5-2023

The Effects of Motivation, Loneliness, and Academic Productivity on College Students during the Pandemic

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THE EFFECTS OF MOTIVATION, LONELINESS, AND

ACADEMIC PRODUCTIVITY ON COLLEGE

STUDENTS DURING THE PANDEMIC

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A thesis

Presented to

The School of Social Sciences, Education & Business

Department of Higher Education and Student Development

Taylor University

Upland, Indiana

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Higher Education and Student Development

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by

Alyssa Bates

May 2023

CERTIFICATE OF APPROVAL
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MASTER'S THESIS
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This is to certify that the Thesis of

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entitled

The effects of Motivation, Loneliness, and Academic Productivity on College Students
During the Pandemic

has been approved by the Examining Committee for the thesis requirement for the

Master of Arts degree
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May 2023

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Abstract

The 2020 pandemic and the stay-at-home-orders shifted the college experience for students and required students to complete their work off-campus. This research uses a convergent mixed methods design to examine how loneliness, motivation, and academic productivity interacted in the lives of students during the pandemic. This study explores the implications of the loneliness students experienced and the patterns or shifts in behavior that brought upon either success or struggle. The study shows that students were relatively lonely during this time, yet had varying measures of motivation, leading to a low positive correlation between loneliness and lack of motivation. Additionally, significant factors for academic success during the pandemic were the environment students found themselves in, the relational support received, grades and GPA, and students' routine and schedule. These results indicate that higher educational professionals should consider how to support students in online or isolated courses of study.

Acknowledgements

As I complete my master's degree in higher education, I have found writing my thesis to be one of the most fulfilling aspects of my degree. Throughout the thesis, I have learned to think deeply and critically, as well as to engage in the slow process of thorough research.

I have so many to thank for the support and encouragement in this process. I truly could not have finished this work without the kindness and help from so many. To my family for being my biggest fan, a listening ear, and presence. Especially my sister Carly for sitting with me and listening to me process my work.

To Cohort XV for learning alongside me and teaching me through your diligent work. Sarah Hagelberger for listening, Sarah Chipka for cheerleading, Aiden for checking in, and Kizito for always hyping me up. Emma, thank you for your thorough edits and long conversations through the process.

Jeff Aupperle, my thesis advisor, for the consistent encouragement and guidance throughout my research. To those on my committee; Scott Gaier and Kelly Yordy. To Scott for fostering my love of research and guiding me to set my affections on my subject matter and move toward "right thinking and right data." Thank you for the time spent in your office to help me wrap my head around the concepts of my research and methodology. To Kelly Yordy for the support, especially in the early stages. Also, for the constant reminder to "sit with your fish" during the research process.

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Chapter 1

Introduction

On January 20, 2020, the first laboratory detected Covid-19 case was confirmed in the United States (U.S. Centers for Disease Control and Prevention, 2021). Months later, the entire country received stay-at-home orders. For the first time in the history of the United States, there was a lockdown based on an epidemic outbreak. Due to the global pandemic, American individuals were encouraged to avoid close proximity to one another in daily contexts like school, work, and business. Instead, isolated and independent habits became commonplace. The Covid-19 pandemic shocked society and shifted the patterns of work–life, school, and how people interact with one another.

While the structure of society shifted, the requirements of work and the turning of the world did not. For professionals, their weekly meetings turned to Zoom. For students, their class discussion became online discussion boards. Businesses transformed to remote work and churches began to offer online services. People left their houses less frequently as social distancing and masks became the new normal. The drastic change in society begs the question of how individuals responded during this time. For many, the paradigm of their habits, behaviors, and relationships shifted. Therefore, during this abrupt and involuntary change, many people had to adapt to new lifestyle behaviors.

Statement of the Problem

Because of the nature of the virus, individuals were required to isolate and remain separate from friends and most family. Most residential college students moved to be in

closer proximity with their family, yet they were distant from the community they experienced while living at their university. This created a sense of loneliness for students. However, certain personalities thrived during this time even while others struggled. The reason for the difference in students' reactions to these opposite reactions may lie in how an individual engages with their motivation and response to loneliness. The purpose of this research is to observe the stay-at-home orders as a case study to explore the impact of motivation and loneliness on the academic productivity of college students.

Motivation

The first variable in this study is motivation, which focuses on the factor that pushes people to accomplish tasks and move toward a goal. Motivation is the "force that drives a person to engage in activities" (Brownlow & Reasinger, 2000, p. 17). To understand how students spent their time during the pandemic, motivation is paramount.

Certain individuals sustain greater intensities and variations of motivation creating a phenomenon that needs to be explored to understand an individual's strengths towards productivity. During the period of national stay-at-home orders for the country, the extrinsic motivation that comes with physically attending classes and collaborating with peers was removed. Instead, students received emails and instruction on Zoom and had to reach out to their peers to feel connected. Without seeking meaningful interaction with those they would otherwise be working with in person, students became disconnected from their peers and their connections. The lifeline towards these extrinsic motivators became available solely through technology. Communicating through

technology was a mediator and a barrier between people, and, for some individuals, this system worked much better than for others.

This research sought to uncover what truly motivated students when they were no longer on campus in-person with peers surrounding them. The pressure for performance changed and so did the factors of internal motivation. At the root of the study was the desire to give language to motivational factors for students during the pandemic.

Loneliness

In addition, during the stay-at-home order in 2020, people were kept separate from most of their regular community. Some people were in quarantine with their family and friends, while others were far removed from the physical proximity of people. Social distancing orders—where people were required to stay six feet away from one another—were established and there were limits to how many people could be in a specific area at a time. Many people stayed at home, but others were able to be creative with social distancing picnics, walks, or visiting relatives through windows. In addition, many utilized technologies to connect with others through phone calls, texting, and social media. However, this form of connection contains drawbacks and cannot fully replicate the experience of an in-person relationship. This led to isolation, the setting in which significant situational loneliness occurs. Therefore, loneliness is an important aspect of how students reacted during this time.

Academic Productivity

Academic productivity is the measure of efficiency, interest, long-term learning, timeliness, assignment completion, and grade-point accuracy within a class setting. Similar to academic productivity, academic diligence can be defined as working

"assiduously on academic tasks which are beneficial in the long run but tedious in the moment, especially in comparison to more enjoyable, less effortful diversions" (Galla et al., 2014). Academic productivity could be measured solely by grades and the resulting outcome of the semester. However, due to changes in curriculum and leniency on assignments, this may not be the best measure of true productivity during a pandemic. Therefore, in this study, the approach involved a quantitative and qualitative approach to the experience of each student, through their own self-assessment.

Purpose of the Study

Overall, this study pinpointed the ways in which students experienced a form of loneliness and identify the ways they reacted to their circumstances. Research on productivity indicates that people "attribute their successes to internal disposition, taking responsibility for outcomes, but blaming external reasons (such as task difficulty) for their failures" (Brownlow & Reasinger, 2000). Accordingly, the study attempted to discover if this remains true within the context of isolation.

This study investigated perceived and situational loneliness to determine its effect on motivation and productivity. This study also considered perceived loneliness and how physical proximity affects people's reactions and drive towards productive endeavors. There are many studies that communicate the harmful long-term effects of lack of social connection, but this research focused on the immediate effects of loneliness on a person's motivation and productivity.

Research Question

Loneliness is not a phenomenon that is isolated to this specific pandemic. In fact, loneliness is prevalent across all generations and will continue to be an obstacle to

productivity. Therefore, this study remains relevant for college students far beyond the global pandemic. This study, however, takes the Covid-19 pandemic and quarantine as a case study and determine the correlation between motivation, loneliness, and academic productivity.

The point of this research was to observe the stay-at-home orders to uncover the impact of motivation and loneliness on the academic productivity of college students. This study sought to answer the research question: How does motivation affect academic productivity during times of loneliness, such as in a global pandemic? The study utilized a convergent mixed methods approach to examine the implications of loneliness on college students' motivation and its effects on academic productivity to discover the patterns and shifts in behavior that brought upon either success or struggle.

