuming a medium effect size with a statistical power of 0.8 and at the .05 alpha level (Faul, et al., 2007; Faul, et al., 2009).

### **Setting**

The SLIFE program's students were required to attend four core area classes and take the *Ohio English Language Proficiency Assessment (OELPA)* once a year. During the 2019-2020 school year, the students participated in only face-to-face instruction. In March of 2020, students and staff were sent home to quarantine for safety purposes due to the COVID-19 pandemic. For this reason, only English and mathematics grades from the first semester of the school year were used. During the 2020-2021 school year, the students participated in only online remote

instruction directed by the same teachers for much of the year until March of 2021, when students were allowed back in the building to attend classes due to the lifting of COVID-19 pandemic restrictions enforced by school and district leadership.

During the in-person learning of the 2019-2020 school year, the schedule for SLIFE students was built to accommodate the work responsibilities of the students whose most common stated goals upon enrollment were to ‘learn English, use a computer, and get a diploma.’ Students were bussed to the school four times a week for their choice of a morning or afternoon session in which they rotated to their various classes. Since they only attended half a day, lunch was not served, but the necessity to send food home quickly became apparent. A local food charity agreed to make deliveries to the school once a week so that nonperishables could be sent home with each student. Fortunately, for students with additional needs, the district had their own organization to provide for district families. Staff also reached out to a local charity organization and the Council of Unaccompanied Minors that was recommended by an ELL teacher at the main campus. This formed a partnership that allowed the staff to send SLIFE students and their families to when in need of family and legal services that the school could not provide. A bilingual therapist also had sessions with students at the SLIFE school once a week.

As the year progressed, the SLIFE students attended English, mathematics, social studies, and science classes. Each teacher made the effort to incorporate English language acquisition and computer technology skills into their classes. Differentiated learning was imperative. To accommodate a multitude of very different skill levels, it was crucial for teachers to not only identify and teach skills considered to be remedial and necessary, but also teach high school level content so that the students could earn high school credits toward their diploma. All courses ended up as an amalgamation of remedial and higher-level content. Those students that could not

read or write in their own language were identified and put in an intensive language class to build their basic reading and writing skills. Unfortunately, when the COVID-19 pandemic closed the SLIFE program in March of 2019, most students did not have access to the technology necessary for online learning, and so packets were sent home by mail with the directions for use and return. Most packets were never returned.

For the 2020-2021 school year, staff at the SLIFE program were told that students would remain in a remote learning environment for the foreseeable future, though this time students would be taught online. As such, paraprofessionals, teachers, and administration attempted to ensure that students had access to a computer and internet in their homes. The SLIFE students had been using computers in the classroom while still in attendance pre-pandemic but had never been taught to use *Google Meets* or *Zoom*, submit assignments online, or post their attendance remotely, among other common online classroom necessities. The staff spent the first two weeks of school correcting technology issues and teaching students remotely how to use the programs teachers would be utilizing, though for some SLIFE students it took even longer than the initial two weeks. Once through the introductory two weeks, SLIFE students met with a different teacher each day for class during their choice of a morning or afternoon session to accommodate their work schedules. Additionally, time was provided twice a day for ‘office hours’ in which students could get help from their teachers with support from the Spanish-speaking paraprofessional. Teachers were instructed to post two or three assignments per week using *Google Classroom*. Since direct teaching was only occurring once a week per content area according to the students’ schedules, teachers also provided instructional videos to supplement their teaching throughout the week’s assignments.

### **Instrumentation**

The researcher used archival data, which was a combination of English and mathematics class grades for SLIFE students in the fall 2019 semester and the fall 2020 semester. The purpose of this instrumentation was to determine if there was a statistical difference in student achievement for SLIFE students before and during the COVID-19 pandemic. As such, archival data for SLIFE students from the fall semesters of the 2019 and 2020 school years was collected with permission of the district administration. All students were from the same district and school, accredited by the North Central Association of Colleges and Schools Higher Learning Commission (NCA-HLC) (Education Corner, 2022). The NCA-HLC was one of six such agencies providing accreditation in the U.S., serving 19 states, including Ohio, in which the SLIFE program was located.

All archival grades were collected by the district's Director of Analytics and Strategic Initiatives for the English and mathematics teachers within the SLIFE program, of which there was one of each. The SLIFE students were graded on the district's board-approved grading scale from 0 to 100 percent. All grades given as a letter grade were converted to an average for that grade range; in this case, A=95%, B=85%, C=75%, D=65%, and F = 55%. Once data was collected, this data was then given to the researcher and secured in an Excel spreadsheet. Only students enrolled in courses for both the fall semesters of 2019 and 2020 were used in statistical analysis, while those who attendance was marked as 'no show' or having no grades were removed from all statistical calculations.

To ensure the validity of courses at public schools, teachers in Ohio were required to have a bachelor's degree, completed an Ohio teacher preparation program, and passed the required PRAXIS exams, which upon passing demonstrated that the teacher had appropriate

content knowledge, pedagogy, and instructional skills (ETS, 2022; Ohio Department of Education, 2021d). Both the English and mathematics teachers had multiple decades of experience in teaching their content and had gone beyond all requirements imposed by the state of Ohio. They both taught for the SLIFE program during the 2019 and 2020 school years. The English teacher had an additional Educational Doctorate in Curriculum and Instruction, and the mathematics teacher had additional degrees of a master's degree in mathematics, an Educational Specialist degree in Educational Leadership, continuing education towards an Educational Doctorate in Curriculum and Instruction, as well as being a National Board-Certified teacher in Secondary Youth Mathematics. Additionally, all teachers in Ohio were required to obtain 180 hours of professional development or six semester hours of teaching-related coursework every five years to maintain their licensure in the state (Ohio Department of Education, 2021e).

### **Procedures**

The researcher gained initial verbal approval from the Superintendent of the district where the study was conducted by using their archival data. After the researcher's dissertation committee approved the proposal, Institutional Review Board (IRB) approval from Liberty University was requested by the researcher. Following IRB approval, the researcher again contacted the superintendent and was required to submit information regarding data collection and proof of IRB approval. Parental consent was not necessary, as the data was ex post facto in nature. The researcher then received written approval on district letterhead to conduct the study and to access archival student data. The researcher met with a district official to collect the necessary archival data. To maintain confidentiality and safekeeping, all data was stored on an Excel spreadsheet on a password-protected computer. See Appendix A for the Institutional Review Board's approval to collect data.



Upon receiving the data, a review of yearly student rosters obtained from the district data official for the SLIFE program was completed. An initial number of participants was determined by the researcher for the two school semesters being studied by establishing which students on the rosters attended during both the fall 2019 and fall 2020 semesters in the SLIFE program. This was a necessary step, since many students stopped attending but were not officially withdrawn until much later. Additionally, students were removed from the list if they did not have English and math grades for both the 2019 and 2020 fall semesters. All data was received and recorded in an excel spreadsheet by the researcher and then saved on a password-protected computer.

