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# Relieving Students' Institutional Debt and Student Success: A Correlational Study

Robert Perez

# Relieving Students' Institutional Debt and Student Success: A Correlational Study

by

Robert Perez

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Dissertation Committee:
Jennifer Jones, Chairperson
Emeka Ikegwuonu
Steven McCullar
Nora Morris

## Abstract

Higher education costs have risen dramatically over the last forty years, leaving many students unable to pay the total cost, even after aid is applied. This results in outstanding debt to the institution they attend. This outstanding institutional debt leads to registration, and transcript holds, resulting in students' inability to continue pursuing their educational goals. Research has shown that students with outstanding institutional debt are twenty-five times less likely to persist. This study aimed to determine if there was a correlational relationship between institutional debt relief and success, with success defined as graduating, re-enrolling, or transferring during the three terms after the debt payoff. As a result of the COVID-19 Pandemic, Higher Education institutions had the opportunity to use grant dollars to relieve students of debt accumulated during the pandemic. I use logistic regression modeling in this quantitative correlational study to predict the relationship between debt payoff status and success. Results suggest that even when a student's outstanding debt is relieved using grants, they continue to encounter a decreased likelihood of success. My study also sought to determine if there was a correlational relationship between certain demographics such as age, gender, socioeconomic level, debt payoff, and success. This study contributed to the limited research by scholars attempting to understand the ramifications of outstanding institutional debt for students. My study also provides valuable data that may help administrators develop equitable policies relating to past-due student accounts.

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# Chapter 1: Introduction

What happens when a student is burdened by the debt they owe the institution they attend? Lingering institutional debt, as low as a few hundred dollars, can upend a student's goal of obtaining a post-secondary degree (Hubert, 2021; Butrymowics, 2022). Students with unpaid tuition or fees are often barred from registering for classes, with many withdrawing (Ison, 2021; Butrymowics, 2022; Eaton, 2022). More so, past-due institutional debt can lead to wage garnishments, seizure of tax returns, and negative credit implications, affecting the most vulnerable students (Ison, 2021). The issue was brought to light during the COVID-19 Pandemic of 2020-2021 as the number of students with institutional debt increased by 31.7% nationwide (NACUBO, 2022). As a result of the Pandemic, Federal relief funds were made available to colleges and universities to relieve students of this debt (Hubert, 2021; Butrymowics, 2022; Faircloth, 2021). My study determines if a correlation exists between relieving a student's past-due institutional debt and success and if specific demographic variables play a role. For the purpose of this study, success is defined as graduating, re-enrolling, or transferring at the community college and graduating or re-enrolling at the technical college.

As part of the overall Federal response to the Pandemic, Congress enacted The American Rescue Plan (ARP), which provided direct economic relief to the nation during the Pandemic (U.S. Department of Education, 2022). Part of the ARP offered financial assistance to colleges, universities, and their students. This portion of the ARP is referred to as the Higher Education Emergency Relief Fund (HEERF) (U.S. Department of Education, 2022). Colleges and universities could pay off a student's past-due student account balances using the HEERF grant to assist them financially and help keep them enrolled during the Pandemic (U.S. Department of

Education, 2022). Hundreds of institutions across the country seized the opportunity to eliminate this debt for students (Faircloth, 2021). The average debt eliminated was $1,200 per student (Faircloth, 2021). In July 2021, City University of New York announced it would pay off outstanding balances for at least 50,000 students, totaling over $125 million in student debt (Weissman, 2021a). In addition, historically Black colleges and universities (HBCUs) were the first to announce using stimulus funds to eliminate students' institutional debt in commencement ceremonies in May 2021 (Weissman, 2021b). In Minnesota, Rochester Community and Technical College forgave 638 individual student debts of up to $3,000, totaling $785,000 (Faircloth, 2021). Normandale Community College and Minnesota State Community and Technical College are just two of many institutions nationwide that spent over $1 million to clear students' institutional debt (Faircloth, 2021). This study takes place at one community college and one technical college in the Midwestern United States that took this action.

The COVID-19 Pandemic and the financial crisis it caused negatively impacted college students and the institutions they attend. Enrollment declines and mid-semester withdrawals occurred at a higher rate than in any period prior to the pandemic (Eaton, 2022). Community colleges saw the most significant enrollment decline at 9.5% nationwide from 2020 to 2021 (Zerbino, 2021). Before the Pandemic, students were already navigating a historical trend of rising costs, leading to increased student debt (National Center for Education Statistics, 2022a).

In the literature review, I examine why higher education costs have increased over the last 40 years. These reasons include reductions in state budget appropriations; competition for funding with other public interests; neoliberal ideologies; the availability of student loans and increases in administrative and operational expenses.

From 2000 to 2020, average postsecondary tuition inflation outpaced wage inflation by 111.4% (Hanson, 2022). While considered the most affordable form of higher education, public 2-Year college tuition rose 108.3% between 1990 and 2021 (Bouchrika, 2022b). This increase has resulted in economic hardship for many students, particularly those from lower incomes (Ma, 2017; Fitzthum, 2020; Velez, 2017; Webber, D., 2017). For example, between 2006 and 2016, income for families in the lowest 20% of income distribution remained stagnant, while inflation averaged 2.5% annually (Bureau of Labor Statistics, 2022), and the cost of higher education increased an additional 3.2% average per year (Ma, 2017).

The financial aid system within the United States was designed to make higher education accessible to all and address the rising costs (Baum S. M., 2019; Chen, 2008). Unfortunately, financial aid in this country has been unsuccessful in meeting its original objective, resulting in an unmet financial need for many students (Bouchrika, I, 2022a; Goldrick-Rab, 2016b). In 1980, an original form of financial aid known as Pell Grants covered approximately 77% of the cost of attending a four-year public college (Delisle, 2021). In 2021, Pell Grants covered only 29% (Delisle, 2021).

Unmet need is the difference between a student's expected family contribution (EFC) and the amount of need-based aid they are awarded (Goldrick-Rab, 2016b). This unmet financial need often results in accumulated student loan debt and outstanding institutional debt (Ison, 2021). Institutional debt is the debt a student accumulates with the college or university for unpaid tuition, fees, and other charges after financial aid or other payments are applied to their accounts (Ison, 2021). Outstanding institutional debt is the amount that is past due. Outstanding institutional debt decreases the likelihood of graduation, with underrepresented students

disproportionately affected (Ison, 2021). My study builds on the limited literature on outstanding institutional debt and its impact on persistence.

When students accumulate outstanding institutional debt, holds are placed on their accounts, often barring them from registering for courses until the debt is brought current, effectively halting their academic progress (Ison, 2021). In addition, colleges and universities use transcript holds to collect outstanding debt. In this instance, transcripts are held until the debt is current, making it difficult for a student to apply at another institution. Transcript holds may even prevent a student from getting a job when the employer requires a copy of an applicant's college transcripts (Ison, 2021). A college or university business office will place a registration or transcript hold on a student account with a past-due balance to ensure collections and reduce the institution's exposure to additional uncollectible revenue (Anoka-Ramsey Community College, 2022). While some institutions, such as Georgia State University, provide students with micro-grants to help with these shortfalls and avoid registration and transcript holds, these programs are rare (Georgia State University, 2022). In a study focused on institutional debt, Ison (2021) concluded that students with outstanding institutional debt were twenty-five times less likely to graduate than those without it.

## Two-Year Community and Technical College Students

I chose 2-Year Community and Technical College students in my study because of the historical role these institutions have had in improving access for lower-income and underrepresented students. Unfortunately, community college students are at the most significant risk of accumulating outstanding institutional debt (Ison, 2021). Community college students tend to be lower income and encounter financial hardships at a higher rate than students at four-

year colleges (Gladieux, 2005). Ison (2021) found that community college students who received Pell Grants were likelier to accumulate unpaid institutional debt than those who did not. Ison (2021) reasoned that this resulted from the outstanding balance on their accounts when the grants they received were insufficient to cover the total amount they owed to the institution.

## Theoretical Framework

The theoretical framework I chose to help explain my study is Chen's (2008) Heterogeneous Model for understanding how various financial aid awards influence student dropout behavior. Chen (2008) noted that this line of research focused on the effects of financial aid in general and had not focused on the differences in dropout behavior across socioeconomic and racial/ethnic groups and how financial aid influences these groups. Chen (2008) explained that larger samples across multiple institutions in a longitudinal nature- are ideal for this type of study. Chen (2008) also noted that binary logistic regression models could be utilized due to the dichotomous nature of student departure or success as the dependent variable.

## Statement of the Problem

Higher education costs have risen dramatically over the last 40 years (National Center for Education Statistics, 2022). Unfortunately, federal financial aid has not kept up with this rise (Delisle, 2021). As a result, students have accumulated additional debt to cover their costs. The average debt for a student leaving college is now approximately $30,000 (Kerr, 2022). Part of this debt includes institutional debt or monies owed to the college or university they attend. When students cannot make payments or get behind in payments to their institution, they are often put into a registration hold status, halting their progression. Students in a registration hold

status cannot register for courses for an upcoming term. Unpaid institutional debt correlates with decreased persistence (Ison, 2021).

## Research Questions

- $R_1$: What is the correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off?
- $R_2$: What is the correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off?

## Research Hypotheses

Hypothesis 1 will answer Research Question 1.

- $H_{01}$: There is no statistically significant correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off.
- $Ha_1$: There is a statistically significant correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off.

Hypotheses 2 will answer Research Question 2:

- $H_{02}$: There is no correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), past-due institutional

debt payoff status, and student success status within three terms after having the debt paid off.

- $Ha_2$: There is a statistically significant correlational relationship between one or more student demographic variables (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off.

## Methodology

My research analyzes pre-existing data from a list of all students that attended a community college and a technical college from Spring 2020 through Fall 2021 in the Midwestern United States. The list of students also identifies whether the student had any past-due institutional debt accumulated during the COVID-19 Pandemic. These students had their outstanding account balances paid off using HEERF funds. In July 2021, 1,316 students received HEERF funds that were applied to their student accounts to pay off outstanding institutional debt. The total population of students was 10,314. I conducted descriptive statistics to analyze these samples and categorize the population into various demographics. I used logistics regressions to test whether debt relief correlated with improved student success (re-enroll, transfer, or graduate) and to analyze how the different demographic variables related. Ison (2021) found that community college students who did not have an outstanding tuition balance were 25 times more likely to persist or graduate than those with debt. I used binary regression modeling to calculate the odds of succeeding for those students whose outstanding institutional debt was paid off. In addition, I compare the results to the general population success rate.

## Purpose of The Study

My study provides higher education administrators with data to understand if there is a statistically significant correlational relationship between past-due institutional debt payoff status and student success status within three terms after having the debt paid off. This study defines success as re-enrolling, graduating, or transferring at the community college and re-enrolling or graduating at the technical college. In addition, this data could be used to determine if institutional debt relief is an appropriate investment by the institution. As a practitioner-scholar in finance and administration in higher education, I often struggle with existing policies that can halt students' academic progress based on outstanding institutional balances. While these policies help ensure the institution remains financially stable, they are not always developed with the student's best interest in mind. The data from my study will assist administrators in writing policies related to past-due institutional balances that benefit both students and the institution.

## Significance of the Study

My study will determine if there is a statistically significant correlational relationship between past-due institutional debt payoff status and student success status within three terms after having the debt paid off. In addition, it is to provide more data on how particular socioeconomic, gender, racial/ethnic, and other demographic variables are related to success when outstanding institutional debt is relieved or paid off by a grant.

My study's broad significance is to provide data that could benefit administrators when developing policies pertaining to outstanding institutional debt. My study would also be significant in helping administrators determine the value of offering grants to relieve students of past-due institutional debt.

## Limitations

My study has several constraints due to the methodology used and the data I accumulated. First, pre-existing demographic data in my research was intended for admissions and financial aid eligibility, which means it may be incomplete and, therefore, not representative of the student population. While my study data may identify correlation, the results are limited because I may not determine causation (Lee, 2021). Other unidentified variables not included in my analyses (such as motivation or employment status) may affect the results.

While my study determines if there is a statistically significant correlational relationship between past-due institutional debt payoff status and student success status within three terms after having the debt paid off, this study is taking place within a unique world event, the COVID-19 Pandemic. COVID-19 continued to impact students' lives and could have potentially affected persistence beyond the financial implications it has had.

One limitation of this study is the limited existing research on institutional debt. While multiple studies (Baker, 2019; Chen, 2008; Dowd, 2006; Canche Gonzalez, 2020; Baum & Steele, 2010; Qayyum, 2019) analyzed the effect of traditional student loan debt and persistence, only one focused on institutional debt (Ison, 2021). Furthermore, that study noted no other known studies on the topic (Ison, 2021).

Another limitation of my study is that it takes place in one community college and one technical college in the Midwest United States. Further studies could potentially analyze the correlation with a larger data set encompassing students from multiple campuses, types of institutions, geographies, and time frames.

Time constraint is another limitation as the option to study institutional debt relief came with a specific time frame in which the HEERF grant could be used. Expressly, grant stipulations required that the HEERF grant could only be used for debt accumulated during the COVID-19 National Emergency declared in March 2020 by The President of The United States (U.S. Department of Education, 2022). Therefore, the grant could be accessed no earlier than July 2021 and was to be used in this single opportunity.

## Delimitations

As a Director of Business Affairs and Administrative Services, I chose this topic of study because the topic is of particular interest to me in my role of managing student accounts and developing policies around delinquent student balances. A further understanding of the correlation between institutional debt relief and student success could lead to policy revisions that benefit both students and the institution. In addition, I chose the two-year college space as this is the area I am currently employed and where my research interests lie.

## Assumptions

This study assumes that students accurately listed their demographic information on their admissions records and that the limited demographic categories that admissions use accurately represent the students being studied. Another assumption is that the data related to which students had past due institutional balances and were paid off using HEERF grant funds was complete and accurate.

## Definition of Key Terms

*COVID-19 Pandemic:* The Pandemic that resulted from the spread of a virus referred to as SARS-CoV-2, which originated in China in December 2019.

*Financial Aid:* Money awarded from state, federal, or campus-based sources that students use to help pay for college costs.

*Free Application for Federal Student Aid (FAFSA):* The yearly application that students and their families complete to determine their eligibility for federal financial aid.

*Higher Education Emergency Relief Fund (HEERF):* A Federal emergency grant initially funded in 2020 to directly support students and higher education institutions for Coronavirus related expenses.

*Institutional Debt:* This term refers to the outstanding balance a student owes to the institution they attend. Institutional debt refers to any outstanding balance on their student account and typically includes tuition, fees, and other charges left after financial aid or other payment types are applied.

*Low-Income Students:* Students eligible for Pell Grants are considered low-income students for this study.

*Neoliberalism:* Neoliberalism is an ideology and policy model that encompasses politics and economics and seeks to transfer the control of economic factors from the public sector to the private sector. Neoliberalism is often associated with austerity policies and attempts to cut government spending.

*Registration Holds:* The business office of a college or university typically places holds on students' accounts having past due balances to ensure collections and reduce the college's exposure to additional uncollectible revenue. Holds are placed on accounts before registration begins for the next semester. Students with a registration hold may not register for courses until the student pays the past-due balance and the Business Office removes the hold.

*Success:* Students who re-enroll at the college the following term (s), graduate from their program, or transfer (community college only) to another institution after having their institutional debt paid off.

*Transcript Holds:* Transcript holds are another hold a college or university business office places on a student's account. When a student has a transcript hold, the release of their transcript is held until their financial obligation is brought current.

*Unmet Need:* Unmet need is the gap between the cost of college and all student resources that do not need to be repaid, such as scholarships, grant aid, and a student's Expected Family Contribution (EFC), calculated in the Free Application for Federal Student Aid (FAFSA).

## Organization of the Dissertation

In this chapter, I provide background regarding institutional debt and how the COVID-19 Pandemic provided an opportunity to relieve students of outstanding institutional debt. I provide an overview of the rising cost of education and its effect on the financial aid system and students. I have included a brief overview of the theoretical framework I use to help explain my study. I also describe the problem statement; the significance of the study; the research questions and methodology, and explain the objectives, limitations, and delimitations, as well as define key terms used in this study.

In chapter 2, I review the literature concerning COVID-19's effect on higher education, the rising cost of higher education and its reasons, financial aid efforts to make education affordable, student loan debt, and institutional debt. In addition, I review the literature as it pertains to the impact that the rising cost of education has had on students from various

demographic groups. Finally, I review the theoretical framework that helps guide this study, Chen's Heterogenous Model for Student Departure and Financial Aid.

Chapter 3 describes the research methodology of my study, including a review of the population, sample, data analysis process, and statistical model used. I also provide a further explanation of the limitations, delimitations, biases, and my researcher positionality.

## Conclusion

The rising cost of education and a financial aid system that has been unable to keep up with that rise has resulted in students accumulating unpaid institutional debt. Students who have accumulated outstanding institutional debt are 25 times less likely to graduate than students that do not (Ison, 2021). This is particularly prevalent at two-year colleges (Ison, 2021). There are many causes for this unpaid debt, including familial obligations, loss of employment, and other financial hardships (Wright, 2017). Strict policies are in place that prevents students from persisting if they have accumulated institutional debt (Eaton et al., 2022). Until the Higher Education Emergency Relief Fund provided the opportunity for colleges and universities to relieve institutional debt students accumulated during the Pandemic, there were very few instances of this type of relief. By providing a fresh opportunity for students with past-due institutional debt, these students may be able to persist where they otherwise would not. My research findings offer statistical data on whether this institutional debt relief at community and technical colleges is correlated with improved success rates and whether there is variation in the correlation based on gender, socioeconomic status, race, and other demographic identifiers.

# Chapter 2: Review of The Literature

In this literature review, I begin with a review of the COVID-19 Pandemic and its effect on higher education, including the financial challenges it caused and the Federal government's response, including student institutional debt relief, which is the focus of my study. Next, I review the literature related to the rising cost of higher education, which is seen as a cause of student loan and institutional debt, focusing on the following five areas: reductions in state appropriations, competition with other public interests, neoliberal ideologies, availability of student loans and increases in administrative and operational costs. Next, I examine the history of financial aid and how it has been unable to keep pace with the rising cost of education, thus placing an additional financial burden on students and their families.

In addition, I look at how specific demographic groups have been affected by the increase in the cost of higher education, notably lower income and underrepresented students. I also examine the role of two-year colleges, which have a unique role in providing affordable education to all students and is the area of higher education where my study takes place. Lastly, I explain the theoretical framework that helps guide my study; Chen's (2008) heterogeneous research approach to financial aid and student dropout.

## COVID-19 Pandemic and Higher Education

My study examines the use of Higher Education Emergency Grant Funds to pay off students' delinquent institutional accounts accumulated during the COVID-19 Pandemic. For historical and contextual purposes, I briefly overview the COVID-19 Pandemic, its effect on higher education, and the financial aid packages colleges and universities received as part of a larger government financial stimulus package.