Chapter 2

Literature Review

In the United States, the 2020 Covid-19 pandemic led to a prolonged lockdown with mandatory stay-at-home orders. Colleges responded in the spring of 2020 by suspending in-person classes and sending away students that had the means to live off-campus. Those remaining on campus were primarily international students and other students for various reasons. The unique conditions caused by the stay-at-home orders led students to feel isolated and lonely both emotionally and through physical proximity. In addition, the class expectations for students shifted and caused them to have to adjust to a different routine. The isolation and loneliness that college students felt impacted their motivation which shaped the way their academic productivity played out. This chapter seeks to explore existing literature on the effects of loneliness, motivation, and academic productivity on college students. This survey of the literature will focus on the pandemic and theories to provide a theoretical framework for the study. The guiding research question is: How does motivation affect academic productivity during times of loneliness, such as in a global pandemic?

Foundational Theories

Transition Theory

The adjustment from on-campus with in-person learning to an alternative learning style created a challenge for students. According to Schlossberg's (1981) transition theory, a transition is as an anticipated transition, unanticipated transition, or as a

nonevent. The effects of the pandemic would certainly be considered an unanticipated transition due to its unexpected and abrupt nature. Furthermore, this transition included occurrences pertaining to non-events (anticipated events that did not happen) and all the perceived expectations for the season that were no longer possible.

According to transition theory, the context is important as it refers to an individual's "relation to the transition and to the setting in which the transition took place" (Patton et al., 2016, p. 37). For the pandemic, students had to adjust to changes such as being back at their families' houses and figuring out how to utilize technology for classes in new ways. The impact of a transition is determined by the "degree to which a transition alters daily life" (Patton et al., 2016, p. 37). When college campuses stopped in-person instruction and workplaces shut their doors following the start of the COVID-19 outbreak, daily in-person interactions with peers were substantially reduced. This caused disruption to the young adults' social lives which resulted in many students being "vulnerable to the negative social-emotional effects of the pandemic" (Juvonen et al., 2022). Based on Schlossberg's theory, the pandemic caused a high amount of stress. Some students viewed the adjustment towards schoolwork at home in a negative light, while others welcomed the freedom and family time and perceived it in a more positive light. However, transitions produce stress regardless of if they are perceived by the individual as being positive or negative (Patton et al., 2016, p. 37). Therefore, whether students perceived their experience during the pandemic as beneficial, they were still affected by the magnitude of the transition.

The natural progression of a transition involves individuals moving from preoccupation with the changes to integration and acceptance over time. A transition

itself may be a realistic adjustment, but the time it takes to normalize the changes is the significant impact point. Because of this, students may have initially focused on adjusting and mourning the changes, but then fully embraced the situation and moved toward adjusting. This looked different for each student as "the time needed to achieve successful integration varies depending on the person and the transition" (Patton et al., 2016, p. 38). There are four major factors that influence a person's ability to cope with transition, and these are situation, self, support, and strategies (Patton et al., 2016). This indicates that students who are surrounded by a support system of friends and families may have had specific strategies to cope with the changes resulting in a distinct experience.

Erikson's Stages of Development

The traditional age for a college student meets them at a critical period of development. Based on Erikson's stages of development, college-aged students are either in stage five: identity versus role confusion or in stage six: isolation versus intimacy (Erikson, 1986). Identity versus role confusion is a significant stage that "signals a transition between childhood and adulthood and a push for one to define themselves" (Patton et al., 2016, p. 290). The isolation versus intimacy stage involves working toward "committed relationships and friendships, as well as severing unhealthy relationships" (p. 290). Therefore, there is significant development that has to do with relationships and proximity to other people to figure out who an individual is and to compete with isolation. This can be particularly disruptive during the prolonged pandemic in emerging adulthood when restricted in-person social contact interferes with the developmental goal of establishing and maintaining close ties separate from one's family (Juvonen et al.,

2022). Therefore, the social development of these students during the pandemic period was much more independent from the influence of others and prolonged.

Isolation and Lack of Social Interaction

Loneliness is the "subjective psychological discomfort people experience when their network of social relationships is significantly deficient in either quantity or quality" (Perlman & Peplau, 1998, p. 571). Social loneliness and emotional loneliness are the two main types of loneliness. Social loneliness occurs when an individual "lacks the sense of social integration or community involvement that might be provided by a network of friends, neighbors, or co-workers" (Perlman & Peplau, 1998, p. 571). This is not to be confused with social isolation that deals with a more objective situation of being alone or lacking social relationships. On the other hand, emotional loneliness stems from the "absence of emotional attachments provided by intimate relationships" (Perlman & Peplau, 1998, p. 574). The quarantine period created a sense of social loneliness, social isolation, and emotional loneliness at times.

Even before the pandemic, the United States was the fourth highest country in the extent of their loneliness (Perlman & Peplau, 1998). This illuminates the prevalence of loneliness in our culture as 53% of college students indicated they were lonely on the UCLA (University of California, Los Angeles) Loneliness Scale (American College Health Association, 2021). Loneliness has been a significant factor in our society and will continue to be so. Emotional loneliness can cause symptoms such as anxiety, a sense of utter aloneness, vigilance to threat, and a tendency to misinterpret the hostile or affectionate intention of others. Furthermore, the symptoms of social isolation result in feelings of boredom, restlessness, and marginality (Perlman & Peplau, 1998). The

loneliness ties to negative emotions, which in turn have a negative impact on motivation and productivity.

One theory of loneliness centers around basic human social needs and the belief that loneliness occurs when these enduring needs are not met. This approach is called the social needs perspective on loneliness (Perlman & Peplau, 1998). On the other hand, the cognitive discrepancy model of loneliness emphasizes the match between a person's desires or expectations for relationships and the reality of his or her social life. Both the social needs perspective on loneliness and the cognitive discrepancy model of loneliness are relevant in the understanding of the complexities of the stay-at-home orders. Students found their basic human social needs unmet simply because of proximity, but on a larger scale, the desires for many to have a specific reality of social life was not realized because of the same reasons. There may have been factors that lessened the implications of loneliness such as technology that connected people and family and friendships that were close by. In addition, the desire of a person and their capacity to be around people consistently may also be a baseline factor.

Several studies further the argument that social relationships are vital to flourishing in an academic setting. One study found that:

> Social relationships subtly embrace us in the warmth of self-affirmation, the whispers of encouragement, and the meaningfulness of belonging. They are fundamental to our emotional fulfillment, behavioral adjustment, and cognitive function. Disruption or absence of stable social relationships blasts our minds and biology like few other events. (Hughes et al., 2004)

This brings us back to transition theory and the drastic impact that isolation can have on a college student. When one's intimate and social needs are not adequately met, "a complex set of feelings termed loneliness occurs that motivates one to seek the fulfillment of these needs" (Weiss, 1973). In addition, social contact with others is fundamental to the wellbeing of a person and can be particularly critical during stressful times (Baumeister & Leary, 1995).

During the pandemic, having a greater number of friends, compared to the transition out of high school, was related to less social anxiety, depressive, and generalized anxiety symptoms. However, the number of friends did not correlate to loneliness, according to one study (Juvone et al., 2022). Instead, the improvement in friendship quality was associated with lower social anxiety and loneliness. Both the quality and quantity of friendships were found to be relevant to overall wellbeing during the pandemic. One difficulty for the quarantine period was that relationship development was hindered and "the relationships that went beyond the surface level of classroom chatter were more difficult to form during isolation and quarantine" (Smith, 2021). Therefore, forming new relationships was put on hold and students had to rely more on their pre-existing relationships.

Based on data collected during the pandemic, less loneliness was reported to be correlated with a change in contact, such as keeping in touch with a greater number of friends and more frequent electronic communication (Juvonen et al., 2022). Therefore, during the pandemic, it is not lack of relationships, but the lack of "satisfying contact that needs to be addressed in emerging adulthood" (Juvonen et al., 2022, p. 595). The students that found ways to meaningfully connect with their friends during the quarantine period

likely experienced less loneliness. One positive aspect, however, is that the "shared threat of a pandemic may help foster greater sense of connection" (Juvonen et al., 2022, p. 586). Therefore, the pandemic may have provided a mutual circumstance that was relatable for many individuals to connect over.