### **Data Analysis**

Since the research groups did not require experimentation, a causal-comparative research design was the most appropriate for comparing groups both before the COVID-19 pandemic and during the COVID-19 pandemic. The statistic used was two paired-samples  $t$  tests, also called dependent samples  $t$  tests. Since a comparison of student achievement collected under two different treatment conditions or two different points in time was required, paired-samples  $t$  tests were most appropriate for this study (Warner, 2013). As such, this study collected data on the same set of students at two different points in time, as well as under the differing treatment conditions of in-person learning during the first point in time and remote learning during the second point in time. Paired-samples  $t$  tests required a continuous scale of measurement for the dependent variable, which was met as students' academic achievement was measured by grades assigned by the English and mathematics teachers from the SLIFE program on a scale from 0 to 100 percent. As for the independent variable, paired-samples  $t$  tests required two categorical, related groups. For this study, the independent variable was time in which the same group of

students enrolled in the SLIFE program had in-person learning during the fall semester of 2019 and then remote learning during the fall semester of 2020.

Data screening for outliers was completed before assumptions testing. The researcher checked for inconsistencies by visually inspecting the data set. Extreme outliers were checked using a Box and Whisker plot for each group. The researcher also tested for the assumptions of a continuous interval of measurement for the dependent variable and the difference between variables were normally distributed (Gall et al., 2007). The Shapiro-Wilk test was utilized for the assumption of normality of distribution. Upon completion of assumptions testing, the researcher conducted two paired-sample  $t$  tests during the two different time periods to determine if there was statistical significance between the two. Using G\*Power, a minimum sample size of 34 was needed for a paired-sample  $t$  test assuming a medium effect size reported using Cohen's  $d$  with a statistical power of 0.8 and at the .05 alpha level (Faul. et al., 2007; Faul, et al., 2009). The Statistical Package for the Social Sciences (SPSS) software was used to conduct all data analysis associated with this study. This process was repeated for null hypotheses one and two.

## CHAPTER FOUR: FINDINGS

### Overview

The purpose of this quantitative, causal-comparative study was to determine if there was a statistically significant difference on the English and mathematics end-of-semester numerical averages of SLIFE students who participated in remote learning due to the COVID-19 pandemic when compared to participation in face-to-face, direct instruction. Thus, if there was a statistically significant difference, the effects of remote learning versus in-person learning due to the pandemic was quantifiably determined and, in turn, enabled educators to build SLIFE programs based on the known needs of the population. This chapter included the research questions and null hypotheses for the study, data screening, descriptive statistics including assumptions testing and statistical analysis, and the results for each hypothesis. The independent variable in the longitudinal study was time. The dependent variable for the study was student achievement, defined as student growth measures. This study utilized both mathematics and English subject grades students earned during the first semesters of the 2019 and 2020 years to determine if there was a statistical difference in student achievement before and during the COVID-19 pandemic.

### Research Questions

**RQ1:** Is there a difference in *English end of semester numerical averages* for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

**RQ2:** Is there a difference in *mathematics end of semester numerical averages* for SLIFE students during the 1<sup>st</sup> semester of 2019-2020 and 1<sup>st</sup> semester of 2020-2021 school years?

### Null Hypotheses

The null hypotheses for this study are:

**H<sub>01</sub>:** There is no statistically significant difference between the *English end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

**H<sub>02</sub>:** There is no statistically significant difference between the *mathematics end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

### Descriptive Statistics

After subject grades were obtained from the school district participating in this study, the researcher entered the data into an Excel spreadsheet. The data was then imported into the SPSS statistics software with the researcher using a  $p < .05$  level of significance throughout the study in order to reject or fail to reject the null hypotheses. The SLIFE students included in the research were graded on the school district's board-approved grading scale from 0 to 100 percent, meaning that the dependent variable was continuous as needed for a dependent samples  $t$  test. All grades were given to the researcher as a letter grade on transcripts and were converted to an average for that grade range; A=95%, B=85%, C=75%, D=65%, and F = 55%. Only students enrolled in both courses for both the fall semesters of 2019 and 2020 were used in statistical analysis, while those whose attendance was marked as 'no show' or having no grades were removed from all statistical calculations, with 35 students remaining for the study. See Appendix B for data regarding subject grades and gender by individual student.

Once letter grades were converted to numerical grades, the mean and standard deviation calculated for English in 2019 ( $M = 86.14$ ,  $SD = 12.55$ ) was greater than the mean for English in 2020 ( $M = 71.57$ ,  $SD = 13.71$ ). The paired samples statistics for English numerical grades can be seen in Table 1. The mean for English in 2019 ( $M = 86.14$ ,  $SD = 12.55$ ) was greater than the mean for English in 2020 ( $M = 71.57$ ,  $SD = 13.71$ ), labeled as ELA19 and ELA20 respectively, while the standard deviations were close to each other. Additionally, the minimum grade in English was a 55% while the maximum was 95%. The paired samples statistics for math grades can be seen in Table 2. The mean for math in 2019 ( $M = 81$ ,  $SD = 12.88$ ) was greater than the mean for math in 2020 ( $M = 67.57$ ,  $SD = 14.62$ ), labeled as Math19 and Math20 respectively, while the standard deviations were close to each other. Again, the minimum grade in mathematics was 55% and the maximum was 95%. While not required for this study, the researcher also found that enrollment in the SLIFE program was considerably lower during remote learning in 2020 when compared to the previous year. In 2019 there were 69 students enrolled in the SLIFE program. This was reduced to 40 students the next year, as only 35 students remained in the program during the 2020 school year, and there were only 5 new students enrolled.

**Table 1**

*English Paired Samples Statistics*

	Mean	<i>N</i>	Std. Deviation	Std. Error Mean
ELA19	86.14	35	12.55	2.12
ELA20	71.57	35	13.71	2.32

**Table 2***Math Paired Samples Statistics*

	Mean	N	Std. Deviation	Std. Error Mean
Math19	81	35	12.88	2.18
Math20	67.57	35	14.62	2.47

**Results****Hypotheses**

**H<sub>01</sub>:** There is no statistically significant difference between the *English end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

**H<sub>02</sub>:** There is no statistically significant difference between the *mathematics end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

**Assumptions Testing**

For assumptions testing, data was imported from an Excel spreadsheet into the SPSS statistics software with the researcher using a  $p < .05$  level of significance throughout the study in order to reject or fail to reject the null hypotheses. In all cases, the dependent variables were continuous and there were two pairs of subject grades for each participant as needed for a dependent samples *t* test, satisfying two of the four assumptions necessary to conduct a dependent samples *t* test. The remaining two assumptions for outliers and normal distribution were determined individually for English and mathematics numerical subject grades.