China reported the first official cases of COVID-19 on December 31, 2019, as unexplained cases of pneumonia to the World Health Organization (WHO) (Moore, 2021). Soon after that, the disease would spread globally, and by September 2021, there were already 200 million confirmed cases and over 4.6 million lives lost (Moore, 2021). Even though vaccinations were quickly developed, illnesses and deaths ensued, and new variants would change the course of the Pandemic (Moore, 2021).

Higher education institutions and the students they serve are severely impacted by COVID-19. Disruptions due to unscheduled openings and closings of campuses, the introduction of remote learning, and increased workloads for staff and faculty led to a very challenging environment in higher education (Gallup, 2022). More than 1300 campuses canceled in-person classes or shifted to online-only instruction by Spring 2020. COVID-19 severely impacted enrollment, with freshman enrollment declining an unprecedented 13.1% in Fall 2020 (Smalley, 2021). Two-year community colleges saw a 21.0% decline in first-time student enrollment, and public four-year colleges and universities saw an 8.1% decline (Smalley, 2021).

**Financial Challenges as a Result of COVID-19**

Campus closures, the move to online learning, and unexpected expenses related to the Pandemic severely affected colleges and universities financially (Smalley, 2021). These expenses included lost tuition, auxiliary services revenue, and increased cleaning and operational costs, such as additional security expenses. Due to these financial challenges, some colleges and universities announced hiring freezes for faculty, pay cuts, and furloughs for staff (Smalley, 2021). Without swift action from the Federal Government, many higher education institutions would be in financial crisis.

As a current Director of Business Affairs for two community colleges, I am a member of the COVID-19 response team. As a result, I have first-hand knowledge of the Pandemic's impact on our institutions financially and operationally. Enrollment declines at the institutions I work at were consistent with national trends mentioned previously. In addition, the enrollment declines resulted in a revenue shortfall which would be detrimental had it not been for the economic stimulus packages the federal government introduced and administered in 2020 and 2021.

**COVID-19 Federal Financial Relief**

The Federal government passed several financial relief packages in 2020 and 2021 that would provide substantial economic aid to colleges and universities during the COVID-19 Pandemic (U.S. Department of Education, 2021). In March 2020, The Coronavirus Aid, Relief and Economic Security (CARES) Act was the first such package and provided $14.25 billion for emergency relief institutions of higher education. In December 2020, the Federal government provided an additional $22.7B through the Higher Education Emergency Relief Fund (HEERF). Finally, in March 2021, through the American Rescue Plan (ARP), an additional $40B was allocated to the existing Higher Education Emergency Relief Fund (National Conference of State Legislators, 2021). These relief packages provided funds for two distinct purposes. First, the Federal Government earmarked approximately half of the aid packages for direct distribution to eligible students. In contrast, the other half could be used to reimburse colleges and universities for COVID-19 related expenses, including lost tuition and auxiliary services revenue.

The U.S. Department of Education encouraged colleges and universities to use the Higher Education Emergency Relief Funds to forgive unpaid institutional balances accumulated since the onset of the Pandemic (Faircloth, 2021). Allowable expenses include tuition, fees, book,

supplies, and other expenses that occurred since the President of the United States declared a national emergency in March 2021. Institutional debt relief for students began in July 2021, after nearly a year of financial strain and rampant job loss due to the Pandemic (Weissman, 2021a).

The American Rescue Plan (ARP), passed in March 2021, was the third round of Coronavirus stimulus funding and the first that allowed institutional debt relief through the Higher Education Emergency Relief Fund (HEERF) (Weissman, 2021a). In addition, the U.S. Department of Education instructed institutions to categorize the debts as lost revenue and reimburse themselves using federal funds (U.S. Department of Education, 2021). The justification was that the institutions would likely not receive most of the past-due institutional debt and see a decline in future revenue due to students being unable to register for future terms due to unpaid debts (Weissman, 2021a).

Institutions nationwide immediately began paying off thousands of student accounts with institutional debt balances averaging $1,200 per student (Faircloth, 2021). In July 2021, City University of New York announced it would pay off outstanding balances of at least 50,000 students, totaling over $125 million in student debt owed to the system (Weissman, 2021). At least 11 historically Black colleges and universities were the first to announce using stimulus funds to eliminate students' institutional debt in commencement ceremonies in May 2021 (Weissman, 2021b). In Minnesota, Rochester Community and Technical College in Minnesota forgave 638 individual student debts of up to $3,000, totaling $785,000 (Faircloth, 2021). Normandale Community College and Minnesota State Community and Technical College are just two of many institutions nationwide that spent over $1 million to clear students' institutional debt.

## Rising Cost of Higher Education

The following section reviews the literature on why higher education costs have risen substantially during the last 40 years. These reasons include reductions in state budget appropriations that typically occur due to economic downturns, competition with other public needs and interests, availability of student loans, and increased administrative and operational expenses.

### Reductions in State Appropriations and Economic Recessions

Over the last forty years, economic recessions resulted in reductions in state support of higher education (Webber, 2017; Weerts, 2006). The average four-year public university has seen its per-student state/local funding drop more than 30% over the past 30 years (Webber, 2017). A typical state will reduce appropriations to higher education during economic downturns but fail to reinstate it once it is over (Clelan, 2017; Webber, 2017). Recessions in FY1980-1983 and FY1990-94 contributed heavily to the slide in state support of higher education (Clelan, 2017; Weerts, 2006). Additional cuts during the recession in FY1990-91 resulted in funding for higher education being reduced from the prior year for the first time in 33 years (Weerts, 2006; Schuh, 1993). Since 1987, 16.1% of tuition increases can be directly attributed to public divestment (Webber, 2017). Furthermore, since the Great Recession in 2007, tuition has increased by 41% due to public divestment (Webber, 2017).

### Competition with other Interests

Another reason state allocations to higher education have declined is the competition for revenue with other interests (Webber, 2017). For example, in Minnesota, where my study takes place, higher education has seen its share of the budget decline as expenses for public welfare

and K-12 education have increased as a percentage of the overall budget (Urban Institute, 2022b). Public welfare expenses include Medicaid, Temporary Assistance for Needy Families (TANF), and Supplemental Security Income (SSI). This trend has resulted in Minnesota State Colleges and Universities receiving approximately 45% of their overall revenue from state allocations, with approximately 50% now coming from student tuition and fees (Lofstrom, 2022). Historically, the Minnesota State System received most of its overall funding from state allocations.

**Availability of Student Loans and The Bennett Hypothesis**

One cause of tuition inflation is the availability of student loans (Baum & Steele, 2010; Bundick & Pollard, 2019). Over the last forty years, the federal government has periodically expanded the maximum amount students can borrow for college education (Baum & Steele, 2010). Consequently, as the capacity for students to pay for their college increases, it allows colleges and universities to raise tuition. This effect is often referred to as the Bennett Hypothesis, named after former Secretary of Education William Bennett. He attributed the rapid rise in college tuition to the expansion of federal student aid in the late 1980s (Bundick & Pollard, 2019; Bennett, 1987).

Moreover, student loans, considered a form of financial aid, have contributed to the rising cost of education (Lucca, 2019). Lucca (2019) linked the rise in college tuition to rising student loan caps. In particular, Lucca found a pass-through effect on tuition of changes in subsidized loan maximums of about 60 cents on the dollar, with these effects most pronounced in 2-year institutions and for-profit colleges.

**Neoliberalism**

College costs are rising throughout the country in response to neoliberal ideologies (Olssen & Peters, 2005). Neoliberalism is an ideology and policy model that encompasses politics and economics and seeks to transfer the control of economic factors from the public sector to the private sector (Manning, 2022). Neoliberalism is often associated with austerity policies and attempts to cut government spending (Manning, 2022). Under neoliberalism, higher education is seen by governments as having greater importance in driving both the knowledge economy and the traditional economy (Olssen, 2005). Neoliberalism operates in higher education by pushing for open market competition to increase colleges' accountability, productivity, and quality (Kelchen, 2018a; Olssen & Peters, 2005). In neoliberal open markets, colleges compete for students because tuition is their primary funding source (Dugas, 2018; Olssen & Peters, 2005). Consequently, colleges increase administrative expenditures, including institutional, academic, and student support structures (Dugas, 2018).

Using Arizona as a case study, Hensley et al. (2013) examined the public vs. private good dialectic regarding higher education. Between 2008 and 2017, the Arizona legislature significantly reduced its funding of higher education institutions (Hensley, 2013). From 2008 to 2011, The University of Arizona saw its funding decrease from $430.9 million to 263.7 million while doubling its tuition from $5,274 to $10,027 (Hensley, 2013). Through the analysis of several interviews and discussions, Hensley concluded that ideological perspectives influence the funding of education in Arizona, particularly the public vs. private debate.

**Increases in Administrative and Operational Expenses**

While states have decreased funding, many institutions have simultaneously increased administrative expenses and added student and institutional support structures, further increasing the cost of higher education (Dugas; et al., 2018; Mintz, 2021). Some of these expenses are related to measuring student outcomes, higher labor expenses, competition among campuses to attract students, and other economic forces. As a result, colleges and universities have had to add amenities that attract students to attend (Dugas, 2018). These amenities include state-of-the-art residential facilities, health and wellness facilities, and upscale dining halls. However, these amenities increase the overall cost of attendance (Dugas, 2018).

Measuring student outcomes is a necessary function of the accreditation process that enables institutions to continue receiving financial aid and is one source of the increased administrative expenses (Worthen, 2018). This includes conducting an elaborate, expensive, data-driven process of measuring outcomes (Worthen, 2018). Expenses associated with measuring outcomes, including paying consultant fees, investing in technology platforms, and conducting quantitative analysis, are ultimately passed on to the students.

Increases in labor costs at colleges and universities have significantly impacted the cost of education and contributed to tuition inflation (Bundick & Pollard, 2019). According to the Bureau of Economic Analysis (2017), the education sector pays approximately 80% of its total production to workers in the form of labor compensation. This is similar to other labor-intensive sectors, including health care and government (Bundick & Pollard, 2019). This high reliance on labor suggests that wage increases directly impact the cost of higher education services and are passed on to students through higher tuition (Bundick & Pollard, 2019).

With so many factors causing the cost of higher education to rise, it has become apparent that the federal financial aid system could not keep pace. Following is a history of financial aid in the United States and its attempt to combat the rising cost of education.

**Financial Aid and the Effort to Combat the Rising Cost of Education**

The foundation of today's higher education financial aid system is over fifty years old. The GI Bill and its successors, the Truman Commission, the National Defense Education Act, and the Higher Education Act of 1965, were the first significant programs to ensure equitable opportunities for those aspiring to attend college (Goldrick-Rab, 2016a). In addition, the Higher Education Act of 1965 increased federal investment in higher education and provided grants and loans for college students (Higher Education Act of 1965, 2022). In 1971 Senator Claiborne Pell introduced a bill that would establish a federal government policy that stated it is "the right of every youngster, regardless of his family's financial circumstances, to obtain a postsecondary education" (Goldrick-Rab, 2016a).

Senator Pell and his colleagues believed subsidizing college costs was necessary to make it affordable for all students. Original Pell grants provided a $1,200 voucher to eligible college students (Qayyum, 2019). When Pell Grants began, they subsidized more than 80 percent of the cost of attending the average public university and all of the costs of attending a community college (Goldrick-Rab, 2016a). In 2020-2021, Pell grants ranged from $639 to $6,345, with an average recipient receiving $4,120 nationally (Minnesota Office of Higher Education, 2022). As a result of the rising cost of education, Pell Grants no longer cover a significant portion of a student's educational cost (Goldrick-Rab, 2016a). As of 2021, the maximum Pell Grant covered

less than one-third of the cost of attending a four-year college and barely 60 percent of attending a community college (Goldrick-Rab, 2016a).

Today, financial aid packages include loans, grants, and scholarships to help students pay educational expenses (Qayyum, 2019). Sources of financial aid include federal and state governments, educational institutions, private funding, financial institutions, and corporations. Financial aid is provided based either on merit or need. Merit-based financial aid is given to students based on achievement, usually academic but can be based on other talents, skills, or traits (Qayyum, 2019). Need-based financial aid is monies given to students based on their families' financial income and assets (Davidson, 2015). With a shift from need-based to merit-based financial aid, more underrepresented students are falling short in their ability to finance their education, ultimately leading to decreased persistence (Goldrick-Raba, 2016; Qayyum, 2019).

The federal financial aid system is the primary defense against the rising cost of higher education for students. Unfortunately, financial aid has not kept pace with the rising cost of education. This rise in the cost of higher education has left many students with accumulated student loan debt and past-due institutional debt (Ma J. B., 2017; Ison, 2021). The average debt for students graduating in 2021 was $30,000 (Kerr & Wood, 2022). While the financial aid system within the United States was developed to make higher education more accessible and affordable for all students, it now only funds a portion of most students' cost of attending college (Higher Education Act of 1965, 2022; Goldrick-Rab, 2016a). On average, in 1980, Pell Grants covered 77% of the cost of attending a four-year public college, while in 2021, it covered only 29% (Delisle, 2021). As a result, 30 to 40 percent of undergraduate students each year take out

federal student loans to fund their education (Urban Institute, 2022a). In addition, over 70 percent of students who receive a bachelor's degree have education debt (Urban Institute, 2022a). Because the federal financial aid system cannot keep up with the rising cost of education, many students have an unmet financial need (Goldrick-Rab, 2016a; Ma et al., 2017). Unmet financial need is the amount students are left to pay after financial aid is awarded (Scholarship America, 2019). In particular, the Federal Application for Financial Aid defines unmet financial need as the cost of attendance (COA) minus the sum of expected family contribution (EFC) and all federal, state, local, institutional, or private scholarships and grants received by the student as determined by the eligible institution (Federal Student Aid, 2022). Accumulated student loan debt and outstanding institutional debt have burdened students and have negatively impacted persistence and retention (Ison, 2021; Velez, 2017).

The increase in the cost of education has made it difficult for students to accumulate the necessary resources to cover the cost of a college education (Archibald, 2007; Baum & Steele, 2010; Ison, 2021). Therefore, for many students, the first step in accumulating those resources is to apply for Federal Financial Aid.

The U.S. government's free application for federal student aid (FAFSA) has a specific approach to determining need, known as the need index (Qayyum, 2019). FAFSA calculates need index as a ratio of cost of attendance (COA) and expected family contribution (Qayyum, 2019). Cost of attendance includes tuition, books, and the total cost of attending the institution each year. Family contribution is defined as the family's financial income, assets, and benefits based on the family size and the number of family members attending college (Federal Student Aid, 2022). The need index is determined when a student applies for financial aid. The need

index serves as a proxy for the financial strength of the student and the percentage of help the student will need to cover their total cost of attendance.

Completing the FAFSA is a complicated and bureaucratic ordeal for many students, resulting in some students never actually completing the process (Davidson, 2015; Taylor, 2019). Students from lower socioeconomic groups and students of color are less likely to complete the FAFSA than students from higher socioeconomic backgrounds and White students, respectively (Holzman, 2020; Klaskik, 2012). Community college students are at a greater risk of not accessing available funds due to the difficulty they experience applying for financial aid (Luna-Torres, 2019; McKinney & Burridge, 2015). Research has shown that monies available through financial aid are typically sufficient to cover tuition and fees at community colleges. This suggests that the FAFSA completion process has some relationship with delinquent tuition debt (Ma et al., 2017; Ison, 2021).

Structural barriers are why some students have difficulty completing the FAFSA application (Davidson, 2015; Rios-Aguilar, 2018; Taylor, 2019). The financial aid verification process established by the U.S. Department of Education is costly, requiring some students to complete additional steps (Davidson, 2015). In addition, Rios-Aguilar et al. found that almost half of the students in prominent urban colleges were chosen to complete other steps, often involving providing further documentation at the institution's financial aid office. Researchers have found that the verification process differed significantly between institutions and higher education sectors (MacCallum, 2008; Romano, 2006). MacCallum (2008) found that institutions that spent less on their financial aid offices had lower FAFSA completion rates. Rios-Aguilar et

al. (2018) found that 75% of students flagged for verification never finished the process and that 20% of those students would be eligible to receive a Pell grant.

## Student Debt

Over the past few decades, the rising cost of education coupled with a shift in priority from gift aid to student loans has left students straddled in debt (Baum et al., 2017; Ison, 2021; Ma J. B., 2017). This section of the literature review focuses on two types of debt; student loan debt and institutional debt, which occurs when a student has an unpaid balance with the college or university they attend.

### Student Loan Debt

Harvard University offered the first student loans in 1840 (Gitlen, 2022). While providing student loans is not new, the government's role in this area is relatively new. The first federal student loans were provided under the National Defense Education Act of 1958 and were only a small portion of student funding options (Gitlen, 2022). Before 1990, grant aid was the preferred method of financial aid for students in need. Basic Educational Opportunity Grants (BEOG) were created in 1972, eventually becoming Pell Grants (Gitlen, 2022).

Over the last 30 years, federal financial aid policy has shifted priority away from grant aid and has moved to student loans (Baum et al., 2019; Ison, 2021; Ma et al., 2017). In 1992 the Higher Education Act was amended, and unsubsidized Stafford loans, which offered low, fixed interest rates with flexible repayment options, became available. However, due to the Great Recession in 2007, many private lenders stopped providing student loans (Gitlen, 2022). Simultaneously legislation passed in 2009 required all federal student loans to be direct loans (Gitlen, 2022).

The increased cost of education has forced students and their families to secure higher student loans to fund their education (Canche Gonzalez, 2020; Velez, 2017). Using data from two national samples, Canche Gonzalez (2020) found a 15% increase in students who borrowed loans from 1991 to 2013. The average amount of student debt increased by $5,890 during that timeframe. In addition, Velez and Woo (2017) also found that 68% of college seniors in 2011-2012 had borrowed money to help finance their education and that the average student debt increased by more than $10,000 when adjusted for inflation.

Since 2007, student loan debt has become the most significant portion of debt for younger Americans aged 18-34 (Ison, 2021; Brown, 2019). As debt levels have increased for students, so have default levels (Gladieux, 2005; Hillman, 2014). Between 2003 and 2010, the number of students who entered default within two years of graduation rose by more than 250,000, and one in ten borrowers of federal student loans will default on their payments at some point (Hillman, 2014). Gladieux and Perna (2005) found that for students that have taken out student loans and dropped out of school, the default is even higher at almost 25%.

Gross et al. (2009) and Hillman (2014) noted several student demographics and socioeconomic characteristics associated with higher default rates. Community college students tended to have higher default rates than four-year colleges. Black and African American students were more likely to default on their loans than White students. Lower-income students and students claiming more dependents were also associated with higher default rates.