Motivation and Performance Barriers for Students

According to the self-determination theory, there are three different types of motivation based on the "different reasons or goals that give rise to an action" (Ryan & Deci, 2000). First, there is a distinction between motivation from within and motivation based on factors outside of yourself. The motivation that results from an internal drive toward a task is known as intrinsic motivation (Ryan & Deci, 2000). This can look like any interest in a project, subject, or task that has nothing to do with any reward or outside factors.

In contrast, extrinsic motivation is a function of the "external contingencies to perform a specific activity" (Ryan & Deci, 2000). The final variation of motivation is simply the lack of motivation. This is known as amotivation and is defined as "a state of motivational apathy in which people possess little or no reason to invest the energy that is necessary to learn or to accomplish something" (Reeve, 2015, p. 120). Therefore, motivation differs in people as "they vary not only in level of motivation, but also in the orientation of the motivation" (Ryan & Deci, 2000).

During the pandemic, there were specific physical conditions that may have hindered the ability for typical motivation and academic productivity. Factors such as the fear of infection, unknown duration of the stay-at-home orders, inadequate information, frustration and boredom, and finances impacted the quarantine period (Brooks et al.,

2020). In addition, the isolation experience proved to be physically challenging for students as they experienced heightened emotions during time in quarantine, but many established ways of structuring their days to tolerate time as well as established various strategies using self-care to better tolerate quarantine (Smith, 2021). Additional factors to be explored in the correlation with productivity in isolation are technology, family involvement, and student habits.

Physical Challenges for Motivation

Technology is becoming increasingly prevalent in society and serves both a positive and negative component to the wellbeing of a student in isolation. There is a paradox with cell phone usage as loneliness is "positively correlated with smartphone addiction and aggression" (Karaoglan Yilmaz et al., 2022), however, technology was also the primary tool for communication to peers during quarantine. Loneliness increases smart phone addiction which decreases academic productivity. Other distractions included video game addiction which is also associated with loneliness and aggression behaviors (Karaoglan Yilmaz et al., 2022). The quality of an activity is negatively affected by screens:

> If an activity involves a screen, it's linked to less happiness and more depression.
>
> If it doesn't—particularly if it involves in-person social interaction or exercise—
>
> it's linked to more happiness and less depression. (Twenge, 2017)

Overall, in-person social interaction is superior for mental health than electronic communication (Twenge, 2017), however this could not be the case for many. One important benefit for college-aged students as opposed to older adults is that "young adults may be particularly well equipped to foster their connections with friends given

their proclivity for, and familiarity with, electronic communication" (Juvonen et al., 2022). Aside from the difficulties of social interactions and distance from peers, students may not have had access to wi-fi at their home. Students may have had a slow connection, or no access, and they would have had to go somewhere else to take part in classes. This creates another barrier to academic productivity and removes the ease of access to education.

Furthermore, Astin's (1984) Involvement Theory positively correlates the amount of physical and psychological energy that the student devotes to the academic experience to the amount of student learning and personal development they will undergo. Therefore, when students were no longer able to be involved in extracurricular activities, athletics, and student leadership in the same way, this correlated with the meaning they attained from their education. There were less ways to be involved which may have decreased the dedication and devotion of students toward their university.

In addition, there was no proximity to classmates and teachers: For many students, they relied heavily on their professors as their "main avenue of support from the institution because, as a student taking classes entirely online, that was their only connection to the university" (Smith, 2021). Therefore, if a professor wasn't technologically adept or adequate with communication, the student would have been directly impacted.

Other physical aspects that the quarantine period brought with it were a sense of tiredness, decrease in physical exercise, and changes in sleep and nutrition. With the transition, "basic physical needs, particularly nutrition and sleep, were difficult for each student to manage, depending on their situation" (Smith, 2021). The remote learning

removed a consistent schedule and structure outside of class times. This was also

impacted by the student's family obligations, environment, and relationships.

Emotional Challenges for Motivation

In the same way, emotional challenges, such as procrastination, mental health,

and distractions, served as a barrier to productivity. The problem of procrastination is a

concept many of us encounter in our daily lives. In fact, according to a recent study,

nearly 95% of college students were affected by procrastination in some way or another

(Scent & Boes, 2014). Supporting this, the National College Health Assessment found

that in 2021, 76% of college students had challenges with procrastination in the past 12

months (American College Health Association, 2021).

Procrastination is one personality trait in a cluster of traits, including weak

impulse control, lack of persistence, lack of work discipline, lack of time management

skills, and inability to work methodically, which cause the delaying of behavior (Scent &

Boes, 2014). This indicates that productivity correlates with personality and personal

habits. Therefore, the barriers for productivity will be examined, and the study will focus

on finding patterns in the students' habits and experiences.

Temporal motivation theory is an integrative motivational theory developed by

Steel and König (2006). This theory is derived from the core elements of four established

theories of motivation: picoeconomics, expectancy theory, cumulative prospect theory,

and need theory. According to this theory, motivation can be understood by the "effects

of expectancy and value, weakened by delay, with differences for rewards and losses"

(Steel & König, 2006, p. 897). An individual has a variety of possible rewarding

activities they can choose from. When deciding on different tasks, individuals have the

tendency to significantly undervalue future events. This leads to putting off tasks leading to "distant but valuable goals in favor of ones with more immediate though lesser rewards" (Steel & König, 2006, p. 892). The favorable result varies depending on the perspective of the individual and the ability to perceive the future outcome. Students that enjoyed the initial task of academic work and pursued schoolwork for more than just future grades were more successful. Therefore, because grades and deadlines were future incentives, prioritizing academic productivity may have been a difficult task for many students. Additionally, as grades are an extrinsic factor, the delay between the work due and the time the work is graded can be long enough gaps that weaken the initial motivation. Therefore, procrastination and distractions were barriers to the academic productivity of students.

College students commonly deal with challenges in mental health, feeling like they belong, and keeping themselves healthy. The National College Health Assessment administered by the American College Heath Association outlines statistics on college wellbeing. According to the survey from 2021, following the quarantine period, students experienced impediments to academic performance (American College Health Association, 2021). In the previous year, 43.4% of college students said that stress was a factor, 34.9% said anxiety was an impediment, and 25.4% experienced depression that created a challenge for academic performance. This is not a direct correlation after the quarantine period, but it does indicate the prevalence of how college students are affected by stressors and mental health. In addition, this survey found that 52% of college students had challenges with academics in the past 12 months. This study will add to this body of

research and seeks to illuminate the causal relationships for academic challenges, specifically when a student is facing transition and loneliness.

Mental health has been a concern for this generation and continued to be so during the pandemic. This generation of students, also known as "iGen," is on the verge of the "most severe mental health crisis for young people in decades. On the surface, though, everything is fine" (Twenge, 2017). Students and their academic productivity are affected by disorders such as anxiety, depression, eating disorders, and stress. (American College Health Association, 2021). In a small study, "five out of the eight students interviewed expressed a concern for their emotional well-being during this time" (Smith, 2021). Other emotional aspects to consider are the fear of Covid-19, grief at the loss of loved ones, and difficult family situations students may have returned to. Transitional grief also includes the loss of community, activities, in-person classes, spaces to commune, and the dorms. These can all lead to students feeling disengaged, becoming less effective due to multi-tasking, and experiencing sadness from lost opportunities.

Conclusion

Overall, we see the vast impact that Covid-19 had on students. The pandemic created a unique environment where students were scattered and could not resume classes as per usual. This study does not focus on students who previously completed online work, but rather on students who were traditional, residential, four-year undergraduate students at a small liberal arts university in the Midwest. The purpose of this study is to investigate further how students coped with these challenges and determine best practices for college students facing isolation or loneliness in the future. In addition, this will

provide practical applications for how professors can interact and provide learning for students that may be most beneficial.