### ***Assumptions Testing for English Grades***

The researcher examined the data for outliers using a box and whisker plot. No data was observed outside of the box and whisker plot, as seen in Figure 1, and so the assumption for no data outliers was met by the researcher. To determine whether the fourth assumption for normality had been satisfied, the researcher examined skewness, Kurtosis, statistical significance using the Shapiro-Wilk test for normality, and an approximate bell curve of a frequency histogram for the difference in English numerical grades from 2019 to 2020. When examining the difference between the English grades ( $M = 14.57$ ,  $SD = 2.64$ ), the absolute value of skewness should be less than 0.8, and the absolute value of Kurtosis should be less than 2. These requirements were met, as the absolute value of the skewness was .09, and the absolute value of Kurtosis was .62, as seen in Table 3. The Shapiro-Wilk test had  $p = .091$  seen in Table 4, and was not statistically significant and, being normally distributed (Warner, 2013). Therefore, all assumptions were met for a dependent samples  $t$  test with the English numerical grades.

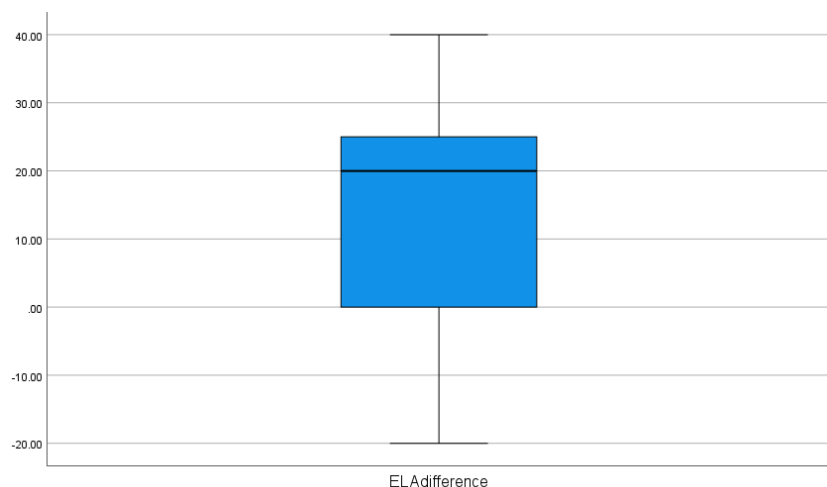
**Table 3***Descriptive Statistics for Difference in English Grades*

		Statistic	Std. Error
Mean		14.57	2.64
95% Confidence Interval for Mean	Lower Bound	9.21	
	Upper Bound	19.93	
5% Trimmed Mean		14.84	
Median		20	
Variance		243.19	
Std. Deviation		15.59	
Minimum		-20	
		Statistic	Std. Error
Maximum		40	
Range		60	
Interquartile Range		30	
Skewness		-.09	.40
Kurtosis		-.62	.78

**Table 4***Tests of Normality for Difference in English Grades*

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ELAdiff	.15	35	.044	.95	35	.091



**Figure 1***Box and Whisker Plot for Difference in English Grades****Assumptions Testing for Mathematics Grades***

The researcher examined the data for outliers using a box and whisker plot. No data was observed outside of the box and whisker plot as seen in Figure 3, and so the assumption for no data outliers was met by the researcher. To determine whether the fourth assumption for normality had been satisfied, the researcher examined skewness, Kurtosis, statistical significance using the Shapiro-Wilk test for normality, and an approximate bell curve of a frequency histogram for the difference in mathematics numerical grades from 2019 to 2020. When examining the difference between the mathematics grades ( $M = 13.43$ ,  $SD = 15.71$ ), the absolute value of skewness should be less than 0.8 and the absolute value of Kurtosis should be less than 2. These requirements were met, as the absolute value of the skewness was .21, and the absolute value of Kurtosis was .49, as seen in Table 5. The Shapiro-Wilk test had  $p = .035$  seen in Table 6, and so was statistically significant (Warner, 2013). However, a Type 1 error can be

overlooked as a dependent samples  $t$  test is robust to violations (Fradette et al., 2003; Posten, 1979; Rasch & Guiard, 2004; Wiedermann & van Eye, 2013). Therefore, all assumptions have been met for a dependent samples  $t$  test with the mathematics grades.

**Table 5**

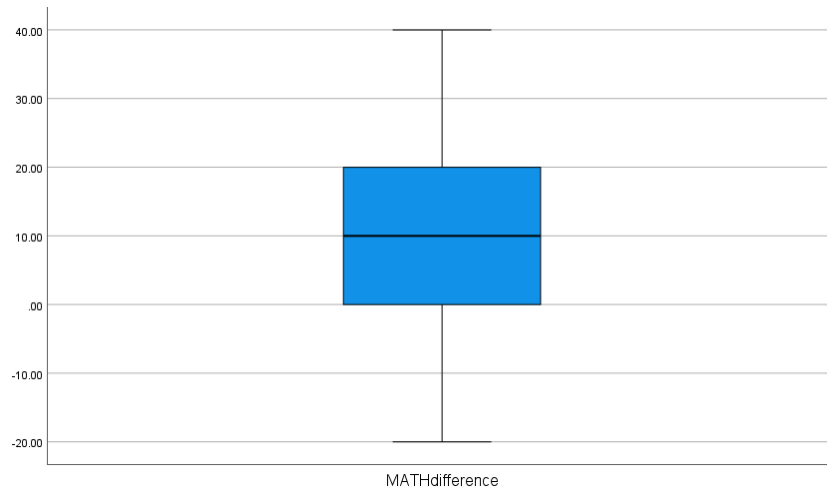
*Descriptive Statistics for Difference in Math Grades*

		Statistic	Std. Error
Mean		13.43	2.66
95% Confidence Interval for Mean	Lower Bound	8.03	
	Upper Bound	18.82	
5% Trimmed Mean		13.57	
Median		10	
Variance		246.72	
Std. Deviation		15.71	
Minimum		-20	
Maximum		40	
Range		60	
Interquartile Range		20	
Skewness		.21	.40
Kurtosis		-.49	.78

**Table 6**

*Tests of Normality for Difference in Math Grades*

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MATHdiff	.19	35	.003	.93	35	.035

**Figure 2***Box and Whisker Plot of Math Grades***Results of Dependent Sample  $t$  Test*****Null Hypothesis 1***

A dependent sample, or paired-sample,  $t$  test was performed to determine if there was a statistically significant difference between the *English end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year, as shown by class grades for the first semester of each year. All calculations were performed using SPSS statistical software and are found in Table 7.