While there is limited research on institutional debt, trends in student loan debt can be used for further context when analyzing institutional debt. In addition, this information may assist in understanding who may be at risk for default with institutional debt.

**Institutional Debt**

Unlike student loan debt, tuition and institutional debt are monies a student owes to the college or university they attend rather than a borrower or the department of education (Eaton, 2022). Delinquent tuition and institutional debt result from a student's unpaid balance that has become past due. One reason student accounts become delinquent is that students experience a deficit between their financial aid eligibility and their actual cost of attendance (Goldrick-Rab., 2016a). Families' financial burden of supporting students is often more significant than what official need calculations estimate when determining student aid packages (Wilkenson, 2005). When students or their families cannot provide additional support, students are left with a funding gap. This gap often results in delinquent tuition and institutional debt (Chen & DesJardins, 2007; Ison, 2021).

Delinquent tuition and institutional debt also occur because students have not accessed potential monies available via the federal financial aid system, failing to complete the FAFSA or even rejecting awards offered (Ison, 2021). In addition, students accrue debt for several other reasons. These include entering into a payment plan for tuition that they cannot keep up with or owe monies on parking, housing, dining fees, and other institutional fees (Butrymowics, 2022).

Another form of institutional debt occurs when a student receiving Title IV financial aid, such as a Pell Grant, withdraws after attending for 60% or less of an enrollment period (Butrymowics, 2022). Federal aid rules require colleges to return a portion of students' Title IV aid disbursals to the U.S. Department of Education in a policy known as Return to Title IV Funds (R2T4) (Congressional Research Service, 2019). As a result, schools must absorb a financial loss or seek to be reimbursed by the student and move the debt to collections (Eaton,

2022). Research has shown that this type of debt is the most significant type of institutional student debt (Eaton, 2022).

Delinquent institutional debt affects many students across the country, with a recent National Association of College and University Business Officers (NACUBO) survey reporting that as many as 31% of the fall 2020 college-enrolled students carried a balance due from prior semesters (Eaton, 2022; Butrymowics, 2022). In the same survey, NACUBO reported that 10% of community college students and 3.4% of 4-year public university students were referred to a collection agency for those outstanding debts (Eaton, 2022). Being referred to a collection agency is one repercussion students face with outstanding institutional debt.

Practices and policies for collecting institutional debt have long-lasting negative consequences for students (Eaton, 2022; Ison, 2021; Butrymowics, 2022). For example, students who accumulate even small debts with their college may be barred from re-enrolling (Butrymowics, 2022). Furthermore, many colleges utilize a tactic known as transcript holding, which places a hold on transcripts until the debt is paid or brought to an acceptable level, thereby preventing the student from continuing their education at other institutions (Eaton, 2022; Ison, 2021).

Many colleges and universities commonly refer institutional student debts to  State collection agencies and for-profit debt collection agencies (Butrymowics, 2022; Eaton, 2022). This results in potential damage to students' credit profiles and limits their access to consumer credit in the future (Eaton, 2022). In addition, some State Higher Education systems use Interagency Intercept Collections (IIC) programs which seize students' potential tax returns and potentially garnish the student's wages (Eaton, 2022). For example, The University of California

System, California State University System, and the California Community College Chancellor's Office use the Franchise Tax Board as their IIC (Eaton, 2022). The Minnesota State Colleges and Universities utilize a similar system by referring student debts to the Minnesota Department of Revenue as their IIC (Minnesota State, 2021).

## The Rising Cost of Higher Education's Effect on Students

The rising cost of higher education and a federal financial aid program that cannot keep up with the rising cost of education perpetuates additional financial challenges and stressors beyond the issue of paying tuition and fees. These issues include access to desired institutions, food and housing insecurity, childcare costs, and affordable transportation (Goldrick-Rab, 2021) Lower-income students report that the most significant challenge in college is paying for housing (Goldrick-Rab, 2016). Studies have revealed that between 25% and 50% of college students experience food insecurity (Allen, 2021; Crutchfield & Maguire, n.d.; Goldrick-Ra, 2016b).

### Basic Unmet Need

Economic hardship is common among college students, and studies show the extent and repercussions of financial stress during college (Maroto, 2013). The stress and anxiety around financial insecurity affect academic performance (Goldrick-Rab, 2021). Scholars have hypothesized that the distraction of these stressors causes students to have difficulty focusing on academic engagement, thus resulting in roadblocks to persistence (Baker, 2019). Research has shown that housing and food insecurity hinder degree obtainment (Goldrick-Rab, 2016; Goldrick-Rab, 2021). Housing insecurity reduces persistence in the first year of college by as much as 10% (Goldrick-Rab, 2021). High levels of financial stress and student loan debt are associated with an increased likelihood of dropping out, stopping out, or reducing course loads

(Baker, 2019). For some students, the time it takes to complete their degree is a financial concern in itself (Letkiewicz. J., 2014)

Often, lower-income and first-generation students have no experience navigating the aid system, compounding the unmet need issue (Chen & Desjardins, 2010). To properly plan for the cost of college, students and their families need to understand the FAFSA application process, financial aid award letters, state aid eligibility, institutional aid programs, and tuition tax credits (Jaschik, 2019). First-generation students and their families are often unlikely to understand these components and how they provide multiple financial aid necessary to cover their educational and living expenses (Dynarski & Clayton, 2013). Financial stress and student borrowing vary between racial and ethnic groups, as well as gender, which points to possible inequities in financial support for college (Baker, 2019)

**Enrollment and Completion Trends for Underrepresented Students**

The rising cost of higher education has resulted in a disproportionate number of underrepresented students and students of color enrolling in nonselective four and two-year institutions (Boland et al., 2021; Kelchen, 2018b). Performance-based funding compounds this issue (Boland, 2021). Studies have revealed that performance-based funding programs have resulted in colleges becoming more selective in admissions and changing institutional financial aid practices to recruit well-prepared students, negatively affecting the enrollment of low-income and minority students (Kelchen, 2018b).

Much research has focused on college completion and outcomes at selective institutions (Melguizo, 2010). Less attention is directed toward nonselective four and 2-year institutions (Boland, 2021). Bound (2010) found a direct correlation between a decline in college completion

rates and an increase in enrollment in less selective colleges and universities when comparing the high school classes of 1972 and 1992. In addition, less selective colleges and universities disproportionately enroll students of color (Bound et al, 2010).

This lack of access for underrepresented students at select colleges and universities has opened the door for the "for-profit" college space to capitalize on this inequality (Cottom, 2017). For-profit college students are more likely to be female, non-white, have a dependent, and be single parents than traditional college students (Cottom, 2017). In addition, for-profit college students are less likely to graduate than students with similar demographics at traditional institutions (Cottom, 2017). Furthermore, data also indicates that when students drop out from for-profit colleges, they tend to carry more relative and actual debt than they would have had they been at a less expensive school (Cottom, 2017).

## The Rising Cost of Education's Effect on Underrepresented Students

Beyond the lack of access, students from underrepresented groups are disproportionately affected by the rising cost of education. As this study focuses on the effect of institutional debt relief on various demographic groups, I have included a review of existing literature that pertains to these groups and how they navigate the rising cost of education.

### *Black Students*

The rising cost of higher education and the unmet need component for Black students is compounded (Addo, 2016). As the cost of education began to rise beyond the inflation rate, Black students were already at a financial disadvantage (Cottom, 2017). Familial financial resources play a prominent role in the investment and financing of a student's education, and many black families do not have the resources that many white students have (Addo, 2016).

Racial wealth disparities in the United States are prominent and persistent, with Blacks suffering the most (Oliver, 2006). Institutional barriers that have made passing along intergenerational wealth difficult perpetuate wealth inequality over time (Oliver, 2006). These barriers include a historical lack of access to financial capital, political power, selective educational institutions, and better health and healthcare (Oliver, 2006).

Shanks and Destin (2009) found that Black families that have accumulated wealth have translated it into better educational and economic outcomes for their children. In particular, parental wealth among Blacks increased college enrollment. Conley (2010) explained that the black-white college enrollment gap was attributed to parental wealth disparities between White and Black families. Familial wealth is unavailable to most Black students, so they must borrow more to meet educational and basic needs expenses more often than White students (Addo, 2016). Addo (2016) suggests that debt accumulation is the main reason for Black families' wealth disparity. First, Black families have substantially more debt than their white counterparts. Secondly, family wealth and postsecondary education attainment contributed to the deficit. Third, young Black adults have a lower net worth which is often also a result of ongoing debt accumulation. Addo (2016) found that even among wealthy Blacks, this wealth is not passed down as quickly as it is for whites, most likely due to possessing less transferable assets.

Baum and Steele (2010) reported that Black bachelor's degree recipients were likelier to have borrowed $30,000 or more in student loans, potentially reflecting lower access to other forms of financial support. Black students are twice as likely to have college debt than white students, with their debt comprising a significantly higher percentage of their current family incomes and projected post-graduation earnings (Goldrick-Rab, 2016). In addition, Black

students are more likely to attend postsecondary institutions associated with high debt, including underfunded and for-profit institutions (Addo, 2016).

The racial disparities and financial gap that Black students experience before and during college can reverberate throughout their lives (Addo, 2016). For example, additional debt load contributes to dropping out of college, inability to purchase a home, and delayed marriage and childbearing (Addo, 2016; Nau et al., 2015). While Black students face particular challenges as the cost of higher education rises, students from other underrepresented groups also have unique challenges.

### *LatinX Students*

The United States has experienced dramatic growth in people identifying as LatinX, with the demography of many colleges and universities mirroring this shift. A growing number of LatinX students are enrolling in higher education institutions emphasizing community colleges, although well represented in the four-year college space (Covarrubias, 2021; Marrun, 2020). LatinX students face particular challenges as they are more likely to live in poverty, be first-generation, have lower median incomes, and have less wealth than their White peers (UnidosUS, 2019b). In addition, divestment in higher education that accelerated during the great recession of 2007 burdens low-income LatinX students as they are responsible for filling a more significant gap between college costs and grant aid (UnidosUS, 2019b). While 64% of LatinX students received Pell Grants in 2016, the average award was only $3,855, insufficient to adequately cover college costs (National Center for Educational Statistics, 2017). In 2016, the average cost of college for Latino students, after subtracting expected family contribution (EFC) and all grant aid, was over

$8,700 higher than the average cost for White students ($8,060) (National Center for Educational Statistics, 2017).

To qualify for federal financial aid, students must complete the FAFSA, which can be a burdensome and complex process that often poses a barrier to low-income and first-generation students (UnidosUS, 2019a). Hispanic students are the least likely to complete the FAFSA application process, with 34% failing to complete it once they start (Jaschik, 2019). In 2012, 17% of Latino students eligible for a Pell Grant did not submit a FAFSA and missed the opportunity to access federal student aid (UnidosUS, 2019a).

Researchers have documented the importance of familial connection for minoritized groups, often focusing on low-income, first-generation LatinX students (Casanova, 2016; Cooper, 2011; Covarubbias, 2021; Jackson et al., 2016; Suarez-Orozco, 1995). Familism for LatinX people represents a strong inter-connectedness among family members (Covarrubias R., 2021). This familism reflects a solid social structure where the family's needs precede individual needs (Fuligni et al., 1999). Familism includes attitudes about family and the belief that behaviors should consist of these attitudes, such as helping family members as necessary (Covarrubias R., 2021). This familial obligation includes a sense that younger family members should help, respect, and contribute to the family financially (Fuligni, 1999) LatinX adolescents report a stronger attitude around the importance of familial obligations relative to their White Counterparts (Covarrubias, 2021; Fuligni et al., 1999; Stein et al., 2015).

As higher education costs continue to rise, it does not preclude many low-income LatinX students from continuing to contribute financially to their families. In a series of interviews, low-income Hispanic students shared that they helped their families extensively while in college,

including the caretaking of siblings and, most importantly, contributing critical financial resources to the family (Covarrubias et al., 2019).

### *Deferred Action for Childhood Arrivals (DACA)*

Undocumented students, including Deferred Action for Childhood Arrival (DACA) recipients, are not eligible for federal student aid (U.S. Department of Education, 2022). Deferred Action for Childhood Arrivals (DACA) is an immigration policy launched in 2012 during the Obama Administration, which allowed certain undocumented young people who came to the U.S. as children temporary relief from deportation (U.S. Immigration, 2022). This group of young people is referred to as "Dreamers." Dreamers have the dilemma of funding their education without the benefit of Federal Financial Aid while contributing financially to the family. In addition, Dreamers often have to contribute even more towards their familial contributions than first-generation students (Covarrubias R. V., 2019).

### *Native American & Indigenous Students*

Another group of underrepresented students and their families that have unique challenges in navigating the rising cost of higher education are Native American students. Tachine & Cabrera (2021) found that indigenous families experienced fear and frustration surrounding college affordability and the financial aid process. Despite residing on historically indigenous lands, predominantly white institutions have historically and systemically excluded Native peoples from gaining access (Brayboy, 2005). When Native students gain access, they often struggle to afford college (Espinosa et al., 2019; Nelson & Tachine, 2018; Tachine & Cabrera, 2021). Many people sincerely believe that American Indians, Alaskan Natives, and Native Hawaiians attend college for free through race-specific scholarships or casino money, but

this is not true (Cabrera, 2019; Nelson & Tachine, 2018). While these groups fall disproportionately in the lower and middle-income groups, it is increasingly difficult for institutions to commit to meaningful support for these students due to the myth that these students' educations are paid for due to their ethnic status (Nelson & Tachine, 2018).

Since the great recession of 2007-2008 and as a result of the dramatic increase in the cost of education that has followed (Goldrick-Rab, 2016), there has been a steady decrease in the number of American Indians and Alaskan Natives attending college (Tachine, 2021). For example, in 2009, 205,900 Native students enrolled in degree-granting four-year institutions, but that number had dropped to 196,200 by 2010. By 2018, Native students numbered only 133,800, the lowest number since 1990 (U.S. Department of Education, 2019).

In the Navajo Nation, poverty is the number one issue that puts undue pressure on young Native Americans to contribute financially to the family while in school or skip college altogether and begin working on or near the reservation (Tachine, 2021). While Navajo families value higher education, many cannot accumulate savings to contribute to their children's education which compounds the rising costs and reduced financial aid (Tachine, 2021). Even Native students with aid and scholarships to cover tuition, room, and board reported they had no resources for additional expenses, such as traveling home on holidays or socializing with other students on campus (Tachine, 2021).

### *Lower Income & Rural Students*

The rising cost of postsecondary education has reduced access and choice for lower-income rural students (Means et al., 2016). Rural students have economic and educational barriers that differ from their non-rural peers (Adelman, 2002; Byun, 2012; Means et al., 2016).

These include lower family incomes and parental education, fewer school resources, lower academic achievement and postsecondary aspirations, and lower college attendance and completion rates (Adelman, 2002; Means et al., 2016). According to Adelman (2002), low-income students from rural areas and small towns are at the most significant disadvantage in learning opportunities. This is consistently evidenced by the lowest college attendance rate among various demographics. Researchers have found that the socioeconomic challenges of rural students created a lag between rural and non-rural students (Byun, 2012).

Many high school students perceive that college beyond their rural community is not an option because it is simply unaffordable (Means, 2016). As a result, choice and access become an issue for many of these students. Means (2016) found that many rural students experienced "sticker shock" when they read their financial award letters and discovered a significant gap between the aid they would receive and the ultimate cost of attending a selected college or university. In addition, many rural students and their families do not fully understand the financial aid application process leading to unrealized opportunities (Means, 2016).

### *Asian American & Pacific Islander Students*

The rising cost of higher education negatively affects low-income students from all ethnic backgrounds, and no group is immune to these challenges. There is a misperception that Asian American students do not need personal, financial, and academic assistance to the degree their peers do (Suzuki, 2002). Suzuki (2002) references the term model minority, which incorrectly labels Asian students and leads to misperceptions regarding their educational and economic needs. Many Asian families are not at economic parity with White families (Higher Education Today, 2017; Suzuki, 2002). Significantly more Asian Pacific Islander Americans (APIA's) live

in poverty than the U.S. average (Lam, 2016). For example, Southeast Asian Americans have one of the highest poverty rates among communities of color, with 38% of Hmong families at or below the national poverty level.

The misperception of Asian American and Pacific Islander students has grave consequences for students. Student affairs professionals sometimes limit outreach to these students, and federal and local grant scholarship programs geared to racial and ethnic minority groups often exclude this group incorrectly, assuming they have all the necessary resources (Higher Education Today, 2017).

## The Role of Community and Technical Colleges in Higher Education

In 1947, The Truman Commission concluded that higher education in the post-World War II era was not equitable and relied too heavily on student ability, family and community circumstances, race, gender, and religion (Gilbert, 2010). The Truman Commission emphasized that finances were the primary barrier that lower-income students faced in their ability to enroll in higher education (Gilbert, 2010). The Truman Commission stated that a democratic community could not tolerate a society based on education for the well-to-do alone (President's Commission on Higher Education, 1947). The Truman Commission advocated education for all and that financial barriers should not prevent those that desired an education from receiving it (President's Commission on Higher Education, 1947).

The Commission believed that expanding the higher education system was vital to increase affordable access and that community colleges were a means to achieve expansion (Gilbert, 2010). In addition, community colleges were seen as an avenue for student expansion because they could be constructed quickly and were seen as a more cost-effective solution

(Brubacher, 1968). In general, The Commission believed that community colleges should be primarily public in nature, geographically accessible to most communities, and financially accessible to all students who would otherwise not be able to afford higher education (Brubacher, 1968).

At the time of the report, there were approximately 600 two-year colleges in America, and their mission and future were unclear (Quigley, 2003). As of 2022, according to the American Association of Community Colleges (2022), there are 1043 community colleges with more than 10.3 million students enrolled. Average annual tuition and fees in 2021-2022 were $3,800 compared to $10,740 at public 4-year colleges. Non-White students represented approximately 55% of students enrolled for credit in 2021, and about 65% of community college students applied for financial aid (American Association of Community Colleges, 2022).

While all the goals of the Truman Commission may not have been realized as of 2022, one could argue that the general goal of improving access and affordability through community colleges is. However, community college students today find it more difficult to fund their education due to rising costs and financial aid limitations.

Lower-income and underrepresented students mentioned in the previous sections and first-generation and academically underprepared students make up a disproportionate percentage of students attending community college (Vieira, 2011). Although most community college students receive some financial aid, the amount they receive has not kept up with the rising cost of education (Vieira, 2011). In 1996 the reauthorization of the Higher Education Act, which moved financial aid priority away from grant aid and toward loan aid, affected community college students by increasing the amount of student loan debt they accumulated (American

Council on Education, 2008). In addition, a financial aid policy change in 2003 that adjusted the need-based funding formula impacted community college students by increasing the contribution a family is expected to make toward their children's education (Martin-Osorio, 2009). This change mainly affected community college students because they are often from lower socioeconomic backgrounds and rely on financial aid (Martin-Osorio, 2009).