Chapter 3

Methodology

While the peak of the pandemic was nearly two years ago, there is much to research in terms of student productivity during times of loneliness. Loneliness and isolation clearly have some effect on academic work. However, this study sought to understand the extent to which college students were affected by the loneliness induced by the pandemic, what they did to cope, and how it affected their perspective for learning. The following chapter outlines the research methodology and participants utilized in the study.

Research Design Approach

In order to effectively identify the problem and find descriptive detail for how specific students reacted to a time of loneliness, this research followed convergent mixed methods design (Creswell, 2012). A convergent design simultaneously collects quantitative and qualitative data in order to "merge the data, compare the results, and explain any discrepancies in the results" (Creswell, 2012, p. 551). The purpose of this type of study is to recognize the value in different types of data that can complement and verify the other in the results. This allows for the variables of loneliness, academic productivity, and motivation to be explored and quantified to reach greater certainty.

A cross-sectional survey with quantitative survey questions with a few open-ended questions was the collection method. This research was conducted all at once with a survey distributed among students. The first portion of the survey captured descriptive

statistics from the quantitative results to determine the prevalence and magnitude of loneliness, motivation, and academic productivity. Additionally, to "describe and measure the degree of association between two or more variables," the data were analyzed for correlation coefficients (Creswell, 2012, p. 343). This indicated the strength of impact that loneliness has on motivation and academic productivity.

However, the addition of qualitative questions required coding and theming that allowed for a partial certainty while also finding thick, rich description. This allowed for the formation of a baseline of the impact that loneliness had on students using the quantitative portion enhanced by the themes found through the qualitative questions. Therefore, the design lends itself to a more complete understanding of the research question. This chapter includes the context and methodology for the research.

Context and Participants

The research was conducted at a small, Christian liberal arts institution in the Midwest with 1,741 traditional on-campus students in 2020. Many of the students are pursuing four-year liberal arts degrees. In the Spring of 2020, the institution sent their students home due to Covid-19 concerns, and the students had to finish their semester without in-person learning or communal living on campus.

The participants for this study are students who attended the institution starting in fall of 2020. The group of students are now seniors, but they were freshmen at the time of the initial start of the pandemic. The survey was distributed to all the senior class, filtering out anyone who did not attend the college in 2020. In an effort to reach a widespread population, the survey accepted responses over a span of ten days with several reminder emails to complete in between. The surveys responses were kept

confidential, and the research was stored on a private laptop with a password. Names were not collected, and the survey allowed for consent (see Appendix A) and the ability to leave without repercussions at any point throughout the process.

The survey was sent to 455 current seniors with a 33% response rate of 152 students. Some of the students in the initial sample were ineligible to participate in the study as they were not on campus in the spring of 2020. Additionally, of the 152 students that responded, 15 responses were invalidated. This left 137 valid responses to analyze for this study. Of the students that responded, 89.2% stayed with their immediate family during the pandemic with only 2.8% of students staying at extended relatives or friends, 1.4% of students staying alone, and 4.3% staying on campus for various reasons.

Procedure

In early December of 2022, students that were on campus during the 2019–2020 academic year were sent a survey in the email. This survey included questions (see Appendix B) tailored around the window that the institution closed its campus, causing students to return home for the stay-at-home orders surrounding Covid-19. The survey formed a foundation of the extent of loneliness the students experienced and utilized a four-point Likert Scale ranging from "often" to "never." The survey utilized the UCLA Loneliness Scale with adaptations integrated into the survey that analyzed if they were lonely and then how this affected their perceived academic productivity (Russell et al., 1980). This scale allowed for the use of non-profit research opportunities. The adaptations to the scale included making the survey past-tense to analyze the loneliness during the span of time during the pandemic and a reduction of the questions. This

decreased the reliability and validity of the instrument as a whole but adequately served the purpose of measurement for this research preserving face validity.

In addition, the survey included follow-up questions formulated in a similar manner. These were displayed in an open-answer format and students had the opportunity to write several sentences depicting their perceptions of their experience. The questions inquired as to if loneliness became an obstacle to motivation for academic productivity during the stay-at-home orders and whether the participants felt they were able to accomplish what they needed academically.

Complete anonymity was expected for the online survey. Only generic demographic data was requested, such as where they lived on campus and their gender. Other identifiable data was not requested. Any identifiers of specific participants were replaced with generic tags (and use of pseudonyms) to preserve anonymity. Electronic files were privately kept on the researcher's password-protected personal computer.

In regard to the beneficence of the research, the survey involved no aspects that could cause physical harm to participants with the expectation of minimal emotional risk to the participant. Anonymity was expected for research participants, so there was little to no social risk to students. The main objective of this research was to come to an understanding of how students experienced motivation and productivity change during an unprecedented time of loneliness during their college experience.

The ways in which a participant experienced the pandemic may have been traumatic or caused an emotional response resulting in emotional stress. However, steps were taken to design the survey in such a way as to minimize potential emotional stress. The quantitative questions, including selections from the UCLA Loneliness Scale only

asked questions about an individual's perception of how they engaged with loneliness and academic productivity. Participants ranked their experience on a scale and these questions did not require the participant to explain their answers. The open-ended questions were written in such a way that students were able to decide what they would like to share. In the survey, the consent form was provided at the beginning of the assessment. Participants selected that they read it and consented before continuing with the survey.

Data Analysis

The survey was organized and the scores from the scales were compiled and analyzed to look for general trends in students' loneliness, motivation, and productivity. The qualitative questions were coded for recurring words and phrases. After the coding process, codes were grouped into themes. These themes were interpreted and analyzed in regard to the study as a whole. Triangulation allows investigators to "improve their inquiries by collecting and combining different kinds of data bearing on the same phenomenon." (Creswell, 2012, p. 546). In this study, triangulation involved the data points from the quantitative section mixed with the coding and theming from qualitative section in terms of how loneliness impacted academic productivity during the quarantine period.

The quantitative results were analyzed to find the descriptive statistics and correlation. This was followed by a process of coding and theming the qualitative questions in the survey. In order for coding to take place, there was an initial read-through of the text data, division into segments of info, labeling of the segments with codes, and then reduction of overlap and redundancy of the codes. (Creswell, 2012,

p. 546). Once codes were identified by identifying key statements, these were collapsed into four main themes that was the culmination of the data for the research. These themes were selected based on the impact and frequency of experiences among participants.

Conclusion

Ultimately, using a mixed methods convergent design allowed for expansive research to gain a general understanding of the breadth and depth of motivation, loneliness, and academic productivity during the pandemic. The approach ensured a move toward certainty to determine the prevalence of loneliness as well as an exploration of the variety of experiences students described. The analysis and the themes are described in the following chapter.

Chapter 4

Results

The study engaged with current students who were attending college at the time of the 2020 pandemic to gauge their levels of academic engagement and motivation to see how it correlated with loneliness. The correlation was measured through a series of survey questions adapted from the UCLA Loneliness Scale and analyzed through bivariate correlational regression. The research set out to determine whether there was a correlation between loneliness and lower motivation and academic productivity. In addition, the survey set out to identify any key issues and patterns in the research.

Student Loneliness

Within the survey, nine questions were specifically adapted to determine loneliness based on the UCLA Loneliness Scale. Students ranked each question as "never," "rarely," "sometimes," or "often" with one being the least lonely and four being the loneliest. As shown in Table 1, each response had a mean of 2.475 or above. The average aggregate score for loneliness was 2.937 with a standard deviation of .640.

Question six revealed that 79.2% of students responded they felt isolated during the stay-at-home orders either sometimes or often. Additionally, 52.2% of students said that it was often difficult for them to make friends during this time. Based on the survey, 72% shared that they were sometimes or often lonely overall during the time away from campus.