**Table 7***Paired Samples t-Test for English*

	Paired Differences				
	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference	
				Lower	Upper
ELA19-ELA20	14.57	15.59	2.64	9.21	19.93

	Significance			
	<i>t</i>	<i>df</i>	One-sided <i>p</i>	Two-sided <i>p</i>
ELA19-ELA20	5.53	34	<.001	<.001

The dependent sample *t* test was found to be statistically significant,  $t(34) = 5.53, p < .05$ ;  $d = .93$ . The effect size ( $d = .93$ ) for this analysis was found to exceed Cohen's  $d$  of .5 for a medium effect size, resulting in a large effect size. Therefore, the null hypothesis was rejected, and results indicated there was a significant difference between the *English end of semester numerical averages* of SLIFE students who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year. Specifically, SLIFE English numerical grades significantly declined from in-person learning in the SLIFE program in 2019, moving to remote learning due to the COVID-19 pandemic in 2020.

***Null Hypothesis 2***

A dependent sample, or paired-sample, *t* test was performed to determine if there was a statistically significant difference between the *mathematics end of semester numerical averages* of SLIFE students who learned remotely during the COVID-19 pandemic as compared to when

these same students had face-to-face instruction in the previous year, as shown by class grades for the first semester of each year. All calculations were performed using SPSS statistical software as seen in Table 8.

**Table 8**

*Paired Samples t-Test for Mathematics*

	Paired Differences				
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
				Lower	Upper
Math19-Math20	13.43	15.71	2.66	8.03	18.82

	Significance			
	<i>t</i>	<i>df</i>	One-sided <i>p</i>	Two-sided <i>p</i>
Math19-Math20	5.06	34	<.001	<.001

The dependent sample *t* test was found to be statistically significant,  $t(34) = 5.06$ ,  $p < .05$ ;  $d = .86$ . The effect size ( $d = .855$ ) for this analysis was found to exceed Cohen's  $d$  of .5 for a medium effect size, resulting in a large effect size. Therefore, the null hypothesis was rejected, and results indicated there was a significant difference between the *mathematics end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year. Specifically, SLIFE math numerical grades significantly declined from in-person learning in the

SLIFE program in 2019, as students moved to remote learning due to the COVID-19 pandemic in 2020.

## **CHAPTER FIVE: CONCLUSIONS**

### **Overview**

The purpose of this quantitative, causal-comparative study was to determine if there was a statistically significant difference on the English and mathematics end-of-semester numerical averages of SLIFE students, comparing averages from before the COVID-19 pandemic to during the pandemic when students were quarantined and learning remotely at home. This chapter included discussions of the research questions and null hypotheses based on the data analyses, implications for SLIFE education, limitations of the study, and recommendations for further research.

### **Discussion**

The purpose of this quantitative, causal-comparative study was to determine if there was a difference in the student achievement through the use of English and mathematics grades of SLIFE students who participated in remote learning due to the COVID-19 pandemic when compared to participation in face-to-face, direct instruction before the pandemic. Newcomers from Guatemala and Honduras arrived in the United States with traumas from their previous countries, and their migration to a new country. Many arrived with limited or interrupted formal education, classifying them as SLIFE upon enrollment in school. However, most districts only recognized English Language (EL) learners, not the more specific category of students with limited or interrupted formal education, leaving many SLIFE students' educational needs unmet. One urban school district in southwest Ohio created a program that would meet the recommendations of former researchers' theories for their learning, but this was interrupted during the COVID-19 pandemic. This study was one step in determining the importance of

research-based in-person learning for SLIFE students when compared to the SLIFE program's change to fully remote learning while students and staff were undergoing quarantine for the good of the public's health. This was determined using the following null hypotheses:

**H<sub>01</sub>:** There is no statistically significant difference between the *English end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

**H<sub>02</sub>:** There is no statistically significant difference between the *mathematics end of semester numerical averages* of SLIFE students' who learned remotely during the COVID-19 pandemic as compared to when these same students had face-to-face instruction in the previous year as shown by class grades for the first semester of each year.

Ex post facto data was used to gain empirical evidence comparing the effects that in-person versus remote programs may have on the student achievement of adolescent SLIFE students. The independent variable was defined as time, as archival data for the same group of students from the fall 2019 semester and the fall 2020 semester was used. The dependent variable was defined as the numerical grades of the SLIFE students enrolled in the SLIFE program during both semesters. Those students not enrolled both semesters were considered outliers and disregarded from the data and statistical analysis.

### **H<sub>01</sub> Results**

When analyzing results for research question #1, the researcher used the English end of semester grades of the students in the longitudinal study during the fall 2019 and fall 2020 school



semesters. The data was analyzed using a dependent sample, also called paired-sample,  $t$  test. Using  $p = .05$  as the level of significance, the researcher ran a dependent sample  $t$  test to compare the group at the two points in time, which resulted in  $p < .001$ . The dependent samples  $t$  test on English end of semester numerical grades showed results of  $t(34) = 5.53, p < .005; d = .93$  and did find a statistical difference between the grades from the fall of 2019 and the fall of 2020. The effect size ( $d = .93$ ) for this analysis was found to exceed Cohen's  $d$  of .8 for a large effect size. Thus, it was concluded that in-person learning at the SLIFE school was more effective in English courses when compared to learning remotely. Also, due to the large effect size of the Cohen's  $d$ , it was also determined that remote learning had a significant negative effect on the English end of semester numerical averages of SLIFE students. This is in alignment with the Ohio Department of Education's (2021a) findings that the most vulnerable students have been most affected by the closing of schools during the COVID-19 pandemic.

### ***Theoretical Frameworks***

The results of the research study agreed with the current literature regarding the theoretical frameworks for education of SLIFE in the SLIFE program's English courses. SLIFE, or students with limited or interrupted formal education, were defined as immigrant students who came from a home in which a language other than English is spoken and enrolled in a school in the United States with limited or no formal education with the consequence of low literacy skills and large academic gaps in knowledge (DeCapua, 2016). In many cases, SLIFE students took longer than typical ELL students to become proficient in the English language (Sheng et al., 2011), and those from Central America had traumas from their former countries and their travels to their new locations in the United States (Hos, 2020). When schools closed in March of 2020 (Gil et al., 2020), SLIFE students not only lost their modes of education, but they also lost their

most accessible support systems, including teachers, bilingual support staff, trauma counselors, and psychologists (Falicov et al., 2020).