Community college students are more susceptible to accumulating unpaid institutional debt for multiple reasons. First, community college students typically do not take out student loans as readily as their peers in four-year institutions (Ison, 2021). In addition, community college students are often already at a lower-income level and have other financial needs, such as familial obligations (Ison, 2021; Dowd, 2006). Finally, accumulated institutional debt at community colleges often translates to lower persistence due to registration holds placed on their accounts (Ison, 2021). For example, Ison (2021) found that 4.4 of all community college students in his study had past-due institutional accounts and could not progress to the following term.

## Theoretical Framework

Over the last few decades, many studies have examined the relationship between financial aid and student dropout behavior (Chen, 2008). Chen (2008) noted that this line of research focused on the effects of financial aid in general and had not focused on the differences in dropout behavior across socioeconomic and racial/ethnic groups and how financial aid influences these groups. Chen (2008) argued that it is important to consider students' economic and racial/ethnic diversity when evaluating the effects of financial aid on student dropout. Early studies on student departure and financial aid usually involved one institution where dropout rates were measured at one moment in time using descriptive statistics (Chen, 2008; Ison, 2021).

Chen (2008) states that given the heterogenous nature of student populations, researchers need to explore the possible variations in aid effects on dropout risks across subgroups rather than specify the average effects for the population. Chen's goal was to re-conceptualize student departure models from an economic perspective paying particular attention to the role that financial aid plays in reducing dropout risk gaps across income and racial-ethnic groups (Chen, 2008).

Chen's heterogenous model integrates perspectives from various disciplines and theoretical orientations, including psychology, sociology, organizational, and interactionist theories (Chen & Desjardins, 2010). In addition to these four categories, Chen (2008) explained that three economic theories should also be considered when modeling how financial aid influences student departure. Those economic theories are (1) liquidity constraints, (2) price elasticity or sensitivity, and (3) debt aversion (Chen & DesJardins, 2010; Ison, 2021). Chen (2008) explained that economic theories were first introduced into theoretical models on student departure in the 1960s and were grounded in the understanding of Human Capital Theory. Human Capital theory states that actors within specific markets (higher education in this case) make rational decisions regarding the time and energy required to pursue a degree by weighing those costs against the potential earnings and utility of obtaining that degree (Becker, 1964; Chen, 2008). Chen (2008) further explained that these market assumptions failed to consider how different racial, ethnic, and socioeconomic populations have different attitudes toward money and debt. Those different attitudes and assumptions might play an important role in why specific student populations fail to matriculate or persist through higher education at different

stages and amounts of financial aid and costs related to obtaining a degree (Chen, 2008; Ison, 2021).

A fundamental assumption in Chen's (2008) model is that students from lower socioeconomic backgrounds will be more price sensitive to their overall cost of education and that when financial aid is reduced, it increases their likelihood of dropping out (Ison, 2021). In addition, individuals from some racial, cultural, or socioeconomic backgrounds with an aversion to debt may experience higher dropout rates (Chen, 2008).

Chen's (2008) model tests whether similar aid packages affect students of color in different observable ways compared to White students (Ison, 2021). Several studies have found validity in Chen's Model and have shown that different types of aid influence persistence and student dropout behavior differently for students of color (Chen & DesJardins, 2010; Luna-Torres et al., 2019; Yang & Venezia, 2020). Utilizing a discrete-time event history model to track and interpret student dropout over six years, Chen and DesJardins (2010) found that students of color were less likely to drop out when awarded a Pell Grant than White Students. This suggests that students who receive the Pell Grant have increased odds of persisting through college (Ison, 2021). Luna-Torres et al. (2019) utilized data from a large urban community college in Texas. After controlling for race, gender, and socioeconomic status, they found that aid packages with higher ratios of gift aid to loans positively influenced persistence rates for students of color and lower socioeconomic students (Ison, 2021). In addition, Yang & Venezia (2020) found that rural community college students had an aversion to particular types of debt.

## Chapter Summary

The continual rise in the cost of higher education coupled with a financial aid system unable to provide adequate resources has left the most vulnerable students with higher student loan debt and past-due institutional debt. This past-due institutional debt ultimately halts a student's progress towards obtaining their degree through policies that include registration and transcript holds. When students have a registration or transcript hold, they cannot register for the next term or enroll in another institution. This issue is particularly prevalent in community and technical colleges, which enroll a higher percent of lower-income and underrepresented students. When a community or technical college student cannot persist due to a past-due student account, it is pronounced as these two-year institutions already have a lower rate of persistence than four-year institutions. The COVID-19 Pandemic provided an opportunity to relieve many community college students of their institutional debt through The Higher Education Emergency Relief Fund (HEERF) grant. With this relief came a unique opportunity to study the effect of past-due institutional relief and its impact on persistence in community and technical colleges.

The review of related literature revealed extensive research on the rising cost of education, the state of student financial aid, and conventional student loan debt in America. There is far less research related to the debt students accumulate with their institution and how it reduces persistence. There are no significant studies researching the effect on persistence when students' past-due institutional debt is relieved. Chapter III outlines the methodology used in my quantitative correlational study.

# Chapter 3: Research Methodology

In the previous two chapters, I explored the rising cost of education and the negative ramifications of that increase on students. One such ramification is the accumulation of debt, which includes a student's debt to the institution they attend, referred to as institutional debt. Students who accumulate outstanding institutional debt are 25 times less likely to persist than those who do not (Ison, 2021). I conducted a quantitative correlational research study investigating whether using Higher Education Emergency Relief Funds to pay off students' outstanding institutional debt correlates with improved student success. This study defines success as having re-enrolled, graduated, or transferred for community college students and either re-enrolling or graduating for technical college students. In addition, I investigated whether other demographic variables relate to student success levels for the students who have had their outstanding institutional debt paid off.

The research questions are:

- $R_1$: What is the correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off?
- $R_2$: What is the correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), a student's past-due institutional debt payoff status, and student success status within three terms after having the debt paid off?

This chapter describes the research design elements utilized in my study. This chapter concludes with the Institutional Review Board (IRB) Human Subject Approval Statement.

## Setting and Environment

I selected a public medium-sized Community College and a small public Technical College in the Midwest United States. According to the Carnegie Classification of colleges and universities, small colleges have fewer than 5,000 students, and medium-sized colleges have 5,000 to 15,000 students (American Council on Education, 2022). My research locations are Northstar Community College and Riverview Technical College (pseudonyms). I selected both institutions because they opted to use a portion of their Higher Education Emergency Relief Fund (HEERF) Grant to pay off the institutional debt that students had accumulated since the onset of the Pandemic and the declaration of a National Emergency in March 2020. I also deliberately chose a community college and a technical college to understand the effect of outstanding institutional debt on students that attend each type of college. In addition, these colleges have policies that place registration holds for any student with an outstanding balance to the college of $501 or more.

A student with a registration hold is barred from registering for an upcoming term until their account balance is brought down to a level determined acceptable by the college or university. At Northstar Community College and Riverview Technical College, that level is $500 or less. Registration and transcript holds that result from outstanding tuition balances adversely affect persistence (Ison, 2021). The institutional setting provides an opportunity to analyze the effect of institutional debt relief in an environment where registration hold policies have been in place.

Throughout 2020 and 2021, educational institutions received HEERF grants from the U.S. Government as part of the American Rescue Plan for institutions to use to reimburse

COVID-19 related expenses, including lost revenue that resulted from the Pandemic (U.S. Department of Education, 2022). The Federal Government determined that institutions had the option to use these funds to pay off students' outstanding debt that they accumulated with the college since the onset of the Pandemic and that they can define this as potential lost revenue. During 2020 and 2021, Northstar Community College received $14,209,462 in institutional grants. Of this amount, Northstar Community College allocated $1,228,143 to pay off outstanding student accounts. During the same period, Riverview Technical College received $4,087,816 and allocated $422,353 to pay off outstanding student accounts.

To be eligible for their outstanding student account to be paid off, the balance had to have accumulated during any or all of the following terms: Spring 2020, Summer 2020, Fall 2020, and Spring 2021. These terms were within the timeframe of the Coronavirus National Emergency declaration, which was declared on March 13, 2020 (The White House, 2022). Students did not have to be enrolled for Fall 2021 to receive the debt relief payoff. In addition, students did not have to be eligible for financial aid to receive debt relief.

## Research Design

I determined that quantitative research is the most appropriate method of research for this study. Literature on research methods described support for the quantitative method in educational research when the research question seeks to answer or explain a phenomenon with numbers (Creswell, 2018; McMillan, 2010). Although they are important research methods in higher education, I determined that a qualitative or mixed methods study was inappropriate for this study.

My study is a quantitative correlational study. Correlational studies provide valuable information on what variables are statistically associated with one another to determine if further review is warranted, although they do not determine causation (Curtis, 2016). Quantitative correlational research is non-experimental and involves the numerical measurement of variables and investigates whether those variables correlate (Mbuva, 2022). My quantitative correlational study determines if correlations exist between outstanding institutional debt relief and student success, or persistence. My study also determines if other independent variables are correlationally related to success status. Other independent variables include admission status, age, first generation status, Pell eligibility, race and gender. My dependent variable is success, defined as graduating (both types of schools), re-enrolling (both type of schools), or transferring (community college only) at the end of three semester terms following the debt payoff, which occurred in July 2021. Those terms are Fall 2021, Spring 2022, and Summer/Fall 2022.

**Population and Sample**

In July 2021, both Northstar Community College and Riverview Technical College identified students that attended the colleges since Spring 2020 and had a past due debt which had accumulated since the onset of the declaration of a national emergency in March 2020 (COVID-19 Pandemic). These students would be identified as eligible to have their outstanding debt eliminated. The colleges would then access the Higher Education Emergency Relief Fund (HEERF) grant to pay off the student's debt on their behalf. The population of students was analyzed over the subsequent three terms after the payoff event. Success for community college students is defined as having graduated, re-enrolled, or transferred to another institution. Success for the technical college is defined as having re-enrolled the following term or graduating. Since

technical colleges are not considered transfer institutions, transferring is not considered in the success description for the technical college. Descriptive statistics were used to describe the characteristics of the sample in order to determine generalizability of results.

### *Northstar Community College*

In July 2021, Northstar Community College identified 1,034 students with past-due student account balances from the prior terms. All these students had their outstanding balances paid off. The total population of students during these terms was 8,998 at Northstar Community College. The total population is defined as any student who had a charge on their account during the terms noted whether they had an outstanding balance mitigated by HEERF funding. Lastly, the students had to have been enrolled in the Spring 2021 term, the last term before the July 2021 debt payoff.

### *Riverview Technical College*

In July 2021, Riverview Technical College identified 282 students with past-due student account balances from the prior terms. All these students had their outstanding balances paid off using the HEERF grants. The total student population during these terms was 1,316, which included any student that had a charge for the initial term, no matter if they had those balances mitigated by HEERF funds or not. Lastly, the students had to have been enrolled in the Spring 2021 term, which was the term prior to the July 2021 debt payoff.

## Instrument for Data Collection

No instrument was created for this study, as I used a pre-existing data set for my analysis. All institutional data was collected from the student information systems by requesting it (after

receiving IRB approval) from the Office of Institutional Research who gathered and deidentified the data.

## Data Analysis

My data was imported into IBM SPSS Statistics Program for statistical analysis. The data was coded and properly organized before analysis to ensure data accuracy. Data points and normality of the data was analyzed using descriptive statistics including sample size, frequencies, relative frequencies, and percentages (Muijs, 2016). I conducted logistic regressions on the data elements to test whether there was a statistically significant correlational relationship between past-due institutional debt payoff status and student success status within 3 terms after having debt paid off. I also conducted logistic regressions to determine if there were statistically significant correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within 3 terms after having debt paid off. I also used Pearson's Chi-Square tests to determine if there were statistically significant differences in student success between the groups of some demographics to increase the information provided by my study.

## Logistic Regression

Logistic regression is used to determine if there are statistically significant correlational relationships between one or more independent variable and a binary outcome (Muijs, 2016). Since the dependent variable has two categories (dichotomous), succeeded or did not succeed, I used the logistic regression method. The underlying premise is that we are looking at the probability of a particular outcome given certain independent variable values. To test the first hypothesis, I used binary logistic regression to determine if there was a statistically significant

correlational relationship between debt pay-off status and success status. To test the second hypothesis, I also used a binary logistic regression model to determine if there was a statistically significant relationship between student demographics, institutional debt payoff status, and student success status.

**Variables & Coding**

This section outlines the dependent and independent variables for each research question.

- $R_1$: What is the correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off?

**Table 1**

*Variables and Codes Used in Analysis for R1*

| **Variables** | **Coding** |
|---|---|
| **Dependent** | |
| Overall Student Success Status 3 Terms following debt relief payoff | 0 = No<br>1 = Yes<br>2 = Unknown |
| **Independent Variables** | |
| HEERF Debt Payoff Status | 0 = No<br>1 = Yes |

- $R_2$: What is the correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), student's past-due institutional debt payoff status, and student success status within three terms after having the debt paid off?

For the second research question the dependent variable remains the same, student success status. The independent variables are Pell eligibility, First Generation Status, Gender, Race and age as described in the Table 2.

**Table 2**

*Variables and Codes Used in Analysis for R2*

| **Variables** | **Coding** |
|---|---|
| **Dependent** | |
| Overall Student Success Status 3 Terms | 0 = No |
| following debt relief payoff | 1 = Yes |
| | 2 = Unknown |
| **Independent Variables** | |
| Age | 0 = 17 and Under |
| | 1 = 18-24 |
| | 2 = 25-34 |
| | 3 = 35+ |
| Gender | 0 = Male |
| | 1 = Female |
| | 2 = Unknown |
| Race (Student of Color) | 0 = White |
| | 1 = Student of Color |
| Pell Eligible | 0 = No |
| | 1 = Yes |
| | 2 = Unknown |
| First Generation | 0 = No |
| | 1 = Yes |
| | 2 = Unknown |
| HEERF Debt Payoff Status | 0 = No |
| | 1 = Yes |

**Assumptions, Validity, and Reliability**

My statistical analyses, including descriptive statistics, logistics regressions, and Pearson's Chi-Square tests, increase the validity of my study. In addition, the following assumptions were met for my research.

Logistics Regression has four assumptions that must be met for binomial logistic regression to provide a valid test (Laerd Statistics, 2022). The results of these tests will be illustrated in chapter four.

- Assumption #1: My dependent variable was measured on a dichotomous scale.
- Assumption #2: I have one or more independent variables which can be either continuous or categorical.
- Assumption #3: I have independence of observations, and the dependent variable is mutually exclusive and exhaustive.
- Assumption #4: There is a linear relationship between any continuous independent variables and the logit transformation of the independent variable.

Pearson's chi-square test was used to discover if there was a relationship between two categorical variables, and the following two assumptions were met.

- My two variables were measured at an ordinal or nominal level.
- My two variables consisted of two or more categorical, independent groups.

A power analysis was conducted to determine the appropriate sample size for the study. Kyonka (2019) asserted that a priori is based on predetermined maximum tolerable Type I and II error rates and the minimum effect size which is the most meaningful. Thus, using power analysis is important in research designs to determine sample size because it

provides a better chance of studies having conclusive results (Kyonka, 2019). Because I conducted linear regression, I calculated the necessary sample size for my tests G*Power (Faul et al., 2009). The results of the Power calculations for both of my tests were .99 or higher.

## Limitations

My study can help understand the correlational relationships between debt payoff status and student success; however, there are several limitations in the research methods. First, my data provide potential correlations for future research, but the results are limited because I cannot determine causation (Punch, 2014). The pre-existing demographic data in this study was initially intended for admissions and financial aid eligibility, which means that the data sample may be incomplete because the data sample is not entirely representative of the general student body (Muijs, 2016). An example would be a student that chose not to apply for student aid, although they may have been Pell eligible if they had applied.

The dataset represents a moment in time; therefore, it does not reflect the changes students experience from one term to another, which could include gender identities and socioeconomic status (Punch, 2014). The data set could also include students' reporting errors on their applications which impacts the accuracy of the statistical analysis.

Some demographic categories may not be included in the sample and others may be over- or under-represented due to the nature of the data sample which may influence my conclusions (Punch, 2014). This is due to the pre-determined categories listed in the pre-existing data set (Punch, 2014). The limited categories available for racial and sexual/gender identities do not reflect the wide diversity of students' ethnicities or sexual/gender identities (Fonseca, 2017). An example is a differentiation between African American students and students that immigrated

from African countries. The current data set provided to me did not differentiate this important difference.

While my study determines if there is a statistically significant correlational relationship between past-due institutional debt payoff status and student success status within 3 terms after having debt paid off, this study is taking place within a unique world event, the COVID-19 Pandemic. COVID-19 continued to impact students' lives and could potentially affect persistence beyond the financial implications it has had.

One limitation of this study is the limited research on institutional debt. While multiple studies (Baker, 2019; Chen, 2008; Dowd, 2006; Canche Gonzalez, 2020; Baum & Steele, 2010; Qayyum, 2019) analyzed the effect of traditional student loan debt and persistence, only one focused on institutional debt (Ison, 2021). Furthermore, that study noted no other known studies on the topic (Ison, 2021).

Time constraint is another limitation as the option to study institutional debt relief came with a specific time frame in which the HEERF grant could be used. Expressly, grant stipulations required that the HEERF grant could only be used for debt accumulated during the COVID-19 National Emergency declared in March 2020 by The President of The United States (U.S. Department of Education, 2022). Therefore, the grant could be accessed no earlier than July 2021 and was to be used in this single opportunity.

## Delimitations

As a Director of Business Affairs and Administrative Services, I chose this topic of study because the topic is of particular interest to me in my role of managing student accounts and developing policies around delinquent student balances. A further understanding of the

correlation between institutional debt relief and persistence could lead to revisions in policy that are beneficial to both students and the institution. In addition, I chose the two-year college space as this is the area I am currently employed and where my research interests lie. Another limitation of my study is that it takes place in the setting of one community college and one technical college in the midwest. Further studies could potentially analyze the correlation with a larger data set encompassing students from multiple campuses, types of institutions, geographies, and time frames.

## Biases

The influence of personal bias in my study is limited because I am using a predetermined data set from a list of all students who had a financial charge on their account during the noted terms. This de-identified list also contained information as to whether the student had an outstanding balance on their account that resulted in a HEERF Grant payoff. However, my interpretation of the results of my study design are influenced by unintended personal biases. While it is impossible to eliminate biases in data and analysis: by increasing transparency and outlining the potential limitations of my study I hope to decrease biases present (Simundic, 2013).