Table 1

Loneliness Descriptive Statistics

Loneliness scale item	Descriptive statistics		
	N	*M*	*SD*
Factor 1: Loneliness			
1. During the time away from campus, I felt I lacked companionship.	137	3.102	0.789
2. During the time away from campus, I felt my social relationships were superficial.	137	2.788	0.835
3. During the time away from campus, I felt I was unable to reach out and communicate with those around me.	137	2.577	0.960
4. During the time away from campus, I felt my interests and ideas were not shared by those around me.	137	2.715	1.022
5. During the time away from campus, no one really knew me well.	137	2.475	1.051
6. During the time away from campus, I felt isolated from others.	137	3.219	0.829
7. During the time away from campus, it was difficult for me to make friends.	137	3.219	0.953
8. Overall, during the time away from campus, I felt lonely.	137	3.015	0.899
9. Overall, I was lonelier attending college off-campus than I was on campus prior to the pandemic.	137	3.321	0.939
Aggregate Loneliness Score	137	2.937	0.640

Note: Likert Scale response on a scale of 1–4: "Never, Rarely, Sometimes, Often"

Furthermore, 58.3% of students shared that they were often lonelier attending college off-campus than they were on campus prior to the pandemic. Additionally, 22.2% of students said they were sometimes lonelier. In total, 80.6% of students said they were either often or sometimes lonelier during the time off campus than while they were on-

campus prior to the pandemic. This depicts the extent to which students experienced

loneliness was significant.

Student Motivation

Three questions specifically targeted motivation and academic productivity in the

survey design. In response to the first question that dealt with the extent to which

motivation for academic engagement was impacted by being away from campus, students

answered on a ten-point scale. On the scale, one represented the least impacted with ten

representing the most significantly impacted motivation. The mean was 6.86 (n = 137)

with a standard deviation of 2.38 (SD). The study revealed 67.6% of students felt their

motivation for academic engagement was impacted as a 7 or higher. The percentage of

the individual scores were seven at 18.7%, eight at 23.7%, nine at 13.7%, and ten at

11.5%. Only 1.4% of participants shared that that their motivation was impacted at an

impact of one.

Additionally, the second question examined the extent it was difficult to be

motivated to get work done during the stay-at-home orders. On a ten-point scale, one was

the least difficult with ten being the most difficult to complete work. The mean of this

sample was 6.93 with a standard deviation of 2.52 (SD). Within the survey, 63.2% of

students shared that they had a difficulty of seven or above, and 13.7% of participants

selected a ten, 20.1% selected a nine, 16.5% selected eight, and 12.9% selected seven.

The third question explored whether students believed their classroom

performance and classwork completion would have been better if they were pursuing

education on campus during that time. The question was on a three-point scale and the

mean was 2.53 (n = 137) with a standard deviation of 0.718 (SD). This revealed that

more than half of the students felt their performance on-campus would have been better if they were pursuing education on campus. Overall, 66.2% of students said yes, 20.1% said maybe, and 13.7% of students said no. The results signal that motivation was moderately impacted with more than half of students indicating their motivation was significantly impacted and their academic productivity would be better on campus.

Correlation of Loneliness to Motivation and Academic Productivity

The data were analyzed to reveal the strength of correlations between loneliness, motivation, and academic productivity. Based on the results of the aggregate loneliness and question 11, regarding the impact of motivation due to the stay-at-home orders, loneliness and motivation have a statistically significant linear relationship ($r = .258$, $p < .001$). The direction of the relationship is positive, meaning that these variables tend to increase together. The magnitude, or strength, of the association is approximately low ($.1 < |r| < .3$).

Additionally, the outcomes of the aggregate loneliness scores and question 11, detailing the difficulty of motivation, revealed similar findings. Based on the results, loneliness and motivation have a statistically significant linear relationship ($r = .227$, $p < .001$). The direction of the relationship is positive, meaning that these variables tend to increase together. The magnitude, or strength, of the association is approximately low ($.1 < |r| < .3$). There is a statistically significant correlation between loneliness and motivation, but it was overall a low linear correlation.

Qualitative Analysis

In addition to the correlation of loneliness, motivation, and academic productivity, participants expounded upon their experience by answering two open-ended questions.

Based on the open-ended questions at the end of the survey, themes of the experiences of the participants were analyzed. The themes that emerged were mentioned by over 45 individuals. The sub-themes were less prevalent but were consistent in conjunction with the major theme that was presented. Four basic themes (Table 2) were determined based on the following two questions:

1. What specifically helped you to be motivated to get the necessary schoolwork completed during this time?

2. What were barriers to your academic productivity?

Table 2

Qualitative Themes

Theme	Description
People and relationships	Students verbalized the relevance of community, peer relationships, mutual accountability, family support, and professor understanding as a factor in their motivation and academic productivity.
Routine and schedule	Students described the benefits of time management and regularity in their daily life for them to be productive.
Environment	Students indicated the spaces, resources, and location of their academic work impacted their motivation and productivity.
Grades and GPA	Students perceived their grades and long-term academic success as a motivational factor for productivity.

Theme One: People and Relationships

The influence of people during the pandemic emerged as a theme in the results with 44 participants mentioning people as a motivation and 63 participants mentioning the lack of proximity with people as a barrier for academic productivity. One participant,

Barbara, shared that "all the things that used to give my life meaning felt purposeless when there was no community around me." For some students, the isolation was more apparent and added to a sense of hopelessness or lack of motivation. Additionally, another student, Richard, reflected that "there [were] no social interactions of studying or people to help with homework or group projects… Being home was hard and my family didn't understand I was also a student and needed to do work." The common ground among students on-campus was missing during this time and it decreased the drive for academics.

The lack of people and the addition of people both added barriers. For some students, people at home were very distracting. For others, the lack of people present prevented them from being able to process information with others. Additionally, when people were not doing the same things, this became a barrier to productivity. Students found that it was harder to find motivation in isolation and when others not doing the same task added distraction from focus and a temptation to join in. Participants were less productive when they were the only ones focusing on school. This theme reinforces the findings and the hypothesis that loneliness and isolation influence motivation and academic productivity.

Sub-Theme: Parents/Family Support and Expectations. Within the responses, family encouragement and support were prevalent. Twenty-two participants directly mentioned their family as an influence on their motivation. These participants wrote that family encouraged them to keep working hard, incorporated accountability, and reminded them of why they were pursuing their degree. Rachael said, "my family was very supportive of me, while taking classes online. They respected my space and gave me time

to work on school, but also spending time with them was restful and enjoyable. They are a huge motivation for my academic engagement." This was echoed in other responses and family was seen as a support, but also a necessary element of accountability and motivation. Andrew shared that "my parents had to help keep me motivated. They knew that I had classes and work to do, and they made sure that I was getting it done. I don't know if that was motivation or being forced, but my work got done one way or another."

Family either was highly motivating or highly distracting. On the other side, Jordyn, and other participants, mentioned the disadvantage of those around them when "no one else had deadlines and work to do except me." When family around the participant had other objectives other than schoolwork, this limited motivation and productivity.

Sub-Theme: Peers and Professor Collaboration and Accountability. In addition, professors and peers played a different role in the digital environment. Professors and peers were mentioned 19 times by participants. Several mentioned how beneficial it was to work with peers. Ray shared, "I also have found just how helpful it is to work with classmates, and that option was not as readily available to me at the time. I am sure that if I had classmates that I could have worked together with, I would have been even more productive." Additionally, scheduled one-on-one meetings with professors and advisors, receiving tutoring, and a posture of grace and understanding from professors were beneficial for productivity and motivation.

Students desired accountability when they were not in class with their peers or in-person with their professors. Seventeen participants brought up the lack of accountability during this time as a detriment to their motivation and productivity. Donna shared that "I

struggled to be productive in large part due to the lack of accountability from professors. Some classes assigned lectures to watch, but there was no way for them to ensure that you watched it which hurt my productivity quite a bit at times." Being in a classroom setting helped students to be attentive and learn the material more efficiently.

Theme Two: Routine and Structure

Twenty-six participants mentioned the addition of routine and structure as a motivating factor. Additionally, 19 participants mentioned the lack of routine and structure as a barrier. Abi found that the adherence to a schedule allowed them to complete their work more efficiently. She said, "I had a very specific schedule that forced me to get things done at certain times, even when I didn't want to or felt lonely." The responses indicated that without a schedule and regularity, this hindered productivity. Ridge shared, "for a couple of my classes, I didn't have regular deadlines. Instead, I had lots of assignments due at the end of the semester, so I did not manage my time well." While students were away from campus, they were away from their typical habits of studying so their schoolwork was hindered. Jack shared that scheduling specific hours for schoolwork and having a "set time to be done with school for the day" allowed for greater motivation.