Previous research highlighted the importance of a learning environment that met the physiological and safety needs according to Maslow's (1943) hierarchy of needs, especially for students that have endured multiple traumas both pre- and post-migration from Guatemala and Honduras. Immigrants from Central America were often leaving their former countries due to high poverty, gang violence, physical or sexual abuse, war, natural disasters, and witnessing or being a victim of a crime (Torres et al., 2018). Before the Covid-19 pandemic began, both the mental and physical health of many Central American immigrants, including SLIFE students, had declined due to the high priority the Trump administration had placed on mass deportations, more restrictive paths to citizenship, ICE raids on places of work, and an end to birthright citizenship (Nichols et al., 2018). Additionally, according to Bandura's (1986) social cognitive theory, learning is social in nature and often takes place through observable behaviors and interactions with teachers and peers. Central to Bandura's work was the belief that human learning is fundamentally social in nature (Allan, 2017). COVID-19 was a virus with a rapidly growing emergence of cases as it spread throughout the world (Lakhani et al., 2020) that made social learning impossible for a time. This quickly led to entire cities and countries employing mass quarantine and social distancing measures and, as quarantine measures expanded indefinitely, mental health problems and post-traumatic stress syndrome (PTSD) increased, especially with young people no longer allowed in their school buildings (Cowie & Myers, 2021).

In this way, previous research agrees with the research study, as there was a large effect size indicating that there was great significance in the taking away of the supports that SLIFE

students received while enrolled in the SLIFE program. Since the English course was comprised completely of SLIFE students, these students were in an environment where they could speak without fear or shame from their peers due to their shared circumstances of difficulties with food or monetary poverty, issues of post traumatic stressors, and other sensitive topics. Consequently, the English teacher and paraprofessional were more likely to recognize needs for students to use the school's bilingual psychologist, be given hygienic or food supplies to take home, or be given information and access to social supports outside of the school.

### ***Education***

SLIFE students from Guatemala and Honduras were among the poorest and least educated in all of Latin America, with compulsory education lasting to sixth grade and ninth grade, respectively (Posner et al., 2017; Murphy-Graham et al., 2021). Upon enrollment in schools within the United States, SLIFE students were often miscategorized upon enrollment, and their needs commonly went unmet in the public education system (DeCapua, 2016). Even when properly identified, educators rarely had the training necessary to meet the needs of SLIFE students, with the consequence that many SLIFE students, especially those who entered the secondary grades, dropped out of school (Hos, 2020). For those educators with EL certification or TESOL endorsement, there were specific standards called the TESOL Pre-K-12 English Language Proficiency Standards (2006) that used the four language domains of listening, speaking, reading, and writing, and included five levels of language proficiency. However, for SLIFE students to reach the same standard as their grade-level peers when they enrolled in high school, already multiple grades behind, would not be feasible, nor would it set SLIFE students up for success. More commonly, students of cultural and linguistic diversity, such as EL and SLIFE students, were seen as discipline problems due to educators' lack of diversity education and

implicit biases based in stereotypes, and, while educators were concerned about these students, these students were also the most harshly disciplined (Suarez Valarino, 2021).

The results of the research study concur with the previous research on SLIFE education. Newcomer schools were specifically designed to educate immigrants and refugees and were preferably located on sites separate from the main schools, with these programs lasting anywhere from 6 months to 2 years (Hos, 2020). The goals of these educational SLIFE programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Teachers should use differentiated materials that enhance language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge (Cohan & Honigsfeld, 2017). While students in the SLIFE program in Ohio were placed in an in-person environment for learning an English curriculum within a specially designed SLIFE program, they had access to a teacher trained to serve EL and SLIFE students through a curriculum designed to meet deficits from prior missed education while in their former countries or during their migration to the United States. The teacher provided opportunities for interactions with each other during learning activities, as well as having the support of a bilingual paraprofessional in their English class to help acquire, practice, and strengthen their English language skills according to the TESOL English Language Learning standards (2006). However, by April 6, 2020, mandates for school closures due to the COVID-19 virus had been enacted for all public schools in every state and remained for the rest of the academic school year, with a few exceptions (Jameson et al., 2020).

Based on the large negative effect size of the data analysis for English grades, it was

concluded that the change from in-person learning to remote learning was detrimental to English grades for SLIFE students, agreeing with the previous research. Students no longer met at a single hub and meeting the TESOL standards for the four language domains of listening, speaking, reading, and writing was limited with remote teaching. Just as many teachers needed training for structuring curriculum and instruction to an online system that was simultaneously motivating and engaging (Ali, 2020), the English teacher had no former training in teaching remotely, and the art of teaching and learning became significantly more difficult for the teacher, as well as less effective for the students. Interaction between students on activities was much more difficult, and participation from students declined, since home access to devices for remote learning was insufficient for 42 percent in families of color and almost 50 percent of low-income families (Kuhfeld et al., 2020). Students no longer felt free to discuss non-academic problems and issues on the remote learning forum, and, as a result, were less likely to be recommended for social-emotional supports or have access to hygienic and food supplies that they would have originally spoken about to the English teacher or paraprofessional.

The results of remote teaching of English within the SLIFE program was similar to previous research regarding the satisfaction of education during the COVID-19 pandemic. Several polls and studies conducted during the late spring of 2020 showed that only 39% of teachers interacted with their students once or more a day (Kuhfeld et al., 2020). In other surveys, only one in five districts met their expectations for rigorous remote learning, and educators estimated that students were spending less than half of the time previously spent during in-person learning on studying. Additionally, chronic absenteeism that already existed at higher rates during a normal school year, being even higher for low-income and minority students, suddenly skyrocketed during the time of remote distance learning.

In comparison to the mathematics class, it was also concluded that because of the effect size of the English class ( $d = .93$ ) being larger than the effect size of the mathematics class ( $d = .86$ ), SLIFE students possibly had more difficulties with the adjustment to remote learning in English class than in mathematics class. This may have been due to the lessening in practice of the English language by the students in the remote learning environment through interactions and conversations.

## **H<sub>0</sub>2 Results**

Similarly, when analyzing results for research question #2, the researcher used the mathematics end of semester grades of the students in the longitudinal study during the fall 2019 and fall 2020 school semesters. The data was analyzed using dependent sample, also called paired-sample,  $t$  tests. Using  $p = .05$  as the level of significance, the researcher ran a dependent sample  $t$  test to compare the group at the two points in time, which resulted in  $p < .001$ . The dependent samples  $t$  test on math end of semester numerical grades were  $t(34) = 5.06, p < .05; d = .86$  and did find a statistical difference between the grades from the fall of 2019 and the fall of 2020. . The effect size ( $d = .86$ ) for this analysis was found to exceed Cohen's  $d$  of .8 for a large effect size. Thus, it was concluded that in-person learning at the SLIFE school was more effective in mathematics courses when compared to learning remotely. Due to the large effect size of the Cohen's  $d$ , it was also determined that remote learning had a significant negative effect on the mathematics end of semester numerical averages of SLIFE students, though somewhat less of an effect than on English numerical averages. This is in alignment with the Ohio Department of Education's (2021a) findings that the most vulnerable students have been most affected by the closing of schools during the COVID-19 pandemic.