## Researcher Positionality

I currently work as the Interim Director of Business Affairs and Administrative Services at a mid-sized community college and a small technical college in the Midwest. In addition, I have previously served as Director of Auxiliary Services. I oversee the college's use of HEERF funds and make decisions regarding financial policy and student requests for an exception to

policy regarding their student accounts. I am a member of the President's Cabinet and realize that I am in a position to influence policy and practice.

As a mixed-race, cis-gendered, first-generation student and college administrator, I have experienced privilege and inequity. Admittedly, I have also contributed to the inequities by not challenging the status quo. I intend to add to the body of literature exploring the financial challenges many students face, particularly underrepresented students and those from lower-income backgrounds.

## Human Subject Approval Institutional Review Board (IRB)

This study has been approved by the Institutional Review Board of Saint Cloud State University and the Office of Institutional Research at the Community and Technical Colleges analyzed. This process ensures that participants remain confidential. Any data used will be securely stored within the State protected OneDrive system, and any students' identifying information has been removed prior to receiving data to protect identities. All data will be destroyed upon completing my study and publication of my dissertation.

My research questions will not require direct student contact to answer; therefore, I do not need to obtain informed consent from the students.

## Conclusion

In this chapter, I introduced my research methodology and restated my research questions. In addition, I described the research design elements to be used in my study. I described the setting and environment as well as the population and sample. I also described the model for logistics regression that I used to conduct my analysis and addressed the assumptions, validity and reliability of my study. The next chapter explores the results of my research.

# Chapter 4: Results

This chapter describes the results of my correlational quantitative analysis study based on my two research questions. My analysis was conducted on a population that included all students with a financial charge to their account that attended Northstar Community College and Riverview Technical College from Spring 2020 to Summer 2021. The total population was 10,314 students. Data was provided by the Office of Institutional Research at the colleges studied. This included a deidentified listing of all students who had a charge on their account during Spring 2020, Summer 2020, Fall 2020, Spring 2021, and Summer 2021 (since the onset of the COVID-19 Pandemic).

The data also included students' demographic information, socioeconomic status, and whether they had an outstanding account balance paid off using the Higher Education Emergency Relief Fund. Lastly, the colleges provided me with data on these students' success status for the three terms following the institutional debt payoff. Those terms were Fall 2021, Spring 2022, and Summer/Fall 2022. For this study, success is defined as having graduated, re-enrolled, or transferred at the community college and having graduated or transferred at the technical college.

Research questions and hypotheses that guided this study:

- $R_1$: What is the correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off?
- $R_2$: What is the correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), student's past-due

institutional debt payoff status, and student success status within three terms after having the debt paid off?

Hypothesis 1 will answer Research Question 1.

- $H_{01}$: There is not a statistically significant correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off.
- $Ha_1$: There is a statistically significant correlational relationship between a student's past-due institutional debt payoff status and student success status within 3 terms after having debt paid off.

Hypothesis 2 will answer Research Question 2.

- $H_{02}$: There is not a statistically significant correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), student's past-due institutional debt payoff status, and student success status within 3 terms after having debt paid off.
- $Ha_2$: There is a statistically significant correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), student's past-due institutional debt payoff status, and student success status within 3 terms after having debt paid off.

My data was imported into SPSS statistics Version 28.0 for statistical analysis. I analyzed my data using descriptive statistics, including sample size, relative frequencies, and percentages. In addition, I analyzed the normality of the variables in my statistics by running descriptive statistics and removing any missing variables in my statistical analyses. For research question 1,

I performed logistic regression determine if there was a statistically significant relationship between the independent variable, debt payoff status, with the dependent variable, student success. For research question 2, I also performed logistic regression to test whether students' demographics (age, sex, race, Pell eligibility, first-generation status, and admission status) had a statistically significant relationship to students' success during the three terms following the debt payoff. In the following sections, I list the combined colleges' demographic data and the results of my statistical analyses. Then, I present the results of a combined community and technical college model followed by an analysis of the community and technical colleges independently. Finally, I present my results and provide conclusions based on the data set and analysis.

## Descriptive Statistics

My sample data includes all 10,314 unique students that attended Northstar Community College and Riverview Technical College between Spring 2020 and Fall 2021 who had a financial charge on their account regardless of if the charge was paid by the student, grants or scholarships. The list of students did not include any students who audited their courses at no charge such as senior citizens. The demographic information included in the tables below are for this population.

**Table 3**

*Descriptive Statistics for Entire Sample of Students Who Had a Charge on Their Accounts Spring 2020 through Spring 2021*

| **Demographics** | | **N** | **%** |
|---|---|---|---|
| Type of College (IV RQ 1 & 2) | Community College | 8520 | 82.6 |
| | Technical College | 1794 | 17.4 |
| Admit Status (IV RQ 2) | PSEO/High School | 1825 | 17.7 |
| | Undergraduate | 8489 | 82.3 |
| Age Range (Mean 21.8) (IV RQ 2) | 17 and Under | 1850 | 17.9 |
| | 18-24 | 6322 | 61.3 |
| | 25-34 | 1331 | 12.9 |
| | 35+ | 796 | 7.7 |
| Race (IV RQ2) **Recoded to Student of Color/White for RQ 2* | American Indian/Alaskan Native | 313 | 3.0 |
| | Asian | 833 | 8.1 |
| | Black/African American | 1619 | 15.7 |
| | Hispanic | 610 | 5.9 |
| | Native Hawaiian/ Pacific Islander | 38 | .4 |
| | Non-Resident Alien | 51 | .5 |
| | Two or More Races | 553 | 5.4 |
| | Race Unknown | 150 | 1.5 |
| | White | 7797 | 75.6 |
| Sex | Male | 4018 | 39.0 |
| | Female | 6232 | 60.4 |
| Received Financial Aid (IV RQ 2) | No | 1803 | 17.5 |
| | Yes | 8511 | 82.5 |
| First Generation Status (IV RQ 2) | No | 8240 | 79.9 |
| | Yes | 1845 | 17.9 |

| Demographics | | N | % |
|---|---|---|---|
| | Unknown | 229 | 2.2 |
| Pell Eligible | No | 2664 | 25.8 |
| | Yes | 3341 | 32.4 |
| | Unknown | 4309 | 41.8 |
| Received HEERF Past Due Debt Payoff (IV RQ1 & 2) | No | 8998 | 87.2 |
| | Yes | 1316 | 12.8 |
| Success Combined Colleges (DV RQ 1 & 2) | No | 5220 | 50.6 |
| | Yes | 5094 | 49.4 |
| Success Community College (DV RQ 1 & 2) | No | 3945 | 46.3 |
| | Yes | 4575 | 53.7 |
| Success Technical College (DV RQ 1 & 2) | No | 1275 | 12.4 |
| | Yes | 519 | 28.9 |

*Note.* $N$ = 10,314

The entire population of students attending 2-year public institutions in Fall of 2021 was 4,662,364 (National Student Clearinghouse Research Center, 2021). According to the National Center for Education Statistics, the retention rate for public 2-year institutions for students entering in 2019 was 61% (National Center for Education Statistics, 2022).

I ran descriptive statistics on the sub-sample of students who had an unpaid balance that was subsequently paid off with the HEERF grant.

**Table 4**

*Descriptive Statistics for Sub-Sample Population of Students who received Debt Payoff*

| **Demographics** | | **N** | **%** |
|---|---|---|---|
| Type of College | Community College | 1034 | 78.6 |
| | Technical College | 282 | 21.4 |
| Admit Status | PSEO | 80 | 6.1 |
| | Undergraduate | 1236 | 93.9 |
| Age Range (Mean 21.8) | 17 and Under | 95 | 7.2 |
| | 18-24 | 930 | 70.7 |
| | 25-34 | 199 | 15.1 |
| | 35+ | 92 | 7.0 |
| Sex | Male | 565 | 43.1 |
| | Female | 745 | 56.9 |
| | Unknown | 6 | |
| Race | American Indian/ Alaskan Native | 52 | 4.0 |
| | Asian | 85 | 6.5 |
| | Black/African American | 401 | 30.5 |
| | Hispanic | 105 | 8 |
| | Native Hawaiian/ Pacific Islander | 5 | .4 |
| | Non-Resident Alien | 5 | .4 |
| | Two or More Races | 93 | 7.1 |
| | Race Unknown | 16 | 1.2 |
| | White | 839 | 63.8 |
| Received Financial Aid | No | 199 | 15.1 |
| | Yes | 1117 | 84.9 |
| First Generation Status | No | 964 | 73.3 |
| | Yes | 320 | 24.3 |
| | Unknown | 32 | 2.4 |
| Pell Eligible | No | 337 | 25.6 |
| | Yes | 645 | 49.0 |
| | Unknown | 334 | 25.4 |

| Demographics | | N | % |
|---|---|---|---|
| Received HEERF Debt Payoff | No | 0 | |
| | Yes | 1316 | 100 |
| Success Combined Colleges | No | 989 | 75.2 |
| | Yes | 327 | 24.8 |
| Success Community College | No | 733 | 55.7 |
| | Yes | 301 | 22.9 |
| Successful Technical College | No | 256 | 19.5 |
| | Yes | 26 | 2.0 |

*Note.* $N$ = 1,316

## Research Question 1 Analyses

What is the correlational relationship between a student's past-due institutional debt payoff status and student success status within three terms after having the debt paid off?

### Logistic Regression

For this research question, I performed three logistics regression tests to measure the correlational relationship between debt payoff status and student success. The three analyses were performed as follows: (1) combined technical and community colleges (2) community college independently and lastly, for (3) technical college independently.

### Assumption Testing

Logistics Regression has four assumptions that must be met for binomial logistic regression to provide a valid test (Laerd Statistics, 2022).

- Assumption #1: My dependent variable was measured on a dichotomous scale.
- Assumption #2: I have one or more independent variables which can be either continuous or categorical.

- Assumption #3: I have independence of observations, and the dependent variable is mutually exclusive and exhaustive.
- Assumption #4: There is a linear relationship between any continuous independent variables and the logit transformation of the independent variable.

I confirmed that my sample size (n=10,314) was larger than the minimum recommended for logistic regression. My independent variables were tested for assumptions, including the independence of errors, the absence of multicollinearity, and the lack of strongly influential outliers (Muijs, 2016). I examined the case processing summary, Pearson' Chi-Square goodness of fit test, Omnibus Tests of Model Coefficients, the cross-tabulations, and the descriptive statistics, including the frequencies, distributions, and outliers, to determine if the assumptions were violated (Muijs, 2016). Next, I ran the Hosmer-Meleshow goodness of fit statistic to determine if the model fits the observed data. The Nagelkerke R Square values indicate the amount of variation in the dependent variable explained by the model. While the test results provided a lower data point, this is an exploratory study, which is appropriate. I also used the Wald test to confirm that the coefficients were not equal to zero and that each predictor of the model results in a statistically significant improvement to the model.

**Results for Research Question 1**

***Community College & Technical College Data Combined***

I performed a logistic regression with the combined data from the community and technical college to determine if there was a statistically significant correlational relationship between HEERF payoff status and student success status for the community college and technical college data combined. The Omnibus Test of Model Coefficients suggested that the

new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(1, N = 10{,}314) = 379.17, p < .001$. The model explained 4.8% (Nagelkerke $R^2$) of the variance in student success and correctly classified 55.8% of the case as reported in the classification table of the binomial regression output in SPSS.

Based on the results of the logistics regression, there is a statistically significant ($p$<.001) correlational relationship between a student's past-due institutional debt payoff status and student success status within 3 terms after having debt paid off for the community college and technical college combined. Students who received the debt payoff were .29 times more likely (less likely) to succeed (see table 5). Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful. Based on these results the null hypothesis for research question one is rejected and there is a statistically significant correlational relationship between student's past due institutional debt payoff status and student success within three terms after having the debt paid off.

**Table 5**

*Logistic Regression Community and Technical College Combined for* **$R_1$**

| **Predictor** | ***B*** | ***SE*** | **Wald** | **df** | **sig** | **Exp (B)** | **95 % CI (Lower, upper)** |
|---|---|---|---|---|---|---|---|
| Received Debt | -1.23 | .07 | 332.89 | 1 | <.001 | .29 | (.26, .34) |

N=10,314

To better understand the logistic regression results, I also conducted a Chi-Square analysis to determine if there were statistically significant differences in student success for students who did and did not receive debt payoff. First, I tested the assumptions for Chi-Square, which are:

- Both variables tested should be either nominal or ordinal.
- Both variables tested must have at least two mutually exclusive categories (Laerd Statistics, 2018)

If these assumptions were not fulfilled, then a chi-square test could not be conducted, and other tests must be considered (Laerd Statistics, 2018). These assumptions were met for these variables.

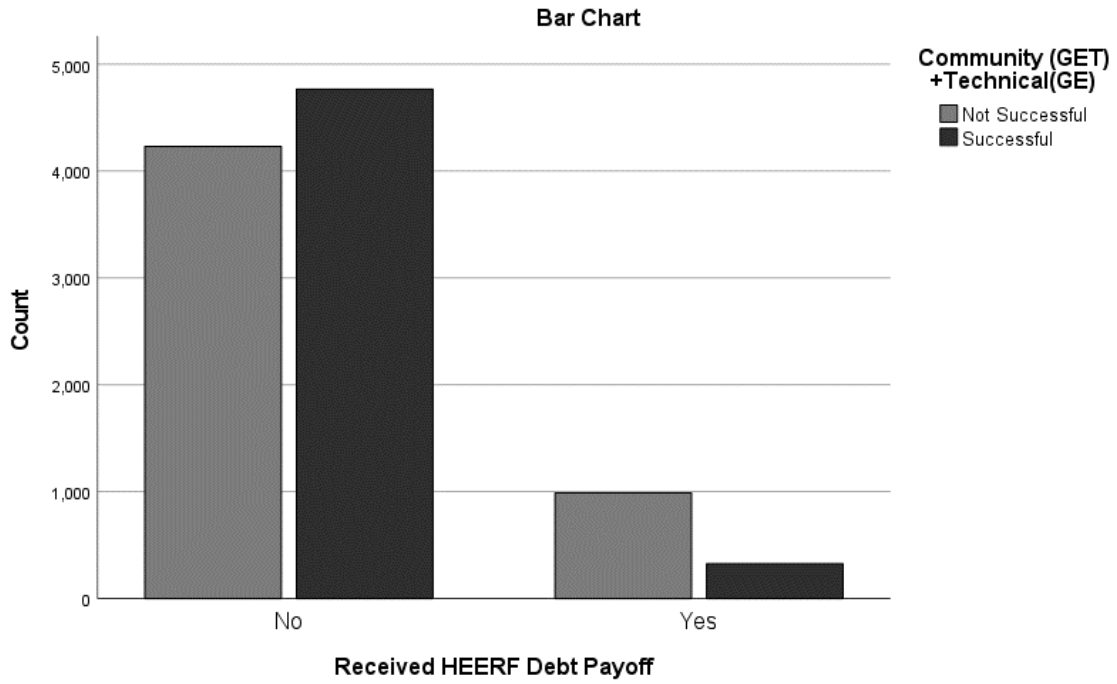
The difference in student success between those who did and did not receive debt payoff was statistically significant, $X^2(1, N = 10{,}314) = 363.46, p < .001$, where (1) represents degrees of freedom.

- Out of 10,314 total students in the sample, 1,316 (12.8%) had past-due accounts and received the debt payoff, and 8,998 (87.2%) did not.
- Of the debt pay-off recipients, 989 (75.2%) were not successful, and 327 (24.8%) were.
- Of all students, 5220 (50.6%) were not successful, and 5094 (49.4%) were successful.

Based on the data, students who did not receive the HEERF debt payoff succeeded at a higher rate than those that did receive debt payoff.

**Figure 1**

*Debt Payoff Status Success-Community and Technical College*




*Note:* 0 = Did not debt receive payoff, 1 = Did receive debt payoff, 0 = Not Successful, 1 = Successful

***Community College Only***

I performed a logistic regression with the data from the community college to determine if there was a statistically significant correlational relationship between HEERF payoff status and student success status for the community college only. The Omnibus Test of Model Coefficients suggested that the new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(1, N = 8{,}520) = 290.69, p < .001$. The model explained 4.5% (Nagelkerke $R^2$) of the variance in student success and correctly classified 58.8% of the case as reported in the classification table of the binomial regression output in SPSS.

Based on the results of the logistics regression, there is a statistically significant ($p$<.001) correlational relationship between a student's past-due institutional debt payoff status and student success status within 3 terms after having debt paid off at the community college. Students who received the debt payoff were .31 times more likely (less likely) to succeed (see table 5). Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.

**Table 6**

*Logistic Regression Community College for* **$R_1$**

| **Predictor** | ***B*** | ***SE*** | **Wald** | **df** | **sig** | **Exp (B)** | **95 % CI (Lower, upper)** |
|---|---|---|---|---|---|---|---|
| Received Debt | -1.18 | .07 | 264.20 | 1 | <.001 | .31 | (.27, .36) |

N=10,314

To better understand the logistic regression results, I conducted a Chi-Square analysis to determine if there were statistically significant differences in student success for students who did and did not receive debt payoff. First, I tested the assumptions for Chi-Square, which are:

- Both variables tested should be either nominal or ordinal.
- Both variables tested must have at least two mutually exclusive categories (Laerd Statistics, 2018)

If these assumptions were not fulfilled, then a chi-square test could not be conducted, and other tests must be considered (Laerd Statistics, 2018). These assumptions were met for these variables.