Sub-Theme: Simplicity and Boredom. One aspect that the stay-at-home orders introduced was an increase in downtime and a lesser array of distractions and opportunities for outside involvement. For 21 participants, the simplicity that resulted from limited activities and social demands created an environment that allowed for better academic engagement. Noah said, "school was the only thing that I had to do when we were sent home, so while I was certainly lonely and stressed at times, I was also

motivated to do my work because it was all I could do." Having nothing else to do was a motivational factor. There was less external demand on the schedule so studying and schoolwork emerged as a remaining demanding factor. Haley shared that "I felt like I had more time on my hands to actually get my schoolwork done. I didn't have any other obligations like athletics or social obligations. The lack of all other kinds of activity, in a way." The simplicity allowed students to prioritize schoolwork more and were drawn to work on it more because they had "nothing better to do."

Theme Three: Environment as a Barrier of Motivation

The environment students found themselves in was a prevalent theme within the data. Fifty participants recognized that the environment and the spaces they found themselves in either hindered or helped their productivity. Being at home revealed for Megan that the "the lack of places to study were definitely a hindrance. It was either alone in my room or downstairs with my family. Either one provided distraction." For many, the fact that they studied and worked in the same place that was for resting was problematic for their focus. Lily shared that "the biggest barrier was not having a space where I could go to study that felt exclusively like a study space. It's important to me that I have places to go where I feel productive, and I lacked that in the pandemic." For some students, this could be helped through intentional placement of their schoolwork. For example, students could make an effort to do classwork and participate in class at a desk instead of on a couch or bed where they are more likely to fall asleep. The perception of home and the spaces that were available to do work limited the productivity of participants. Kyle shared that they "see home as a place to be away from the classroom

and rest rather than having to do all of my assignments there which made it hard to balance the two environments."

An important theme to note is the lack of resources. Thirteen participants mentioned the specifics of the lack of facilities, equipment, and necessary supplies. Based on the major of a particular student, classes were more achievable off-campus and with less collaboration. However, one student, Carly, shared their difficulty with the location and lack of facilities and said, "I am an art major, and many of my assignments require the facilities available [on campus]." With improper equipment to complete the work they needed to do, students were less able to participate and learn.

Additionally, wi-fi speed and internet availability were obstacles for several students. Lindsey shared that while "living in a rural area my family struggled to find high speed internet. With my brother and I both trying to complete our college assignments we had consistent problems with our wi-fi crashing." The resourcing and access to technology was a barrier to how students were able to engage in their academic work.

Sub-theme: Distractions. Distractions were mentioned 38 times in the research. Brightyn shared that while they were working in their room, this resulted in a difficulty in doing homework in the space when they could "just watch TV, play videogames, or go to sleep instead." The noise of their environment and the lack of separations of purpose in space hindered the motivation of several participants.

Theme Four: Grades and GPA

Forty-four participants specifically mentioned grades and GPA as a motivational factor. In addition, the long-term oversight into the future and the hopes of completing

their college degree was a motivating factor for 15 participants. Many participants were keenly aware that they needed to maintain their grades and GPA. The knowledge of the repercussions of a poor grade were the motivation to complete their work and to be productive. For Ashtyn, the simple concept made a difference that "if I did not get it done, my grade would drop" and they didn't want their GPA from freshman year to set the tone for the rest of their career.

A few responses reflected that grades and GPA took part in the participants' identity and self-worth. John said, "I (wrongly) place a lot of my identity in my academics and my grades, so I had a lot of intrinsic motivation to do well in my classes but no motivation to actually learn and engage with the content. I finished my assignments on time but did not really learn anything from the work I was doing." Participants discussed a disconnect between truly learning material and simply engaging to get by in their classes. The deadlines and percentage grades were a tangible representation of academic productivity. Another participant, Stephanie, said that "grades and deadlines kept me motivated. I wanted to do well grade wise so I did my work, however, if I wasn't pushed to keep good grades my efforts would have dropped greatly." Without the measure of academic productivity and the form of feedback in the form of letter grades, certain students would not have had the motivation to put in academic effort.

Additionally, future-oriented mindsets were mentioned 15 times. Participants brought up the impact of grades affecting scholarships and their future. Students wanted to succeed in their classes so they could have a better future. Future mindsets in participant responses varied from life goals, having a better life than how they grew up,

giving back to their family, and looking forward to the next semester. One participant, Jenna, summed this up sharing their motivation was "the end goal of getting my teaching degree to be able to get a job that I love and move out of my parents' house."

Other Notable Items

In the reading, there were several other notable items that were revealed through the research. They did not emerge as strongly as the four main themes, but their magnitude was notable. A few responses that are pertinent to discuss surround the issues of mental health and the state of the country during this time. Because the stay-at-home orders were enforced because of a global pandemic, this created new fear in many, unprecedented circumstances, and added a sense of unimportance and irrelevance to study compared to the larger events in the world. This was seen in responses such as Greg's, who stated, "the upheaval of the normal order of things—if the world can turn on its head in a matter of days, school seems less important." Five students mentioned the prevalence of the pandemic and how the reality of Covid made school feel less important or would elicit fear that was a barrier to their productivity. Additionally, 19 students reported that their mental health was a significant obstacle for their academic engagement. Mental health was not the highest factor in the study, however, for those that mentioned mental health, it was highly significant and a large hindrance for them.

Furthermore, mentioned by 21 participants were the detrimental effects of poor online course quality. According to AJ, there was "just a lack of care for an online education. The content was rushed out and not as deep or rigorous, with the in-person relationship with the professor also taken away." Another participant, Steve, expounded that "online classes made classes feel less real and therefore less important. During class,

it was easier to get distracted or not pay attention." The transition into the pandemic gave professors little time to prepare to switch classes to online material which seemingly lessoned some of the content matter. Additionally, online classes were much more difficult to engage with, in general, for some individuals.

Self-motivation was brought up by 27 participants where the temperament of the student and their passion or commitment to their studies aided their productivity. Students that were previously homeschooled or who enjoyed the concepts they were learning, displayed greater confidence in their own motivation. For instance, one student, Christy, was home schooled most of their life and said they would "just get everything thing for the week done on Monday and then have time to work ahead or hang out." Another participant, Jimmy, stated that because they were homeschooled "doing homework at home on their own time was not more difficult than high school." In terms of self-motivation, Levi wrote that "I have fairly high standards for myself because I know I'm capable of being a great student. I didn't want to sell myself short and get bad grades just because I wasn't on campus and physically in a classroom." Dreams, ambitions, and expectations for themselves aided students in their ability to remain on track.

A notable barrier for students who live abroad was the time change and the fact they were required to be in class during the middle of the night. These students had to adapt to a work environment at less ideal hours which may have impacted sleep patterns and the ability to maintain a normal schedule. Only three people wrote about how they had no barriers to their productivity, or how they were more productive during this time. The rest of the 136 participants found their productivity impacted in some way. Overall,

the primary barriers in productivity for students was the lack of people, environment, structure and routine, and grades and GPA.

Conclusion

This study sought to answer the question: How does motivation affect academic productivity during times of loneliness, such as in a global pandemic? Through a parallel convergent design, this chapter displays the loneliness, impact on motivation, and themes that emerged through the pandemic. The study indicates that students considered themselves lonely during the time of the pandemic but had varied experiences with motivation. The major factors that influenced students in their productivity were relationships, schedules, grades and GPA, and the environment they found themselves in. The next chapter provides a discussion of the implications and future research based on the findings.

Chapter 5

Discussion

This study provided unexpected results and insight into academic productivity during unprecedented times. The pandemic created sociological conditions that seldom affect people in a magnitude of this size. This opened the doors for unique studies and research on lifestyle change without requiring people to change their lives for the research. This study takes full advantage of the specific circumstances and adds to the discussion on the topic of motivation, productivity, and academic productivity.