## ***Theoretical Frameworks***

The results of the research study agreed with the current literature regarding the theoretical frameworks for education of SLIFE students in the SLIFE program's mathematics courses. SLIFE, or students with limited or interrupted formal education, were defined as immigrant students who came from a home in which a language other than English is spoken and enrolled in a school in the U.S. with limited or no formal education, with the consequence of low literacy skills and large academic gaps in knowledge (DeCapua, 2016). In many cases, SLIFE students took longer than typical ELL students to become proficient in the English language (Sheng et al., 2011) and those from Central America had traumas from their former countries and their travels to their new locations in the United States (Hos, 2020). When schools closed in March of 2020 (Gil et al., 2020), SLIFE students not only lost their modes of education, but they also lost their most accessible support systems, including teachers, bilingual support staff, trauma counselors, and psychologists (Falicov et al., 2020).

Previous research highlighted the importance of a learning environment that met the physiological and safety needs according to Maslow's (1943) hierarchy of needs, especially for students from Guatemala and Honduras that have endured multiple traumas both pre- and post-migration. Immigrants from Central America were often leaving their former countries due to high poverty, gang violence, physical or sexual abuse, war, natural disasters, and witnessing or being a victim of a crime (Torres et al., 2018). Before the Covid-19 pandemic began, both the mental and physical health of many Central American immigrants, including SLIFE students, had declined due to the high priority the Trump administration had placed on mass deportations, more restrictive paths to citizenship, ICE raids on places of work, and an end to birthright citizenship (Nichols et al., 2018). Additionally, according to Bandura's (1986) social cognitive theory, learning is social in nature and often takes place through observable behaviors and

interactions with teachers and peers. Central to Bandura's work was the belief that human learning is fundamentally social in nature (Allan, 2017). COVID-19 was a virus with a rapidly growing emergence of cases as it spread throughout the world (Lakhani et al., 2020) that made social learning impossible for a time. This quickly led to entire cities and countries employing mass quarantine and social distancing measures and as quarantine measures expanded indefinitely, mental health problems and post-traumatic stress syndrome (PTSD) increased, especially with young people no longer allowed in their school buildings (Cowie & Myers, 2021).

In this way, previous research agrees with the research study, as there was a large effect size indicating that there was great significance in the taking away of the supports that SLIFE students received while enrolled in the SLIFE program. Since the math course was comprised completely of SLIFE, students were in an environment where they could speak without fear or shame from their peers due to their shared circumstances of difficulties with food or monetary poverty, issues of post traumatic stressors, and other sensitive topics. Consequently, the mathematics teacher and paraprofessional were more likely to recognize needs for students to use the school's bilingual psychologist, be given hygienic or food supplies to take home, or be given information and access to social supports outside of the school.

### ***Education***

SLIFE students from Guatemala and Honduras were among the poorest and least educated in all of Latin America, with compulsory education lasting to sixth grade and ninth grade, respectively (Posner et al., 2017; Murphy-Graham et al., 2021). Upon enrollment in schools within the United States, SLIFE students were often miscategorized upon enrollment, and their needs commonly went unmet in the public education system (DeCapua, 2016). Even



when properly identified, educators rarely had the training necessary to meet the needs of SLIFE students with the consequence that many SLIFE students, especially those who entered the secondary grades, dropped out of school (Hos, 2020). For those educators with EL certification or TESOL endorsement, there were specific standards called the TESOL Pre-K-12 English Language Proficiency Standards (2006) that used the four language domains of listening, speaking, reading, and writing, and included five levels of language proficiency. However, for SLIFE students to reach the same standard as their grade-level peers when they enrolled in high school already multiple grades behind would not be feasible, nor would it set SLIFE students up for success. More commonly, students of cultural and linguistic diversity, such as EL and SLIFE students, were seen as discipline problems due to educators' lack of diversity education and implicit biases based in stereotypes and, while educators are concerned about these students, these students were also the most harshly disciplined (Suarez Valarino, 2021).

The results of the research study concur with the previous research on SLIFE education. Newcomer schools were specifically designed to educate immigrants and refugees and were preferably located on sites separate from the main schools, with these programs lasting anywhere from 6 months to 2 years (Hos, 2020). The goals of these educational SLIFE programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age (Hos, 2020). Teachers should use differentiated materials that enhance language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge (Cohan & Honigsfeld, 2017). While students in the SLIFE program in Ohio were placed in an in-person environment for learning a mathematics curriculum within a specially designed SLIFE program,

they had access to a teacher trained to serve EL and SLIFE students through a curriculum planned to meet deficits from prior missed education while in their former countries or during their migration to the United States. The teacher provided opportunities for interactions with each other during learning activities, as well as having occasional support of a bilingual paraprofessional in their mathematics class to help acquire, practice, and strengthen their English language skills within the mathematics curriculum according to the TESOL English Language Learning standards (2006). However, by April 6, 2020, mandates for school closures due to the COVID-19 virus had been enacted for all public schools in every state and remained for the rest of the academic school year, with a few exceptions (Jameson et al., 2020).

In comparison to the English class, it was also concluded that because of the effect size of the English class ( $d = .93$ ) being larger than the effect size of the mathematics class ( $d = .86$ ), SLIFE students possibly had less difficulties with the adjustment to remote learning in math class than the English class. This may have been due to the familiarity of math numbers and symbols by the students in the remote learning environment that used more of their previous knowledge and relied less on conversation for overall understanding of a topic. Additionally, the math teacher also had some Spanish language speaking skills that likely helped in teaching the subject material and understanding student questions and comments presented verbally.

### **Student Achievement Results**

SLIFE students, or Students with Limited or Interrupted Formal Education, were a growing subpopulation of the English Language Learners (ELL) population with very high drop-out rates, though exact numbers were not known due to the lack of research among this group (DeCapua, 2016). For this research study, student achievement was defined as a student's growth measures obtained through standardized test scores, subject area grades, and other areas of

student measurement over time (Ferreira & Gignoux, 2013), used to highlight the disparities in methods for teaching SLIFE students. The researcher used English and mathematics end of semester numerical averages to identify statistical significance between the fall 2019 semester and the fall 2020 semester for the same group of students in one SLIFE program in urban southwest Ohio. Data analysis determined a statistical significance in the decline of both subject area grades with a large negative effect size. Therefore, it was concluded that student achievement during in-person learning pre-pandemic was significantly higher than during remote learning during the COVID-19 pandemic.