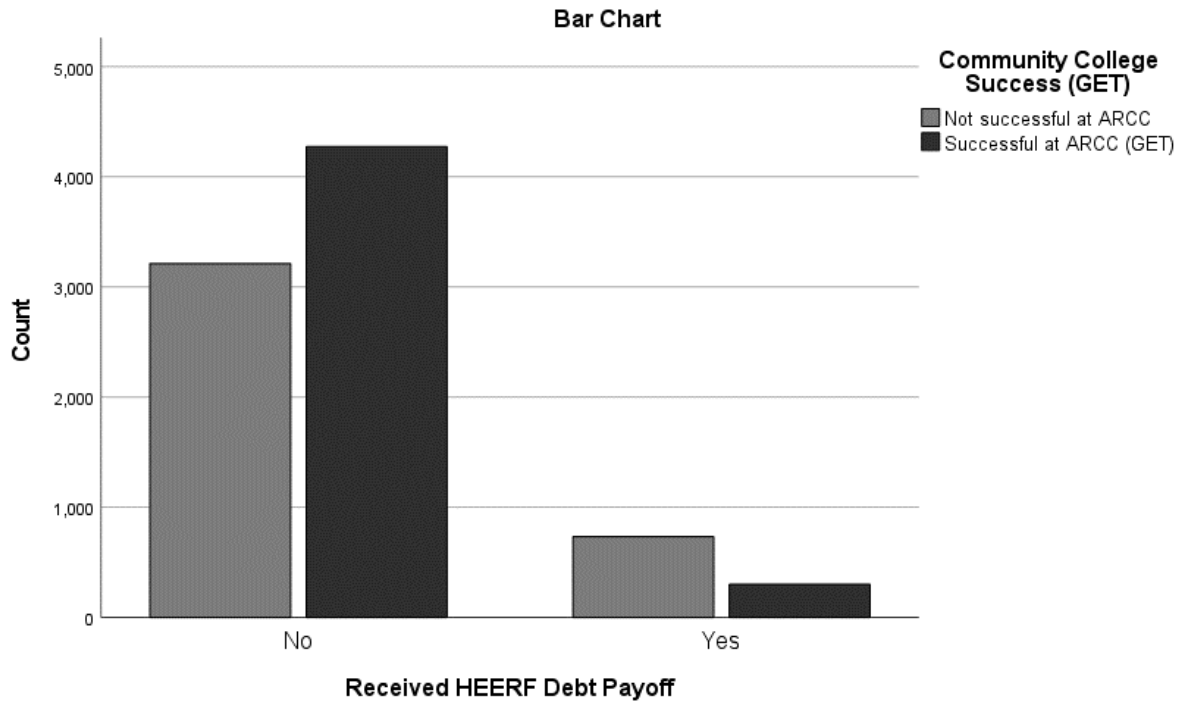
The difference in student success between those who did and did not receive debt payoff was statistically significant, $X^2(1, N = 8{,}520) = 286.13, p < .001$, where (1) represents degrees of freedom.

- Out of 8,520 total students in the community college sample, 1,034 (12.1%) had past-due accounts and received the debt payoff, and 7,486 (87.9%) did not.
- Of the debt pay-off recipients, 733 (70.9%) were not successful, and 301 (29.1%) were.
- Out of all students, 3,945 (46.3%) students were not successful, and 4,575 (53.7%) were successful.

Based on the chart, students at the community college who did not receive the HEERF debt payoff succeeded at a higher rate than community college students who received debt payoff.

**Figure 2**

*Debt Payoff Status Success Community College*



*Note:* 0 = Did not debt receive payoff, 1 = Did receive debt payoff, 0 = Not Successful, 1 = Successful

***Technical College Only***

I performed a logistic regression with the data from the technical college to determine if there was a statistically significant correlational relationship between HEERF payoff status and student success status for the technical college only. The Omnibus Test of Model Coefficients suggested that the new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(1, N = 1{,}794) = 75.57\ p < .001$. The model explained 5.9% (Nagelkerke $R^2$) of the variance in student success and correctly classified 71.1% of the case as reported in the classification table of the binomial regression output in SPSS.

Based on the results of the logistic regression, there is a statistically significant ($p$<.001) correlational relationship between a student's past-due institutional debt payoff status and student success status within 3 terms after having debt paid off for the technical college. Students who received the debt payoff were .21 times more likely (less likely) to succeed (see table 5). Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful than those who had their debt paid.

**Table 7**

*Logistic Regression Technical College for $R_1$*

| Predictor | *B* | *SE* | Wald | df | sig | Exp (B) | 95 % CI (Lower, upper) |
|---|---|---|---|---|---|---|---|
| Received Debt | -1.56 | .21 | 53.7 | 1 | <.001 | .21 | (.14, .32) |

N=10,314

To better understand the logistic regression results, I conducted a Chi-Square analysis to determine if there were statistically significant differences in student success for students who did and did not receive debt payoff. First, I tested the assumptions for Chi-Square, which are:

- Both variables tested should be either nominal or ordinal.
- Both variables tested must have at least two mutually exclusive categories (Laerd Statistics, 2018)

If these assumptions were not fulfilled, then a chi-square test could not be conducted, and other tests must be considered (Laerd Statistics, 2018). These assumptions were met for these variables.

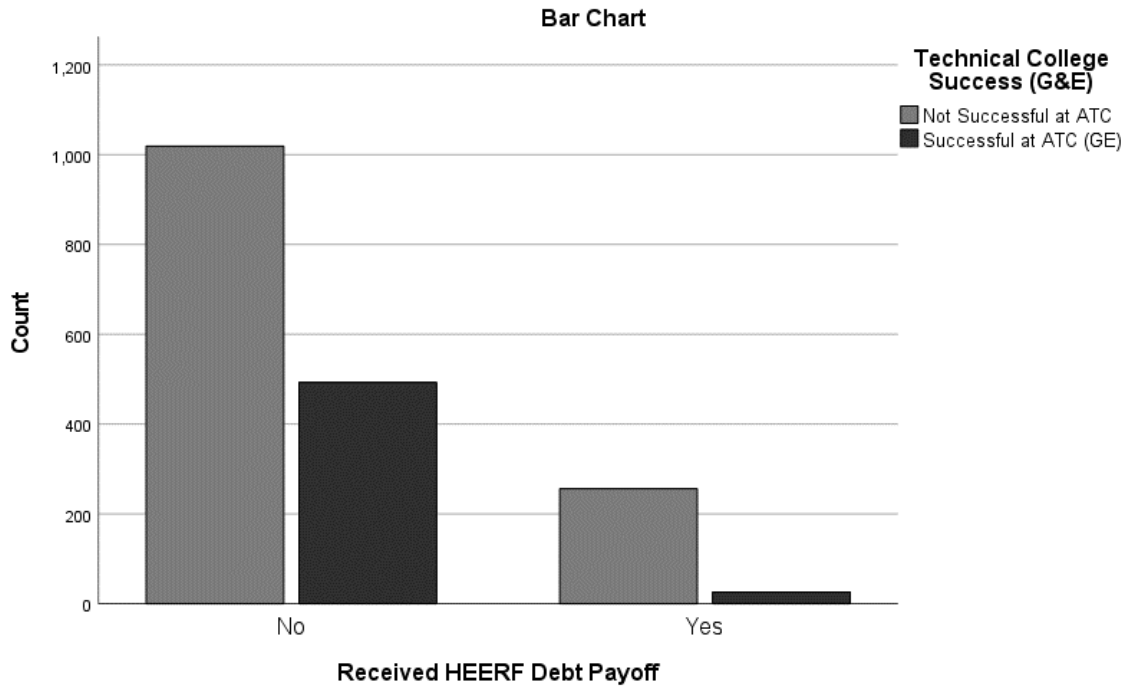
The difference in student success between those who did and did not receive debt payoff was statistically significant, $X^2(1, N = 1{,}794) = 63.22, p < .001$, where (1) represents degrees of freedom.

- Out of 1,794 total students in the sample, 282 (15.7%) had past-due accounts and received the debt payoff, and 1,512 (84.3%) did not.
- Of the debt pay-off recipients, 256 (90.8%) were not successful, and 26 (9.2%) were.
- Of all students, 1,019 (67.4%) were not successful, and 493(32.6%) were successful.

Based on the chart, students who did not receive the HEERF debt payoff succeeded at a higher rate.

**Figure 3**

*Debt Payoff Status Success Technical College*




*Note:* 0 = Did not debt receive payoff, 1 = Did receive debt payoff, 0 = Not Successful, 1 = Successful

***Research Question 1 Conclusion***

In conclusion, the null hypothesis was rejected, and the alternative hypothesis was accepted. The alternative hypothesis states that there is a statistically significant predictive relationship between a student's past-due institutional debt payoff status and student success. My study confirmed a correlational relationship between institutional debt relief and student success, although results indicate that the likelihood of succeeding decreases for those who have had their institutional debt paid off. In addition, students that had their institutional debt paid off

for them were significantly less likely to graduate, re-enroll or transfer after having that debt paid off.

## Research Question 2 Analyses

What is the correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within 3 terms after having debt paid off?

### Logistic Regression

For this research question, I performed three logistic regression tests to measure the correlational relationship between student demographics, debt payoff status, and student success status. The three analyses were performed as follows: (1) combined technical and community colleges, (2) community college independently, and lastly, (3) technical college independently.

### Assumption Testing

Logistics Regression has four assumptions that must be met for binomial logistic regression to provide a valid test (Laerd Statistics, 2022).

- Assumption #1: My dependent variable was measured on a dichotomous scale.
- Assumption #2: I have one or more independent variables which can be either continuous or categorical.
- Assumption #3: I have independence of observations and the dependent variable is mutually exclusive and exhaustive.
- Assumption #4: There is a linear relationship between any continuous independent variables and the logit transformation of the independent variable.

I confirmed my sample size (n=10,314) was larger than the minimum recommended for logistic regression. My independent variables were tested for assumptions including the independence of errors, absence of multicollinearity, and the lack of strongly influential outliers (Muijs, 2016). I examined the case processing summary, the Pearson' Chi-Square goodness of fit test, the cross tabulations, and the descriptive statistics including the frequencies, distributions, and outliers to determine if the assumptions were violated (Muijs, 2016). The Omnibus Test of Model Coefficients showed that the overall model had a significantly reduced -2LL compared to the baseline which suggests that the new model is explaining more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022). I also used the Wald test to confirm that the coefficients were not equal to zero and that each predictor of the model results in a statistically significant improvement to the model (Muijs, 2016).

**Results for Research Question 2**

**Combined Community and Technical College.** I performed a logistic regression with the combined data from the community and technical college to determine if there was a statistically significant correlational relationship between student demographics (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off? The Omnibus Test of Model Coefficients showed that the new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(7, N = 10{,}314) = 299.52, p < .001$. The model explained 6.6% (Nagelkerke $R^2$) of the variance in success and correctly classified 57.1% of cases as reported in the classification

table of the binomial regression output in SPSS. The Wald test confirmed that the coefficients were not equal to zero and that each predictor of the model resulted in a statistically significant improvement of the model.

Based on the results of the logistic regression, there is a statistically significant ($p<.001$) correlational relationship between some student demographics (age, gender, Pell eligible status, admit status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off (see table 8).

- Age: For each year older, students were .99 times more likely (less likely) to succeed, P=.005. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.
- Gender: The findings showed that females were 1.29 times more likely to succeed after having their debt paid off, P<.001.
- Pell-Eligible: The findings showed that Pell-eligible students were .77 times more likely (less likely) to succeed, P<.001. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.
- Debt Payoff Status: Having had the debt payoff resulted in students being .31 times more likely (less likely) to succeed. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.

The logistic regression results for the community and technical colleges combined are in table 8.

**Table 8**

*Logistic Regression Model Demographics Combined for* **$R_2$**

| Predictor | *B* | *SE* | Wald | df | sig | Exp (B) | 95 % CI (Lower, upper) |
|---|---|---|---|---|---|---|---|
| **Age (reg)** | -.01 | .01 | 8.04 | 1 | **.005** | .99 | (.98, .99) |
| **Gender (1)** | .254 | .06 | 20.64 | 1 | **<.001** | 1.29 | (1.16, 1.44) |
| Student of Color | -.067 | .06 | 1.30 | 1 | .254 | .94 | (.83, 1.05) |
| **Pell Eligible** | -2.63 | .06 | 21.70 | 1 | **<.001** | .77 | (.69, .86) |
| First Gen | -.00 | .07 | .001 | 1 | .974 | 1.00 | (.88, 1.14) |
| **Debt Payoff Status** | -1.17 | .09 | 191.53 | 1 | **.001** | .31 | (.26, .37) |
| Undergrad or High S | -.72 | .58 | 1.54 | 1 | .215 | .49 | (.16, 1.52) |

$R^2$=6.6, *N* = 10,314

Based on these results, the null hypothesis for research question two is partially rejected and there is a statistically significant correlational relationship between some student demographics, student's past due institutional debt payoff status and student success within three terms after having the debt paid off. Specifically, age, gender, Pell eligibility, and debt payoff status were shown to have a correlational relationship while race, first gen status and admit status did not have a correlational relationship.

**Community College Only.** I performed a logistic regression with the data from the Community College to determine if there were a statistically significant correlational relationship between student success and different groups within demographic/independent variables. The Omnibus Test of Model Coefficients showed that the new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(7, N = 8{,}520) = 213.68, p < .001$. The model explained 5.8% (Nagelkerke $R^2$) of the variance in success and correctly classified 57.6 cases reported in

the classification table of the binomial regression output in SPSS. The Wald test confirmed that the coefficients were not equal to zero and that each predictor of the model resulted in a statistically significant improvement to the model.

Based on the results of the logistic regression, there is a statistically significant ($p<.001$) correlational relationship between some student demographics (gender, Pell eligible status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off (see table 9).

- Gender: The findings showed that females were 1.23 times more likely to succeed after having their debt paid off, P<.001.
- Pell-Eligible: The findings showed that Pell-eligible students were .80 times more likely (less likely) to succeed, P<.001. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.
- Debt Payoff Status: Having had the debt payoff resulted in students being .30 times more likely (less likely) to succeed, P<.001. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.

**Table 9**

*Logistics Regression Model Demographics-Community College for* **$R_2$**

| **Predictor** | ***B*** | ***SE*** | **Wald** | **df** | **sig** | **Exp (B)** | **95 % CI (Lower, upper)** |
|---|---|---|---|---|---|---|---|
| Age (reg) | -.01 | .01 | 2.13 | 1 | .14 | .93 | (.98, 1.00) |
| **Gender (1)** | .26 | .06 | 17.42 | 1 | **<.001** | 1.23 | (1.16, 1.46) |
| Student of Color | .06 | .06 | .78 | 1 | .38 | 1.06 | (.93, 1.20) |
| **Pell Eligible** | -.23 | .06 | 13.25 | 1 | **<.001** | .80 | (.71, .90) |
| First Gen | -.08 | .07 | 1.28 | 1 | .26 | .92 | (.80, 1.06) |
| **Debt Payoff** | -1.10 | .09 | 145.68 | 1 | **<.001** | .30 | (.28, .40) |
| Undergrad or High School | -1.13 | .69 | 2.96 | 1 | .085 | .30 | (.08, 1.18) |
| $R^2$=6.6 | | | | | | | |
| *N*= 8,520 | | | | | | | |

**Technical College Only.** I performed a logistic regression with the data from Riverview Technical College to determine if there was a statistically significant correlational relationship between student success and different groups within demographic/independent variables. The Omnibus Test of Model Coefficients showed that the new model explains more of the variance in the outcome and is an improvement from the baseline model (National Centre For Research Methods, 2022), $X^2(7, N = 1072) = 112.86, p < .001$. The model explained 13.9% (Nagelkerke $R^2$) of the variance in success and correctly classified 69.2% of the case as reported in the classification table of the binomial regression output in SPSS. The Wald test confirmed that the coefficients were not equal to zero and that each predictor of the model resulted in a statistically significant improvement of the model.

Based on the results of the logistic regression, there is a statistically significant ($p$<.001) correlational relationship between one student demographic (Pell eligible status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off (see table 9).

- Pell-Eligible: The findings showed that Pell-eligible students were .80 times more likely (less likely) to succeed, P<.001. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.
- Debt Payoff Status: Having had the debt payoff resulted in students being .30 times more likely (less likely) to succeed, P<.001. Because the odds ratio (Exp B) was less than 1.00, this means that these students were less likely to be successful.

**Table 10**

*Logistic Regression Model Demographic-Technical College for* **$R_2$**

| **Predictor** | ***B*** | ***SE*** | **Wald** | **df** | **sig** | **Exp (B)** | **95 % CI (Lower, upper)** |
|---|---|---|---|---|---|---|---|
| Age (reg) | .01 | .01 | .47 | 1 | .490 | 1.10 | (.99, 1.02) |
| Gender (1) | .19 | .14 | 1.80 | 1 | .180 | 1.29 | (1.15, 1.46) |
| Student of Color | .06 | .06 | .80 | 1 | .377 | 1.06 | (.93, 1.20) |
| **Pell Eligible** | -.225 | .062 | 13.253 | 1 | **<.001** | .798 | (.71, .90) |
| First Gen | -.083 | .074 | 1.281 | 1 | .258 | .920 | (.80, 1.06) |
| **Debt Payoff** | -1.10 | .091 | 145.68 | 1 | **<.001** | .303 | (.28, .40) |
| $R^2$=6.6 | | | | | | | |
| *N*= 1,794 | | | | | | | |

***Research Question 2 Conclusion***

For research question 2, the null hypothesis was rejected, and the alternative hypothesis was partially accepted. The alternative hypothesis states that there is a statistically significant predictive relationship between student demographics, students' past due institutional debt payoff status, and student success. I found that some of the demographic independent variables had a statistically significant correlational relationship between debt payoff status and student success status. In particular, being female correlated with increased odds of succeeding after debt payoff while being Pell Eligible had a reverse effect. This was consistent in the

combined model and the community college model while the only other statistically significant independent variable at the Technical College was Pell-eligibility.

### *Additional Pearson's Chi-Square Analyses for Research Question 2*

Although the results of the Chi-square analyses do not specifically answer the research question 2 regarding correlation, the results provide valuable data for further review relative to research question 2. For these analyses, I performed the tests only on a combined community and technical college model.

**Students of Color, Debt Payoff, Success-Community and Technical College Combined.** I performed a Chi-Square test of independence to evaluate if the following variables were related: students of color, debt payoff, and the likelihood of succeeding. The results showed the relationship to be significant, $(1, N = 10{,}314) = 154.60, p < .001$, where (1) represents degrees of freedom.

- The 125 students of color who had a debt payoff and were successful represented 1.2% of all students.
- This group represented 2.5% of all successful students and 5.0% of the students of color.

Figures seven and eight provide graphic representations for students of color and White students, debt payoff status, and success status.