Benefits

This research dove into student reaction to isolation and how they interacted with academic work. This type of research helps to give a framework for professors and administrators to view in order to be aware of student responses and how the educators can meet the students part way. One of the goals of this research was to find the best practices to interact with a wide variety of students remotely while they may be experiencing loneliness. In the case there is another pandemic or phenomenon that requires stay-at-home orders, this research forms a basis for the problems and best practices during this time. In addition, this research aids in the process of taking assumptions from the pandemic and moving them toward certainty. Therefore, instead of simply noticing a correlation between loneliness and its effect on student work and motivation, there were quantitative data that helped lay the groundwork for the

hypothesis. Additionally, this research helps to honor the stories of students that overcame potential obstacles due to unconventional circumstances in the pandemic.

Overall Loneliness

Loneliness was a prevalent theme in this research. The survey indicated a high level of loneliness among students during the pandemic. This finding was complemented with the finding of the theme of "people and relationships." The average scores for loneliness from the survey were in the "sometimes" range for experiencing loneliness, meaning the majority of students expressed they experienced loneliness occasionally during the pandemic. Many students expressed that this time was one of the loneliest times for them, yet not all shared the experience.

There were some students who shared that they were not lonely during this time. This could be for many reasons, but likely a result of perceived introversion, positive family experiences, or a lack of adjustment to the short period of college they experienced in the fall semester. Students had very different environments and family situations they were returning to. Those that had positive relationships with their family had an easier time adjusting to being at home and some shared that they liked the time at home better than at school. The support and impact that was brought on by family was significant. Several attributed their success to their family's support. Additionally, when students were around other people that were also doing schoolwork, it was easier to get things done. Enjoying the change of pace brought on by the pandemic was not the majority but displays the imperfection of the pandemic as a controlled experiment. There are many factors that went into how students interacted with their circumstances, and these cannot be evaluated to the full in this limited research.

The loneliness theories discussed in Chapter 2 could provide context to the students that did not find themselves lonely. For example, the social needs perspective theory on loneliness states that when basic human social needs are not met, loneliness occurs (Perlman & Peplau, 1998). Therefore, if students had their basic human social needs met through proximity with their family or satisfying communication through technology, they may not have experiences loneliness to the same degree. Additionally, the cognitive discrepancy model of loneliness depicts the relationship between a person's desires or expectations for relationships and the reality of the individual's social life (Perlman & Peplau, 1998). This could lead to students' expectations for their social experience. Some students strongly desired more in their social relationships at the time, while others were satisfied which led to a varied response in loneliness.

The results also translate well to Schlossberg's Transition Theory that describes the continuous nature of transition and provides a systematic framework of situation, support, self, and strategies to cope (Schlossberg, 1981). This is seen in the research in some of the students that handled the transition poorly and positively. The support system from family and connections was prevalent, as well as self-support and motivation. Additionally, the situation the students found themselves in after being sent home determined what kinds of distractions they would face and the environment and resources they had to work with. Some students employed excellent strategies of planning and structuring their time that allowed them to keep a steady rhythm. Overall, this time was a huge transition and students were constantly adapting.

Prior to this study, I expected to find a strong positive correlation between loneliness and lack of motivation, so that when loneliness increased, the lack of

motivation and academic productivity would also increase. However, this research indicates that there is a low positive correlation between the factors. While analyzing the results, I compared the correlational results of the students who said they were the loneliest to the students who stated they were not lonely to correlate the values of motivation and found nothing significant. I had expected to find a stronger correlation with the students who claimed to be the loneliest—and their perceived lack of motivation—and the least lonely, but the distribution of the lack of motivation and academic productive varied too much across the data.

As mentioned above, loneliness was found to be a prevalent issue with the stay-at-home orders. However, ratings of productivity and motivation levels were dispersed more widely. This is because there were unique circumstances that aided productivity and had very little to do with loneliness. One of the main factors for the retainment of productivity was that there was less external demand for time and the addition of simplicity. Students mentioned that there was often not much else to do other than homework. This allowed time to think, explore interests and hobbies, and utilize imagination. The pandemic removed athletics, extracurricular activities, and social outings. Additionally, this also stripped some natural structures of routine. Therefore, some students were able to introduce routines and schedules for themselves that worked with their newly isolated lifestyle. Those that were aware enough to acknowledge the change in routine and possessed the ability to add structure to their lives tended to adjust better.

I anticipate that if the same demands on time existed, students would have less time to be productive in their academics. However, it is these very activities that bring in the social factors that help combat loneliness. The paradox of the pandemic added more

time and less socialization into people's lives. Astin's (1984) Involvement Theory positively correlates the amount of physical and psychological energy that the student devotes to the academic experience to the amount of student learning and personal development they will undergo. Therefore, because students were less involved in the college setting, they may have had less learning and growth during this time.

Motivation and the Student

Additionally, as discussed in the literature review, temporal motivation theory represents how much satisfaction or drive reduction an outcome is believed to realize due to the value, expectancy, impulsiveness, and time (Steel & König, 2006). The attractiveness of an event depends on both the situation and differences in the individual. Different students are satisfied and motivated by incentives and outcomes to varying degrees. Outcomes can satisfy needs to different degrees. Therefore, students that were used to the demands of online or independent work, such as those who were homeschooled previously, were more motivated and knew how to handle the task at hand. Additionally, those that believed they could finish school and see the long-term goals were more motivated.

Students that were more effective during the pandemic were those that reacted more positively to intrinsic motivation or had access to more extrinsic motivation. Specifically, some participants mentioned the drive and ability to find motivation for themselves, create a routine or schedule, or find enjoyment in their coursework. Additionally, the significant extrinsic factors were family, environment, and grades. The students that relied solely on extrinsic motivating factors appeared to have a more

difficult experience than those students that were able to maintain disciplines of their own accord.

I was surprised to find how significant the environment students were in affected them. Students need space in their lives to do work that is separate from their personal life. For example, it was less effective to complete homework in a bedroom that also symbolized rest. Those that had environments that suited their future work-life patterns adjusted better to the circumstances.

The measure of productivity and motivation may need to be tweaked to detect more specific elements. This study captured a snapshot, but a more specific instrument may need to be assessed. To measure true productivity, the assessment of grades, quality of work, and the time it took to complete would be beneficial to explore. Therefore, there is the possibility this research could not capture the full picture of how productivity and motivation changed for students, and this could be why the correlation was weaker.

The Online Educational World

Based on the literature, I anticipated discovering more about the hindrance technology had on students' connection with others as well as more discussion surrounding procrastination. However, phones seemed to add a distraction but allowed students to maintain an amount of beneficial connectedness. Technology only emerged as a barrier in terms of online learning and logistics. With the sudden transition to online learning, professors had less time to prepare their coursework and adapt it to an online curriculum. Therefore, many were attempting to use the same coursework with a different setting and students lacked resources, communication, and the ability for collaboration and accountability with peers. Zoom classes were also a challenge with technological

difficulties such as wi-fi, connectivity, and troubleshooting. The quality of class was decreased for some because professors were unfamiliar with the software.

On the other hand, I was not surprised to find how much students relied on their grades. I was sobered by the attitude in which students shared their motivation from grades was one of the only things keeping them going. For some students, working online reduced their academics to a transactional experience where they were far removed from professors and fellow scholars so that it became an individual and isolating experience with grades in return for their work they submit. Without the physical classroom setting and proximity to others, school was reduced to a task to simply get through.

The reduction of work to a task reveals the need for future research to determine whether students actually learned during the pandemic. The quantitative results show that productivity and loneliness don't have a strong correlation, but the qualitative results show that learning during this time may have been less meaningful. The work that students were engaging in during the pandemic was centered toward the ability for students to complete the tasks. Therefore, there may be a correlation between the social connectedness of students and their drive to learn.