Previous research included theories for best practices in educating newcomer students with limited or interrupted education. This study agreed with previous theories for educating SLIFE students that included programs that can span from 6 months to 2 years, providing English language and content instruction and an introduction to culture and civics in the U.S. while the student adapts to the formal education system (Hos, 2020). The goals of these educational SLIFE programs usually included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Teachers used differentiated materials that enhanced language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps, most importantly, valuing students' previous knowledge (Cohan & Honigsfeld, 2017).

The Ohio SLIFE program had taken into consideration these best practices but, due to the trauma that many SLIFE adolescents from Guatemala and Honduras endure throughout their young lives, an additional layer of attending to the needs of traumatized SLIFE students according to Maslow's (1987) hierarchy of needs and Bandura's (1986) social cognitive theory

were also incorporated into the program. This study has begun to close the gap between theory and practice with the use of quantitative data. This quantitative research study proved that when students had an in-person program with recommended supports for best practices for SLIFE, students performed significantly better in English and mathematics, and therefore student achievement, than when physiological supports, social-emotional support personnel, and social interactions were removed during remote learning.

This quantitative, causal-comparative study reinforced that when SLIFE students were enrolled in a program that incorporated best practices for newcomer EL students, as well as taking into consideration practices that would attend to the traumas so many SLIFE students from Guatemala and Honduras face, student achievement was significantly higher during in-person learning than when many of these best practices were removed during remote learning. These practices included schools specifically designed to educate immigrants and refugees, and preferably located on sites separate from the main schools lasting anywhere from 6 months to 2 years (Hos, 2020). The goals of these educational SLIFE programs included providing English language and content instruction, an introduction to American culture, and a chance to acclimate to formal education while catching up with peers of their own age. Additionally, teachers should use differentiated materials that enhance language and content, bilingual support from teaching assistants, small-group work, scaffolding techniques with videos and graphics, and, perhaps most importantly, valuing students' previous knowledge (Cohan & Honigsfeld, 2017).

During the fall semester of the 2019-2020 school year, SLIFE students attended an in-person learning program designed specifically to meet their needs. When the COVID-19 pandemic sent students and staff of the SLIFE program into quarantine, it resulted in remote learning through the fall semester of the 2020-2021 school year and beyond. With the large-scale

adjustment to remote learning, problems emerged. Learning gaps between advantaged and vulnerable students, school funding, standardized testing, state graduation requirements, a shift to social-service coordination, such as food distribution and mental wellness, and students having the appropriate technologies, were all common issues (Sawchuck, 2020). For SLIFE students, this also meant that both their social-cognitive and deficit needs according to Bandura's (1987) social-cognitive theory and Maslow's (1986) hierarchy tiers of physiology, safety, and belongingness likely were not met.

The results and large effect size of the study therefore implied that SLIFE needs were not met during remote instruction. In reflection of alternate causes, it could have been that, due to the lack of training of teachers for remote teaching or the lack of social-emotional and physiological supports that had been previously provided, caused the decline in student achievement rather than the remote learning itself. By the time some teachers did have access to professional development for teaching remote classes, many students had already decided not to return for the 2020-2021 school year. Students had been sent home to quarantine in the state of Ohio in March of 2020 and with very little direction due to the lack of technology and home internet access among SLIFE students. By the end of the 2019-2020 the damage had been done. With little to no communication from the school, many SLIFE did not return the next school year and were considered 'no shows' on attendance records until they could be withdrawn. This could be explained by Bandura's social cognitive theory in that, once environmental influences weakened, personal dynamics became much more dominant (Schunk, 2016). This combined with changes in perceived self-efficacy, a student may then change how they choose tasks, show persistence, expend effort, and acquire skills, resulting in a shift in focus away from education to more immediate factors. This could be seen by the beginning of the new school year, with the

number of students that did not return to the remote learning that was being offered, even though the majority of students in the district had access to home technologies, and teachers had access to remote teaching tools and training in its uses. However, there was still no training regarding pedagogy or methodology for effective remote teaching.

### **Implications**

Immigrants from Central America often leave their former countries due to high poverty, gang violence, physical or sexual abuse, war, natural disasters, and witnessing or being a victim of a crime (Obinna & Field, 2019). SLIFE students coped with these traumas and many others in their journey to the United States. Unlike most educational populations and topics, there was not a great deal of research about educating Students with Limited or Interrupted Formal Education, especially those specifically from the Central American countries (DeCapua, 2016). However, best practices for this population were inferred through the current literature that could be found. With this in mind, the implications of this study added to the existing body of knowledge and theories regarding adolescent SLIFE education. The study reduced the gap between what was previously thought to be best practices and actually having quantitative data showing that when these best practices were not implemented, SLIFE adolescents' academic achievement had a significant decline. Implications also included helping to improve the conditions, lives, and environment of SLIFE students through an improvement in educational practices now proven to be effective when SLIFE students were enrolled in a program appropriate to meeting their needs.

The SLIFE program that students were enrolled in during the fall of 2019 included an in-person design that incorporated best practices for teaching students with limited or interrupted formal education that addressed their specific needs. This learning environment was then completely replaced in the fall of 2020 when these same students were forced to learn remotely

from their homes due to the COVID-19 pandemic. This study showed a significant negative decrease in student achievement through English and mathematics grades. This in turn implied that previously theoretical best practices for SLIFE do work with targeted structure and planning, and educators can begin to improve their educational programs for SLIFE. As EL programs grow due to the influx of immigrants from Guatemala, Honduras, and other countries, district leaders can direct enrollment officers to look for identifying factors for SLIFE students in lieu of placing them in a general EL category. EL and TESOL teachers can provide supports specifically to mitigate the impact of the lack of formal education and skills when compared to their peers, as well as mitigating the impact of trauma and poverty may have on identified SLIFE students. Additionally, emotional support personnel that include counselors, social workers, and psychologists will be able to provide greater support if the SLIFE students they work with know more about the background and needs of the population they are supporting.

Students in the SLIFE population are among the highest in dropouts. With an increase in their chances for graduation, a more stable life after high school is attainable. Students who graduate earn higher incomes after graduation, have better overall health, and are less likely to be incarcerated (Rose & Bowen, 2021). Thus, having a program specifically designed to meet their needs could lead not only to higher academic achievement but also to a chance for a better future. Additionally, since so many SLIFE students contributed to their families by earning money through work, creating a remote program designed to meet SLIFE needs could possibly increase attendance and enrollment numbers when compared to an in-person learning environment that may be difficult to fit into their full work schedules.