**Figure 4**

*Students of Color, Debt Payoff Status, Success-Community and Technical College*

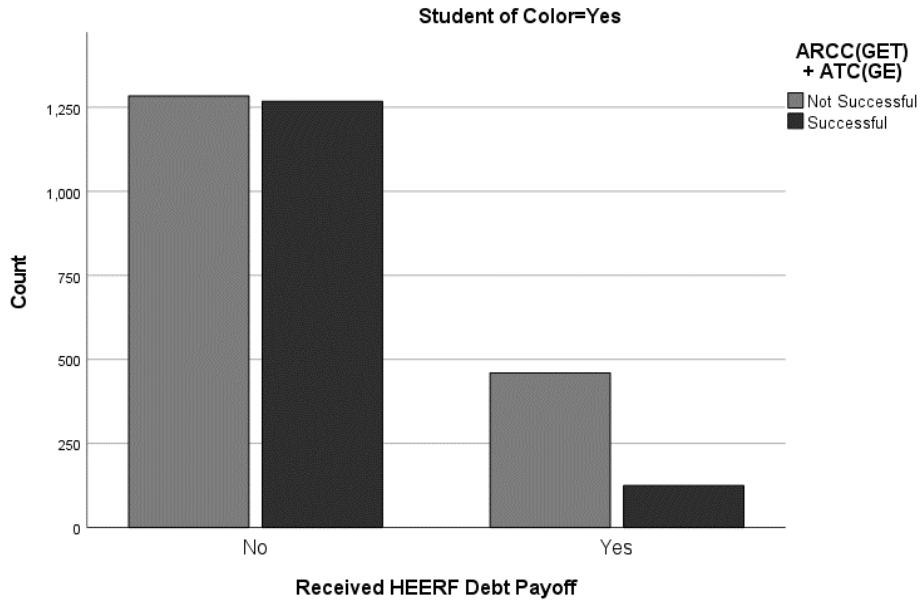
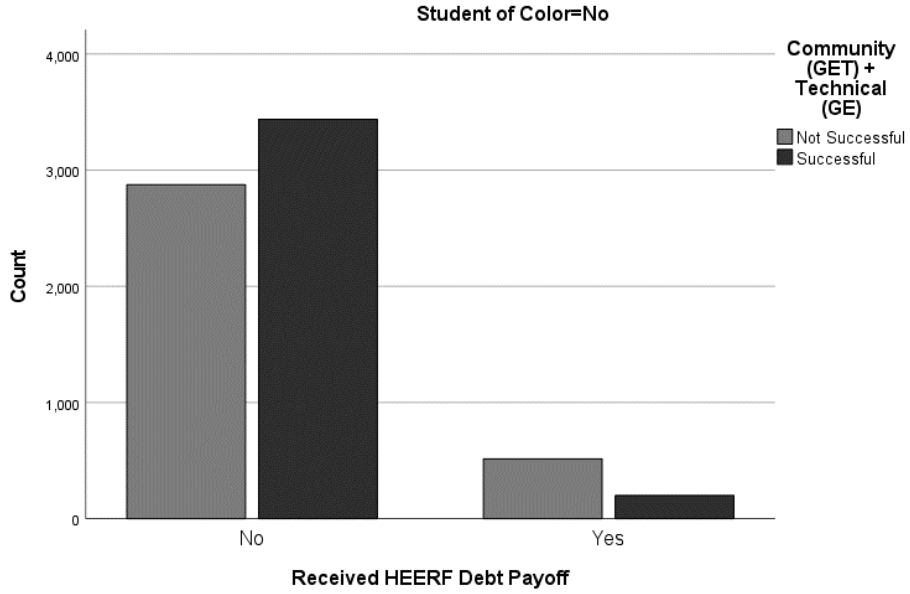



**Figure 5**

*White Students, Debt Payoff Status, Success-Community and Technical College*



**Pell eligible, Debt Payoff, Success-Community and Technical College Combined.** I performed a Chi-Square test of independence to evaluate if the following variables were related: Pell-eligible students, debt payoff, and the likelihood of succeeding. The relationship between these variables was significant, , $X^2(2, N = 10{,}314) = 178.24, p < .001$, where (2) represents degrees of freedom.

- The 126 Pell-eligible students with a debt payoff and success represented 1.2% of all students.
- This group represented 2.4% of all successful students and 3.8% of the Pell-eligible students.

Figures nine and ten provide a graphic description of Pell-eligible and non-Pell-eligible students, debt payoff status, and success status.

**Figure 6**

*Pell Eligible, Received Debt Payoff, Success-Community and Technical College*

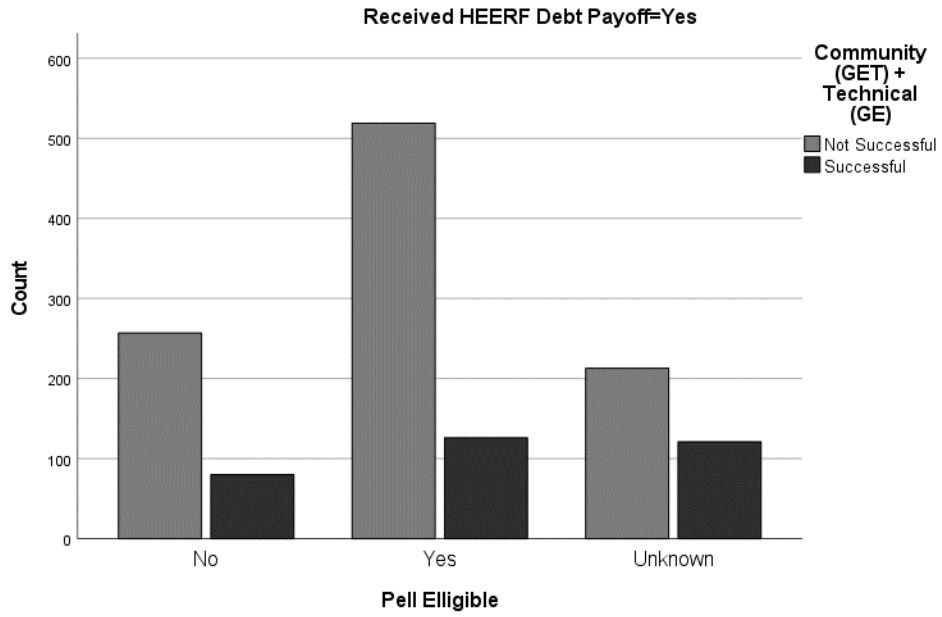
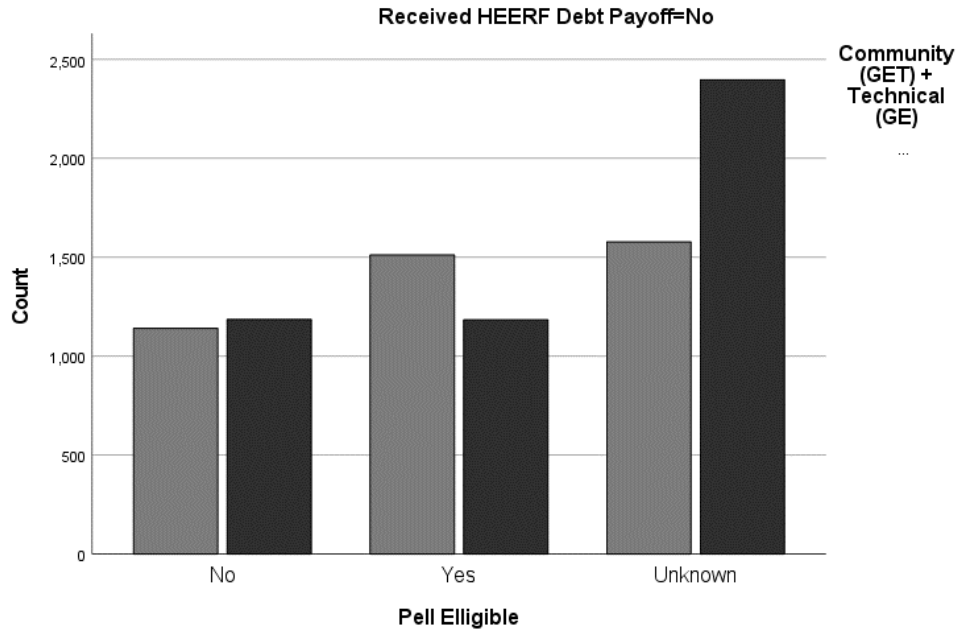



**Figure 7**

*Pell Eligible, No Debt Payoff, Success-Community and Technical College*



**Gender, Debt Payoff Status, Success.** I performed a Chi-Square test of independence to evaluate the relationship between gender, debt payoff, and the likelihood of succeeding. The relationship between these variables was not significant, $X^2(2, N = 10{,}314) = 3.77, p = .152$. where (2) represents degrees of freedom. I chose to show these results to provide valuable data for further research.

- Of the 326 that received the debt payoff and were successful, 200 were female, and 126 were male.
- The 200 female students who had a debt payoff and were successful represented 1.9% of all students and 3.9% of all successful students.
- The 126 males represented 1.2% of all students and 2.4% of all successful students.

Figures eleven and twelve provide a graphic representation of males, females, debt payoff status, and success status. These graphs represent the difference in success rates females achieved after having their debt paid off compared to males. My study revealed that female was the only independent variable with improved odds of succeeding after the debt paid off.

**Figure 8**

*Gender, Received Debt Payoff, Success-Community and Technical*

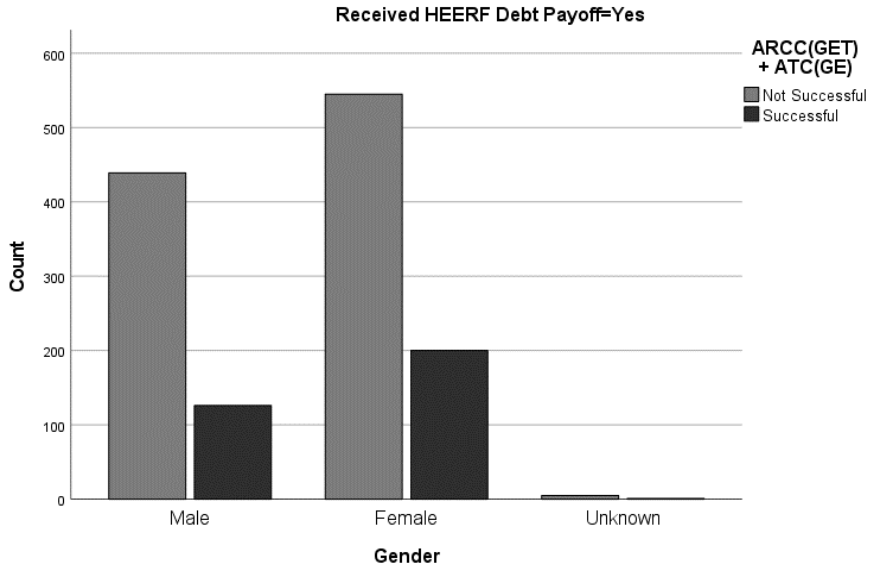
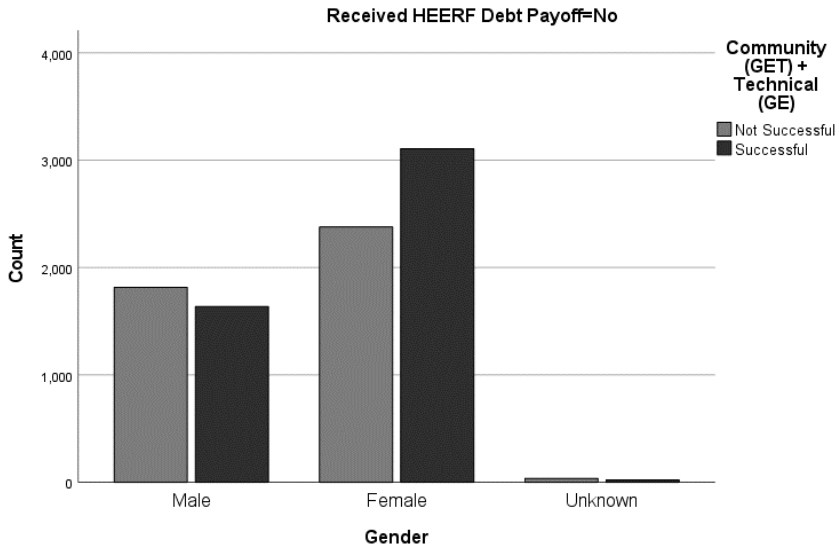



**Figure 9**

*Gender, No Debt Payoff, Success-Community and Technical College*




## Conclusion

In this chapter, I listed the demographic data, analyses, and results for each research question. For research question 1, I found a statistically significant correlational relationship

between past-due institutional debt payoff status and student success status within three terms after having the debt paid off. Receiving the past due debt payoff correlated with decreased odds of succeeding. These results are consistent in the combined model and the community and technical college models independently.

Furthermore, regarding research question 2,

- I found that there is a correlational relationship between one or more student demographic variables (age, gender, race, Pell status, First Gen status, admit status), past-due institutional debt payoff status, and student success status within three terms after having the debt paid off in the combined model.
- Gender, Pell eligibility, and age were the variables that had a statistically significant relationship to success for students with their institutional debt paid off in the combined model.
- There was no significant relationship between race, first-generation status, and admit status.

My results also illustrated the outcome of the logistics regression for the community college and technical college independently.

- The community college results varied slightly in that the statistically significant variables were gender and Pell eligibility.
- Finally, the technical college showed that only Pell eligibility and debt payoff status were statistically significant variables.

A discussion of my study results follows in Chapter 5, where I tie my study results to the literature and theoretical framework. I also discuss the limitations of my study and the implications for further research, policy and practice.

# Chapter 5: Discussion

The purpose of this study was to analyze existing institutional data to better understand the correlational relationship between student institutional debt payoff status and student success status. Previous research has established that students who accumulate a past-due balance with their institution have significantly lower odds of succeeding (Ison, 2021; Bers, 2000-2001; Butrymowics, 2022). In addition, students straddled with institutional debt often face further repercussions, such as registration holds, transcript holds, referrals to collection agencies, and negative credit implications (Butrymowics, 2022; Ison, 2021). Finally, research has shown that lower-income and underrepresented students are most impacted by policies related to past-due institutional debt (Ison, 2021; Butrymowics, 2022). With this research project, I aimed to contribute to the existing research by studying the effect of students' past-due institutional debt relief to determine if it correlated with the likelihood of success. Success, for this study, is defined as having graduated, re-enrolled, or transferred at the community college and graduated or re-enrolled at the technical college

Chapter 1 provided the background for my study, an overview of the purpose of my study, research questions, theoretical framework, methodology, the significance of the study, and the definition of key terms. In Chapter 2, I reviewed existing literature on the rising cost of education, its effect on students, and the related role of public two-year colleges in response to the high cost of post-secondary education. In addition, the literature review outlined the COVID-19 Pandemic's effect on higher education and Chen's Heterogenous Model, which is the theoretical framework that helps guide this study. In Chapter 3, I outlined the research methodology of my study, and in Chapter 4, I discussed the study's results. Finally, in this

chapter, I summarize the results and discuss findings relating to existing literature, theory, policy implications, and opportunities for future research.

## Summary of Results

My first research question asked, what is the correlational relationship between past-due institutional debt payoff status and student success status within three terms after having the debt paid off? The null hypothesis was rejected and the alternative hypothesis was accepted. My quantitative correlational study determined a statistically significant relationship between past-due institutional debt payoff status and student success status within three terms after the debt was paid off. Once again, success, for this study, is defined as having graduated, re-enrolled, or transferred at the community college and graduated or re-enrolled at the technical college. Prior to conducting my research, I had assumed that for students who had their past due and delinquent student accounts paid off for them, their odds of succeeding would improve. However, my study revealed an inverse correlational relationship between debt payoff status and success. I found that in a combined model of 10,314 community and technical college students, those that had a past due student account paid off, were .30 times more likely (less likely) to succeed after the event occurred. Because these results are less than 1.00, it means that these students are less likely to succeed. These results were relatively consistent in the community college model alone but even more pronounced in the technical college model, where students were .20 times more likely (less likely) to succeed. Once again, because these results are less than 1.00, it means that these students are less likely to succeed.

In my second research question, I sought to determine if there was a correlational relationship between one or more demographic variables on the dependent variable, student

success, for students who had their institutional debt paid off. With this question, the null hypothesis was also rejected and the alternative hypothesis was partially accepted. My findings indicated that there was a correlational relationship with some variables. In the combined community and technical college model, gender, Pell eligibility, and age were the three variables that had a statistically significant correlational relationship to success for students who had their institutional debt paid off. Females were the only demographic that increased the odds of succeeding after their past-due balances were paid off. The other variables decreased the odds of success. There was no significant correlational relationship between race, first-generation status, admit status, debt relief status, and student success. In the community college, the statistically significant variables were gender and Pell eligibility. Lastly, there was only one statistically significant variable at the technical college that had a correlational relationship with debt payoff status and success and that was gender. Females had an improved chance of succeeding after having their debt paid off at the technical college.

## Discussion of Results/Findings

This study followed 10,314 community and technical colleges of which 1,316 had a past-due student account paid off for them using the Higher Education Emergency Relief Fund. For students to receive the debt payoff, they had to accumulate a past-due balance on their student account from Spring 2020 through Spring 2021. Descriptive statistics reveal essential differences between the group that had their unpaid tuition balances paid off and those that had no outstanding institutional debt and thus no outstanding debt to be paid off. First, students of color and lower-income students are disproportionately represented. This is consistent with literature stating that underrepresented students face financial challenges disproportionately (Addo, 2016;

Canche Gonzalez, 2020; Chen, 2008; Dowd, 2006; Ison, 2021). For example, while students of color represented 22.8% of the entire population, they represented 35% of the students with past-due accounts in my sample. In addition, consistent with existing literature, my study showed that Black students often face the most significant financial challenges. In my study, Black students represented 30.5% of students with a past-due balance, while they represented only 15.7% of the entire student sample. My study is consistent with literature that states that students of color and students at community colleges are more likely to default on their loans or obligations, primarily because they disproportionately come from lower-income households (Gross, 2009; Ison, 2021).

Several studies show that accumulated educational debt can deter students from re-enrolling in higher education altogether or encourage students to drop out before obtaining their credentials (Dowd, 2006; Gladieux, 2005; DesJardins, 2002). This could explain the aversion to debt that students in my study showed. Given the opportunity to proceed without debt, it could likely have been more appealing to drop out than to continue and potentially re-accumulate institutional debt. Additional qualitative research would need to be done to confirm this. Gladieux and Perna (2005) found that students at 4-year institutions were more likely to finance their postsecondary education than the community and technical college students. Without student loans as a second form of financing their education, community college students' institutional debt becomes more pronounced (Ison, 2021).

Pell-eligible students represented 49% of the students with a past-due balance paid off compared to 32.4% of the total sample. This is consistent with literature that states that financial aid has been unable to keep pace with the rising cost of education and that Pell grants are insufficient to fund a student’s education (Goldrick-Rab, 2016a; Ison, 2021; Ma J. B., 2017;

Qayyum, 2019). In addition, students that received financial aid represented 84.9% of students with past due accounts, further confirming that financial aid has been insufficient in covering the total cost of higher education. Finally, Pell-eligible students were retained at a higher rate after receiving the debt payoff than those who were not. This could be a result of students that did not want to lose their Pell grants by dropping out after having their debt paid off. This is consistent with Ison's (2021) study.

Regarding Asian students, my study was inconsistent with Ison's (2021) study, which showed the group as the smallest demographic with unpaid institutional debt. My study revealed that Asian students were the second largest racial group with past due balances, representing 8% of the sample. This is consistent with literature that revealed the diversity of the Asian student body and the economic challenges many face, particularly South East Asian students (Suzuki, 2002).

A notable element of my study is how female students responded to the debt payoff opportunity. This group of students was the only group whose debt payoff correlated with an improved likelihood of success. Existing literature shows that female students have higher accumulated debt than males (Cottom, 2017). My study showed that a more significant percentage of female students that received the debt payoff than male students went on to graduate, re-enroll, or transfer.