Implications for Practice

While the pandemic was a unique circumstance that will likely never happen again, the principles of online classwork, lack of motivation, and loneliness will exist in the educational realm indefinitely. Therefore, there are several takeaways from this study to increase student engagement in their academics and steward online courses well. Educators can learn to decrease disconnect, be mindful of environment, incorporate routine, and increase accountability.

First, to create less disconnect amongst students, collaboration and community must be a priority. This can take place in a classroom setting or online. However, incorporating discussion, teamwork, and building relationships aids the student's sense of belonging. Additionally, the availability of the professor to be accessible and meet with students builds trust and helps information to flow more smoothly.

Sometimes students will try the same strategies for productivity hoping for different results. Their environment is one strategy this happens with often. Students need spaces for work that are separate from their personal life, but the realization and changing of habits takes willpower. Professors can begin the discussion and assess with students whether their environment is working for them or against them.

Another strategy would be to have a teaching routine and schedule that works for professors and students. Especially in online courses, it can be beneficial to incorporate regularity. This includes regular hours to assist and meet with students as well as moments in class to form connections. Finally, accountability can be obtained by sharing goals, tracking progress, and allowing students to delve into areas of the course that intrigues them. To aid in accountability, professors can incorporate goal-setting and grading goals for the classes or peer accountability programming in online work.

Implications for Future Research

Future research would be beneficial for exploration of this vast topic. The research set out to discover that loneliness would cause decreased motivation and academic productivity. The data revealed that students were in fact lonely, yet there was not a strong correlation with motivation. Additionally, themes of environment, grades,

people, and routine arose. Therefore, for future research, loneliness, relationships, and motivation should continue to be explored to fill in the gaps.

It would be helpful to discover more strategies for loneliness and its impacts. Specifically, research how loneliness impacts online work and what other factors it influences. Loneliness and motivation could be looked at further to clarify if there are more ways to pinpoint a correlation with less external factors influencing the results. This can include whether students were able to learn or how mental health factored into the results.

Additionally, researching the most beneficial ways to incorporate peer collaboration online would be helpful. Relationships and peer work are important, yet the same strategies do not always work on online platforms in the same way they work in the classroom. Learning strategies that are tailored toward online education can aid in maintaining the quality. Therefore, an exploration of the strategies for online platforms could be added to the discussion.

Finally, motivation can be explored more elaborately to discover why some students seem to have dispositions toward intrinsic and extrinsic motivations. These findings could help to understand techniques and lifestyle changes to increase and expand motivation for all students.

Limitations

Despite the attempt for thorough research, there are several limitations to this design. First, due to the timing of the pandemic, the data analyzed pertain to events that happened in the past. This leaves error due to faulty memory and changed perceptions based on current life standings. In addition, the research only focused on a specific

institution with religious leanings in the Midwest. The participants were only focused on students who were freshmen at the time of the pandemic so the breadth of experience from different grades will not be represented. In addition, those that did not sustain their education and persist toward graduation were not represented. The random sampling included only students who have remained in school and overcame the obstacles that arose during the time of the pandemic.

Conclusion

The findings in this research point towards the complicated nature of online education. The results were largely in part due to the ineffective ability to transition full course loads to online classes. The transition was easier for some professors, courses, and students. However, this transition reveals areas of improvement for online education and instances with students who are working more independently and isolated. The findings reveal the importance of faculty availability and collaboration in work. Additionally, access to technology and proper resources are simple fixes to take on. Mental health should be considered in order to provide support and check-ins for students to thrive. The results in this research indicate that students were impacted by the pandemic. Students were lonely and their productivity was impacted. Their ability to learn and enjoy their coursework may have also been affected.

Hopefully the world is never confronted with another pandemic again. However, the ways in which educators and students face schoolwork can be adjusted. Classes should be structured with maximum connection in mind. Students should seek out spaces for themselves that provide a degree of compartmentalization within their work-life

balance. Overall, environment, connection, drive, and routine are vital to the success of a student in an online setting.

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Appendix A

Informed Consent

TAYLOR UNIVERSITY

INFORMED CONSENT

Assessing the correlation of students' loneliness, motivation, and academic productivity during their college experience.

You are invited to participate in a research study on how students' motivation affected academic productivity during times of loneliness, specifically during the pandemic, during their time in college. You were selected as a possible subject because you were enrolled as a student at Taylor University in the 2019-2020 school year when Taylor sent students home due to the stay-at-home orders. We ask that you read this form and ask any questions you may have before agreeing to be in the study.
The study is being conducted by Alyssa Bates, graduate student (MAHE). It is not funded.

STUDY PURPOSE
The purpose of this study is to assess the correlation of students' perception on their motivation, academic productivity, and loneliness during the stay-at-home orders.

NUMBER OF PEOPLE TAKING PART IN THE STUDY:
If you agree to participate, you will be one of approximately 100 subjects who will be participating in the online survey.

PROCEDURES FOR THE STUDY:
If you agree to be in the study, you will do the following things:
Participate in the following survey. This is a one-time occurrence and in total should take no more than 10 minutes.

RISKS OF TAKING PART IN THE STUDY:
While on the study, the main risk of participating in the survey is being uncomfortable answering the questions. While filling out the survey, you can choose to end the survey at any time should you feel uncomfortable or skip a particular question. In the event of significant discomfort, free and confidential counseling services are available from your institution.

BENEFITS OF TAKING PART IN THE STUDY:
There are no benefits to participation that are reasonable to expect, although you would be helping to expand the understanding of how motivation effects academic productivity in times of loneliness for college students.

CONFIDENTIALITY

Efforts will be made to keep your personal information confidential, but we cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Your identity will be held in confidence in reports in which the study may be published and databases in which results may be stored.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the Taylor University Institutional Review Board or its designees, the study sponsor (Alyssa Bates), and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP), etc., who may need to access your research records.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study or a research-related injury or in the event of an emergency, contact the researcher, Alyssa Bates, at alyssa_bates@taylor.edu. If you are unable to reach Alyssa, you may contact Jeff Aupperle at jeffry_aupperle@taylor.edu.

VOLUNTARY NATURE OF STUDY

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with Taylor University or the researcher.

Your participation may be terminated by the investigator without regard to your consent in the following circumstances: Extreme emotional distress in order to prevent further emotional trauma.

If you have any inquiries regarding the nature of the research, your rights as a subject or any other aspect of the research as it relates to your participation as a subject can be directed to Taylor University's Institutional Review Board at IRB@taylor.edu or the Chair of the IRB, kris_johnson1@taylor.edu.

SUBJECT'S CONSENT
In consideration of all of the above, I give my consent to participate in this research study.

I will be given a copy of this informed consent document to keep for my records. I agree to take part in this study.

Appendix B

Survey Questions

Where did you complete the semester after the institution sent students off-campus in March 2020?

Please answer the following questions based on the time you spent away from campus in March-May of 2020 after Taylor University dismissed students to complete the spring semester away from campus due to the beginning of the Covid-19 Pandemic.

Scoring for the following questions: Often Sometimes Rarely Never

1. During the time away from campus, I felt like I lacked companionship.
2. During the time away from campus, I felt my social relationships were superficial.
3. During the time away from campus, I felt I was unable to reach out and communicate with those around me.
4. During the time away from campus, I felt my interests and ideas were not shared by those around me.
5. During the time away from campus, no one really knew me well.
6. During the time away from campus, I felt isolated from others.
7. During the time away from campus, it was difficult for me to make friends.
8. Overall, during the time away from campus, I felt lonely.
9. Overall, I was lonelier away from campus than I was during my time on campus prior to the pandemic.

Section 2:

10. To what extent was your motivation for academic engagement impacted by being away from campus?
    - Scale: 1-10 None, very much
11. To what extent was it difficult to be motivated to get your work done during the stay-at-home orders?
    - Scale: 1-10 not difficult at all, extremely difficult
12. Do you believe if you were pursuing education on campus during this time, your class performance and outside classwork completion have been better?
    - Yes, maybe, no
13. How motivated were you to be productive to get the work done that needed to be done?
14. What were barriers to your productivity during the pandemic?

15. Is there anything else you would like us to know about your productivity during the pandemic?