While difficult to design a comprehensive remote SLIFE program, this could have significant benefits on the population's academic achievement. However, research showed that,

as students were quarantined and isolated for longer periods of time, concern for the mental and physical health of students was on the rise. Feelings of anxiety and uncertainty increased, along with online bullying and vulnerable students, including SLIFE, were trapped in abusive, neglectful, and exploitative homes (Cowie & Myers, 2020). Children from low-income families saw an increase in unhappiness, worry, and clinginess due to escalating emotional difficulties (Cowie & Myers, 2020), and traumas came in the forms of lost social supports at school, sick family members, job loss, and facing the potential for homelessness (Kuhfeld et al., 2020). Considering that a “suitable study and work environment is crucial for improved academic...performance” (Silva et al., 2020, p. 8), it was not surprising that so many students felt a reduced quality of life while utilizing remote learning and, as a result, educational leaders’ and teachers’ roles in the mental health of students was intensified (Salari et al., 2020). Therefore, it will also be important to determine what type of learning is suitable for the individual SLIFE student and to maximize learning whether in-person or remote learning is implemented.

### **Limitations**

The limitations of a study were categorized as the flaws or shortcomings which could be the result of multiple causes, including the unavailability of resources or small sample size. No study is completely flawless or inclusive of all possible aspects. In the case of this study, a limitation was the longevity of the SLIFE program. The SLIFE program had only been in existence since the 2018-2019 school year, so the first year of this study took place during the program’s second year in existence. Since many programs take years to fully develop, this could imply that the program was not fully developed or at its strongest due to the timing of the study data. Additionally, including additional semesters or years of data would be beneficial.



Another limitation of the research study would be the lack of archival data used. A comparison between pre-pandemic years and the pandemic year or drawing data from a larger pool of courses or standardized tests would provide a more in-depth analysis of student achievement components. Additionally, a larger sample size, preferably from more than one SLIFE program, would be more ideal for the research. In the case of this study, the researcher was the mathematics teacher during both years of the longitudinal study, potentially threatening the validity of the research and results. However, the opportunity to study multiple SLIFE programs and other content areas would potentially demonstrate the same results without the researcher also being one of the teachers.

Student achievement was measured using students' growth measures obtained through English and mathematics end of semester numerical averages, but standardized tests could have also been utilized. In the state of Ohio, all English Language Learners are given the *Ohio English Language Proficiency Assessment*, which was a standardized test that determined a student's proficiency with the English language over time (Ohio Department of Education, 2021b). Another possible standardized test that could have been used would be the *Measure of Academic Progress (MAPS)* test that was given twice a year to determine growth in multiple academic areas (NWEA, 2022). A survey of students' growth or decline in physical or mental health could also contribute to the overall understanding that remote learning had on SLIFE students when compared to in-person learning designed for SLIFE.

When the COVID-19 pandemic shut down schools, students were forced to learn remotely from their homes while teachers were forced to teach remotely. Very few teachers had training in this type of learning environment as opposed to knowing best practices for students with limited and interrupted education while in in-person learning environments. Consequently,

the negative effect size and results of the research study may be more significant than if the teachers had training in remote teaching. With teacher training in remote instruction best practices and strategies, the negative effects of remote learning on SLIFE student achievement may not be so drastic. Additionally, students that had attended the SLIFE program previous to the pandemic had limited preparation with technology programs used with remote teaching and learning. With more instruction on the uses of *Zoom* or *Google Meets* visual meetings technology, or even in submitting work through Google Classroom and other online classroom organizational technologies, students may have had greater success in their remote learning, as well as having more confidence in their abilities to use the appropriate required technologies while learning remotely.

### **Recommendations for Future Research**

This study concentrated on SLIFE students emigrated from Guatemala or Honduras and their student achievement in the form of English and mathematics end of semester subject grades during in-person learning designed specifically for the needs of SLIFE students compared to remote learning caused by a pandemic. As such, there were several recommendations for future research.

1. Greater diversity within the researched SLIFE population is needed. Students with limited or interrupted formal education come from many countries outside of Guatemala and Honduras. However, as more diversity is incorporated, so too will their specific needs grow and change.
2. Experimentation among groups of students is recommended with teachers that are trained in both in-person and remote teaching pedagogy and methodology. This study was the result of a pandemic that suddenly removed the established best

practices of in-person SLIFE learning. To replicate something similar, a longitudinal experiment would most likely be required.

3. Research specific to the SLIFE population is greatly needed. At this time, most educational research is directed toward EL students or newcomers but is not specific to SLIFE. This is a challenge in that many public-school districts do not identify these students upon enrollment, demonstrating that there are very few SLIFE programs.
4. Quantitative data and research for SLIFE is recommended. Of the educational research that does exist, it is mainly theoretical and qualitative. Additional empirical evidence would speak to the quality of current and emerging SLIFE programs.
5. Further research beyond English and mathematics grades is needed to better determine student academic achievement, such as research into language acquisition or standardized testing scores for SLIFE. This would also require data outside of basic grade averages.

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**APPENDIX A: INSTITUTIONAL REVIEW BOARD EXEMPTION****LIBERTY UNIVERSITY**  
INSTITUTIONAL REVIEW BOARD

March 28, 2022

Sarah Richter  
Michelle Barthlow

Re: IRB Exemption - IRB-FY21-22-886 The Effects of Remote Learning on SLIFE Students from Central America During the COVID-19 Pandemic

Dear Sarah Richter, Michelle Barthlow,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

(4) Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at [irb@liberty.edu](mailto:irb@liberty.edu).

Sincerely,

**G. Michele Baker, MA, CIP**

*Administrative Chair of Institutional Research*

**Research Ethics Office**

**APPENDIX B: STUDENT SUBJECT GRADES AND GENDERS**

Student	Gender	Fall 2019		Fall 2020	
		ELA	Math	ELA	Math
1	M	A	B	C	D
2	M	F	F	F	F
3	M	C	D	C	D
4	M	F	F	F	F
5	M	A	A	C	F
6	M	A	B	D	C
7	F	C	A	C	A
8	M	A	C	F	D
9	M	B	C	F	F
10	M	A	A	C	F
11	M	C	B	B	C
12	M	A	A	F	F
13	F	A	B	A	A
14	F	A	A	B	F
15	F	A	A	D	F
16	M	A	A	A	A
17	F	A	B	B	B
18	M	A	C	C	F
19	M	A	A	A	A
20	F	A	A	B	B
21	F	B	D	A	C
22	M	A	B	D	D
23	M	B	B	C	C
24	F	B	C	D	D
25	M	A	A	C	F
26	M	D	D	F	F
27	F	A	B	F	F
28	M	D	F	B	C
29	F	A	D	F	F
30	M	B	B	F	F
31	F	C	C	F	F
32	M	A	B	B	D
33	M	D	B	D	F
34	M	A	B	A	C
35	F	B	D	D	F