In my literature review, I explored the research regarding the many financial challenges students face due to the rising cost of education. I discussed how the stress and anxiety around financial insecurity affect academic performance (Goldrick-Rab, 2021). Scholars have hypothesized that the distraction of these stressors causes students to have difficulty focusing on

academic engagement, thus resulting in roadblocks to persistence (Baker, 2019). In addition, housing and food insecurity are often barriers to completion (Goldrick-Rab, 2016; Goldrick-Rab, 2021), reducing persistence in the first year of college by as much as 10% (Goldrick-Rab, 2021). My study revealed that institutional debt relief, in itself, may not be enough to deter students with the greatest need, as most students who obtained debt relief still dropped out. This could be because the institutional debt relief was still insufficient for these students to overcome the more significant financial challenges mentioned earlier. Once again, further qualitative research could help confirm this.

Lastly, my literature revealed that the COVID-19 Pandemic had a profound impact on the lives of college students resulting in enrollment declines by as much as 10% in community colleges (Smalley, 2021). The effects of COVID-19 likely impact my study's success rates, but my study did not include COVID-19 as an independent variable. I will address this as a limitation of my study.

## Summary Statement

This study provided a surprising revelation. It is easy to assume that if a student's institutional debt is relieved, thereby releasing any registration holds, a student would be much more likely to succeed (success, for the purpose of this study, is defined as having graduated, re-enrolled or transferred at the community college and graduated or re-enrolled at the technical college in the term (s) following the debt payoff). However, my study revealed that past-due institutional debt is a significant barrier to success, even when that debt is paid off with a grant. I chose both a community college and a technical college to help determine if there was a difference in success rates between students from these types of institutions. In the community

college and technical college combined model, the 327 students with debt paid off who succeeded represented 3.2% of the total sample, compared to 46.2% who did not have an outstanding debt paid off. In the technical college model, students who had their debt paid off and succeeded represented only 1.4% of the population, while those without an outstanding debt paid and were successful represented 27.5% of the total population. The results of my study reveal that paying off a student's institutional debt does not correlate with improved student success. In summary, even when students with outstanding institutional debt paid off, very few re-enroll, graduate, or transfer.

## Relationship to Theory

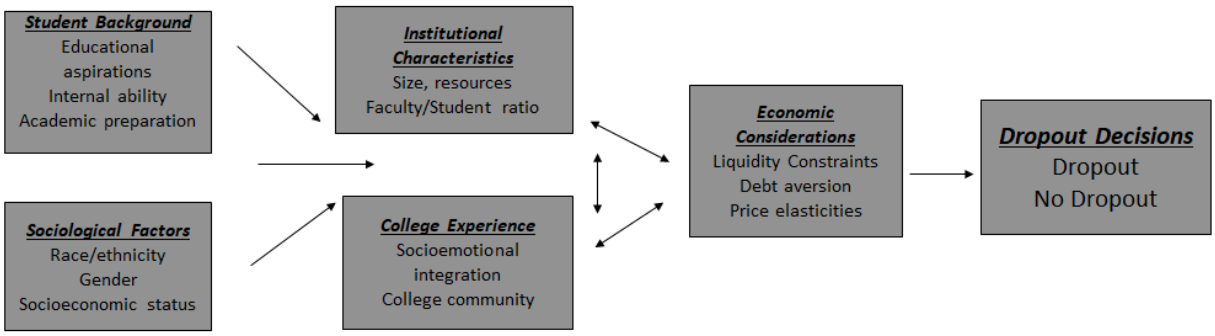
I chose Chen's (2008) Heterogeneous model to understand how various financial aid awards and philosophies influence student dropout behavior from higher education as a theoretical framework for my study. Chen (2008) argued that it is important to consider students' economic and racial/ethnic diversity when evaluating the effects of financial aid on student dropout. Early studies on student departure and financial aid usually involved only one institution where dropout rates were measured at one moment in time using descriptive statistics (Chen, 2008; Ison, 2021). I studied  my sample over three terms following the students' debt payoff. Chen (2008) explained that larger datasets with samples across multiple institutions are most appropriate for this type of analysis and that logistic regression models can be utilized due to the dichotomous nature of student departure as the dependent variable (Ison, 2021). Following Chen's framework, my sample size was in excess of 10,000 students and involved two types of institutions; a community college and a technical college.

Chen's (2008) model integrates perspectives from various disciplines and theoretical orientations, including psychology, sociology, organizational, and interactionist theories (Chen & DesJardins, 2010). In addition, Chen advocated that the following economic theories be considered when modeling how financial aid influences student departure: (1) liquidity constraints, (2) price sensitivity, and (3) debt aversion (Chen & DesJardins, 2010; Ison, 2021). Chen explained that the introduction of economic theories in student departure was grounded in understanding the Human Capital Theory (Ison, 2021). Integrating the Human Capital Theory into student departure models assumes that students make rational decisions regarding the time and energy required to pursue education and weigh those costs against the potential earnings and the utility of obtaining a degree (Chen, 2008). Chen noted that these earlier models integrating Human Capital failed to consider how different racial, ethnic, and socioeconomic groups hold different attitudes towards money and debt and that these different attitudes and cultural assumptions might explain why specific populations fail to matriculate or succeed despite receiving financial aid.

My findings align with assumptions from Chen's (2008) model. Chen (2008) stated that individuals from certain racial, cultural and socioecomic backgrounds have an aversion to debt and may experience a higher dropout rate as they attempt to avert debt. This may likely explain why so many students that received the debt payoff dropped out. They may have seen the value of no longer having a debt to the institution. In addition, integrating Human Capital, students may have weighed the opportunity of moving away from higher education and into the workforce without debt.

**Figure 10**

*Visual representation of Chen's Heterogenous Model of Student Departure (Chen & DesJardins, 2010; Chen, 2008)*




Another assumption of Chen's (2008) model is that specific aid packages will affect students of color differently when compared to their White peers. For example, Chen & DesJardins (2007) found that compared to White students, students of color were less likely to drop out when awarded a Pell grant. In my study, Pell grant recipients, who are disproportionately students of color, were less likely to drop out than White students after having their institutional debt paid off.

## Implications for Further Research

Research that pertains to student institutional debt is limited. Before my study, only one published study examined the correlation between student institutional debt and student success (Ison, 2021). The diminished odds of succeeding for students with institutional debt that I discovered in my study were consistent with Ison's (2021) study. Success, for this study, is defined as having graduated, re-enrolled, or transferred at the community college and graduated or re-enrolled at the technical college. My study added to existing research by

including the component of institutional debt relief to determine if there was a correlation to success once that debt was paid off for the students. Adding this component opened the door for even further ways to research institutional debt relief and student success. In addition, the unique world events that unfolded before and during the study also provide context for additional research. Following are some areas that should be considered in future research.

**Macro Economic Environment and Enrollment**

This study occurred during the COVID-19 Pandemic and the unusual economic events as the Pandemic began winding down. In particular, the labor market excelled during the study with the local unemployment rate reaching an unprecedented 2% (U.S. Bureau of Labor Statistics, 2022). Historically low unemployment rates and increasingly higher wage rates (U.S. Bureau of Labor Statistics, 2022) may have contributed to many students withdrawing regardless of their institutional debt status. These unique events provide an opportunity to review how the external labor market affects enrollment in two-year colleges. This topic is of particular interest to technical college administrators challenged with students being recruited to work before graduation, contributing to attrition. A recent study by Intelligent.com, which polled 1,250 undergraduates, found that up to 19% of students were considering dropping out to enter the job market (Dickler, 2022).

**Qualitative or Mixed Methods Study**

Both quantitative and qualitative analyses are needed to better understand the prevalence and effect of outstanding student institutional debt. Given that so few students in my study matriculated, more research is needed to determine what additional factors students may have considered before deciding to withdraw. By interviewing or adding a survey component,

researchers could add valuable data about the lived experiences of students with outstanding institutional debt. A qualitative study could also investigate the positive aspects of debt relief on students' personal lives, even though they chose to leave the college

**Additional Independent Variables**

My study included limited independent variables due to time constraints and data availability. The independent variables in my study included age, race, gender, and socioeconomic categories. A future study that includes additional variables, such as a student's major or program, work status, GPA, and educational intent, could be beneficial. Community and technical college students sometimes enroll to complete just one course while attending another institution. Future research could examine these cases independently to remove these outliers. In addition, more research is needed to determine if students' academic performance correlates with unpaid tuition balances. A potential correlation between academic performance and outstanding debt status may be identified by incorporating a student's GPA into the study.

Another potential independent variable to include in future studies is the amount of debt incurred, categorizing amounts in the medium, low, and high ranges. Amounts of $500 or less would be considered low-range, $501 to $2,000 for the middle range, and $2001 and above as a high range. Valuable data could be obtained by understanding if the amount of past-due balance a student holds plays into their decision to withdraw or to stop making payments.

**Other Types of Institutions and Geographies**

My study found that the technical college had even more pronounced results than the community college with the odds of succeeding being even lower at this type of institution. These results confirm not only a need to study the technical college environment further but to

also look at other types of institutions, including four-year institutions, private colleges and universities and for-profit institutions. Understanding the unique financial situations that students that attend these types of institutions encounter could help administrators develop policies and programs to improve outcomes.

Extending a similar study geographically could be very beneficial. For example, while this study occurred in the Midwest United States, similar studies in other geographic areas could provide valuable information for administrators and policymakers in determining if geographical factors play a role.

**Gender and Debt Relief**

My study revealed that females responded positively to institutional debt relief and were more likely to be successful as a result. This illuminated the opportunity to focus research on why females respond differently than males when receiving either debt relief or financial aid in a greater context. Furthermore, additional studies on how females respond to financial aid could be included in the literature review of any new research on this topic.

**Longer Longitudinal Study**

Finally, my study occurred over three terms following the debt payoff due to time constraints. A longer longitudinal study that followed a cohort over six terms would provide a better understanding of the results concerning whether the student succeeded or not over a longer duration of time.

In addition, further research to understand how unpaid tuition debt effects the overall financial health of an institution would be beneficial. This would help administrators understand the full financial impact of delinquent student accounts. Another area for potential research

involves FAFSA completion rates for this group of students. Understanding what the barriers to completing the FAFSA are for this group of students could help reduce the number of students with outstanding tuition balances. Finally, research that helps understand other mitigating factors that students with delinquent accounts encounter could be beneficial. This includes looking at employment status, family support and overall consumer debt levels these students encounter.

### Other Benefits of Institutional Debt Relief

One area my study did not focus on was the positive personal outcomes students may have experienced who received the debt payoff regardless of whether they matriculated. Some of these students entered the workforce immediately, free of institutional debt from college. It would be compelling to understand what this meant to these students. Some students may have seen this opportunity as a fresh start, free of the burden of debt to the institution they attended. Others may have seen this as an opportunity to have more resources available for other crucial financial needs, such as basic needs. My study illuminated the need to research the positive aspects of institutional debt relief beyond the educational component.

## Implications for Practice and Recommendations

My study's results indicate a correlational relationship between institutional debt payoff status and success. Ideally, students who had their past-due student account paid off for them would stay enrolled, transfer to a four-year institution or graduate. This study found the opposite to occur. Students who had a past-due account paid off using the Higher Emergency Relief Fund were more likely to drop-out. This finding has notable implications for practitioners who may be considering using funds to pay-off student accounts on their behalf. At minimum, practitioners should consider investigate the following areas prior to expending resources to relieve students

of institutional debt: FAFSA completion efforts, o return to Title IV policies, recruitment and retention efforts, and financial counseling and outreach to students with outstanding debt.

**FAFSA Completion**

One cause of student institutional debt is that students are unable to complete the FAFSA completion and verification process by the time the tuition and fee charges hit their account (Davidson, 2015). Twelve percent of students that had unpaid balances did not complete their FAFSA application (Ison, 2021). A simplified FAFSA completion process which includes a more streamlined process for verifying income and assets would help reduce the number of incomplete FAFSA's and in turn reduce the number of delinquent accounts that result. In addition, Davidson (2015) notes that more than 50% of the information collected from financial aid verifications is inaccurate and does not include the initial information that triggered the verification process in the first place (Ison, 2021). Therefore, the U.S. Department of Education and congressional legislators should consider reducing institutions' administrative burden on conducting the verification process or eliminating it altogether.

**Return to Title IV Policies**

The results of my study could help legislators revise policies as they pertain to returning Title IV awards. Community college students often experience economic circumstances that leave them in more precarious positions than their four-year counterparts (Ison, 2021). When a student decides to withdraw mid-term to work additional hours or take care of family members, they must pay back part or all of their Title IV awards (Butrymowics, 2022). When they cannot make these payments back to the college, they become delinquent. Legislators and policymakers

should review policies regarding the returning Title IV awards and perhaps adopt more lenient policies regarding this.

**Recruitment and Retention Efforts**

The information obtained from completing this study can help inform policy and decision makers determine the best use of funds as they come available. My study has shown that utilizing a grant to pay-off student institutional debt is not necessarily a worthwhile investment on the part of a college. Perhaps using grant funds to invest in retention efforts could reap better outcomes. Some colleges and universities use what is called a student retention ROI estimator (Breckner, 2022) to determine the return on investment of funds used for student retention. This type of estimator helps colleges and universities determine the financial benefit of using funds specifically for the use of recruitment and retention efforts.

**Financial Counseling and Outreach for Students with Institutional Debt**

At Virginia Commonwealth University (VCU), every student is assigned a financial counselor to help them better understand financial management, educational expenses and student accounts (Virginia Commonwealth University, 2022). The goal of the VCU Financial Counseling Program is to reduce financial barriers to completion that students face. In addition, student peer financial ambassadors and counselors assist students with applying for financial aid and researching any financial needs. By investing in financial counselors, colleges and universities could potentially reduce the number of students that develop delinquent student accounts and thus improve student success.

## Limitations

Several limitations apply to my study. To begin with, this study began one year after the COVID-19 Pandemic was declared worldwide. The study's results could have been impacted by factors resulting from the Pandemic's effect on students and the economy. In addition, this study took place during an expanding job market (Edwards, 2022), which could explain why some students opted to drop out of the institution. Unemployment rates declined from 13% to 4.2% between 2021 and 2022, and wage rates also increased (Edwards, 2022). Finally, due to time constraints, my longitudinal study occurred over three terms after receiving debt relief. Another longitudinal study over six terms or longer could provide additional valuable data for policymakers to use.

Another limitation is that this study focuses on one two-year community college and one two-year technical college. Expanding the study to other types of institutions and a larger sample size would have been more beneficial but would require more time and access to additional data. Therefore, caution should be used in interpreting these results against other types of institutions. In addition, it is unknown how many students never intended to complete a degree, graduate, or transfer; thus, the success rates should be interpreted with caution. In addition, this study takes place over three terms, and the results are not aligned with the standard three-year timeframe used as a benchmark for completing two-year degrees. Finally, some students may enroll in community colleges intending to capture financial aid funds and have no intention to graduate. This study is unable to capture that mitigating factor.

## Conclusion

The perception that if a student's outstanding debt is relieved, they are more likely to succeed is rejected in my study. My study found that paying off students' outstanding debt decreased the likelihood that the student would succeed. These results confirm a need to understand the motivating factors that compel a student to drop out despite receiving debt relief. It would be beneficial for administrators to understand if a student typically drops out before their account becomes past due and subsequently decides not to pay outstanding balances as a result of their decision to withdraw.

The Higher Education Emergency Relief Fund provided hundreds of millions of dollars to institutions to pay off students' past-due institutional debt. While paying off student debt may have short-term positive financial benefits to the college, it did not correlate with improved student success. Thus, the question remains, was using the Higher Education Emergency Relief Fund to pay off past-due student accounts a worthwhile investment of the funds? Based on the findings in my study, I would conclude that this was not the case for the colleges and universities that chose to do this. It is not as straightforward as to what benefits the students' experience after having their debt paid off for them.

My study expands the limited literature on the relationship between student institutional debt and success by exploring the effects of debt relief. As Chen's (2008) Model suggests, many economic and personal factors influence students' enrollment decisions. Future studies should consider different research methodologies that may provide insight into students' lived experiences. Why students succeed or persist in community and technical colleges is complex and more research needs to be done on how different economic conditions, student

demographics, and other variables impact a student's decision to persist or drop out. In addition, specific research that looks at how different genders and racial groups respond differently to institutional debt relief would be beneficial. Future research around institutional debt relief could also focus on four-year and minority-serving institutions. In addition, future studies examining the correlation between student finances and persistence should consider the macroeconomic environment. My study illuminated the need to revise policy and practice, particularly around FAFSA application and completion policies. Practices that provide students with financial advising and additional financing opportunities could also be beneficial. In conclusion, as a practitioner that primarily works with student accounts, I would not recommend utilizing funds to pay the outstanding institutional debt off on behalf of students except in cases where re-enrolling is a prerequisite.

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# Appendix A: SCSU Institutional Review Board Approval

**Institutional Review Board (IRB)**
720 4th Avenue South AS 101, St. Cloud, MN 56301-4498

## IRB PROTOCOL DETERMINATION: Exempt

January 25, 2023

To: Robert Perez
Email: rgperez@go.stcloudstate.edu

Faculty Mentor: Jennifer Jones

**Project Title: Relieving Students' Institutional Debt and Persistence: A Correlational Study**

The Institutional Review Board has reviewed your protocol to conduct research involving human subjects.

| | |
|---|---|
| **Your project has been:** | **Approved** |
| **Expiration Date:** | **N/A** |
| **SCSU IRB#:** | **45510135** |

Please read through the following important information concerning IRB projects:

**ALL PROJECTS:**

- The principal investigator assumes the responsibilities for the protection of participants in this project. Any adverse events must be reported to the IRB as soon as possible (ex. research related injuries, harmful outcomes, significant withdrawal of subject population, etc.).
- The principal investigator must seek approval for any changes to the study (ex. research design, consent process, survey/interview instruments, funding source, etc.).
- The IRB reserves the right to review the research at any time.

**ADDITIONAL FOR EXPEDITED AND FULL BOARD REVIEW PROJECTS:**

- The principal investigator must submit a Continuing Review/Final Report form in advance of the expiration date indicated on this letter to report conclusion of the research or request an extension.
- Approved consent forms display the official IRB stamp which documents approval and expiration dates. If a renewal is requested and approved, new consent forms will be officially stamped and reflect the new approval and expiration dates.

If we can be of further assistance, feel free to contact the IRB at 320-308-4932 or email ResearchNow@stcloudstate.edu and please reference the SCSU IRB number when corresponding.

Sincerely,

**IRB Chair**:
William Collis-Prather

Program Director
Applied Clinical Research

**IRB Institutional Official:**
Dr. Claudia Tomany

Associate Provost for Research
Dean of Graduate Studies